



Working Document

Explorations 04

Scaling: From simple models to rich strategies

Aknowledgements

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For this working paper, a number of ‘thought leaders’ and practitioners involved in scaling efforts were interviewed in the period from December 2015 to July 2016. We would hereby like to express our gratitude for their time and effort spent on getting the paper to this level of analysis, which would not have been possible without their valuable insights and concrete experience from the field.

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Jan Ubels and Floortje Jacobs, 1 November 2016

Colophon

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PPPLab Food & Water is a four-year action research and joint learning initiative (2014 - 2018) to explore the relevance, effectiveness, and quality of Dutch supported public-private partnerships (PPPs).

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Executive summary

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The term 'scaling' is increasingly popular in international development efforts, as it has the connotation of providing a real solution for large numbers of people. However, the popularity of the term is not necessarily matched with a sufficient degree of conceptual clarity, depth of approaches and underpinning of success claims. Good literature and papers on scaling are scarce.

Recently, Public Private Partnerships (PPPs) have been seen as one instrument for overcoming certain barriers to scale, as they combine the competencies and experience of different actors to address difficult development issues and to create breakthroughs.

This paper seeks to unpack the concept of scaling and create conceptual clarity by presenting an overview of the terms, frameworks, and models used in relation to scaling. In doing so, we hope to contribute to the understanding of the specific role of PPPs in scaling and to support practitioners in getting to grips with different scaling approaches. Based on a literature study and interviews with case owners and thought leaders, this paper collects various concepts, frameworks, models, and approaches and presents an overview and synthesis of these. While the cases studied are from the water and agriculture sectors, the concepts and approaches are of wider relevance.

The following aspects of scaling and PPPs are explored and illustrated with examples from practice:

What is scaled. Often the focus is on a specific practice or technical solution that should be scaled. But in real life cases, we see that what is scaled is not so much a technical solution alone, but rather a set of organizational and transactional arrangements that stimulate, enable, and propel the adoption, use, management, and sustainability of the improved solution or practice.

Scaling repertoire. Ten possible and frequently used 'ingredients' of scaling approaches are distinguished. These ingredients also roughly represent four domains: Business & Markets, Governance & Regulation, Empowerment & Transparency, and Knowledge & Technology.

Numbers and systems: horizontal and vertical approaches.

The basic mental model for scaling is often replication or rolling-out: increasing the numbers and copying a successful solution or model to new clients, markets, and contexts. Scale in this horizontal perspective is measured in numbers. Any way of achieving significant levels of scale usually also requires dealing with other vertical system levels: the organizations that play a role in realizing what is scaled and the institutions and rules of the game in the sector or subsector concerned. System change happens when something becomes the 'new normal'. It requires both institutionalization (vertical scaling) and spreading in sheer numbers (horizontal scaling). Horizontal scaling approaches are often applied in inclusive business strategies, but also by public actors and certain NGOs that seek to reach as many people or clients as possible. 'Vertical' scaling approaches focus on changing or strengthening the enabling environment for certain practices or solutions, and are applied by governments, certain civic actors, and (larger) companies.

Horizontal and vertical scaling combined.

Success in scaling seems to rest on finding a good balance between horizontal and vertical approaches and a continuous evolution of the combination. This requires effective and sustained cooperation between the private sector, the development sector, and government.

Entry levels. Different actors will enter the scaling process and ambition from different positions. A distinction can be made between macro, meso and micro entry-level positions. Each of these system levels comes with different ambitions, mindsets and practical focuses. Over time, actors working on these different levels must be connected in a sufficiently coherent way to enable effective scaling in larger systems.

Stages of scaling and transformation. Scaling processes take substantial time to lead to meaningful transformation in a subsector. Sector transformation can be thought of in several stages, starting from disparate small initiatives that gradually gain coherence and build credibility, influence, and volume until a sufficient critical mass is reached, after which a major transition towards new system dynamics, rules of the game,

and institutionalization takes place. It should be recognized that projects of 4–7 years' duration will deal only with a part of such larger transition. The scaling of individual projects or businesses can also be seen in stages: from blueprint, to validation, to market preparation, and real scaling. Analysis of the current stage of scaling and of the specific sector transformation dynamics that are being dealt with is vital for a realistic and successful scaling strategy.

This paper ends with initial findings and perspectives on the relevance of PPPs for scaling. Moreover, we include suggestions on how to deepen the understanding of scaling as a multifaceted challenge and ambition and perspectives on the use of PPPs for specific stages and challenges in scaling efforts. We think it is important to improve the quality of scaling strategies, and to that end we formulate several possibilities for further research and knowledge development.

In Appendix II the document also contains seven case profiles that show how selected projects in the FDW and FDOV portfolios work on scaling.

Scaling is one of the themes of the knowledge agenda of PPPLab. Other themes are business models and financing, the role of the public P, and partnership performance tracking. For more information, see www.ppplab.org

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1. Introduction

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Scaling impact, scaling inclusive business, getting to scale, scaling in, out, up, down, or across – the term scaling is increasingly popular in international efforts. It has the connotation of providing a real solution and getting it to work for large numbers of people. It also implies overcoming some of the pitfalls that many development efforts have struggled with: the focus on pilots that remain islands of success, the on-going need for subsidies, and the lack of institutionalization that plague numerous development programs.

While there are many initiatives that have scaled quite (or even very) successfully, deliberate scaling of pro-poor development impact has proven to be challenging. Recently, Public Private Partnerships (PPPs) are seen as one instrument to achieve scale, as they combine the competencies and experience of different actors. This should help to address tough development issues and create breakthroughs where individual actors cannot produce them. In the Dutch development policy, this is further refined as the ‘Dutch diamond’, in which the specific qualities of private, public, civic, and knowledge actors are combined.¹ Instruments designed with this model in mind include, for example, the FDW and FDOV.²

The popularity of the term scaling and the importance that is given to it are not necessarily matched with a sufficient degree of conceptual clarity, depth of approaches, implementation realism nor underpinning of success claims. In fact, the use of the term is often superficial and there is little solid literature available on the topic. The practitioner seeking to deepen her or his knowledge only finds small and often very dispersed, ill-connected pieces of substance.

PPPLab has therefore initiated a knowledge and research project on scaling.³ The first preliminary outcome is this paper, which seeks to unpack the concept of scaling. We also hope to contribute to further understanding of the specific roles of PPPs in scaling and to support practitioners in getting to grips with different scaling approaches

and elements. This is an exploratory paper aimed at creating conceptual clarity; we have collected different concepts, frameworks, models and approaches and present an overview and synthesis of these. To this end, we have made use of different conceptual frameworks and knowledge bodies, especially international development, inclusive business, sector transformation, and innovation thinking.

It is important to note that we have not used an academic methodology, but rather an inductive knowledge generation process that uses existing sources but also builds new logics between and beyond them. This document seeks to serve as a resource from which the reader can obtain concepts, ideas, frameworks, logics, and practical points of attention when developing, enriching, deepening, reviewing, or discussing his or her own scaling work and ambitions.

This paper is written with a focus on actors directly engaged in implementing concrete PPP programs in the agriculture and water sectors. Yet the insights in this document are relevant to programs in other fields and to policy makers and academics as well. As well as using various content sources, we have interviewed thought leaders (see Appendix I) and have interwoven their specific insights and lessons throughout the text. An equally important source of knowledge and experience is the range of specific projects dealing with scaling which have been analyzed through documents and interviews; their real-life examples and experiences are used to further deepen practical understanding.⁴

While short text boxes are included in this paper to illustrate concepts and logics, a more elaborate collection of case profiles on scaling can be found in Appendix II. We have thus combined conceptual exploration with cases to verify the applicability of the concepts. We expect that this enables easier translation from the theory and concepts used in this paper to more practical applicable tools for a next stage of this knowledge trajectory.⁵

¹ Ssee PPPLab's Insights Series #01: 'Public-Private Partnerships, A Brief Introduction', at www.ppplab.org/publication/insight-series-01-public-private-partnerships-a-brief-introduction/. ² For basic information on both instruments, see PPPLab's portfolio scans available at www.ppplab.org. ³ It is important to note that parallel to this trajectory, PPPLab is also working on other related themes – namely, financing strategies for PPPs, the role of the public partner in PPPs, and a partnering process tool. These publications are expected before the end of 2016 and will be available at www.ppplab.org. ⁴ See www.ppplab.org under "resources". ⁵ We expect to develop a first 'navigation tool' in spring 2017.

2. Context

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A growing need and opportunity for impact at scale in international development ambitions can presently be witnessed; there is a need therefore to develop a stronger ability to tackle scale with understanding and strategic skill. This attention to scale in development programs must be understood against the background of some major trends. From development literature and practice, five important contextual trends can be identified in relation to scaling:

- **A rapidly changing world.** We live in a world where changes at scale are happening in many fields: from the use of mobile phones and immunization rates to environmental degradation and market integration, to mention just a few. These changes are increasingly generated in global and South–South knowledge, and economic and social interactions.
- **Systemic challenges.** Positive change necessary for critical global issues such as sanitation, food and environmental concerns stagnates or moves far too slowly. For example, the world needs to feed extremely large numbers in a sustainable manner within decades. The general consensus is that solutions can only emerge through major systemic transitions or transformations. For this, the Sustainable Development Goals (SDGs) emphasize the importance of partnerships. Combining private and public resources and qualities is seen as essential in reaching the SDGs, as are new financing instruments to support such transitions at scale.⁶
- **Changing aid.** Official development assistance (ODA or aid) is changing in importance in the context of the total financial flows between the so-called developed and less-developed parts of global society. Development efforts are seeking to break out of the limitations of projects, pilots, and donor aid. Aid is increasingly used to leverage other finance for structural solutions. The transition from the MDGs to SDGs means a refinement of specific targets, but perhaps more importantly, also more attention to linkages between issues, to sustainability, and to systemic

transitions. Donors need to understand how to invest limited but unique means wisely so as to stimulate catalytic change.

- **The power of the market.** The last 15 years have witnessed increasing emphasis on the power and importance of market-driven approaches for sustainable change at scale.⁷ This has strongly influenced the priorities of the development agenda and the instruments used. Recently, this has been complemented by a renewed acknowledgement of the complementary importance of the public domain and civic action for scaling processes, especially to address governance, policies, regulation, and the required grounding in citizen engagement.
- **Cross sectoral learning.** Individuals, communities, businesses, NGOs, and governments are all increasingly ‘networked’ within and across countries. This results in increased availability of data and information, increased possibilities of horizontal exchange between peers, and a resulting ability to compare, choose, and mobilize; all these drive the potential for innovation and scaling.

It is against the background of such developments and dynamics that this paper explores the scaling topic and analyzes its elements, approaches, and challenges.

⁶ In this light, PPPLab is conducting a study on financing options and strategies of PPPs, which is also expected before the end of 2016. ⁷ An example is the inclusive business approach first described by the World Business Council for Sustainable Development (WBCSD) in 2005, which focuses on sustainable business solutions that go beyond philanthropy and expand access to goods, services, and livelihood opportunities for low-income communities in commercially viable ways.

3. The rationale for scaling

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The attractiveness and rationale of scaling has various dimensions for donors and other development actors. Of course, scaling means increasing business for the private sector and reaching more impact for the public/civic sector. But scaling is also associated with getting beyond pilots and leveraging budgets and efforts in an efficient way. All in all, we have noted that scale is associated with five different benefits in this study:

- Firstly, and by definition, scale means **reaching more people** (beneficiaries or clients) and thus improves the situation of larger numbers of people.
- Secondly, scale simply **pays off for the actors involved** (businesses, NGOs, or governments), as it increases both their claims of credibility and relevance, and their own turnover and size of operations.
- Thirdly, an important expectation is that effective scaling is the next stage in **strengthening the effectiveness of aid and development efforts**. Effective scaling approaches are supposed to overcome shortcomings of many development projects and get beyond islands of success.
- In the fourth place, scale is associated with **higher efficiencies per person reached**, and is thus expected to bring higher efficiency and value-for-money to development efforts.
- Fifthly, scale is often correlated with **achieving systemic changes and financial sustainability**: what has been scaled becomes 'the new normal'.

Although these five benefits are often associated with scaling, they are not necessarily found in practice. For example, reaching a larger target group does not automatically lead to improved efficiencies per person reached. Scaling might also have negative consequences – for example when there is too much focus on adoption-oriented scaling. Such scaling ambitions may easily become blueprints that are ill-adapted to different contexts and might come to be perceived as top-down pushed efforts (Wigboldus et al. 2016). So 'big' is not always better, especially when scaling strategies are not well thought through.

However, in the international development field, scaling of solutions is rarely contested. After all, we cannot afford to invest in research and innovation for the purpose of projects remaining islands of success (Wigboldus et al. 2016). However, the current attention to scaling sometimes seems to imply that scaling is a goal in itself rather than a means to create impact. This paper frames scaling as a deliberate means to create social, environmental, or economic impact.

4. What is scaled?

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A basic question when analyzing and improving scaling ambitions is what is it that we actually seek to scale? Initially, people often speak about a specific practice or technical solution (leading to social or economic impact) that should be scaled – for example, the use of toilets or a specific water-saving irrigation technique for agriculture. But if we look at projects that have gone in-depth in scaling in these domains, we obtain a much richer understanding.

What is (being) scaled? Two examples from the FDW portfolio.

Sanitation in Kenya ⁸

The “Financial Inclusion Improves Sanitation and Health (FINISH)” project aims to decrease the prevalence of sanitation-related diseases through improved sanitation facilities, as a result of increased demand and financial inclusion of marginalized communities in two counties in Kenya. Its scaling strategy is built around the “Community Led Total Sanitation” (CLTS) approach, which raises community awareness of the risks of open defecation. This collective awareness is meant to lead to increased motivation for the construction and use of sanitation facilities. The introduction of this process involves the back-up from local government planning, priority setting and support, marketing of improved sanitation (CLTS+), and the setting up of supply chains that provide and build toilets. Additionally, for both the toilet owners and the enterprises, the engagement of (micro)finance institutions (CLTS++) and NGOs is required to support the various activities.

Improvements in sugarcane growing in India ⁹

The “Increasing Water Use Efficiency In Sugarcane Growing In India” project aims to increase water-use efficiency in sugarcane farming in India to address the over-exploitation of the groundwater resource that threatens the sugarcane industry. The project activities center on the adoption of improved irrigation and farming practices known to reduce water use and result in higher crop yields for the farmer. The adoption of these improved practices is stimulated through extension services that are initiated by three sugar mills.

The intervention strategy is designed to achieve sustainability on the basis of a business case for both the cane farmers and the sugar mills. Next to this, local leadership (cane commissioners, panchayats, and the Ministry of Agriculture) is involved to obtain buy-in and influence in the sector. The business case has already been tested on individual farmer’s fields. However, this project intends to deliver solid proof of the effectiveness of the intervention at scale by factories, and to that end also uses monitoring techniques of water productivity through remote-sensing techniques.

From these different examples in sanitation and sustainable agriculture, we can obtain a more refined understanding of what is scaled:

- Awareness and demand creation and organization among users or producers;
- Availability of technical solution or practice;
- Financial arrangements;
- Value chain development building linkages to suppliers, buyers, or service providers;
- Back-up by professional knowledge;
- Embedding in (local) government priorities, policies and programs.

This understanding would seem to apply not just to the two examples above, but in general to programs that promote a specific technical solution or practice for making impact. It reflects that scaling processes are not just replicating a single thing, but a set of arrangements; they thus consist of a set of intertwined scaling processes. Technical solutions, supply chains, financing mechanisms, policies and regulations, professional knowledge, etc., all need to be scaled in a sufficiently coherent, interrelated way in order to make something simple, such as the use of a toilet or an agricultural practice, possible at scale. The scaling of each of these elements will also bring its own specific challenges and requirements and will require working with the specific organizations and rules of the game relevant to each element. One example is financing, which plays a particularly crucial role in these arrangements, as getting from a solution to scale often requires a careful strategy consisting of an evolving combination of various types of financing over time.¹⁰

⁸ For a more extended case profile, see Appendix II: Case Profile 2. ⁹ See Appendix II: Case Profile 1. ¹⁰ See also PPPLab’s parallel work stream on financing PPPs, which is expected to produce more detailed insight in the relation between scaling and financing strategies.

What is scaled is not so much a technical solution alone, but rather a set of arrangements that stimulates the adoption and continuity of an improved solution or practice.

One can also look at scaling from a fundamentally different perspective: not so much of promoting a specific solution package (the set of arrangements as described above), but of creating certain new or improved rules of the game. This is what has been done in many of the voluntary standards that have been created in agricultural value chains for sustainable coffee, tea, sugar, soy, and so on. Similarly, the adoption of Open Defecation-Free (ODF) villages in certain countries is essentially also a way of adopting a new standard and new rules for the sanitation situation in communities. Such frameworks do not necessarily prescribe how the improved situation should be achieved (though sometimes public policies and norms can also do that, to some extent), but they set new norms and rules that stimulate the adoption of certain broad types of solutions or practices that fulfill certain criteria.

5. Intervention repertoire for scaling

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From the interviews and cases used in this study, an interesting range of activity types show up as actually being used in seeking to achieve scale. On this basis, a scaling repertoire of ten separate categories can be distinguished, each reflecting particular sets of professional activities.

Each category can be seen as a possible ingredient for building a rich and effective scaling strategy. Scaling is not a standard recipe, but a well thought through mix of ingredients can help to deepen

a specific scaling strategy. Depending on your precise scaling ambition and context, a specific combination and mixture of ingredients has to be considered.

*From experience and practice, **ten ingredients** for practical and sturdy scaling processes can be derived. These roughly reflect four domains of work: Business & Markets, Governance & Regulation, Empowerment & Transparency and Knowledge & Technology.*

Scaling ingredients and what they provide to support scaling

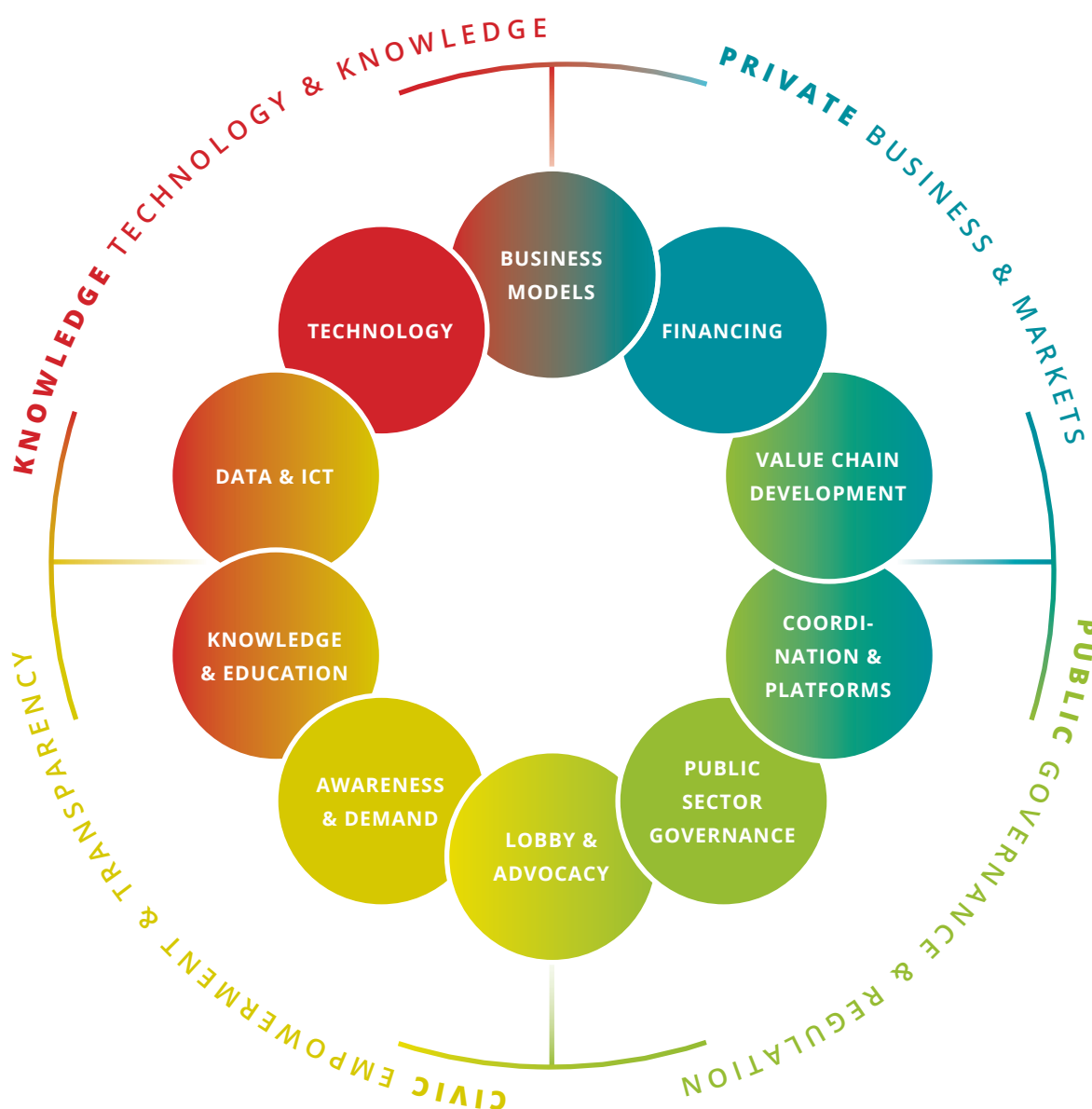
SCALING INGREDIENT	WHAT IT PROVIDES TO SUPPORT SCALING
Technology	An effective and efficient solution for the issue at stake
Business case	An attractive financial/economic proposition for users and others
Awareness & demand	A wish and readiness for the consumer or producer to use the solution
Financing	Effective financing options for users and providers or buyers
Value chain development	Effective input and supply provision and other support services
Coordination platform	Strategic collaboration between key stakeholders
Public sector governance	Enabling policies, regulations and mechanisms
Lobby and advocacy	A 'change coalition' that pursues scaling and influences others
Knowledge and education	The required knowledge and professional capacity and recognition
Data & ICT	Evidence and facts that underpin and communicate the scaling ambition

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In the figure below, these ingredients are roughly grouped into four domains of work: Business & Markets, Governance & Regulation, Empowerment & Transparency, and Knowledge & Technology.¹¹

The four domains reflect the main focus and intervention tendencies of private, civic, public, and knowledge actors.¹² This distinction resonates with the logic of the Dutch Diamond model,¹³ which

suggests that breakthroughs on tough issues can be fostered by adequately using and combining the specific qualities and dynamics of business, government, civil society, and knowledge actors. In practice, scaling strategies include several, or even quite a number of such scaling ingredients. The emphasis can vary for different initiatives, as well as for the stages of the scaling process (as described in the chapters that follow).



¹¹ This grouping into four domains was performed after the 10 categories had been delineated on the basis of cases and literature. ¹² These orientations or domains must, however, not be taken too rigidly. In today's world, more innovative actors often pick up elements from other domains and display more 'hybrid' behaviors and repertoires. ¹³ For more information, see http://www.ondernemeninontwikkelingslanden.nl/sites/default/files/bijlages/nieuws/01%20BZ_folder_328x264mm_11.pdf. A more recent version of the Dutch Diamond model also includes financial institutions as a fifth actor category. We have not named them separately here. For more information, see <http://aiv-advies.nl/download/ad4cd569-2111-4292-b04d-25aa7ba41441.pdf>.

Scaling ingredients: examples of diverse scaling repertoires

Sanitation in Kenya ¹⁴

The “Financial Inclusion Improves Sanitation and Health (FINISH)” project, as mentioned in Chapter 4, is an example of a project that uses a rich scaling strategy, building on a diverse set of ingredients:

- **Demand creation** for sanitation through the CLTS approach.
- Provision of **financing** options by providing access to sanitation loans through microfinance institutions.
- **Value chain development** through training entrepreneurs who will build and manage the sanitation, thereby building a sanitation supply chain.
- **A business model** for sanitation for low-income communities is built using the previous three ingredients.
- Focusing on **public sector governance** by cooperating with the Kenyan Ministry of Health, which is providing the CLTS framework and has set the goal of reaching 100% Open Defecation-Free Villages as a policy objective
- Building a **platform** of key stakeholders through which knowledge and experience with the project is shared and coordinated

As might be clear now, this project taps into three different domains (the private, public, and civic; though to a lesser extent it also contains elements of the knowledge domain). This is also reflected in the partners of the PPP, which are mainly NGOs, microfinance institutions and the Kenyan government.

Health services in Kenya ¹⁵

The “Health SME Business Development Project” is built on the following repertoire:

- Providing access to **knowledge & education** for Health SMEs through business development services, with the aim of enhancing performance and increasing revenues.
- At the same time, also providing access to **finance**, which enables further investments and performance improvements.
- It is foreseen that the business development services now provided with support from Dutch consultants will eventually be taken over by local consultants; in that sense, it will build a **supply chain** for those services.
- **Demand** is created by showing Health SMEs the benefits of paying for business development services (starting with a cross-subsidizing approach for lower segment SMEs).
- In essence, these building blocks lead to a **business model** for business development services for health SMEs.

This project mainly taps into the private, civic, and knowledge domains.

¹⁴ See Appendix II: Case Profile 2. ¹⁵ See Appendix II: Case Profile 5.

6. Numbers and system

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The basic mental model for scaling is often replication or rolling-out: simply increasing the numbers and copying a successful solution or model to new clients, markets, and contexts. Scale in this horizontal perspective is measured in sheer **numbers**.

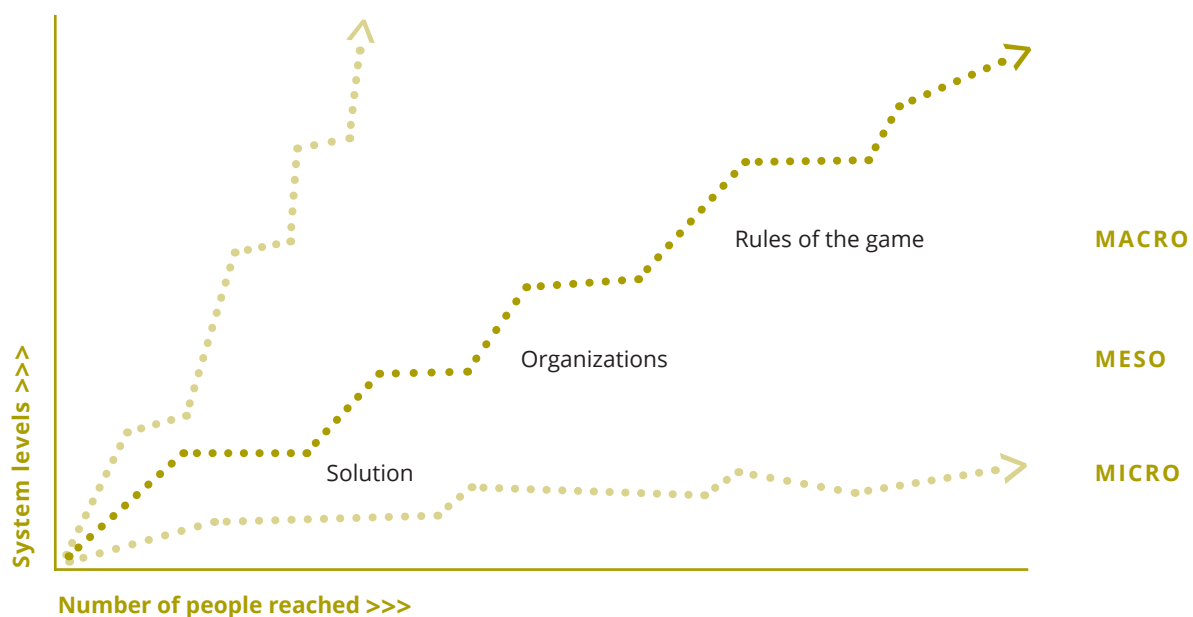
In many cases, achieving significant scale requires dealing with other **system** levels: not just spreading the solution or practice, but also altering the ways that organizations and institutions function so as to enable the solution or practice. This is also labelled as vertical scaling, and involves changing the rules of the game in the domain concerned.

A simple example of dealing with different system levels is the attempt to scale financial services for improved agriculture practices (NewForesight 2013). The first level, for example in a pilot project,

would be concerned with the type of **financial product** or **service** that farmers need so that they can afford to implement the improved agricultural practice. At a next level however, when seeking to make this accessible to more farmers, the concern shifts to the **financial institution** (such as a specific bank or a microfinance institution) and the way that it can provide, manage, and sustain such a product. If one wants to scale further – to national level, for example – the concern shifts again to the **rules of the game** (policies, regulations, institutional landscape, business climate, etc.) that will allow various financial institutions to provide such products or services.¹⁶

Vertical scaling is used to ultimately reach more people and have more impact, and thus to reach more horizontal scale. The horizontal and vertical dimensions are visualized in Figure 2.

Figure 2. The relation between numbers of people reached and system levels (developed on the basis of Wigboldus & Leeuwis (2013) and New Foresight (2013)).



¹⁶ Note some development initiatives explicitly focus on what is sometimes called 'downscaling': the process of developing 'smaller' solutions for more specific contexts, and replicating these.

Although it is clear that there is a relation between numbers and system levels reached, there is not a linear or proportional pathway to follow. A real-life scaling process may consist of different phases in which the focus on and balance between horizontal and vertical approaches shifts considerably. Every scaling effort will follow its own path; hence the irregular dotted line of the arrow.

We will return to the horizontal and vertical dimensions of scale and related approaches in the two following chapters. Before that, it is important to note **the different approaches of public and private actors** regarding scale. Public actors, as well as NGOs involved in advocacy and rights-based approaches, often focus on enshrining certain approaches, rights or practices in rules and regulations. In that sense, they adopt vertical approaches to scale and focus on policies, regulation, standards and the strengthening of enabling conditions, knowledge, and governance arrangements.

On the other hand, businesses that sell a certain product or buy agricultural produce from small farmers – or NGOs that focus on implementation or promote specific solutions – have a primary focus on increasing numbers and turn-over. They look at efficiently reaching larger numbers, either through increasing a single business or replicating certain business models. In that sense, they tend to adopt horizontal approaches in first instance, propelled by a sound business case, cutting edge technology, supportive financial services, and value chain development. However, businesses can also be the key driver behind rules of the game-oriented scaling interventions – for example through agreements in industry or subsector platforms that are embodied in voluntary business standards and often stimulated through market benefits (higher prices). They may also be backed up with certain (publicly endorsed or enforced) admission barriers or standards.

Both business and public actors – as well as civil society and knowledge players – can and do use vertical and horizontal approaches in combination. In this paper, we clarify and deepen a view on scaling that recognizes the systemic dimensions of scaling on challenging development issues in water and agriculture. Such a view acknowledges both

the horizontal and vertical dimensions. In these contexts, vertical scaling is a critical necessity for realizing and sustaining horizontal impact numbers. This is a key rationale for donors to invest in PPPs, which are expected to have the capacity to address the combination of horizontal and vertical dynamics better than single actors can.

***System change** is when something becomes the 'new normal'. It requires both adoption in sheer numbers (horizontal scaling) and institutionalization at different levels (vertical scaling).*

7. Horizontal approaches

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Overall, horizontal scaling activities focus on:

- Demand, awareness, and producer and customer engagement;
- Technical qualities, competitiveness of the solution, and service;
- Attractiveness and efficiency of the business models for users, business, and intermediate players, including efficiency in the delivery model;
- Value chain development

Such elements are of essential importance to companies that take an inclusive business perspective: firms that seek to be of relevance to the bottom of the pyramid for both business and social reasons. By definition, such actors look at scaling in terms of business growth and introduce business thinking in achieving impact. One main way of conceptualizing scaling in this sphere has been through combining scale with a basic marketing matrix. This logic has been used by various authors and with different terminology.¹⁷ Figure 3 shows some of these variations, focusing on the types of products to be scaled and the types of market or customer targeted.

Regardless of the terminology used, it might be clear that each quadrant of the matrix represents a different kind of business challenge.

Generally, horizontal scaling strategies are associated with strategies for business growth. In certain cases, these are strongly driven by a lead business seeking to increase its own market share. In doing so, it promotes its relatively pro-poor product and service model. But there are other examples where a program rather promotes the emergence of a large(r) number of SMEs. In numerous cases, a combination of a lead firm with intermediaries or support services is also seen. In the examples on the next page, there exists some role for public agencies, farmer organizations, and NGOs, but this role is limited and clearly only supportive to the private sector market drive.

Figure 3. Variations in terminology used for scaling. Table based on the conceptual framework of van Tulder & Blokhuis (2016).¹⁸

SCALING ORIENTATIONS	Existing Markets	New Markets
Existing products	Scaling up (London, 2011) Scaling deep (BoPInc 2015) Expanding in depth (Gradl & Knobloch 2010)	Scaling wide (London, 2011) Scaling up (BoPInc 2015) Expanding in breadth (Gradl & Knobloch 2010)
New products	Scaling deep (London 2011) Scaling out (BoPInc 2015) Expanding in width (Gradl & Knobloch 2010)	Scaling across (BoPInc 2015)

¹⁷ In this paper, we have decided to keep our own terminology to the general term 'horizontal scaling' as it is not our aim to delve into the details of specific business growth strategies. The overview is meant to show the wide variety of terms currently used in relation to scaling, and the need for conceptual clarity on a more detailed level. In this paper, we describe horizontal scaling in more detail without adding extra terms to the already confusing terminology. ¹⁸ For an adequate discussion of the range of terms and definitions used for linking scaling to this marketing matrix, see the publication by van Tulder and Blokhuis.

Horizontal scaling: two examples from the FDOV portfolio

Analytical services for farming in Kenya ¹⁹

The “Providing Analytical Services for Informed Farming in Kenya (PASIFIK)” project builds capacity for a franchise organization aiming at quick, cheap and reliable soil and feed testing, and related advice, for small and medium farmers in Kenya. These services, based on proven technology, will be easily accessible to farmers through the use of mobile field laboratories that visit organized farmers in their own area, charging low prices. The program will entail the development and adjustment of the mobile field labs to the local context, identification of franchise takers (local entrepreneurs) who will manage the laboratory systems, awareness campaigns, and training programs that educate farmers on soil and feed management – thus creating a market for this innovative service.

Poultry in Myanmar ²⁰

For the “Sustainable and Affordable Poultry for All (SAPA)” project, a Dutch and a Belgian company aim to develop the input market for broiler farmers in Myanmar by introducing more productive and sustainable farming practices for poultry and corn production. This will result in lower cost prices and productivity gains, making poultry more affordable. To achieve this, a professional hatchery will be set up, reducing the current unstable supply of day-old chickens. The capacity of 250 broiler farmers will be enhanced to professionally manage the farms. This will be done by setting up three poultry training centers (PTCs) which will offer professional broiler farm management training courses. These PTCs will be developed by making use of already existing poultry farms, which will be upgraded gradually. Additionally, as corn is the main cost element of poultry feed, a team of advisors will be developed to train corn farmers, from whom the project will buy the corn. As compared to the present feed market, the project activities will create more reliability, open and independent access, and greater choice for farmers.

Horizontal scaling models are not exclusively promoted by business. The development sector is full of (both successful and less successful) horizontal approaches driven by semipublic and NGO actors. Agricultural extension services for more sustainable and productive farming practices for small farmers are a good example of this. A key issue for such activities has always been who continues to pay for them in the case that public budgets and civic resources are restrained.

In recent years, so-called market-driven approaches or solutions have been introduced to programs driven by public or civic actors. Agricultural extension and health services, for example, are increasingly being reshaped into demand-driven, user-funded services.²¹ The same applies to sanitation, where direct household benefits may be sufficient for poor households to finance improvements. Such market-driven approaches have been proven to increase the effectiveness and efficiency of public or civic-led programs, as they propel an in-built accountability between the commercial service provider and the client who seeks value for money. Such market dynamics can also drive service providers to offer more varied and locally adjusted services to different client segments than top-down public programs are usually able to provide.

So even public and civic horizontal scaling approaches tend to use more and more market-driven and private-sector-driven elements. In such contexts, public subsidies and philanthropic finance are increasingly used to help open up new markets and client segments that the private sector has not yet been able to serve on a commercial basis. Noncommercial finance covers market development costs and subsidizes (for some period) the high-risk investments needed to reach out to the poorer and most difficult to serve regions and people (‘going the last mile’). For these components, NGOs or not-for-profit companies are often engaged, as purely private companies themselves typically lack the manpower, local networks, and social capital to address last-mile challenges.

¹⁹ See Appendix II: Case Profile 4. ²⁰ See Appendix II: Case Profile 6. ²¹ Sometimes backed by mutual health insurance schemes; for example, the “Fanning the Spark” project in Burundi (FDOV12BI01). Also see <http://www.rvo.nl/subsidies-regelingen/projecten/fanning-spark-burundi>.

Horizontal approaches to scale are generally associated with strategies for replication, business growth, and market-driven approaches to achieve impact numbers.

Horizontal scaling: an example from the FDOV portfolio

Health services in Kenya ²²

The “Health SME Business Development Project”, led by the PharmAccess Foundation and its sister organization, Medical Credit Fund (MCF), aims to improve the clinical and business performance of Health SMEs (HSMEs) in Kenya, enabling the private health sector to better serve the rapidly growing demand for quality private healthcare services. The core intervention of the program consists of setting up and scaling up business development services for the HSME sector in Kenya through loan products and business development services (such as training, coaching, and managerial support by local consultants with the support of Dutch consultants) in order to help HSMEs improve their performance and grow their businesses. The package of products and services is designed in a tiered fashion, targeting three different market segments: the low-end of the market, which needs instructions on the basics of running a health business (Segment C); the mid-market HSMEs (Segment B); and higher end HSMEs, which will be provided with help accessing larger loans, high level training (mini-MBAs), and strategic advisory services (Segment A). The FDOV subsidy is used to gradually build up a business case for business development services – i.e., researching market demand, developing curricula, training trainers and consultants, and partially subsidizing first projects. However, it is expected that the higher-end SMEs will gradually become willing and able to pay for the services themselves once they see the results, and that the tiered structure will enable cross-subsidizing of the business development services between the segments.

The strength of the horizontal inclusive business approaches is that they focus on business drivers and clear benefits on the ground. They have a strong focus on achieving market numbers through various directions of market expansion, as reflected in the matrix at the start of this section. They usually pay much attention to getting the basics for replication clear to ensure financial soundness. By building successful business models, horizontal approaches make an essential contribution to sustainability and the on-going process of scaling. Horizontal approaches tend to plan and measure the scale of impact very deliberately. They also strongly build on local actors (businesses), peer exchange, and learning. In general, business actors have a strong drive towards standardization as a way of scaling, as they commonly seek to develop a clear business model in order to reach high numbers.

There is discussion about the degree of success of horizontal approaches to scaling, and especially the inclusive business logic. On the one hand, the increased use of business dynamics and market-based solutions over the last 15 years is seen as a key improvement to the development repertoire. On the other, the application of inclusive business approaches also faces hurdles and limitations.²³

²² See Appendix II: Case Profile 5. ²³ For example, the expansion of impact investment portfolios (and more recently, impact bonds) for inclusive business has struggled with the low number of viable (bankable) business propositions. The pipeline remains too small, and thus the volume of business endeavors (and investments) that explicitly target development impact remains limited. For example, see http://www.impacteconomy.com/papers/IE_FINDINGS_SCDII_EN.pdf.

8. Vertical approaches

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In the vertical scaling repertoire, the focus is on:

- Sector or industry platforms, including self-regulation and voluntary standards;
- Improvements in the coordination and governance of the overall value chain or subsector;
- Influencing government policies, regulations, and standards, including through lobbying and advocacy;
- Tertiary chain and sector functions such as education and knowledge institutes.

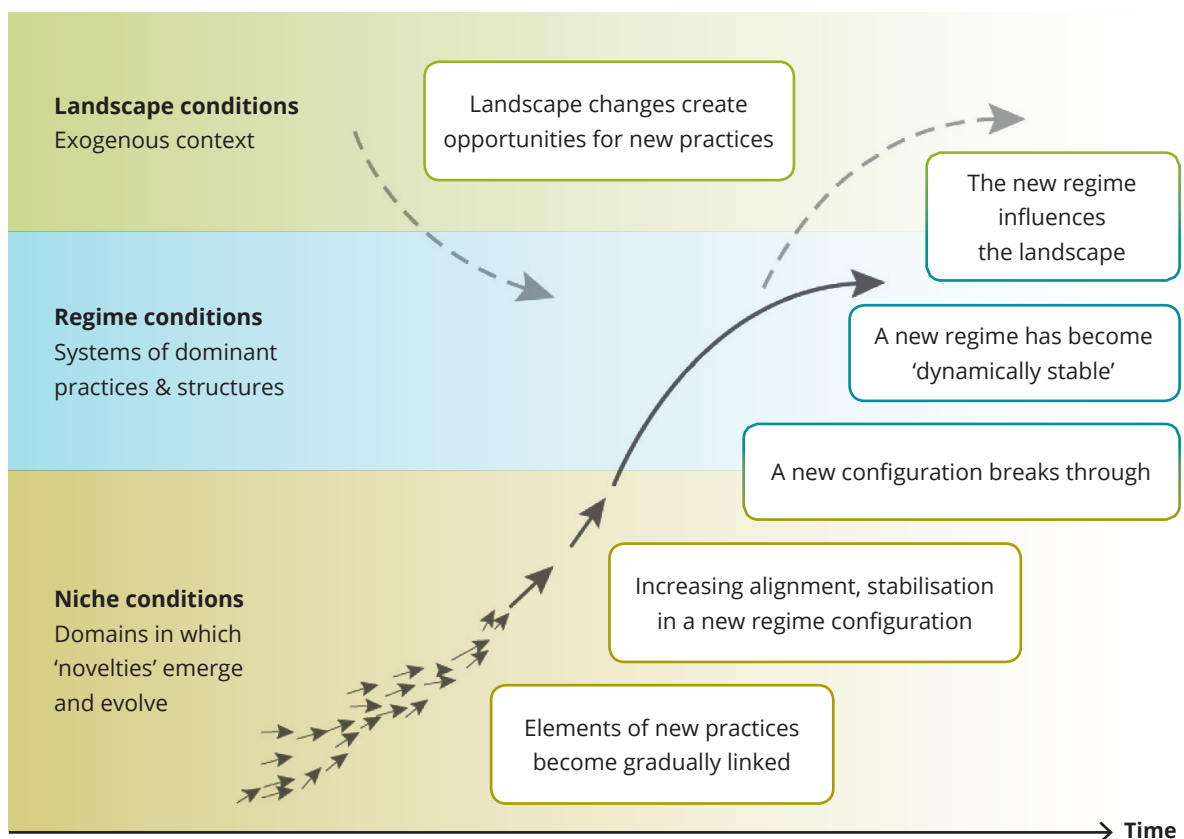
These vertical orientations are often brought in as an addition to demand, business models, competitiveness, and supply chain efficiency approaches; because sooner or later, actors attempting to reach more consumers or beneficiaries with a new solution or practice will meet limitations in the way the sector or subsector functions. To further scale horizontally, these actors need to pursue change in the sector to embed the

solution in adequate and relevant organizations, chain dynamics, policies, and rules of the game.

Some actors are not necessarily promoting a specific solution, but rather seek to create an enabling environment that incentivizes certain types of improvements or practices (for example, more environmentally friendly, less child labor, or more pro-poor outreach). In vertical approaches to scale, there is also an ambition for system change: redefining what is 'normal' and getting improved practices backed up by the system.

Vertical approaches look at the systems and institutions that govern, enable, and shape the specific practices and solutions, thus strengthening the enabling environment – for example, by making certain practices a policy priority, enforcing or stimulating them through regulations, or by providing financial mechanisms.

Figure 4. The multilevel perspective of scaling (Wigboldus & Leeuwis 2013) ²⁴



²⁴ The 'landscape' dimension in this figure refers to the bigger macro, country, and international settings (with their own higher level 'rules of the game'), within which the specific subsector regime sits.

A relevant perspective in this context is also how innovations spread. Innovations are usually developed in a certain niche, such as through pilot projects, often with specific project support and financing. A relevant model that visualizes the vertical dimension of scale in innovation processes has been created by Wigboldus and Leeuwis as is shown on the previous page. This can be considered a more detailed version of the figure in Chapter 6.²⁵ The figure shows that, as a new practice gains ground, it seeks to become embedded in a regime. In other words, it seeks to influence and receive back-up from the rules of the game and the institutions that shape the sector concerned. It then becomes part of the new normal.

Vertical scaling: two examples from the FDW portfolio

Vertical scaling ambitions are also visible in several FDW and FDOV projects, both in the water and the agricultural domains. They reflect cases where PPPs are deliberately trying to achieve system change beyond the boundaries of their own projects.

Drinking water in Kenya ²⁶

The “Performance Enhancement of Water utilities in Kenya through benchmarking, collective learning and innovative financing (PEWAK)” project is setting up a learning platform and using benchmarking between water companies to improve access to safe water for low-income areas in Kenya. The utilities or Water Service Providers (WSPs) are the principle suppliers of water and sanitation services to these areas. However, due to their poor commercial viability, their ability to invest sustainably in underserved areas is low. The project, with the water utilities sector association WASPA leading the benchmarking, helps utilities to learn the practical strategies to improve their performance and to make smart investments to reduce water losses and other water not paid for (non-revenue water or NRW). In essence, it aims to upscale benchmarking as a tool for rapid dissemination and stimulation of best practices to at least 25 WSPs, including anchoring the method for sector-wide impact and continuous performance improvement. The project builds on a niche created through previous projects with individual utilities,

and is now using interventions to gain traction at the sector (or regime) level by engaging many of the utilities while also gradually influencing the regulating body (WASREB). For ownership and sustainability reasons, the project gradually develops standards and self-governance through a knowledge platform owned by the utilities themselves.

Sugarcane in India ²⁷

The “Increasing Water Use Efficiency In Sugarcane Growing In India” project, which was already named in Chapter 4, aims to increase water use efficiency in sugarcane farming through the adoption of improved irrigation and farming practices. While the project is ‘only’ targeting the command areas of three sugar mills, the FDW subsidy will leverage public and private resources necessary to achieve a proof of concept which is essential for increased credibility, advocacy and strengthening scaling conditions. Furthermore, the project enables interaction with the relevant stakeholders in the sector (including local leadership and government), which provides lead partner Solidaridad a seat at the table in essential policy discussions. Clearly, Solidaridad sees this project as one element in a larger effort to influence a much wider conversation on systemic water issues in (South) India. The scaling strategy of the project can thus only be fully understood in the context of a wider portfolio of activities of Solidaridad and other key partners.

Each of these cases does deliberately work with a number of organizations or a (emerging) platform of organizations and use their concrete results to stage a broader conversation on adjusting the operating logics and underlying rules of the game (regime) in the subsector concerned. The logic of vertical scaling is further illustrated by the distinction between **push and pull dynamics** as suggested by Wigboldus et al. (2016) and visualised in Figure 5 on the next page.

In certain cases, a new solution or practice that is developed in a specific niche still must be ‘pushed’ in the absence of an enabling environment. For successful further scaling, one can then try to promote the solution by changing the rules of the game in the sector. Doing so creates an

²⁵ Similar curves can be found in related strands of literature, such as on innovation processes, institutional and governance reform, and sector development. For an example of the latter, also see Chapter 11, where a model for sector transformation is explained based on the work of NewForesight, AidEnvironment, and IIED (2015).

²⁶ See Appendix II: Case Profile 3. ²⁷ See Appendix II: Case Profile 1.

enabling set of visions, norms, and priorities in the macrocontext that will help to stimulate and 'pull' further scaling in new niches.

Vertical approaches to scale pursue change in the sector concerned to embed/foster a solution in relevant organizations, value chains, policies, and rules of the game.

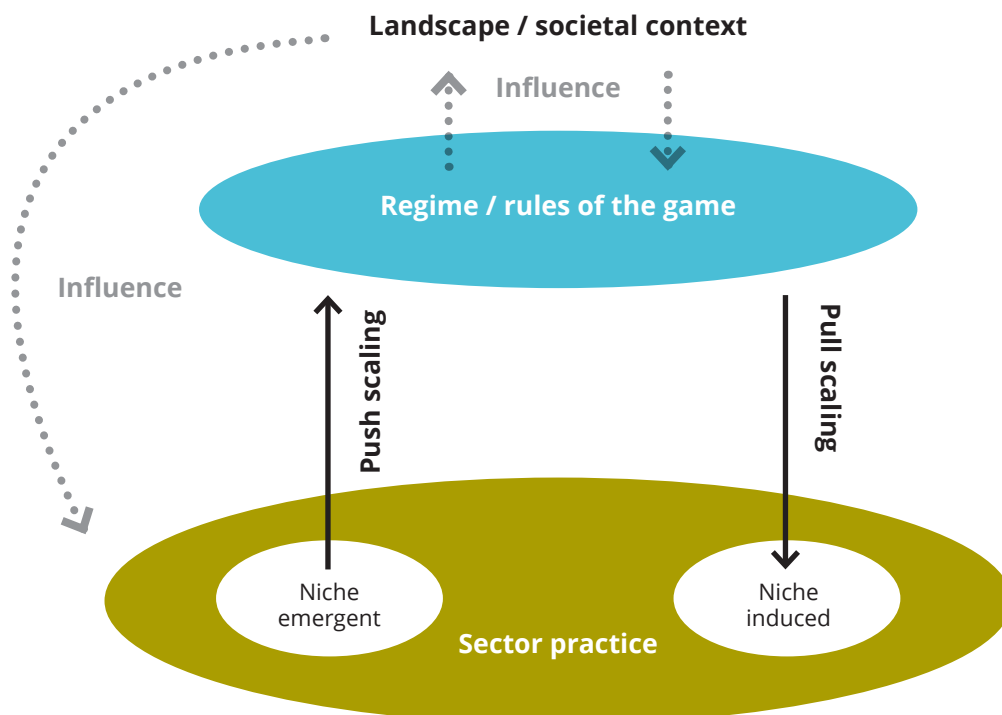
Although vertical scaling approaches are a natural perspective for many public actors and certain NGOs, they are also used by certain lead companies. Where lead firms begin to drive roundtables to shape the rules of the game in their commodity or subsector, for example, they are applying vertical scaling strategies.²⁸

Vertical scaling strategies also have their limitations and pitfalls. For example, when policies and rules are not sufficiently grounded in and responsive

to field realities, and are not sufficiently fed by experiences with horizontal approaches, they risk becoming too standardized and too much top-down without sufficient space for local actors, motivation, and adaptation.

It should also be stressed that achieving vertical changes can often be challenging. Many **barriers to scale** are located in the broader sector dynamics and governance environment.²⁹ Current rules reflect current power and norms, and thus exist for a reason. Political and cultural acceptance of new practices and rules of the game, both informal and formal, is often a demanding and highly political process. Much effort and time are needed to achieve governance, regulatory, institutional, or legislative change. Horizontal scaling of inherently interesting innovations or propositions is sometimes crippled or stalled by such lack of vertical breakthroughs and changes.

Figure 5: Push and pull incentives for scaling (Wigboldus et al. 2016)



²⁸ A firm innovating the way business is done will often directly or indirectly apply vertical strategies to have its new approach allowed, and preferably even stimulated, in the norms and rules of the sector concerned. The FINISH sanitation project in Kenya is an example. The project not only seeks to create new financing mechanisms for sanitation, but also seeks to embed these in organizations and general sector dynamics.²⁹ See 'Beyond the Pioneer' (2014) by Koh et al., p. 11, which identifies barriers in the value chain, public good, and government levels. This is also an interesting model of vertical scaling challenges, which in a sense is an alternative to the Wigboldus and Leeuwis picture used in this chapter. The model by Koh et al. focuses more on scaling from an inclusive business perspective of a specific firm.

9. Combining horizontal and vertical – different entry points

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The horizontal and vertical scaling perspectives discussed in the previous two sections have different emphases and action orientations, as summarized in the table below.

Success in scaling lies in finding a good balance between horizontal and vertical dynamics and continuously evolving this mixture. Traditional aid actors thought very ‘vertically’ for decades, working on policies and regulations while horizontal dynamics were limited. In fact, their thinking was based on top-down and trickle-down models. Ellerman (2003) framed this as a lack of understanding of the importance of horizontal social learning as a key development dynamic.

Over the last fifteen years, the attention to private sector engagement and market-driven solutions has given a healthy impulse for strengthening horizontal perspectives and practices. However, the limitations of horizontal approaches in dealing with ‘tough problems’ have also become clear, and even the private sector advocates for a more able government to help address the big questions and set the rules of the game on tough issues. As vertical scaling efforts do not necessarily lead directly to a return on investment, it is often difficult for the private sector to invest money from their

core business into vertical scaling activities. In many cases, commercial organizations may also lack the skills or attitudes to do such work in practice, which is why they often invite civic actors to play roles in lobby and advocacy, as well as raising awareness and developing knowledge.

*Finding a **healthy balance** and connection between horizontal and vertical approaches seems to be an essential factor in shaping realistic and successful scaling strategies.*

A summary of the horizontal and vertical scaling perspectives

	HORIZONTAL	VERTICAL
Primary orientation	Increasing numbers and business growth	Improving the enabling environment and institutions
Related areas of action	<ul style="list-style-type: none"> • Demand, awareness, and customer engagement • Technical qualities and competitiveness of the solution or service • Supplier and support functions • Attractive and efficient business models for users, business, and intermediaries, including efficiency in delivery models 	<ul style="list-style-type: none"> • Strengthening value chain governance and coordination • Sector and industry platforms, including self-regulation and voluntary standards • Public policies, regulations and standards • Tertiary chain/sector functions, including education and knowledge

Horizontal and vertical scaling approaches combined: an example from the FDW portfolio

Irrigation in Ghana ³⁰

The “Integrated Water Management and Knowledge Transfer in Sisili Kulpawn Basin” project in Ghana introduces modern irrigation and soil and water conservation farming practices to the Savannah Agro-Ecological Zone of Northern Ghana, which is characterized by difficult agroecological conditions. The project develops innovative flood mitigation, irrigation, and drainage systems and introduces new soil and water conservation practices. The intervention involves an extensive training package to assist farmers in sustainably supporting the change from traditional to modern farming, introducing irrigation, water retention, and improved crop management techniques, while at the same time ensuring the availability of agricultural input supplies and credit facilities and access to secure markets. The project is strongly linked with the Northern Savannah Development Strategy, a government strategy focusing on the development of the northern savannah into a more productive area for farmers.

In essence, this project aims to scale the adoption and use of improved agricultural and new water-efficient irrigation practices by farmers. The scaling of these practices is based on a business case for both the farmers and the lead firm (IWAD); farmers can increase their income by adopting the techniques and increasing and improving their produce, while IWAD will sell their produce and reinvest the revenues to expand the irrigation infrastructure. Interestingly, the scaling strategy of this PPP makes use of both horizontal and vertical approaches: horizontal in the sense of building a business case based on increasing numbers of farmers that adopt the irrigation techniques, and vertical as the PPP closely cooperates and receives coinvestment from a local governmental authority (SADA), ensuring the embedding of the irrigation systems in local policy structures such as the Northern Savannah Development Strategy. SADA was established to mobilize the private sector as a catalyst for this strategy by providing opportunities for cooperation and coinvestment, thus providing ‘pull’ incentives for engaging in the development of the Sisili Kulpawn Basin.

In this context, it is also important to recognize that work on scaling can start from different points of the system. **Three entry points** or levels can be distinguished, which we have labeled ‘macro’, ‘meso’, and ‘micro’. There are clearly different basic rationales and mindsets that people use in shaping their scaling ambitions and practices, depending on the point from which they start to deal with the scaling ambition.

At one end, we find the **macro or system level**, which deals directly with the rules of the game and the governance or institutions in the field concerned. This is an entry point for national governments, large firms, national and international (civic) platforms, and multilateral players. They enter the scaling issue not so much from the perspective of a specific practice or solution, but with an eye on promoting certain public goods, general benefits, or quality standards. Their repertoire is usually predominantly vertical. Actors operating on such national and international levels will usually adopt specific solutions as they come and go, and may stimulate ongoing innovation.

At the other end of the spectrum, we find the **specific solution** or practice or **micro level**, which deals with the spread of certain types of business, specific products, services, or practices. This is an entry point for technology firms, service providers, pilot projects, and practical NGOs that are promoting new solutions and practices.³¹ Their repertoire is usually strongly horizontal in nature. Such actors are often driven by a strong belief and commercial interest in their own specific innovation. Over time, more actors are realizing that to scale a solution, it is necessary to keep redesigning and reshaping the solution – for example through ‘context variation by design’ (see Kersten et al. 2015). The actors that come in at the micro or product/practice level have a strong interest in market share. The more advanced ones may also be innovation leaders in their market or product segment, and may thus help to (indirectly) drive system innovation.

The third entry point is the **meso, organization or delivery models level**. This intermediate perspective is often adopted by actors pursuing

³⁰ See Appendix II: Case Profile 7. ³¹ Note that these actors do not need to be ‘small’, but they are specialized in providing a specific (element of a) product or service.

a certain level of scale, without having either the macrolevel or microlevel position. Many donor-funded development programs operate on this level, as do local and regional governments, commercial service providers, and NGOs with an implementation/change ambition. They usually apply a mixture of selected vertical and horizontal scaling activities. All these actors aim to increase the scale of development impact within their reach or mandate. They govern, build, or implement services or programs under which an increasing number of people can benefit from certain solutions and practices. Scaling strategies are thus

usually aimed at increasing the effectiveness and efficiency of delivery systems: at reaching more people by increasing the scope and diversity of the target group, but also at improving the conditions and enabling environment in that specific context. Typically, the core interest of a mesolevel strategy lies in spreading a mixture of solutions that suit the diversity of beneficiaries in their constituency or geographical scope and in developing or enabling operational delivery systems to implement this outreach effectively and efficiently. This type of strategy will also use elements of the other two entry points without completely focusing on them.

Three entry levels for scaling ambitions

MACRO: rules of the game and institutions

Focuses on: ³²

- Policies, norms, standards, regulation
- Development of market/business environment
- Changes in institutional mandates & relations
- Financing landscape and mechanisms

Associated Actors:

- National governments
- (Multi-)national lead firms
- International and national platforms
- Activist NGOs

MICRO: solution/practice and business

Focuses on: ³³

- Product/practice specifications
- Technology development
- Business development
- Price and competitive power

Associated Actors:

- Technology producers and promoters
- Service providers
- Pilot projects
- Innovators

MESO: organisation and delivery models

Focuses on: ³⁴

- Coordination between relevant actors
- Delivery systems, quality assurance
- Mainstreaming of products and services
- Access to knowledge & education

Associated Actors:

- Local governments
- Development programs and service providers
- User and producer federations
- Implementing NGOs

³² Predominantly vertical. ³³ The first and last are considered vertical, the middle two horizontal. ³⁴ Predominantly horizontal.

Many initiatives have a main entry point, but it is also possible to start at multiple entry points or to combine them over time. In the evolution of the scaling of certain practices or innovations, shifts in attention will be seen; the development of new or refined solutions may be important at some points, building effective delivery systems or expanding them at another, and setting or adjusting the rules of the game at yet other moments. Real-life scaling processes will move up and down across the levels as the process unfolds and as needs arise.

Three entry points for scaling strategies can be distinguished: on the micro, meso, and macro level. Real-life scaling approaches will need to shift their attention and focus across the levels during the scaling process.

The macro level as an entry level

Sustainability standards in the palm oil industry

Unilever, as the biggest buyer of palm oil in the global market, has begun to pursue sustainability standards not only in its own supply chain, but also across the entire sector. Unilever's scale is being used to influence the entire industry. It actively encourages other consumer goods companies on their sustainability commitments through collaborations at international conferences, such as the Consumer Goods Forum and the World Business Council for Sustainable Development, but also by playing a leading, active role on the Roundtable for Sustainable Palm Oil, of which Unilever is cofounder and through which standards are set. The commitments made through those collaborations have helped raise the bar for many others who follow suit, and many of these companies have now been recognized in relevant sustainability ranking systems. In these efforts, Unilever has also sought engagement with (publicly funded) NGOs that pursue a similar agenda. The new green standards set can be considered a shift in the rules of the game of the palm oil industry whose impact extends beyond Unilever's own supply.

10. Stages of scaling and sector transformation

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Most meaningful scaling processes take substantial time, starting from 5–7 years,³⁵ but with 10–15 years as a more realistic time frame.³⁶ If horizontal and vertical approaches to scaling are recognized, it is clear that scaling processes are not just a matter of increasing the numbers for an individual solution, but also a process of transformation in a subsector, through which the rules of the game and institutions are changed and geared towards a ‘new normal’. In talking about timelines and stages, it is thus relevant to distinguish the scaling of a specific solution or (inclusive business) proposition from the transformation of the sector as a whole. First, the bigger picture, or the transformation of the subsector, will be discussed, and then the scaling of an individual proposition, product, or solution will be considered.

In general, it is quite common to think about subsector transformation processes as occurring in several stages: for example going from technical innovation, to building proof-of-concept under real-life conditions, to growing a niche, and finally towards structural adoption by a critical mass and institutionalization in the regime. A specific version of this logic is shown in Figure 6 below and has been developed by New Foresight (2013) in its work with Aidenvironment and IIED on agricultural value chains.

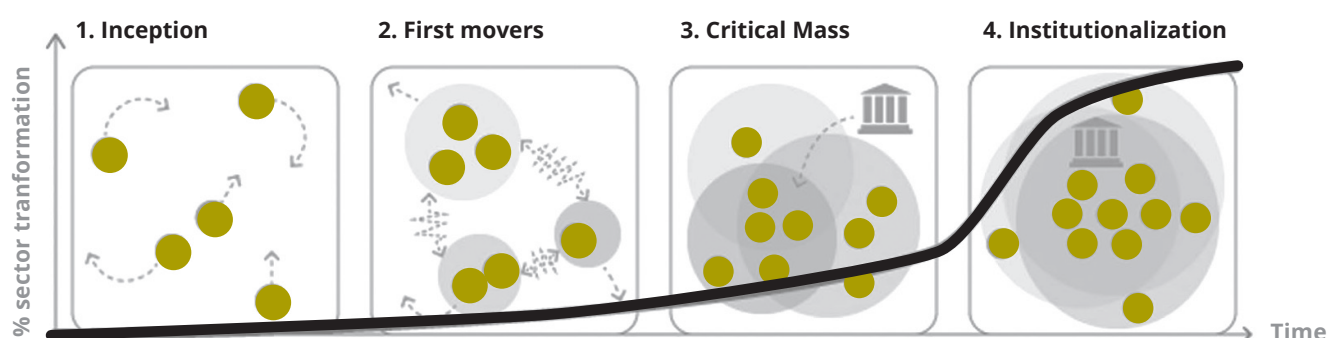
This picture sketches a pattern in which disparate small initiatives (stage 1) start to gain some direction, coherence, and influence through groups

of ‘first movers’ (stage 2). These first movers gradually build more credibility, influence, and volume, until a sufficient critical mass is reached (stage 3). Only through and after that can a major transition towards new system dynamics, new rules of the game and institutionalization take place (stage 4).

However, it is important to not see the S-curve in the figure above as a deliberate singular process; it is rather the result of the activities and ambitions of multiple players. Both horizontal and vertical scaling activities happen in all stages and will follow upon each other or coincide in various cycles and sequences.

NewForesight adds a couple of essential insights to this picture,³⁷ arguing that it is important to understand that the present status of any subsector is the result of a complex set of factors.³⁸ For effective scaling, it is necessary to understand the present system drivers and failures and to have attractive and viable alternatives. This is not the case with many scaling ambitions that are primarily product-driven. A critical review of proposed scaling strategies would therefore need to consider the degree to which it is based on a sound understanding of the present system dynamics and proposes viable alternatives for these in terms of not only the technical solution, but also of (price) incentives and the required support from regulations and policies.

Figure 6: Four stages of sector transformation (Molenaar et al 2015) © NewForesight Consultancy b.v.



³⁵ An example of a short-term scaling project is M-PESA, a mobile phone-based money transfer, financing and microfinancing service, launched in 2007 by Vodafone. For more information see <http://www.vodafone.com/content/index/what/m-pesa.html>. ³⁶ Based on the interview with Nicholas Chevrollier of BoPInc (see also Appendix I) in anticipation of his research with the Massachusetts Institute of Technology (to be published). Koh et al. (2012) also report similar or even longer timeframes to reach scale in inclusive business. ³⁷ Based on an interview with Lucas Simons, CEO of New Foresight on 20/7/2016 (see Appendix I) ³⁸ Often combining a) lack of alternatives, b) a lack of incentives to reward better practices, and c) failing regulations or enabling environments.

Stages of scaling: an example from the FDW portfolio

Drinking water in Kenya ³⁹

The “Performance Enhancement of Water utilities in Kenya through benchmarking, collective learning and innovative financing (PEWAK)” project, mentioned in Chapter 7:

- Focuses on improvements in water delivery, based on individual experiences of different water companies in several earlier projects (stage 1);
- Is now creating a learning sector platform with 25 water companies to exchange such innovations (stage 2); if this is successful, it will create a critical mass (stage 3) of most of the sizable utilities in the country.
- When benchmarking and joint learning indeed proves to lead to better on-the-ground performance for the water companies, it is expected to eventually lead to broad sector adoption and institutionalization of various topics and solutions addressed in the platform (stage 4)
- Through the use of a joint learning initiative between such large numbers of utilities, the project is seeking to bring the scaling dynamics from a push situation to more of a pull situation.

Next to sector transformation, the **scaling of individual solutions** is also often understood in several stages; for example, the four stages shown in Figure 7 below used by Monitor in its ‘From Blueprint to Scale’ (2012) publication for inclusive business propositions and firms.

As Koh et al. (2012) indicate, in the **first (Blueprint) stage**, an idea or concept is not enough; there must also be a clear sense of what the business will offer,

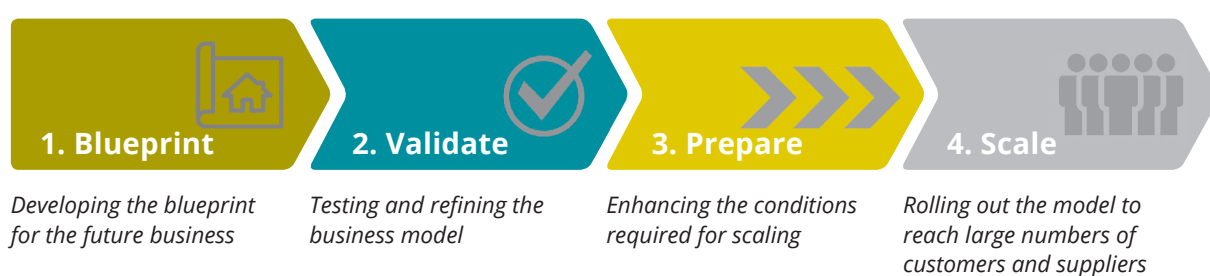
what it will do, and how it will do it. In other words, there needs to be a compelling initial business plan. At the end of this stage, product prototypes and critical technologies can be expected to have been demonstrated successfully (proof of concept).

In the **second (Validate) stage**, the commercial viability and scalability of the business model needs to be validated. Will customers pay? Will there be sufficient business benefit and profit? Market trials lead to refinements in product, technology, and business models. The greater the degree of model innovation involved, the more time and resources need to be invested in this stage.

In the **third (Prepare) stage**, pioneer initiatives or firms fully launch their products into the market. The conditions in the market and in the firm for sustainable scaling now need to be prepared. This is especially true where a new category of product or a new value chain model is introduced. In particular, the firm or PPP may need to invest in a) customer education and category marketing for awareness, and b) improving the capabilities of suppliers and distribution networks. Both may be seen to some extent as investments in ‘common goods’ that other initiatives or firms can also make use of or build upon.

If the pioneer initiative can successfully surmount these challenges, it is in a strong position to reach the **fourth (Scale) stage**, where activities are scaled to reach more customers or suppliers. The initiatives will face new challenges as they enter new geographies, control costs, address inefficiencies, and manage more diverse sets of stakeholders.⁴⁰

Figure 7: Four stages of proposition development (Koh et al. 2012)



³⁹ See Appendix II: Case Profile 3. ⁴⁰ The description of the four stages above is an excerpt, with small adaptations, from page 12 in Koh et al. (2012). See also the table on the four stages on page 13 of that publication.

It is important to recognize that lead or pioneer firms and initiatives need considerable investment, especially in the Validate and Prepare stages. But few (impact) investors seem to be prepared to provide money and technical assistance at these earlier stages. This is considered 'entirely rational as there is limited or no potential for financial returns within a reasonable timeframe' and there is a 'high likelihood that initial spending on market preparation may not be recouped by the firms and its investors, because much of the benefit accrues to others, such as new entrants or to the firm's customers or suppliers' (Koh et al. 2012: 12). This is the pioneer gap, and is where 'enterprise philanthropy' and public coinvestment for PPP financing are needed.

The essential insight here is that **where the scaling of an innovative proposition takes place in the context of early stages of market transformation**, as sketched at the beginning of this chapter (Inception, First movers, and towards Critical mass), the Validate and Prepare stages of an individual proposition can be very challenging and costly, as they need to invest both in innovative business arrangements and broader sector capacity in terms of customer awareness, as well as supplier and distribution network capabilities.⁴¹

Two types of stage can be distinguished:

*1) stages in scaling the individual solution and
2) stages in the process of subsector transformation. Both must be looked at carefully if the specific scaling challenges and dynamics are to be understood.*

⁴¹ A more detailed description of the financing needs at different scaling stages is the subject of another PPPLab trajectory on financing PPPs, whose first publication is expected before the end of 2016.

11. Conclusions and perspectives

30 PPPs as an instrument for scaling is worth further exploring

This paper provides a conceptual and case-based exploration of scaling impact in relation to PPPs. A first conclusion is that, at least from a theoretical perspective, there is indeed a sound basis for the role of PPPs in scaling development solutions and impact. Bringing together different actors and drivers can help to address the various dimensions of scaling, with businesses, certain types of NGOs and public campaigns usually driving the horizontal dimensions of scale, while other types of NGOs, public actors, and sometimes also certain larger businesses drive the vertical dimensions. These different actors together can better address various barriers to scale. A range of practical examples from selected projects from the FDW and FDOV portfolios illustrate how PPPs deliberately pursue scale. Such evidence remains, however, anecdotal, and the overall track record of PPPs in achieving scale still needs to be assessed more seriously. Other studies also indicate limitations to the degree of success in scaling impact through partnerships (PBL 2016).

Scaling as a multifaceted challenge and ambition

This exploration shows that real-life scaling strategies consist of many different aspects. In today's donor rhetoric, there is the tendency for lip-servicing the attractive idea of scaling, without addressing it thoroughly or very realistically. In this study, specific elements for building rich and sturdy scaling strategies came to the fore, derived both from theory and practice. These are:

- The recognition that a solution itself is not scaled, but rather a set of arrangements that stimulates the adoption and continuity of an improved solution or practice.
- A repertoire of ten ingredients (representing public, business, civic, and knowledge realms) was identified to form building blocks for shaping a sturdy scaling strategy.
- The distinction of horizontal and vertical approaches with their specific elements and focuses, and the need to combine both types of dynamics to achieve a degree of system-change.

- A recognition of different entry levels at which actors can work on scaling, and the need to combine these over time.
- A distinction between the different stages in scaling and in sector transformation, and the need to recognize both the stage that the activity is in as well as the stage that the sector is in at present and the challenges that come with that.

From a focus on 'selling a solution', towards a focus on system dynamics, context, competitors and colleagues

Even in the most advanced agricultural value chains, the process towards increased sustainability (driven by standards and labels, for example) finds itself in stages where the adoption of improved practices is still limited. The challenge is still to reach the critical mass, while the transition towards full institutionalization is not yet seriously in sight.⁴² One of the main observations from this initial exploration is that the term 'scaling' is still used too optimistically and too frequently with underlying notions of selling a specific solution, simple replication, or an individual project in mind.

Various examples and perspectives – from both the more conceptual and the more case-based sources – indicate that if we want to pursue scale seriously, we need to understand:

- The major systemic patterns in the larger subsector, both in terms of drivers of the present situation and the barriers that need to be overcome.
- Sustainable improved solutions rarely emerge from one project, supplier or, technology. They grow instead from several parallel (often competing) initiatives, and often by cross-fertilization or the mixing of ideas, solutions and practices over time.
- Lead actors in PPPs (whether business, knowledge, civic, or public) drive scale not through individual projects, but through a portfolio of activities. One needs to understand individual PPP projects within such broader portfolios.

⁴² Based on interviews with Lucas Simons and Jan-Kees Vis (see Appendix I).

31 Taking the barriers to scaling serious

A consequence of scale becoming a new buzzword in development is that many PPPs are radiating positive energy about their abilities to scale and realize change. This optimism may, however, be to the detriment of a serious analysis and treatment of barriers to scale. Such analysis might reveal system dynamics that are difficult to break. Strengthening the contextual analysis can reveal a lack of ability to address specific issues, for example point at possibilities of improving the mixture of scaling ingredients or a better coverage of entry levels.

It seems relevant in general for PPPs to carry out an explicit analysis of barriers to scale and to determine concrete approaches to deal with them. Such barrier analysis can be part of both PPP design stages and of the later phases of monitoring, review, and development.

PPPs for what stages?

From the cases reviewed and a first overview of the portfolios of FDW and FDOV,⁴³ it appears that most projects in these portfolios are in the second stage of sector transformation;⁴⁴ this is the stage of first movers that seek to gain influence and build more credibility and volume, until a critical mass is reached in stage 3. If stage 2 of sector transformation is indeed the predominant niche for these instruments,⁴⁵ this recognition can help to become sharper on scaling ambitions and dimensions.

Notably, this raises such horizontal and vertical questions as:

- Is the package of arrangements the project promotes a lead initiative in this field? How attractive and competitive will it be for end users in comparison with other initiatives, packages, or providers?
- What can be learned from parallel or competing initiatives and to what extent can synergy and cross-fertilization be realized?
- What specific market share does it have, and what are the realistic market perspectives, timeline, and steps towards reaching a critical mass?

- In the ambition to reach a critical mass, what vertical elements should logically be envisaged (rules of the game, policies, enforcement, sector collaboration, governance questions), and are these addressed in the project or elsewhere?
- Through what actors, mechanisms, coalitions and activities will these be realized?

There is significant room to improve quality by treating such questions in coherent and fact-based ways, whether in project proposals, assessments, or the inception and development stages of PPPs. Investing in the early stages of sector transformation is inherently risky, and the ability to reach simple impact targets is limited. Growing sector influence and maturity of the proposition can and must be monitored along other parameters than impact numbers (alone).

PPPs for what challenges?

Two additional observations can be made in relation to PPP segments. Firstly, there are several proposals in both portfolios that can be considered as being more in stage 1 of sector transformation (labeled the inception stage in Chapter 10) or stage 1 of scaling (labeled the Blueprint stage in Chapter 10). By its nature, these involve considerably more risk for scaling efforts, as a significant number of the (often experimental) initiatives in these stages are not likely to reach serious scale. With such experimental projects, the question of whether they are fit for scaling – and in turn whether FDOV and FDW want to invest in them – is even more difficult to answer. It can be questioned whether the FDW and FDOV instruments are meant for this stage.⁴⁶ Reaching a considerable level of scale within the project period will, in any case, be very difficult.

Secondly, there are projects in the present portfolios that will likely scale through the commercial ambitions of the private sector alone. Such projects seem a better fit for other types of funding from private sector subsidy instruments, and less for PPP programs oriented at system change.

⁴³ Further work in the next stages will need to underpin this more precisely. ⁴⁴ See Chapter 10. ⁴⁵ This is an impression that, in itself, should be discussed and analyzed more deeply. ⁴⁶ Except maybe for projects that really have a very high 'break-through' potential.

32 Improving the quality of scaling strategies

It is easy to understand that the donor appetite for scaling in combination with the implementers' ambition to prove their relevance can form fertile ground for the easy and superficial use of the term 'scaling'. The thinking about scaling and transformation in many project documents is too simple and optimistic. There are clear indications that significant gains can be made in strengthening scaling strategies (for example, in the next FDW and FDOV calls) through:

- A.** Better assessment of the critical added value of projects from a scaling and system change angle.
- B.** More detail on the elements and ingredients of the scaling strategies in project documents.
- C.** Paying attention to the way the specific project sits within the broader portfolio of activities of the lead actors.
- D.** A deeper understanding of projects and their scaling strategies within the broader sector and system context and its present drivers and barriers, including competition analysis.
- E.** Explicit attention to the analysis of barriers to scale.
- F.** More focus on how critical mass (stage 3) and institutionalization (stage 4) of sector transformation can be reached.
- G.** More serious monitoring over time of how the business model promoted by a PPP is developing and taking shape.
- H.** Planning a more explicit evolution of scaling strategies and stages, including beyond the project period.
- I.** Explicit attention to 'moving on' and graduation of the financing of scaling beyond the proposed (or current) project period.

An indicative set of next knowledge questions and activities

While we have reviewed and used a number of selected cases, the concepts and perspectives presented in this paper have not yet been widely applied, tested, or refined in practice. PPPLab

envisages that further research and knowledge work on scaling will evolve along the following three lines that complement each other:

I. Deepen and expand present work

- While this document contains an initial exploration of the concept of the scaling, key understandings and dimensions of scaling can still be further deepened – for example, by diving deeper into the business and system thinking literature.
- The number of case studies can be expanded, preferably by following these cases for a longer time. This will provide further depth on the ingredients, on key success factors, on combining entry levels, on the stages of scaling, and on the key contextual factors influencing specific strategies. See also point III below.

II. Translation of key concepts and insights into practical tools

A next step in the work would be to translate the findings into practical tools to help programs, partnerships, and practitioners to design, review, and improve their scaling strategies.⁴⁷ In this context, PPPLab plans to develop a checklist or navigation tool that will help PPPs to sharpen their existing scaling strategies and design new ones.

III. Work alongside PPPs (using the above) to strengthen and evolve scaling approaches

A third line of work would be to work together with PPPs in their scaling efforts to support them with, and gather broader experiences of, the systematic design and evolution of scaling strategies. This potentially leads to a better distinction between key scaling pathways, including a complementary set of 'design guidances'.⁴⁸ This can also be used to inform more advanced versions of the practical tools, as mentioned under II above.⁴⁹

⁴⁷ In more modest form, the concepts and elements in this paper can also be used as a basis for shaping a quality checklist for scaling strategies. ⁴⁸ As 'scaling impact' is still a very broad term, key profiles or pathways can help unpack this and support the identification of the right strategies for the right projects and contexts. Identification of these key pathways will then help in further developing practical tools leading to tailored support for scaling. ⁴⁹ Such efforts could be focused on a limited number of specific subsectors represented in FDW and FDOV that are considered to be of particular interest. These could be selected on the basis of their strategic relevance for the Dutch development agenda and certain groups of Dutch (and international) actors.

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Appendix I: List of Interviewees

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'Thought Leaders'

- **Sietze Vellema**, Wageningen University & Research Centre (11-12-2015, The Hague)
- **Rob van Tulder**, Erasmus University Rotterdam (22-03-2016, The Hague)
- **Ken Caplan**, University of Cambridge (22-03-2016, The Hague)
- **Wouter Kersten**, Enviu & Delft University of Technology (14-04-2016, The Hague)
- **Peter Knorringa**, ISS Faculty of Erasmus University Rotterdam (18-04-2016, The Hague)
- **Jan Kees Vis**, Unilever (26-05-2016, Rotterdam)
- **Seerp Wigboldus**, Wageningen University & Research Centre (07-06-2016, Wageningen)
- **Nicholas Chevrollier**, BoPInc (08-06-2016, Utrecht)
- **Dave Boselie**, The Sustainable Trade Initiative (IDH) (06-07-2016, The Hague)
- **Lucas Simons**, New Foresight & SCOPEinsight (20-07-2016, Utrecht)

'Case Owners'

- **Sven Sielhorst**, Solidaridad (14-12-2015, Utrecht)
- **Wouter van Vliet**, Larive (14-12-2015, The Hague)
- **Valentin Post**, WASTE (14-12-2016, The Hague)
- **Adriaan Mels**, VEI (11-01-2016, Utrecht)
- **Johan van den Ban**, De Heus (09-06-2016, Skype)
- **Reinder van der Meer**, SoilCares (10-06-2016, Skype)
- **Femke Smeets**, PharmAccess Foundation, and **Tom Bouma**, Medical Credit Fund (23-06-2016, Amsterdam)
- **Ammar Jiwaji**, Quality Food Products Ltd. Tanzania (24-06-2016, Skype)
- **Tom Durang**, Wienco/IWAD (15-07-2016, Utrecht)

Note: Follow up contact has taken place with several of the interviewees on one or more occasions and has further informed this document.

Appendix II: Case Profiles

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Case Profile 1: Increasing water use efficiency in sugarcane cultivation in India

PPP Facility: FDW

Project period: 2014 – 2019 (5 years)

Budget: € 4,828,774

Partners: Solidaridad (applicant), NSL Sugars (sugar company), Trident Sugars (sugar company), Vasantdada Sugar Institute (knowledge institute), Osmania University (knowledge institute), eLEAF (technology company), Hindustan Unilever Foundation (NGO), LEI Wageningen UR (knowledge institute).

The project

This project, led by Solidaridad with three sugar factories as key (and financial) partners, aims to increase water use efficiency in sugarcane farming in India to address overexploitation of the groundwater resources that threatens the income security of millions of sugarcane growers, as well as the future of sugar mills and associated industry in India. The project activities center on the adoption of improved irrigation and farming practices that are known to reduce water use and result in higher crop yields and margins for the farmer. The adoption of these improved irrigation and farming practices is stimulated through extension services initiated by the mills. The intervention strategy is designed to achieve sustainability on the basis of a business case for both the cane farmers and the sugar mills. The target of the project is to train 35,000 farmers in the command areas of the three mills in better farming practices, and 300 microentrepreneurs in providing farmer support services.

What is the PPP trying to scale?

The business case for increasing water productivity, while at the same time improving the incomes of sugarcane farmers, has been sufficiently tested on individual farmer fields in India and other countries. The effectiveness of extending the approach to significant parts of command areas through integration in mill extension services (as is the objective of this project) has not been realized in India so far. The project thus intends to deliver solid proof of the effectiveness of the intervention on this scale by monitoring water productivity. To that end, innovative remote sensing techniques will be employed.

The scaling strategy

As mentioned, the PPP works together with three sugar mills to introduce the improved farming techniques to their command areas. The project thus starts at the meso or organizational level as the **entry level** for scaling. The project applies a **horizontal scaling** approach, as the mills seek to increase the number of farmers in their geographical area applying the techniques. Beyond this direct roll-out of techniques, the PPP also tries to achieve a proof of concept by using monitoring techniques. The **key ingredients** of the strategy within the project are a business case, knowledge through farmer extension, the application of technology, and the development of service providers. The extension is financed by the mills to a significant degree. As the improved techniques are also commercially attractive to the mills (providing higher volumes with higher sugar content), the basis for self-paid replications is laid.

The role of the PPP in the larger scaling pathway

The project builds on experimental work with the specific techniques of earlier projects. The FDW subsidy leverages public and private financial resources necessary to achieve a proof of concept (stage 1) and a set of 'first movers' (stage 2). The project envisages that, through creating convincing real-life examples with mills, these mills will play a role in further horizontal scaling by 1) owning multiple factories – if the method turns out to be effective, the firms will likely extend the method to other factories; 2) other firms being inspired to copy the methods used (there are about 400 sugar mills in India).

Next to this, the PPP works together with local leadership (cane commissioners, panchayats, and the Ministry of Agriculture) to obtain buy-in and gain influence in the sector. As the playing field is scattered, Solidaridad has identified the need to create convergence around water issues in the sector. For this reason, it aims to start a stakeholder platform or roundtable, seeking further embedding of the techniques through a **vertical** strategy. This, however, will not be part of the PPP project. Solidaridad sees this project as just one element in a larger effort to influence a much wider conversation on systemic water issues in India.

Case Profile 2: Financial Inclusion Improves Sanitation and Health (FINISH) Kenya

PPP Facility: FDW

Project period: 2014 – 2018 (4 years)

Budget: € 12,600,000

Partners: WASTE (applicant), AMREF (NGO), SNS Asset Management (financial partner), Family Bank (financial partner), K-Rep (financial partner), Goodwell Investments (financial partner), Kenyan Ministry of Public Health and Sanitation (government), UNU-MERIT (knowledge institute), Social Equity Foundation (financial partner).

The project

This project, led by WASTE, with AMREF, the Kenyan national government, and several financial institutions as partners, aims to decrease the prevalence of sanitation-related diseases among marginalized communities in two counties in Kenya through improved sanitation facilities, as a result of increased demand and financial inclusion. To achieve this goal, interventions consist of demand creation through the CLTS+ method (raising awareness of the importance of sanitation), marketing of improved sanitation, and the development of sanitation loans by local financial partners (so that households will be able to afford sanitation). Also, supply chain development and training of local entrepreneurs in sanitation services is conducted to lower costs and improve the quality and durability of sanitation. The target of the project is to raise awareness among 840,000 people and to ensure that 280,000 people have access to sanitation facilities by the end of the project.

What is the PPP trying to scale?

The project aims to scale the construction and use of sanitation facilities by marginalized communities. Its scaling strategy is built around the “Community Led Total Sanitation” (CLTS) approach, which raises community awareness of the risks of open defecation. This collective awareness is meant to lead to increased motivation for the construction and use of sanitation facilities. The introduction of this process is combined with the back-up of local government planning, priority setting, and support, as well as the setting up of marketing for the improved sanitation (CLTS+) and supply chains to provide and build toilets. For both the toilet owners and the enterprises, this requires the engagement

of microfinance institutions (CLTS++) and NGOs to support the activities. All in all, multiple activities are being scaled, which will strengthen each other to develop a sanitation market based on a business case.

The scaling strategy

This project starts activities at multiple **entry levels**. First of all, the CLTS approach is implemented by the Kenyan government on the national level, while the training of entrepreneurs and the development of sanitation loans starts at the meso or organizational level; process features required for scaling are added through cooperation with MFIs. With these multiple activities, a business model is created using market forces to reach more beneficiaries – **horizontal scaling**. The activities associated with **vertical scaling**, however, are also part of the project; close cooperation with the Kenyan government, and a national platform for coordination and collaboration of stakeholders is being arranged. The Kenyan Ministry and AMREF will also remain involved through, for example, the platform. The **key ingredients** of the scaling strategy are thus demand creation, financing through sanitation loans, and value chain development by training sanitation entrepreneurs, all leading up to the construction of a business model. Other ingredients include public sector governance and coordination through a platform.

The role of the PPP in the greater scaling pathway

The project, which aims to build a business model from the first phase of creating demand, can be seen as starting from stage 1/2 as a first mover to change the sector, but aims to evolve quickly and reach a critical mass (stage 3). The business model will be tested in two counties, with the intention to later scale the activities to other counties. In this sense, the PPP has the advantage that the CLTS approach is implemented nationwide by the Kenyan government, so demand creation is already taking place on the national level.

This project builds on experience with a similar project in India (FINISH India) and is largely based on that model. As in India, WASTE is planning to set up a separate organizational entity that will ensure that the activities continue beyond the project period.

Case Profile 3: Performance Enhancement of Water utilities in Kenya through benchmarking, collective learning and innovative financing (PEWAK)

PPP Facility: FDW

Project period: 2015 – 2020 (5 years)

Budget: € 6.3 million

Partners: Aquanet (applicant), Water Services Regulatory Board (WASREB; public), Water Services Provider Association (WASPA; NGO), ten Water Service Providers (WSPs) in Kenya, Water Services Trust Fund (WSTF), Vitens Evides International (not-for-profit organization of two Dutch drinking water companies), UNESCO-IHE (knowledge institute), SNV Netherlands Development Organization (NGO).

The project

The 'PEWAK' project is led by VEI/Aquanet as key partner and project manager, while the benchmarking activities are led by WASPA, the water utilities sector association. The project uses a learning platform and benchmarking between water utilities to improve access to safe water for at least 100,000 people. It also aims to have developed access strategies for 750,000 people in low-income areas in Kenya. Water Service Providers (WSPs) are the principle suppliers of water and sanitation services to these areas. However, due to poor commercial viability, their ability to invest sustainably in underserved areas is low. Reducing high nonrevenue water (NRW) levels is the key to improving the WSPs' commercial viability. The project therefore aims to help companies learn practical strategies to improve their performance and carry out smart investments in NRW reduction for at least 51,000 connections (400,000 people).

What is the PPP trying to scale?

The PPP aims to upscale benchmarking as a tool for rapid dissemination and stimulation of best practices to at least 25 WSPs, including anchoring the method for sector-wide impact and continuous performance improvement. Benchmarking is used as a mutual learning mechanism within a growing group of WSPs, which helps them to a) collect data and analyze their own performance, b) exchange these data to learn from each other's best practices, c) develop performance improvement plans with financial support, and d) follow-up in a trusted environment of colleagues. Ten WSPs are formally

included in the PPP for their financial contributions, but the benchmarking activities thus focus on a wider group of WSPs.

The scaling strategy

The scaling strategy for this project is built around learning and exchange through a platform for WSPs, which is driven by personal and company learning ambitions, but peer and external pressure also play a role. Increased business performance and commercial viability of the WSPs will also lead to increased access to affordable commercial finance (and less reliance on donor funding). The benchmarking method being a central element of the project reflects the contribution of this project to a **vertical scaling** strategy, where new informal norms and rules of the game in the sector are being shaped. This is deliberately done through a sector platform and association (rather than through the regulatory body, WASREB) so as to base them on collective learning and establish ownership among the community of utilities.

WSTF is involved in leveraging the grant funding (with loans through the Output-Based Aid program) and stimulating financial graduation of the WSPs towards commercial lending. It is foreseen that the benchmarking will gradually come to pay for itself (utilities already contribute from their own operational budgets). The **entry point** is on the macrolevel – namely, the community and association of water utilities in Kenya. The PPP aims to introduce the benchmarking method to multiple WSPs at the same time, starting with 25 that cover all the major cities in the country and almost half of all utilities. The **key ingredients** of the strategy are a sector platform, knowledge exchange and learning.

The role of the PPP in the greater scaling pathway

The present project is based on experiences with similar endeavors involving smaller numbers of WSPs. The evolution to a sector platform is helping to move from a stage of 'first movers' to broader adoption among a critical mass in the sector (stage 3). This learning between larger numbers of utilities is also expected to influence institutionalization in norms and regulation (stage 4), through involvement of the regulatory body.

Case Profile 4: Providing Analytical Services for Informed Farming in Kenya (PASIFIK)

PPP Facility: FDOV

Project period: 2013 – 2017 (5 years)

Budget: € 2.7 million

Partners: Heifer Nederland (NGO), SNV Netherlands Development Organisation (NGO), BLGG Research/SoilCares (Dutch Technology Company), AgriQuest (private laboratory).

The project

The PASIFIK project, led by the Dutch technology company SoilCares, builds capacity for a franchise organization aimed at quick, cheap, and reliable soil, and feed testing and related advice for small and medium farmers in Kenya. These services, based on proven technology, will be easily accessible to farmers through mobile field laboratories that will visit organized farmers and charge low prices. The program will entail the development and adjustment of the mobile field labs to the local context, identification of franchise takers (local entrepreneurs) who will manage the lab systems, and training programs that educate farmers about soil, feed management, and the benefits of testing, thus creating a market for this innovative service. As a result of this program, farmers will be enabled to make informed decisions on field and feed management, leading to increased productivity and efficiency. SoilCares aims to run its own lab and to have four franchisees offering laboratory services by the end of the project, which will link to the approximately 45,000 farmers within the networks of Heifer and SNV.

What is the PPP trying to scale?

The PPP is trying to scale the access to laboratory services for smallholder farmers in Kenya based on an attractive business model for franchisees, who will start offering these services. The business model is built on the basis of several components, such as the development and adaptation of the technology to the Kenyan context, training laboratory staff, and raising awareness of the benefits of testing for farmers, thus creating demand for the services. Moreover, the ongoing development of the technology will lead to lower prices, making the services affordable and more attractive for smallholder farmers. It is expected that these components will stimulate local

entrepreneurship and lead to a network of at least four franchisees.

The scaling strategy

The main focus of the project is on the development of a specific technology and on building a market and business model for this. This means that the scaling strategy takes the microlevel as an **entry point**. In a next stage, the meso or organizational level also plays a role, as SoilCares tries to have that solution adopted and managed by independent franchisees. The project's aim is to spread the technology across the country, and thus mainly involves **horizontal scaling**. However, in parallel with the above, labs also have been sold to counties in Kenya and are being operated by the counties' agricultural extension departments. In that sense, the strategy also has vertical elements, as the solution will be adopted and embedded as a public service by local governments. As might have become clear, the **key ingredients** for the scaling strategy here are the development of technology, raising awareness and building a market for this, knowledge and education for farmers and laboratory staff, and building a viable business model with these components.

The role of the PPP in the greater scaling pathway

The project aims to build a market for new technology and is attracting franchisees as 'first movers' to offer these technology services; the project is therefore in stage 1/2, but aims to reach a critical mass of farmers within the project period (stage 3). The PPP is part of the greater ambitions (beyond the FDOV project) of the lead partner SoilCares, which has already become familiar with the local market since its office opened in Nairobi in 2008. The continued development of the technology (for example, the recently developed handheld labs) is expected to lead to ongoing reduction in costs and prices, making even deeper market penetration possible, including beyond Kenya (laboratories are already built in Rwanda, Burundi, Zambia, and Namibia).

Case Profile 5: The Health SME Business Development Project, Kenya

PPP Facility: FDOV

Project period: 2015 – 2020 (5 years)

Budget: € 3.9 million

Partners: PharmAccess Foundation (NGO), Medical Credit Fund (private foundation), Kenyan Ministry of Health (national government), Strathmore Business School (private business school), IFC's Health in Africa Initiative (multilateral organization), AMPC International Health Consultants (consultancy company)

The project

This PPP, led by the PharmAccess Foundation, aims to improve the clinical and business performance for Health SMEs (HSMEs) in Kenya, enabling the private health sector to better serve the fast-growing demand for quality private healthcare services. The core intervention of the program involves setting up and scaling up a two-year business development trajectory for the HSME sector in Kenya, consisting of loan products, quality assessments, improvement advice, and business development services (training, coaching, and managerial support by local consultants, supported by Dutch senior consultants) that help HSMEs improve their performance and grow their business. The package of products and services is designed in a tiered fashion, targeting three different market segments: the low-end of the market, which needs instructions on the basics of running a health business (Segment C), the mid-market HSMEs (Segment B), and the higher end HSMEs, which will be provided with help accessing larger loans, high level trainings (mini-MBAs), and strategic advisory services (Segment A). The desired outcomes are to have at least 500 SMEs enrolled in business development services by the end of the project. These HSMEs will have increased their patient visits and revenue by 20% and their staff by 10%. Moreover, it is expected that the project will help SMEs obtain access to loans for investments to the total value of USD 5,000,000 in five years.

What is the PPP trying to scale?

This PPP is attempting to scale a business model for business development services targeted at HSMEs in Kenya. In doing so, the PPP aims to improve the performance of these HSMEs, enabling them to

plan for growth, and even obtaining loans from commercial banks to further invest. The FDOV subsidy is used to set up the training curriculum, build capacity with local trainers and consultants, and provide the first business development services, so to develop the business case, which will be built from a cross-subsidizing system based on segmentation of SMEs; losses in segment C (the lowest-quality HSMEs) will be partially covered by profits made in segments A and B (the higher-end SMEs).

The role of the PPP in the greater scaling pathway

With the business model being the essential **ingredient** of the scaling strategy, this PPP is trying to reach scale through a focus on **horizontal scaling**. By promoting a business development trajectory for 500 HSMEs nationwide, it is focusing on the **macro level**. The PPP also involves county governments by letting officials participate in the training components for the HSMEs, thereby supporting counties in effectively managing their new task of public health service delivery. However, there is no direct aim for **vertical scaling** within the project scope.

Other key ingredients of the scaling strategy are knowledge and education through the business development services, and finance in supporting HSMEs gaining access to loans. Moreover, it is foreseen that the business development services now strongly supported by Dutch consultants will eventually be fully taken over by local consultants; in this sense, it will build a supply chain for those services. Demand is created by demonstrating to HSMEs the results of the business development services, such as by using "ambassadors" (graduates of the business courses) to promote the program.

The role of the PPP in the greater scaling pathway

This case is part of a general transition towards a growing market for private health services in Kenya, and sits within a larger effort of the PharmAccess Foundation and MCF to improve those services. In combination with the SafeCare ranking system (previously introduced by the PharmAccess Foundation), the PPP is attempting to gain the trust of potential patients in those HSMEs that

have taken part in the program. SafeCare, which is the first quality assessment and ranking system for smaller health providers in resource-restricted settings, in combination with the business development services and support accessing loans, can be seen as game changers for smaller service providers in Kenya's health sector. The offer of business development services to HSMEs remains unique, and the business model can only become sustainable with help of the FDOV subsidy – it might therefore be seen as starting from stage 1, but it has the ambition to move to stage 2 within the project period.

Case Profile 6: Sustainable and Affordable Poultry for All (SAPA) Project, Myanmar

PPP Facility: FDOV

Project period: 2015 – 2020 (5 years)

Budget: € 5 million

Partners: De Heus Animal Nutrition BV (Agro Company), De Heus Myanmar Ltd. (Agro Company), Belgabroed N.V. (Agro Company), Fresh Studio Innovations Asia Ltd. (consultancy company), Aeres Group (knowledge institute), Myanmar Livestock Federation (sector organization), Yezin Agriculture University (knowledge institute)

The project

The objective of this PPP, led by the two Dutch companies De Heus and Belgabroed, is to improve food security and income of rural smallholders in Myanmar through the introduction of more productive and sustainable farming practices for poultry and corn production. This will result in lower cost prices and productivity gains, making poultry in Myanmar more affordable. To achieve this, a professional hatchery will be set up, reducing the current unstable supply of day-old chickens (DOCs), and the capacity of 250 broiler farmers will be enhanced to professionally manage their farms. This will be done by setting up three poultry training centers (PTCs) that will offer professional broiler farm management training courses. These PTCs will be developed by making use of already existing poultry farms, which will gradually be upgraded. Additionally, as corn is the main cost element of poultry feed, corn farmers will be trained, from whom the project will buy the corn. This will increase the domestic supply of chicken meat by 18 million kg per year – the equivalent to the annual consumption of one million people. The overall direct value created by the project is US\$40 million per year, and 6700 smallholder farmers will directly generate income from this project.

What is the PPP trying to scale?

The PPP is trying to scale a set of arrangements – the production of day-old chickens and the production of corn as chicken feed – to improve the production of poultry by smallholder farmers in Myanmar. By investing in a DOC hatchery, broiler and corn farmer extension services, expertise centers, and purchase of corn for feed, De Heus and Belgabroed are together trying to gain a share

in the monopolistic poultry market of Myanmar. In doing so, the project creates more reliability, open access, and freer choice for farmers in the sector. The project also attempts to scale the broiler farms by training the farmers, based on which they will be able to improve their technical and financial performance, in turn enabling them to invest in and expand their farms.

The scaling strategy

The **entry point** of the scaling strategy is the microlevel, introducing improved practices and building a business case for both these practices and support services. It is worth noting that De Heus is also building a factory, which is outside the scope of the FDOV project but an essential element in building the business model. Clearly, the main approach here is **horizontal scaling**. There are also some activities on the meso/chain level in the sense that the commercial firms work with their own distribution systems and back-up training services. Cooperation with the Myanmar Livestock Federation might contribute to a conducive environment for scaling and can be seen as a (small) form of **vertical scaling**. The PPP is not deliberately planning for vertical scaling activities, which can be understood in the challenging context of a country with weak governmental institutions. The main **ingredients** of the scaling strategy are value chain development, expanding a business model, knowledge and education through the farmer extension services, and improved technology and practices.

The role of the PPP in the greater scaling pathway

The role of the PPP is that it leverages the public and private (financial) resources needed to build this pro-poor business model. The FDOV subsidy reduces the high risks of investing in a business environment like Myanmar. The aim of De Heus and Belgabroed, as the ‘first European movers’ in the poultry sector in Myanmar, is to gain an initial market share (stages 1 and 2). The project activities are based on De Heus’ experiences with a similar business model in Vietnam. De Heus and Belgabroed are covering the initial risks; this is expected to open up the Myanmar poultry market for other international players in later stages. At present, the market is relatively monopolistic, so this project may cause a game change in the sector.

Case Profile 7: Integrated Water Management and Knowledge Transfer in Sisili Kulpawn Basin in Ghana

PPP Facility: FDW

Project period: 2012 – 2017 (5 years)

Budget: € 11,775,050

Partners: Wenco Ghana Ltd. (Agriculture Company), the Savannah Accelerated Development Authority (SADA: local government Ghana), Alterra Wageningen University (knowledge institute), Rebelgroup International (Consultancy Company)

The project

The project, led by IWAD (Integrated Water Management & Agricultural Development Ghana Ltd., a department of Wenco), envisages introducing modern irrigation and conservation farming practices in the Savannah Agro-Ecological Zone of Northern Ghana, which is characterized by difficult agroecological conditions. The project aims to develop innovative flood mitigation measures, irrigation, and drainage systems, as well as to introduce new soil and water conservation practices. The intervention contains an extension package to support the behavioral change from traditional into modern farming, introducing irrigation, water retention, and improved crop management techniques, while also ensuring the availability of agricultural input supplies, credit facilities, and access to secured markets. The project aims to increase the incomes for about 3000 outgrower smallholder farmers on 6000 ha, and to develop 150 ha irrigation systems with smallholder farmers. 250 ha of irrigated land is reserved for a commercial nucleus estate. The project will have an indirect impact on the livelihood of 21,600 people and stimulate employment and economic growth in the north of Ghana.

What is the PPP trying to scale?

IWAD aims to introduce improved water management by scaling the adoption and use of improved agricultural and irrigation practices by farmers. This will enable the farmers to make the transition from low-level dry-land to medium-level irrigation practices. Scaling these practices is based on a business case for both the farmers and IWAD: farmers will increase their income by adopting the techniques and increasing and improving their produce, while IWAD provides inputs,

knowledge, and credit to the farmers (which will be paid back to IWAD later) and sells the farmers' produce. The share of the profits received by IWAD will be reinvested in the expansion of irrigation infrastructure.

The scaling strategy

To introduce irrigation to the region, the PPP is building irrigation infrastructure and working directly with farmers to let them adopt more water-efficient irrigation techniques. This means that the project uses the microlevel as the **entry level** for scaling. The scaling strategy of the PPP includes both **horizontal and vertical approaches**: horizontal in that a business case is developed on the basis of increasing the numbers of farmers using the improved practice; vertical in the sense that the PPP closely cooperates with and receives coinvestments from a local governmental authority (SADA). Furthermore, the PPP also cooperates with local chiefs and leadership to ensure local embedding of the project activities. The **key ingredients** of the scaling strategy are, in the first place, the business model based on the irrigation infrastructure (the key technology), finance through credit for farmers, public sector governance through close involvement of SADA, and knowledge and education through extension services for the farmers by Alterra and local universities.

The role of the PPP in the greater scaling pathway

The FDW subsidy leverages public and private financial resources needed to make the first investments in the irrigation infrastructure. Wenco and IWAD have much experience in the area and have been looking for financing opportunities to develop and expand the irrigation and soil and water conservation practices gradually in the near future. Wenco and IWAD can be considered as 'first movers' (stage 1), as they are the first commercial firm in Ghana to invest in irrigation infrastructure for the development of dry farm land. The PPP considers this project a 'flagship' or pilot project, and has from the start deliberately planned to continue expanding the irrigated land, including beyond the project period. For this purpose, it is looking for new sources of (mixed) finance, which will still be necessary, considering the high costs of irrigation and flood management infrastructure. IWAD in this way takes into account the fact that

43 the Ghanaian government is planning to build a large dam and reservoir near the project area, which might open up new bulk water development opportunities and further expansion of climate smart irrigation and drainage practices.

Scaling impact has become a popular term in the development arena, but its popularity is not always matched with conceptual clarity, depth of approaches and underpinning of success claims. PPPs are seen as one (key) instrument for scaling. This paper seeks to unpack the concept of 'scaling' and make it comprehensible, concrete, and actionable, thus helping practitioners and PPPs to analyze their own strategies and shape improvements.

While focusing on examples from water and agriculture, the paper also synthesizes substance from 'thought leader' interviews and literature. For various aspects of scaling, key conceptual models and approaches – as well as real-life examples – have been collected and synthesized.

The paper ends with a brief set of remarks on the relevance and roles of PPPs, suggestions for improving scaling strategies, and further knowledge issues.

Scaling is one of the themes of the knowledge agenda of PPPLab. Other themes include business models and financing, the role of the 'public P', and partnership performance tracking. For more information, see www.ppplab.org



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