

The Scaling Playbook

A Practical Guide
for Researchers



scaling
science



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International Development Research Centre
Centre de recherches pour le développement international

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www.idrc.ca/scalingscience

Introduction

SCALING IMPACT is a priority for the International Development Research Centre (IDRC) and the broader development community. But how to best achieve impact at meaningful scales is far from straightforward. Pathways to impact are winding, systems are complex, and scaling involves a multiplicity of actors.

To better understand the process of scaling in the context of research for development, IDRC explored the work of numerous researchers who purposefully aimed to produce impact at scale with their work. This exploration yielded unique information about what creates desirable change and meaningful impact. It resulted in the IDRC open-access book, *Scaling Impact: Innovation for the Public Good*, and now, *The Scaling Playbook*.

By building on lessons from the past, the playbook presents an evidence-based and action-oriented tool that provides a practical way to approach the complex challenge of scaling for impact. It is intended to help you proactively incorporate scaling into research—whether you are new to scaling, wish to strengthen existing efforts to scale your work in development, or perhaps beyond.

This playbook is a starting place. Nothing in it is conclusive or complete. We invite all users to tailor, adapt, and critique the ideas offered through the coming pages.

PART I

Background

What is scaling science?

THE TERM 'scaling science' purposefully embraces two meanings:

- First, it means *scaling scientific research* results to optimize impacts. That is, scaling the impacts of research for the public good.
- Second, it refers to a systematic, principle-based *science of scaling* that can increase the likelihood that innovations will benefit society. All approaches to scaling should be questioned, tested, refined and used thoughtfully.

Innovators working with IDRC find that scaling in research for development aims to achieve a scale of

impact important to people and environment, and contribute to a broader system of development change. In other words, scaling means understanding how to position research results so that the solutions generated reach the people who can use them, and in a way they can endorse.

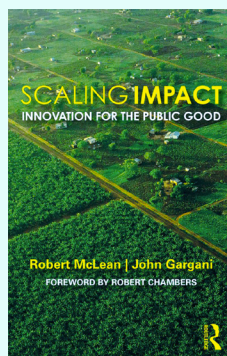
At the same time, our work to synthesize this experience and apply it to advance scaling practice is one contribution to a science of scaling. Your efforts to test, refine, and improve these ideas are just as important.

The IDRC scaling science exploration yielded unique information about what creates desirable change and meaningful impact. From this perspective:

«Scaling impact is a coordinated effort to achieve a collection of impacts at optimal scale that is only undertaken if it is both morally justified and warranted by the dynamic evaluation of evidence.»

FURTHER READING

Explore a deeper dive into scaling science in the open access book:



Scaling Impact: Innovation for the Public Good

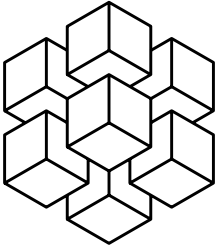
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Four guiding principles for scaling impact



1. Justification

- Scaling is a choice that must be justified.
- The choice is made by the balance of evidence alongside values.
- The choice to scale is shared.

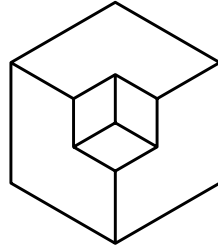
To make the principle of justification practical, it begins with the question “why scale?” The answer should include:

- Technical evidence that scaling will produce positive impacts that outweigh negative impacts; and
- A description of the values (including whose) that inform the decision to scale.

These responses can help you articulate a value proposition as a basis for decision-making about scaling. Sometimes, however, it is better not to scale.

Scientific evidence can help you understand whether an innovation *can* scale. But the values of those impacted will inform whether an innovation *should* scale.

Articulating both evidence and values can help you enlist various stakeholders in the scaling process since they can see the justification for the scaling efforts. Doing so encourages participation and stakeholder endorsement.



2. Optimal Scale

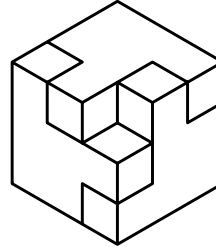
- More is not necessarily better.
- Scaling produces a collection of impacts.
- Impact at optimal scale balances dimensions of magnitude, variety, equity, and sustainability.

Optimality challenges the “bigger is better” logic of scaling.

Simply because a solution works at a local level doesn’t mean that implementing it nation-wide or beyond will multiply the benefit. Likewise, if a solution proves ineffective at a local level, we cannot automatically conclude it won’t produce desirable impacts at broader scales.

Determining optimal scale requires ongoing considerations of the trade-offs between magnitude, sustainability, equity, and variety of impacts. For example, improving efficiency for hospital visits may not always correlate with better patient outcomes; just like technological innovation in agriculture may or may not mean concomitant benefits for the environment.

Optimality also raises the question of who defines this ‘right’ scale. Numerous stakeholders, including researchers, funders, and beneficiaries, may all have different views. Considering different perspectives, and setting out a process to determine optimal scale that stakeholders endorse is key to successfully scaling impact.



3. Coordination

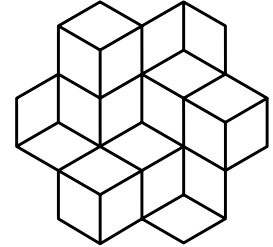
- Scaling occurs in complex systems.
- Complexity requires a flexible scaling process.
- Coordination connects an evolving set of actors to the scaling process.

Coordination refers to the need to plan and adapt for the many actors involved in bringing impact to scale. This principle reminds researchers that scaling takes place in complex systems and that complexity demands a flexible scaling process.

Accordingly, coordinating a scaling journey requires a strong understanding of the system in which one operates, while acknowledging that unintended impacts are possible and therefore require ongoing monitoring. This includes, for example, the understanding and accommodation of gender dimensions when coordinating with various actors in your scaling effort.

Coordination implies that researchers consider the wider range of initiators, enablers, competitors, and impacted. These groups may affect, or be affected, by scaling in ways that alter intended impacts.

Such broad engagement may occur within a single project, or as a part of a longitudinal series of coordinated research projects and activities are coordinated to work together. At the same time, organizations may use a ‘portfolio approach’ to coordination, whereby they syndicate projects or innovations for greater impact from the portfolio, than would be produced by the individual parts.



4. Dynamic Evaluation

- Scaling is an intervention that can be evaluated.
- Scaling generates dynamic change.
- Dynamic evaluation is a stance that is held before, during, and after scaling.

Because scaling generates dynamic change, it necessitates dynamic evaluation. It can use a collection of tailored learning strategies to examine how scaling transforms a holistic concept of impacts – assessing the magnitude, variety, equity, and sustainability of change.

Dynamic evaluation goes beyond asking whether impact was achieved at a certain date, and instead asks how, why, under what conditions the impact was achieved, and how this might change over time and place.

Dynamic evaluation is not a method, it is a stance. It aims to measure the collection of impacts of scaling as an intervention. Not just the impact of the innovation or research at a single level of scale. This implies a body of tools for rounding rapid learning cycles that can be used strategically before, during and after scaling and the choice of tools relies on the judgement of those involved in the scaling system.

Scaling science as a component of research for development

Research for development is intended to achieve impacts that promote development through discovery science or applied science. To illustrate how scaling can complement either of these approaches to research, we introduce a third notion we call scaling science.

Illustration 1 provides a simplified overview of these three approaches to research, where they feed into and how they build on one another:

ILLUSTRATION 1
Discovery, applied, and scaling sciences are complementary

	Discovery Science	Applied Science	Scaling Science
Motivation	Curiosity	Solution to a problem	Impact
Means	Objectivity	Utilization focus	Principled innovation
Audience	Academic community	Immediate knowledge users	Range of initiators, enablers, competitors, and impacted who may bring or block impact at optimal scale
Results	Validity	Validity + action	Validity + action + optimal impact

Impact at Optimal Scale

Despite the simplified model above, moving from discovery to scaling is not a linear, additive process. The distinction between these approaches is rarely clear, and the categories are not always mutually exclusive.

Scaling impact requires mechanisms and varied knowledge sources that can move research back and forth along this spectrum. It is important to note that researchers need not continue scaling if there is not enough evidence to support an innovation, or if those who will be affected do not endorse it.

Knowledge translation and scaling

Scaling and knowledge translation activities share many features. Both require justification, coordination, and evaluation to monitor how well an innovation works as it is put into action.

Scaling, however, is a supplement to knowledge translation. It moves beyond targeting knowledge users in a specific context and instead considers the full range of initiators, enablers, competitors, and impacted who will support or hinder downstream results of the innovation. In essence, scaling moves researchers’ mindsets beyond outputs or solutions (often described as outcomes) and towards *impact*.

Knowledge translation is about moving research-generated knowledge into action.

Scaling is how we amplify, distribute, sustain, and at times de-scale, the impact of these actions.

ILLUSTRATION 2
How the results of discovery, applied, and scaling science are positioned for use



PART II

Application

THIS SECTION acts as a guide to help integrate scaling into your research. It is followed by a worksheet with prompting questions to make the conceptual guidance actionable.

Throughout this section, we alternate between two case studies to illustrate the concepts. The complete case studies can be found in the Annex.

CASE STUDY 1

A research project in Nigeria used scaling science to address the high rate of mortality associated with pregnancy and childbirth when pregnant women could not reach health facilities for prenatal care.

CASE STUDY 2

A research project in Tanzania used scaling science to address vitamin A deficiency that was leading to blindness, diarrhea, and measles.

Integrating scaling into research

Successfully scaling impact can require continuous reflection on the four guiding principles (justification, optimal scale, coordination, and dynamic evaluation) from start to finish of a research project.

To help build scaling into your research, this playbook focuses on how these principles can support research at three typical stages:

- Framing— selecting the research topic, focus, and questions.
- Doing— data collection, analysis/synthesis, and interpretation.
- Sharing— communicating research results.

These are generalized, and in many ways over-simplified, representations of stages in a research process. However, they broadly represent the steps of the scientific method, used across every field of science, to plan and subsequently execute a research protocol. As such, we hope researchers will find these relatable, while noting that some degree of context-fitting is required.

Each stage is described below and includes prompting questions to consider when integrating scaling concepts into your research. It also compares how each consideration might have been interpreted in discovery or applied science.

A— FRAMING: Focus and questions

The first step in any research is to set a focus and parameters, and when it comes to scaling science, to fulfill the first principle of justification by asking “why scale?”

Research questions define the goals of the research, and reflect its motivations and purpose. Why is this research important? To whom is it important? What will an answer to this question contribute? How might it help solve a problem? Why and how might that solution be scaled?

Sometimes this process plays out across a community looking for answers to a social problem; at other times it is led by a specialist in a lab.

Although different types of research approach framing in different ways, each employs similar ways to identify a problem, investigate it by asking questions and construct an appropriate methodology for answering these questions.

How we frame our research will affect how its impact is scaled. Framing contrasts across different sciences—discovery, applied, and scaling science—as summarized in Illustration 3:

ILLUSTRATION 3
“Framing Research” in discovery, applied, and scaling science

	Discovery Science	Applied Science	Scaling Science
Motivation	Curiosity	Solution to a problem	Impact
Goal	To generate new knowledge	To generate knowledge of practical value to a specific problem	To generate knowledge about the optimal benefit of a solution
Justification	The research addresses a knowledge gap	The research offers a solution to a local problem. Often engages research users’ perspectives	The research is broadly endorsed within the scaling system in which impacts unfold. Includes the initiators, enablers, competitors, and impacted

The justification for scaling tends to be wider than that for the other types of research. It refers to the broader areas in which research outcomes and impacts will unfold. This pushes researchers to justify the work not only as initiators, but also among other actors—including enablers for scale, competitors who may hold alternative solutions, and most importantly, the endorsement of those who will be impacted, for better or worse, by the research.

Questions to consider when framing research:

i— Based on the research focus and question(s), what potential opportunities might grow the impact of your research?

Framing a research project for scale means to plan for diverse impacts that might unfold from the work, and develop strategies to help desirable impacts come to fruition. Where else could the results of this project make a difference? Who and what could benefit? Who and what could be harmed?

CASE STUDY 1

To address the high mortality rate associated with pregnancy and childbirth in Nigeria, the research team was attentive to opportunities to scale universal home visits for pregnant women **within** the state. If results were positive, there could be opportunities to scale **beyond** the state level—although not within the original project scope.

MAPPING THE SCALING SYSTEM

Considering the ‘people, places, and things’ that affect or are affected by scaling helps to plan for broad and positive impact. For simplicity we suggest thinking about 4 categories in a scaling system:

- Initiators** are people, places, and things, that make it possible to begin a change in scale, and may include:
- Innovators/researchers
 - Funders/investors
 - Permissions
 - Know-how
 - A willing community
 - Land with a specific set of attributes
 - Cultural acceptance
- Enablers** are the combined people, places, and things that can facilitate the scaling, including:
- Service providers
 - Laws
 - Policymakers
 - Distributors
 - Culture
 - Markets
 - Communities
 - Government
- Competitors** are the people, places, and things that, in combination, offer a next-best or better-than alternative to scaling the innovation, such as:
- Commercially competing companies or products
 - Substitute ideas
 - Social or cultural norms
 - Ingrained habits and traditions
- The impacted** are those who experience the positive or negative results from scaling, and ultimately control success:
- People
 - Places (natural or built environment)
 - Things (such as cultural and gender norms, laws, and ideas)

Thinking about potential impacts can be broad and aspirational—you can always scale back ambitions at a later stage.

ii— Who/what are the people, places, and things (initiators, enablers, competitors, those impacted) that affect and are affected by the scaling process?

This question considers the broader range of people, places, and things (such as cultural and gender norms, laws, institutions, etc.) with the potential to enable or constrain scaling of results beyond the immediate users. Grouped under broad categories of various actors as seen on page 6, these can include:

- Governments or policy makers with priorities or ongoing policy processes related to the expected research results;
- Regulatory frameworks that could enable or hinder uptake of an innovation;
- Cultural and gender norms and practices that facilitate or inhibit ideas from spreading in desirable or undesirable ways; or
- Alternative approaches or innovations that address the same or a similar research problem.

CASE STUDY 2

In Tanzania, researchers considered manufacturers of sunflower oil based locally, a delivery network of retailers, outreach activities to make refined sunflower oil the preferred choice for consumers, and the Government of Tanzania's broader micronutrient fortification strategy.

iii— Which users and beneficiaries should you consult to understand and justify the research framing and its potential impact?

When impact at scale is priority for a research project, it is critical to gather and assess evidence of the technical merit of an innovation. Evidence that an intervention—say, a new program or practice—can produce the desired result is critical to inform rollout and scale.

However, evidence of technical merit can only tell us if an innovation *can* scale, not whether it *should* scale. To determine whether it should scale, consider the significance and value to those who will be impacted; a key component of the justification principle.

It is helpful to consult with different user groups and potential beneficiaries before defining the research question(s). This will allow you to better understand their contexts. Then you can confirm or reject the

importance of the research problem, and develop a framing that aligns with the characteristics, needs, and values of those who will ultimately determine and realize impact.

Declaring and openly unpacking potential impacts, positive or negative, from the start of a project will help ensure framing is ethical and the results of the research are optimally impactful.

CASE STUDY 1

In Nigeria, the research team collaborated closely from the beginning with planners, policy-makers and government officers to ensure the research question addressed essential concerns and the content of the home visits were endorsed. They also surveyed households to determine factors related to maternal morbidity to ensure the home visits focused on the right issues.

B— DOING: Data collection, analysis/synthesis, and interpretation

After framing a research problem and approach, typically the next step is to determine how to undertake the research. This includes identifying what data will be needed and selecting the best methods to collect, analyze/synthesize, and interpret the data.

In the “doing” phase, the various sciences—discovery, applied, and scaling—all have different goals, just as in the framing stage. The processes build on one another and diverge to provide different results, as summarized in Illustration 4 on the next page.

Rarely is a single solution the best fit for an entire population, and rarely do innovators or their funders have the resources required to scale to entire populations alone.

The scaling principle of dynamic evaluation means that data collection, analysis/synthesis, and interpretation in scaling science should help determine *optimal* scale, rather than unquestioningly pursuing *maximum* scale.

Questions to consider when doing research:

i— What evidence is needed to determine optimal scale?

Answering this question will help researchers design data collection, analysis/synthesis, and interpretation, and will help determine the scale at which results will be most beneficial.

What data would help you understand a holistic concept of impact? Begin by assessing the following impacts the research can achieve:

- **Magnitude:** How much impact will the intervention create? This may include the average size or quality of impacts; how many people benefit or are harmed; and the importance, value, or merit of such impacts as judged by stakeholders.
- **Variety:** What is the range of impacts the research will create? Are there different types of impacts (such as health, economic, environmental) that the research will create?
- **Sustainability:** How long will impacts last, and what factors might affect this?
- **Equity:** What benefits and/or harm will different sub-groups experience as a result of the research? Do specific sub-groups (based on gender, religion, or class for example) experience impact differently, and what factors affect this?

CASE STUDY 2

In Tanzania, optimal scale included technical evidence that local enterprises could indeed produce enough fortified oil to satisfy regional demand, that it was cost-effective, and that it could be successfully disseminated to regional populations.

Evidence was needed to show to what extent fortifying the oils benefited the lowest-income households. Could they afford to purchase the fortified oil? Did the incentives work to encourage the population to use it? Was there enough evidence on the impact of the oil to increase vitamin A levels and show the intended health benefits?

ILLUSTRATION 4
“Doing Research” in discovery, applied, and scaling science

	Discovery Science	Applied Science	Scaling Science
Goal	Validity and reproducibility	Validity and utility for primary knowledge user	Validity and optimal impact for beneficiaries
Means	Objective approach: Data collection, analysis/ synthesis, and interpretation aim for objectivity and validity, with a clear protocol that other researchers can replicate	Targeted utilization-focused approach: Data collection, analysis/ synthesis, and interpretation aim for validity and of most use to the targeted user	Inclusive utilization-focused approach: Data collection, analysis, and interpretation aim for optimal impact. Possible impacts of the work are named and considered, and decisions about which to pursue are balanced by need and feasibility
Results	Sound analysis/synthesis: Examines, assesses, and compares the data in a systematic and reproducible way	Sound + relevant and actionable analysis/ synthesis: Pinpoints and prioritizes practical issues in the data, and offers techniques that facilitate clear understanding and uptake by the primary knowledge user	Sound + relevant and actionable + optimally impactful analysis/synthesis: Investigates practical issues in the data, and offers techniques that facilitate uptake by a range of users who can apply the results at scale for optimal impact

ii— How will you involve stakeholders appropriately in data collection, analysis/synthesis, and interpretation?

To ensure research meets the needs of the stakeholders and contributes to intended impacts, it is important to ensure that those that affect and are affected by scaling actively help define the research approach in ways that are feasible and endorsed by stakeholders.

Involving stakeholders in doing research implies they participate in answering critical questions such as:

- What data is collected?
- How is the data unpacked and assessed?
- Who interprets, and what is, its validity, meaning, and importance?

This requires coordinating the contributions of different actors to help encourage ownership of the research and its results, while taking into consideration contextual factors such as cultural and gender norms. Determining when and how different stakeholders may be involved in *doing* research can help ensure rigour, an understanding of its complexity, and improved aims for optimal impact.

CASE STUDY 1

In Nigeria, the project involved and trained Bauchi state government officers and officers from the local government authorities to manage and monitor the universal home visits. Trained officers took over implementation in two wards, and played an active role in supporting the research team in data analysis and writing up results.

iii— What key moments can you foresee for learning and adaptation?

Once you have identified what evidence will inform an understanding of optimal scale, next determine how to use this to inform moving toward this desirable collection of impacts.

Plan to reassess your scaling efforts and approach at opportune moments within the research process. Consider any external opportunities to involve stakeholders in this process and promote uptake. What are the key windows of opportunity in the decision-making processes?

CASE STUDY 2

In Tanzania, the team realized early on through their interactions with retailers that low-income households frequently tend to buy very small amounts of cooking oil—just enough for one day. To adapt, the project team offered consumers smaller packaging options.

As well, the E-voucher system encountered a number of difficulties, leading the research team to adjust its approach during the project's implementation. They adapted by switching to a retailer-oriented discount called eWallets.

C— SHARING: Communicating research results

Both applied and scaling science aim to responsibly engage knowledge users throughout the research as seen in Illustration 5 on the next page. This engagement helps ensure that the results of the research will be relevant and actionable.

Existing structures can be used to share the research beyond normal research channels and engage a wider group of stakeholders. This might, for instance, involve government planning bodies to broaden the reach of a policy, or markets that allow wide distribution of a new technology.

Dynamic evaluation can help to identify potential users who could benefit from research results on an ongoing basis, as well as those that might help sustain the impacts. Such broad engagement also helps to ensure that key stakeholders inform and endorse the definition of optimal scale.

Questions to consider when sharing research results:

i— What strategies will facilitate participation, and contribute to the intended impacts of your research?

Involving users and beneficiaries in framing and in doing research may already contribute to the likelihood that they will endorse results.

But further action is likely required. Consider which strategies will facilitate stakeholders to take action based upon the research findings. For example, what contextual factors might affect the ability to act on the results, and what can you do to address these factors?

ILLUSTRATION 5
“Sharing Research” in discovery, applied, and scaling science

	Discovery Science	Applied Science	Scaling Science
Goal	To contribute to the body of knowledge on the topic	To enable targeted knowledge users to learn about and act upon research results	To engage those with the potential to act on and benefit from the research results in the setting of the study and beyond
Audience	Academic community	Immediate knowledge users	Range of initiators, enablers, competitors, and impacted who may bring or block impact at optimal scale
Timing	Share results at the findings stage, once data collection and analysis are complete	Share results at the findings stage AND involve primary research users in the research process so that they can shape it according to their needs	Share results at the findings stage AND integrate a range of potential users and beneficiaries into the research process so that they can help determine and achieve optimal scale

CASE STUDY 1

In Nigeria, the research team highlighted the need to continue to monitor the implementation of home visits as they were being rolled out in different communities and contexts.

Training government officers in data-monitoring and quality-control methods, as well as in data management, analysis, and reporting, is critical to ensure the sustainability and effectiveness of home visits.

to act as intermediaries, for example, to encourage ongoing uptake of results or to support uptake by key stakeholders.

In some cases, implementing strategies to extend impact may be possible within the scope of an existing research project, especially if the researchers consider scaling early on and budget accordingly. In other cases, it may require additional resources or a new research project altogether.

ii— Are there particular findings or aspects of your analysis that may be of use to stakeholders beyond those you targeted throughout the research?

Scaling does not end with ensuring uptake by a predetermined set of users and beneficiaries. It is a dynamic and iterative process reliant on an evolving set of actors and new actors may significantly shift the original vision of optimal scale.

Consider what results could be useful or influential to a broader range of stakeholders—including any unintended results. This may involve extending impact through replication in another context or reinforcing impacts through involving additional stakeholders in the same locale. Some users may also be well positioned

CASE STUDY 2

In Tanzania, the project shows how and under what conditions market mechanisms can be used to support food fortification efforts. Scaling the development impact is not only confined to **scaling to more regions** than the original project, but also to **scaling more products** that need enhanced nutrition.

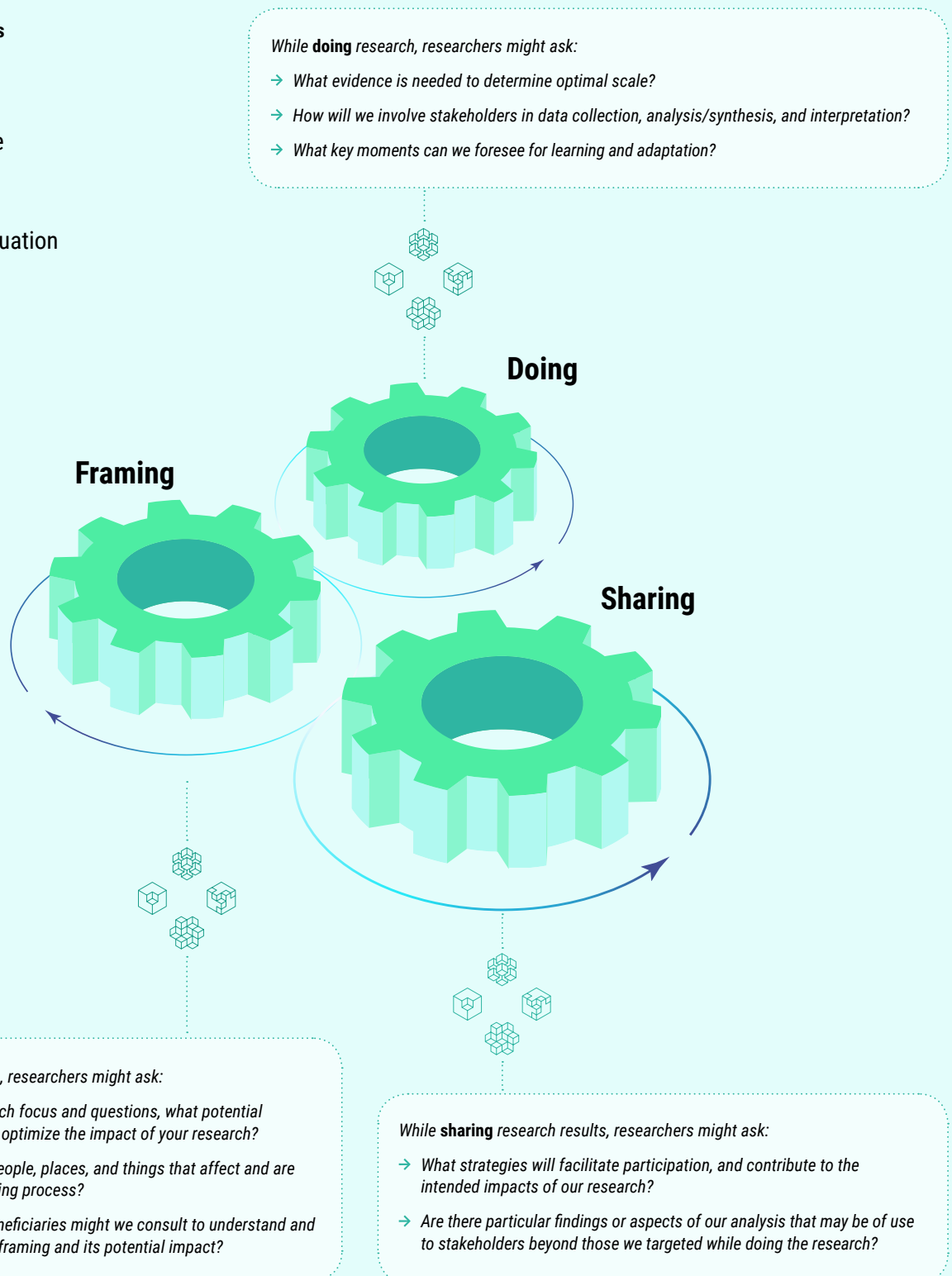
The team found that government policies and regulations must go hand-in-hand with efforts to enhance nutrition. The regulatory system for any such fortification efforts should be clear and align well with the operation of the enterprises involved in the fortification process. Coordination is therefore of utmost importance in such scaling efforts.

ILLUSTRATION 6

Getting scaling into research— Considering the four guiding principles throughout the research process

Four Guiding Principles

-  Justification
-  Optimal Scale
-  Coordination
-  Dynamic Evaluation



PART III

Worksheets

RESEARCHERS MAY consider these worksheets to position a project for scaling. Researchers may also use these questions to guide efforts to build on previous applied research in a project more explicitly focused on scaling. We recommend that you provide initial responses to all questions at the outset of a research project, and then revisit and revise these responses regularly as the research progresses. This is not an exhaustive list, it is a starting place. Integrate your own prompts, and skip-over the questions that don't work in your context.

A. FRAMING: Focus and questions

Question	Notes			When will you revisit this response?
i) Based on the research focus and questions, what potential opportunities might optimize the impact of your research?	Opportunities	Strategies to pursue		
ii) Which users and beneficiaries might you consult to understand and justify the research framing and its potential impact?	Actor	Rationale	Potential implications	

Mapping the ‘Scaling System’



B. DOING: Data collection, analysis/synthesis, and interpretation

i) Constructing a 'multi-dimensional' view of impact	How would you describe optimal scale for this dimension of impact? What evidence would demonstrate it to your stakeholders?		When will you revisit this response?
• Magnitude of the impacts (e.g. number of people served, quality of change)			
• Diversity of the impacts that the intervention will achieve (e.g. health outcomes, environmental outcomes, financial benefit, etc.)			
• Sustainability of the impacts (e.g. are impacts durable? why or why not?)			
• Equity of the impacts (e.g. do some sub-groups fare better than others? Who wins? Who is left behind?)			
ii) How will you involve stakeholders in data collection, analysis/synthesis, and interpretation?	Stakeholder group	Strategy to engage	
iii) What key moments can you foresee for learning and adaptation?	Internal (based on research timeline)	External (based on stakeholder needs)	

C. SHARING: Communicating research results

i) What strategies will facilitate participation and contribute to the intended impacts of your research?	Stakeholder group	What lessons might be shared with this stakeholder? How might they be engaged?		When will you revisit this response?

ii) Are there particular findings or aspects of your analysis that may be of use to stakeholders beyond those you targeted throughout the research?	Stakeholder group	Finding(s)	Strategy	

ANNEX

Case Studies

CASE STUDY N°1

Nigeria— Home visits to enhance maternal health in Bauchi State ¹

Issue: Pregnancy and childbirth in Nigeria are associated with a high rate of mortality. Travelling to health facilities for prenatal care is not always possible for pregnant women, particularly for the poorest and those in rural areas. The quality of care offered at health facilities is also uneven.

Research topic: To examine the acceptability and impact of universal home visits to pregnant women and their spouses in randomly selected wards in the Toro Local Government Area of Bauchi state, Nigeria.

Intervention: Trained female home visitors from the communities visited pregnant women and talked to them about risk factors for health during pregnancy. Trained male home visitors from the communities visited and spoke with the women's partners about the same issues. The visits also included video 'edutainment'—short video clips addressing maternal health risks through popular soap opera scenarios.

Anticipated outcomes: The project helped Nigerian policy-makers and health providers understand how new approaches to in-home care might improve the lives of pregnant women and their children without straining the overburdened health system in the state.

Comparison of the first two wards (visited) and the next two wards (not yet visited) showed that women in the visited wards had fewer complications during pregnancy and after delivery, and they had an improvement in the targeted risk factors. These improvements occurred even though women in the visited wards did not increase their use of health facilities for prenatal care or delivery.

Scaling

A— Framing: Focus and questions

i— Based on the research focus and questions, what potential opportunities might grow the impact of this research?

When framing and designing the project, the research team was attentive to opportunities to scale the project *within* Bauchi state. The researchers had previously worked with this state government, who prioritised improving maternal health. The research team also recognized that, while it was not within the project scope, if results were positive in the trial of universal home visits in Bauchi, there could be opportunities to scale *beyond* the state level.

ii— Who/what are the people, places and things (initiators, enablers, competitors, those impacted) that affect and are affected by the scaling process?

The Bauchi state government played a key role as co-implementers. Their close involvement supported sustainability of the scaling efforts. The team also identified sub-state level government – the Local Government Authorities (LGAs), Toro LGA and others, as important players.

A project steering committee included key stakeholders. The project also developed a close collaboration with the Bauchi State College of Nursing and Midwifery (CONM) to promote the sustainability of the home visits program. The project supported development of a core faculty in CONM to continue training government personnel within the State to manage the home visits program as it expanded.

iii— Which users and beneficiaries should you consult to understand and justify the research problem and its potential impact?

Users: The research questions addressed essential concerns expressed by planners and policy-makers in the state in formal and informal meetings. Government officers helped design the content of the home visits in a series of design meetings.

Beneficiaries: The content of the home visits was based on the team's earlier research on maternal health in Bauchi. A representative household survey found four factors related to maternal morbidity: heavy work in pregnancy, domestic violence, lack of spousal communication about pregnancy and childbirth, and lack of knowledge about danger signs in pregnancy and childbirth. These are all issues that households themselves can act on to reduce risks. The research team developed a questionnaire and discussion guide for the home visits focusing on these issues.

B— Doing: Data collection, analysis/synthesis, and interpretation

i— What evidence is needed to determine optimal scale?

If the visits had a measurable and useful impact on maternal and child health, this would support the wider implementation throughout Bauchi State, and potentially throughout Nigeria. Other considerations included whether the visits were acceptable and endorsed by different sub-groups within communities and were

1. [Video Edutainment: Impact on Maternal and Infant Outcomes in Toro, Nigeria \(IMCHA\)](#) (Project #108039)

cost-effective in improving maternal health. Analysis of these aspects will help determine if and how the program should be scaled.

ii— How will you involve stakeholders in data collection, analysis/synthesis, and interpretation?

The project involved Bauchi State government officers and officers from Toro LGA as team members, and trained them to manage and monitor the universal home visits. Trained officers took over implementation of the home visit scheme in two wards during the funded project. The government officers attached to the research team played an active role in data analysis and writing up results. The trained home visitors were women and men nominated from within their own communities, remunerated for the visits they made.

iii— What key moments can you foresee for learning and adaptation?

When government health service personnel started to manage the home visits in the first two wards, this provided insights on the feasibility of the home visits as part of a routine service offer. Further, it allowed the team to assess the sustainability of the scaling efforts within the government system. With scaling in mind, the research team considered not only the effectiveness of the home visits in a research context, but also how this effectiveness could be maintained in a wider implementation under non-research conditions.

There were also learning opportunities throughout the project. In a linked project, the team heard from men and women in Bauchi communities their views about

child spacing (*kunika* in the Hausa language means lack of adequate child spacing) and co-designed with them a module on *kunika* to include in the evolving content of the home visits.

C— Sharing: Communicating research results

i— What strategies will facilitate participation and contribute to the intended impacts of your research?

The research team highlighted the need to continue monitoring implementation of the home visit as they are rolled out in different communities and contexts. Training of government officers in data-monitoring and quality-control methods, as well as data management, analysis, and reporting, is critical to ensure the sustainability and effectiveness of home visits.

ii— Are there particular findings or aspects of the analysis that may be of use to stakeholders beyond those you targeted throughout the research?

With some contextualization, the home visits have the potential to be scaled beyond Bauchi state. Evidence to support the appropriateness of implementing the visits in communities in other Nigerian states is needed for nation-wide scaling.

This project is a collaboration between the Federation of Muslim Women's Associations in Nigeria; the Community Information for Empowerment and Transparency / Participatory Research at McGill; and the Bauchi State Primary Health Care Development Agency. It is funded under the Innovating for Maternal and Child Health in Africa (IMCHA) initiative, a research partnership between IDRC, the Canadian Institutes of Health Research, and Global Affairs Canada.

CASE STUDY N°2

Tanzania—Scaling a nutrition intervention through market mechanisms ²

Issue: In developing countries, vitamin A deficiency is not only a leading cause of blindness in children, but can also increase the health risks associated with diseases such as diarrhea and measles.

Research topic: To examine ways to address vitamin A deficiency and investigate the viability of using market mechanisms to increase its consumption in two regions in rural Tanzania suffering from high levels of vitamin A deficiency.

Intervention: The project involved small- and medium-sized enterprises fortifying unrefined sunflower oil with vitamin A. To ensure that the Vitamin A-enriched oil could be put on the market, the project started by meeting public safety and quality standards. The project also aimed to test whether eVouchers, electronic coupons downloaded by consumers to their mobile phones, could stimulate the sale of the fortified oil and encourage sustainability of its consumption.

Outcomes: The overall results showed that the newly fortified oil contained sufficient levels of vitamin A after having been stored for several weeks by the retailers. Rural consumers accepted this approach and effectively enhanced their Vitamin A uptake.

pursued the potential impact of this finding by testing the businesses' ability to fortify unrefined sunflower oil for local consumption.

ii— How will you involve stakeholders and beneficiaries in data collection, analysis/synthesis, and interpretation?

Since the project relied on market mechanisms, it was important to involve manufacturers of sunflower oil in the regions of focus. To deliver the fortified oil to consumers, it was also necessary to identify the network of retailers in the two regions. The government's strategy and regulatory initiatives needed to be identified, deliberated, and navigated to ensure the project's success.

Other actors included the organizations involved in outreach activities who aimed to make refined sunflower oil the preferred choice of consumers. There was also possible competition given that some consumers might prefer imported palm oil, rich in saturated fats, over the fortified sunflower oil. This underlined the importance of consumer outreach activities.

iii— Who/what are the people, places and things (initiators, enablers, competitors, those impacted) that affect and are affected by the scaling process?

From its inception meeting, the project tried to incorporate as many local and national stakeholders as possible. This allowed the actors to understand the intent of the work and its position within Tanzania's fortification strategy, and establish relationships to share information as scaling progressed.

Testing the technical feasibility of unrefined sunflower oil fortification at the small- and medium-sized enterprises level required significant outreach. The project needed to identify enterprises that saw the long-term benefits of participation, since businesses needed to install relatively expensive new equipment and had to learn the techniques involved in vitamin A fortification.

The project also needed to coordinate delivery partners' work and accommodate existing market structures and demands. Consumers' pre-established consumption patterns in the two regions also had to be considered as the product was brought to scale.

Scaling

A— Framing: Focus and questions

i— Based on the research focus and questions, what potential opportunities might grow the impact of this research?

The project manager had developed relationships with a number of small- and medium-sized enterprises producing unrefined sunflower oil commonly used in Tanzania. Around the same time, the Government of Tanzania was drafting mandatory fortification rules that would require certain products be fortified with micronutrients. This presented a potential challenge for producers of unrefined sunflower oil, as there was no established process to fortify unrefined oil at the time. However, there could be a clear opportunity for scaling if the unrefined oil could be successfully fortified and commercialized.

A technical study showed that unrefined sunflower oil could be fortified and maintain shelf-stability for long enough to accommodate the production, transportation, sale, and consumption of the oil before the vitamin A would break down. This research project

2. [Promoting Locally Fortified Sunflower Oil Using E-Vouchers \(CIFSRF 2\)](#)
(Project # 107790)

B— Doing: Data collection, analysis/synthesis, and interpretation

i) What evidence will help to determine optimal scale?

- Enterprises' abilities to produce a sufficient quantity of fortified oil to satisfy demand in the regions.
- Cost-effectiveness of production.
- Success to disseminate the oil to the target population.
- How well fortifying the oils benefited the lowest-income households (Could they afford the fortified oil, and did the buying incentives work?).
- Impact of the oil to increase vitamin A levels in the target population.

If the visits had a measurable and useful impact on maternal and child health, this would support the wider implementation throughout Bauchi State, and potentially throughout Nigeria. Other considerations included whether the visits were acceptable and endorsed by different sub-groups within communities and were cost-effective in improving maternal health.

i) How will you involve stakeholders in data collection, analysis/synthesis, and interpretation?

Consumers: Engagement activities at events such as cooking shows to familiarize consumers with the fortified sunflower oil.

Religious leaders and decision makers: Strategic engagement with religious leaders and decision-makers on household spending and misconceptions surrounding micronutrient fortification.

Government: Capitalize on the Tanzanian government's priority to address vitamin A deficiencies. Involve government representatives in the interpreting the data to increase the chances of further scaling the results.

iii) What key moments can you foresee for learning and adaptation?

Interaction with key stakeholders: Through interactions with retailers, the research team realized early on that low-income households tended to buy very small amounts of cooking oil, just enough to last one day. To adapt, the project team offered smaller packaging options to consumers.

Project implementation: The E-voucher system encountered a number of difficulties, leading the research

team to adjust its approach during the project's implementation. They adapted by switching to a retailer-oriented discount called eWallets.

C— Sharing: Communicating findings and research results

i) What strategies will facilitate participation and contribute to the intended impacts of your research?

Beneficiaries: The research team collected, monitored, and analyzed data to understand to what extent lower-income populations were able to purchase the oil. This provided useful information for local and national governments on strategies to scale up the results to other regions. The project also monitored the effects of fortified sunflower oil on vitamin A deficiency in the two target regions.

Users: The team organized major stakeholder meetings at the end of the project, including various governmental agencies. This provided an opportunity to discuss the project results and what conditions were needed for success. This also had the potential to inform next steps. The dialogue encouraged stakeholders to think how the design of such fortification initiatives could be strengthened.

ii) Are there particular findings or aspects of the analysis that may be of use to stakeholders beyond those you targeted throughout the research?

The project tested sustainable business models and strategies to promote vitamin A consumption, and ultimately determined that the fortified oil could reduce micronutrient deficiencies in vulnerable groups. The scope of scaling the impact suggests it is possible to scale to *more regions* than targeted by the project, and also to scale to *more fortified products* to enhance nutrition.

It became apparent that Tanzania's policies and regulations must work hand-in-hand with efforts to enhance nutrition. The regulatory system for any such fortification efforts should be clear and align well with the operation of the enterprises involved in fortification. Coordination is therefore of utmost importance in such scaling efforts.

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**scaling
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