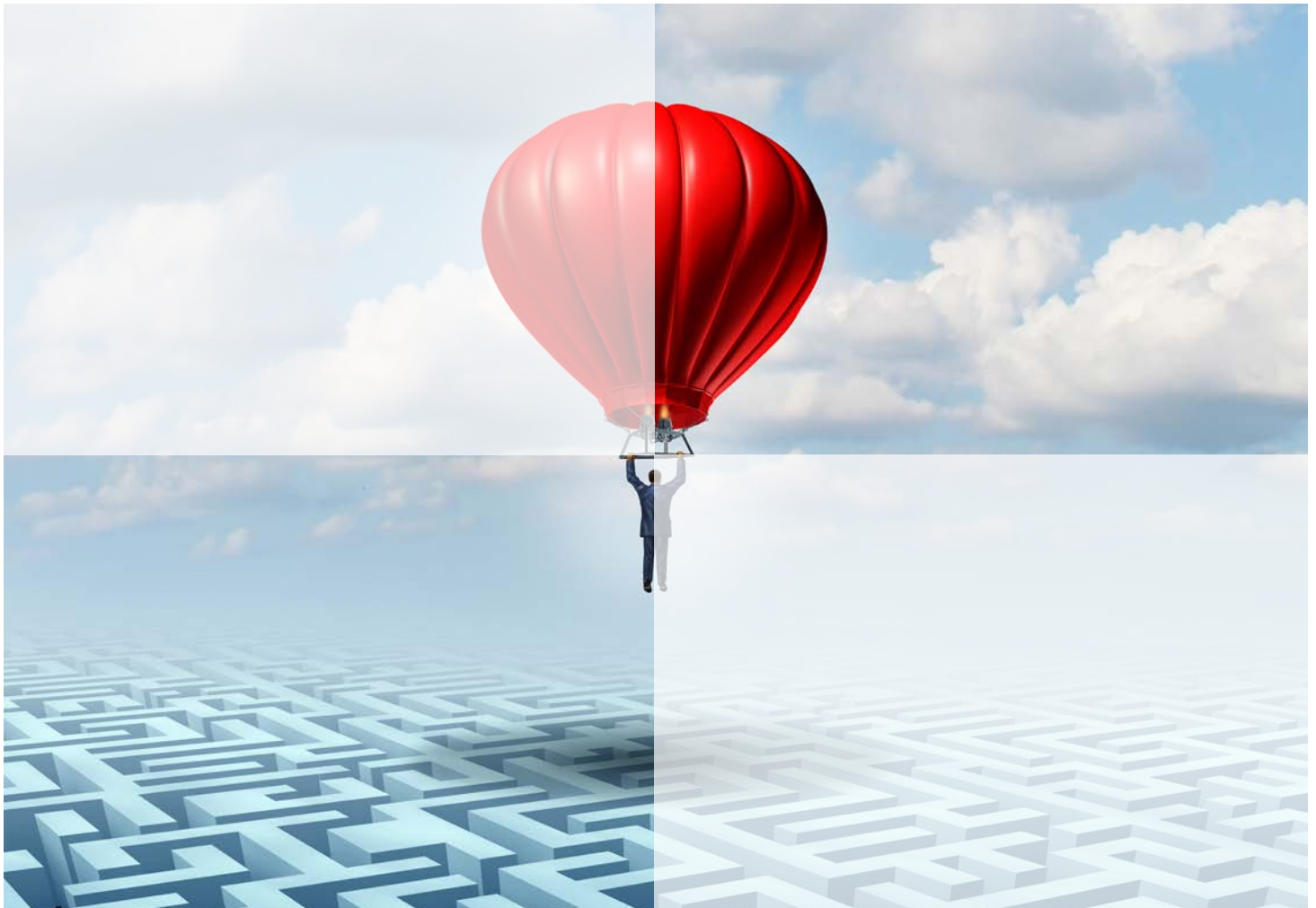


Industry Agenda

Health Systems Leapfrogging in Emerging Economies From Concept to Scale-up and System Transformation

This project is supported by the Boston Consulting Group (BCG)

January 2015



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REF 140115

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Preface



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Health system sustainability concerns everyone. Leapfrogging is a transformative approach to development that can empower emerging economies to achieve a vision of an ideal health system.

For emerging economies, emulating the development paths of mature health systems is neither feasible nor desirable. It is too expensive, takes too long and leads to many of the pitfalls that mature health systems face today. It also fails to take advantage of the multitude of innovations that can radically change how to conceive of, provide and manage health.

A window of opportunity is open. Emerging economies are growing and spending ever more on health. Many understand that health is not a cost centre: investments in health help economies grow with equity, strengthen social stability, increase people's well-being and help them live with dignity.

At the same time, the rise of non-communicable diseases and the persistence of communicable ones – recently, Ebola – highlight the need for emerging economies to invest in their health systems. Quick, narrow and funnelled solutions need to be replaced by visionary, long-term thinking, and systematic approaches need to be coupled with collaboration between multiple stakeholders to transform nascent or maturing health systems towards an ideal vision.

The three-year initiative Health Systems Leapfrogging in Emerging Economies aims to find solutions that will allow emerging economies to leap towards an ideal health system vision quickly, cost-effectively and with scale by avoiding the problems encountered by developed economies.

We are now completing the second year of our journey. Building on the first year's groundwork on the case for and the definition of leapfrogging, our new paper focuses on how health systems leapfrogging works. It identifies key lessons learned and enablers for scaling-up single leapfrogs. It also outlines how single leapfrogs can come together to initiate broader health system transformation.

It has been an exciting and rewarding journey. In addition to the initiative's engagements at the World Economic Forum Annual Meeting in Davos-Klosters, at the Annual Meeting of the New Champions in Tianjin and at several regional meetings and gatherings around the globe, we have generated insights through collaboration with government officials, academics, investors and private-sector leaders across several industries.

We have had the opportunity to work with more than 50 leapfroggers from 20 different emerging economies, all of them dealing with scaling-up challenges on a daily basis.

We have also worked with the Republic of South Africa and the Federal Republic of Nigeria to test and anchor our recommendations. By facilitating dialogues between the private and public sectors, we have helped advance the design and implementation of several leapfrogging ideas.

The opportunity for leapfrogging is here and now. Several governments of emerging economies and numerous private- and public-sector partners have already started the journey. Join us. Help move our ideas into action and impact!

1. Leapfrogging towards a Health System Vision

A. Window of Opportunity

The development path followed by the health systems of mature economies is neither feasible nor desirable for emerging economies. It is too expensive, time-consuming and inefficient. It can lead to the sustainability challenges that the health systems of developed economies face today. Indeed, emerging economies could not follow the path of developed ones even if they wanted to. For instance, given Nigeria's current training models and health delivery practices, it would take that country 300 years to train the same number of doctors per capita as currently exists in the countries of the Organisation for Economic Co-operation and Development.¹

Building strong and sustainable health systems in emerging economies requires an approach based on innovation to accelerate development and achieve results equal to or better than those of mature economies, in less time. Leapfrogging over arduous and expensive development stages is the only practical way for emerging economies to establish better, alternative health systems.

While they face large obstacles in development, emerging economies have some advantages over more mature economies. For one, they can benefit from the past mistakes of more developed economies. They also have more freedom to reform their systems because they are less burdened by path dependencies, sunk costs and vested interests. Perhaps most crucially, emerging economies now have access to numerous technological and organizational innovations that present significant opportunities for leapfrogging.

Economic and policy conditions are favourable for emerging economies to take advantage of those opportunities. Between 1995 and 2012, health expenditures grew by 7.4% per annum in emerging economies, compared to 3.5% in developed economies. Emerging economies are expected to increase their spending by 10.7% per annum until 2022, compared to 3.7% for developed economies. For every additional \$100 that will be spent globally on health in 2022 (compared with 2012), \$50 will come from emerging economies. Meanwhile, public attention in emerging economies has increasingly turned towards the need for sustainable, high-quality health systems. The recent Ebola crisis in West Africa highlights the importance of bolstering health systems in their entirety, to move beyond a focus on the traditional responses aimed at the treatment of a single disease.

B. Our Approach

Leapfrogging to an ideal state assumes having a target vision of what it should be. Our vision of an ideal health system is one that achieves good health outcomes across all demographic and socio-economic groups, improves individual experience and satisfaction with health activities and interventions, and most importantly makes healthcare financially sustainable for both the people and the society.²

Achieving those goals requires innovation, and innovation is at the heart of leapfrogging. In this paper, an innovation with leapfrogging potential is called a “leapfrog” and the leader of such an innovation is a “leapfrogger”. To be considered a leapfrog, an innovation must satisfy three criteria: it must accelerate a health system's development (i.e. reduce the time to results); it must be cost-effective (i.e. achieve current or better results at lower cost); and it must be scalable (i.e. accommodate expansion efficiently).

Leapfrogging is enabled by three types of innovation: new technology, new operating models and new behaviour patterns. Leapfrogging is also a mindset, a way of thinking about problems and opportunities with an eye towards speeding up a system's development.³ The acceleration of a system's development can take place at two levels. The first is the micro-level, where a leapfrog can cause change in a specific part or geographic region of a health system. Many examples of this kind of leapfrogging exist throughout the world (see Exhibit 1, which also shows the type of innovation involved in each leapfrog).



Exhibit 1: Leapfrogging Matrix with Major Themes [from the 2014 Health Systems Leapfrogging Project Paper]

Health system categories	Innovation types			
		A Technology	B Operating model change	C Behavior change
0 Prevention & Health promotion		Mobile technology can be used to prevent disease and create demand for health care via mobile-phone based health education programs and counseling hotlines. (Example: Project Masiluleke in South Africa)	A holistic approach to prevention and health promotion can bring health considerations into every aspect of people's daily lives. (Example: Health Promotion Board in Singapore)	Using social marketing employing proven commercial marketing techniques to promote can improve individuals' health choices. (Example: Greenstar social marketing for family planning in Pakistan)
1 Service delivery		Care can be moved from hospitals to homes by smart phone technology enabling remote support and tracking of therapy adherence. (Example: Helius software tool by Proteus Digital Health in the United Kingdom)	Telemedicine can improve the quality of care for remote communities by leveraging centrally-located expertise. (Example: Fortis and GE Healthcare tele-ICU in India)	Insights from behavioral sciences can be used to effect behavior change in both the demand and provision of medical services. (Example: Abdul Latif Jameel Poverty Action Lab study on immunization incentives in India)
2 Medical products		Refocusing medical product innovation on value to create products balancing quality with cost can increase access to care for low-income populations. (Example: Philips' infant warmer; QIAGEN CareHPV Test)	Strengthening supply chains for medical products , for example through supply chain integration, can make products more accessible and affordable to low-income populations. (Example: "Deliver" Project by USAID)	Incentivizing the workforce to prolong equipment longevity through careful handling, regular maintenance, and safe re-use of devices sold as single-use products. (Example: re-using steel clamps at CARE hospitals in India)
3 Workforce		Clinical decision support (CDS) software can empower health workers to improve the quality of the services they provide. (Example: Diagnostic software used by "Minute Clinic" walk-in clinics in the United States)	Empowered community health workers can promote health and provide primary care, supported by and acting as a gateway to more qualified health workers. (Example: Pesinet child health programs in Africa)	Increasing workforce awareness of financial considerations can reduce costs by promoting transparency and rewarding suggestions for process improvements. (Example: Physician cost awareness policy by Narayana Health in India)
4 Information		Mobile technology can be harnessed to communicate to broad population segments, especially in rural and low-income areas (Example: Kenya Integrated Mobile MNCH Information Platform)	Defined global standards for measuring health outcomes can allow meaningful international benchmarking and sharing of best practices. (Example: International Consortium for Health Outcomes Measurement ICHOM)	Providing food labeling to help consumers better make more health-conscious choices (Example: "Traffic light" nutrition labeling in the United Kingdom)
5 Financing		Smart cards for health insurance buyers can streamline administration, facilitate data collection and mobility, and improve the quality of service delivery while preserving patient privacy (Example: RSBY biometric smart card in India)	Micro-insurance products can increase access to care for low income populations while limiting exposure to financial risk. (Example: Hygeia Community Health Care in Nigeria)	Rewarding health insurance buyers for healthy lifestyles by adjusting premiums to measurable exercise activities and consumption habits can improve health and cut costs. (Example: Discovery insurance group in South Africa)
6 Leadership/ Governance		A nationwide, integrated electronic health record system can improve quality and efficiency of care by avoiding data silos (Example: Electronic Health Record System in Estonia)	Intersectoral governance can bring health considerations into all aspects of public policy making in a holistic manner (Example: National Committee on Public Health in France)	Excise taxes and marketing bans on unhealthy products (foods, tobacco, alcohol) coupled with subsidies for fruits and vegetables encourage healthy behaviour (Example: Sugar tax in Norway)

Proven theme Nascent theme

Source: Expert interviews, project partner organizations, desk research, BCG



The second level is the macro level, where leapfrogging can lead to the transformation of an entire system. This is an aspiration. No system has yet been completely transformed through leapfrogging, but some have experienced large-scale change using this approach. For instance, Ethiopia has made large improvements in healthcare in recent years – more than any other Sub-Saharan country – by implementing an innovative 20-year strategy (Health Extension Programme).⁴ It focuses on several aspects of the health system, including bringing life-saving services and products to the country's largely rural population by training more than 38,000 additional health workers. How to systematize and reproduce that kind of large-scale change is a big puzzle this initiative is working to solve.

Leapfrogs have distinct development phases. Our research shows that many potential micro-level leapfrogs fail when they reach the scale-up phase. These projects integrate poorly into the health system and are uncoordinated with other initiatives, limiting their impact. Although insufficient for system transformation, getting the micro-level leapfrogs right is a necessary condition. This paper examines the key factors that can help both proven and emerging leapfrogs scale up successfully.

2. Why Leapfrogs Fail: The Perils of Scaling-up

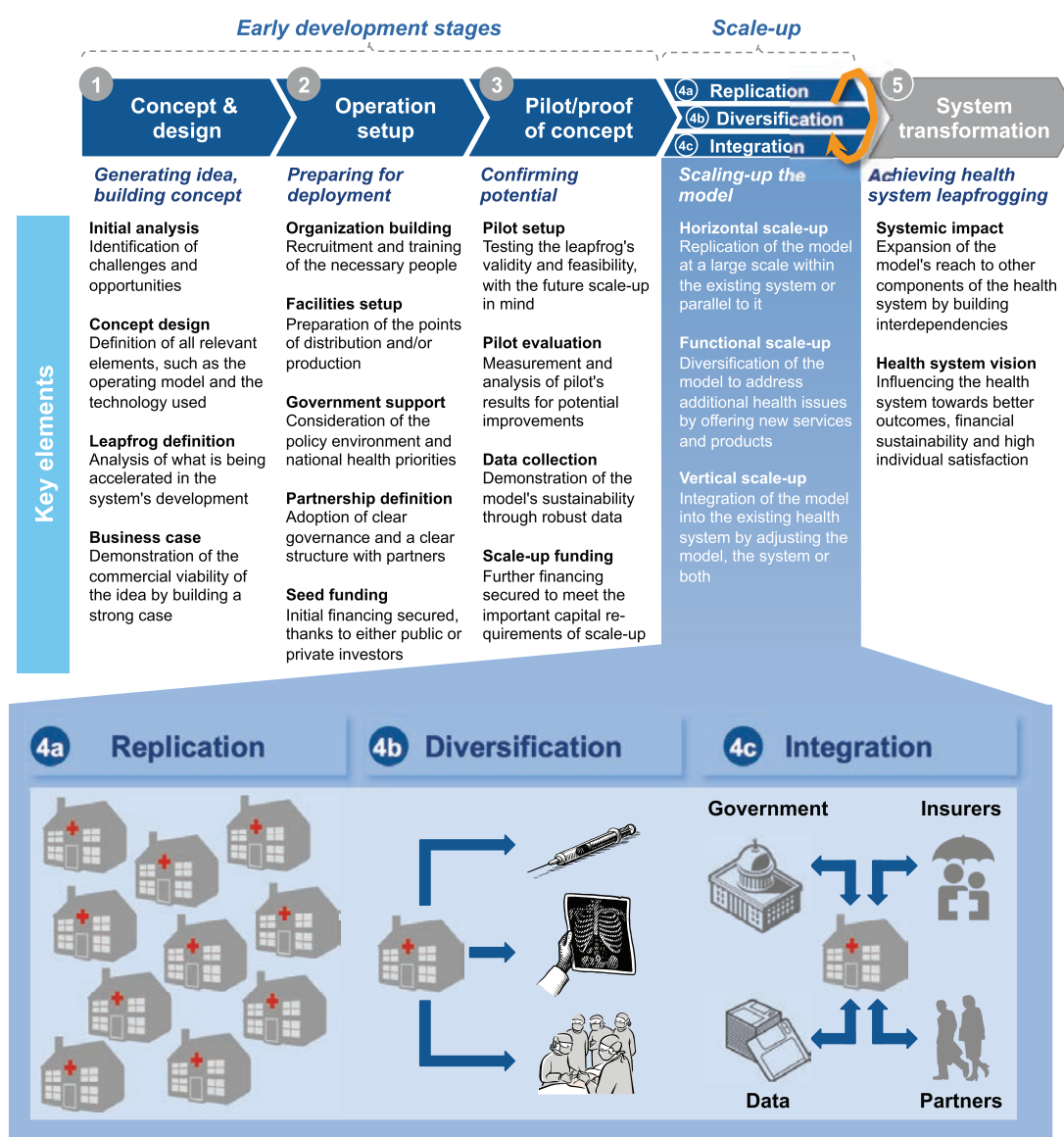
A. The Life Cycle of Leapfrogs and Types of Scaling-up

Conceptually it is useful to consider micro-level leapfrog development as consisting of four basic stages. If an innovative project can go through each of these successfully, it can accelerate the health system's development and contribute to system transformation (see Exhibit 2).

The first stage is concept and design, which is about generating the idea and building a concept. Next is the operation setup stage, which is about preparing for deployment. The third stage is the pilot/proof of concept stage, which is about testing and confirming the model's potential. The fourth and last stage, scale-up, is where the model meets reality. According to many leapfroggers interviewed, this is by far the most perilous stage.

An innovation can be scaled up along three different, complementary dimensions, either simultaneously or sequentially (the right combination and balance will depend on factors discussed in Section 4).

Exhibit 2: Life Cycle of a Leapfrog with Three Types of Scale-up



Source: Leapfrogger interviews, BCG

In horizontal scale-up (also called “replication”), the innovation is replicated at a larger scale within the existing system or parallel to it. The objective is to increase coverage and impact by bringing the innovation to different geographic locations and population segments. For example, a successful low-cost clinic that initially started with a few facilities in a single district might expand across the whole country.

In functional scale-up (also called “diversification”), the model is adapted to address additional health issues. Often this means adding new services and products. The objective is to increase impact by extending the initial value proposition to additional needs. For example, the low-cost clinics mentioned above might start selling medicines for patients to use at home.

In vertical scale-up (also called “integration”), which is probably the most ambitious and difficult to achieve, the model is integrated into the existing health system by adapting the model, the system or both. The objective is to increase impact by identifying and improving links and compatibilities between the model and the existing system. For example, the low-cost clinic might become an official service provider or begin working with an existing public insurance scheme.

B. Challenges and Pitfalls

According to leapfroggers, scaling-up a model to reach 100 people is easy, and scaling it up to reach 1,000 people is doable, but reaching 1 million people is a tremendous challenge. Indeed, scaling-up along any of the three dimensions tends to bring potential flaws of the project to the surface. For example, an innovation rolled out quickly to address a “burning platform” crisis may be a jerry-rigged solution, useful in the moment but difficult to replicate in other environments. As Don de Savigny, a health systems expert, put it: “The urgency of some situations leads to quick and efficient innovations that are conceived in parallel to existing systems. Afterwards, it results in a very complex integration process that usually fails or leads to a long-term suboptimal use of resources.”



Scale-up is the also the most challenging stage because it can include governmental, financial and market roadblocks (see Exhibit 3). For instance, one entrepreneur stated: “Government officials expect us to take on all of the risks, even during scale-up stage. It’s a survival of the fittest mentality that undercuts our planning and investment ability.” Sometimes the leapfroggers themselves may be the obstacle to scaling up. According to one non-profit investor: “Entrepreneurs tend to hold on to their baby and fail to make the relevant changes for the model to work at a much larger scale.”

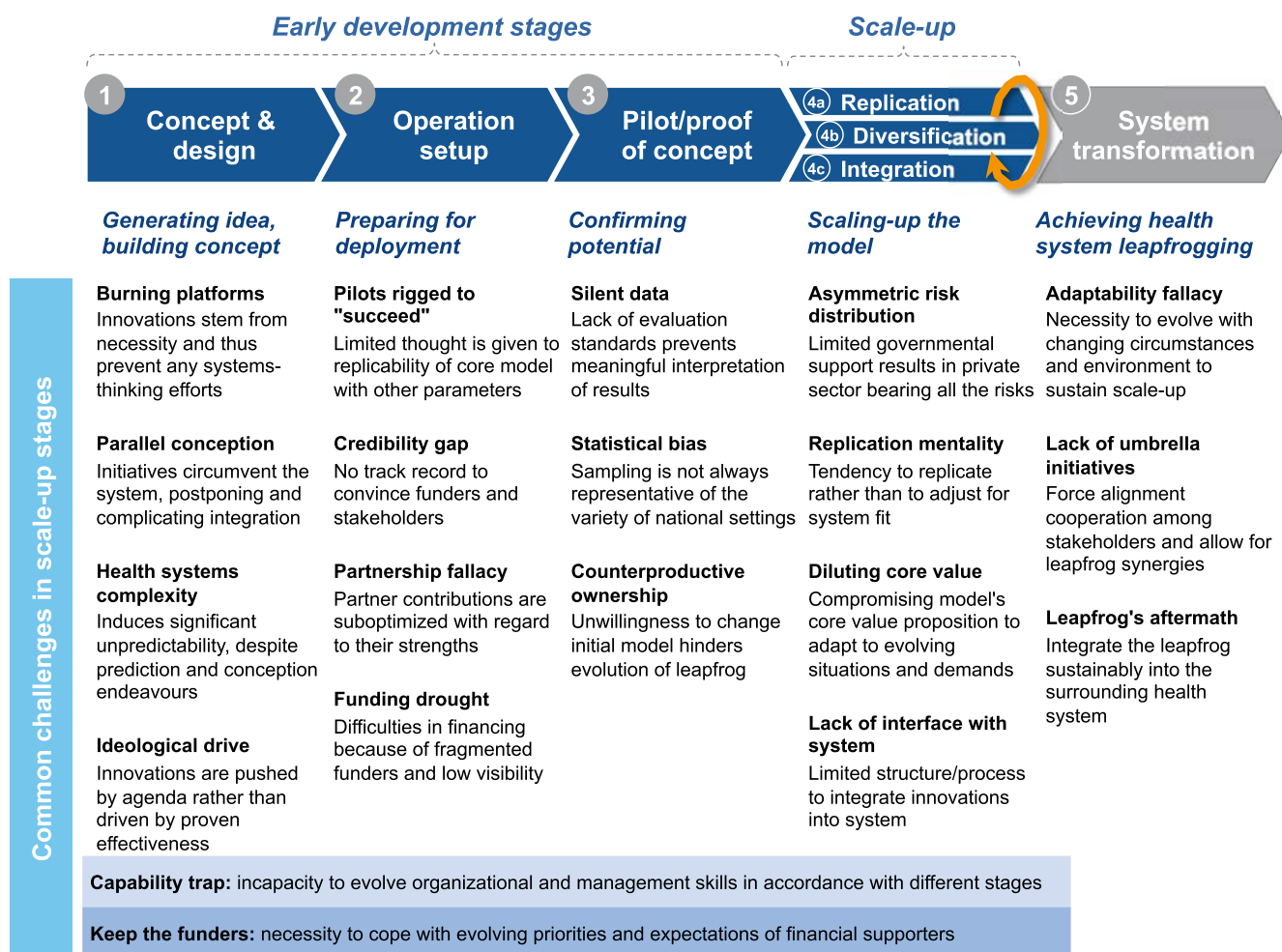
Much of the difficulty of scaling up also comes from structural features of health systems. Specifically, they have three qualities that make scale-up difficult and hinder overall system transformation.

First, they are complex. They have many interrelated components (financing, workforce, infrastructure, etc.) that involve various stakeholders (payers, providers, health workers, patients, government, etc.) with different and often conflicting objectives and incentives.

Second, the design of a health system is context specific. Health systems are deeply shaped by various local factors such as the legacy of past decisions, current public opinion, epidemiology and geography, as well as by cultural norms and values.

Third, health systems are conservative (i.e. they gravitate towards the status quo) due to path dependencies, high sunk costs and vested interests among stakeholders. In addition, some stakeholders are resistant to reform when “outsiders” to the system champion it. Furthermore, most health systems are only partially transparent and not directly accountable to the people they should serve. Finally, rarely does a single actor have the information, incentive and political and economic will and capacity to push for transformation.

Exhibit 3: Universe of Major Scale-up Challenges and Pitfalls



Source: Leapfrogger interviews, BCG

3. How to Succeed: A Road map for Scaling-Up

A. Strategy for Scaling-up

Determining the right scale-up approach for a given leapfrog is critical to its ultimate success. Many leapfrogs suffer from a lack of strategic planning, with leapfroggers failing to think about the leapfrog's contribution to overall system transformation (see Section 5). A sound strategic plan should balance the three dimensions of scale-up: horizontal (replication), functional (diversification) and vertical (integration). Each dimension represents a different strategic focus and presents numerous options for the leapfrogger to ponder.

A leapfrog can be replicated (scaled up horizontally) in different ways: by franchising, by creating new branches, by partnering or by transferring the key principles of the innovation to another actor. VisionSpring, a social enterprise that designs and distributes more than 500,000 pairs of low-cost eyeglasses in 26 countries every year, adjusts its replication strategy from country to country, depending on what kinds of partners are available. In South America, VisionSpring has adopted a hub-and-spoke approach, using its own stores as its main distribution channel but also using a variety of small local partners. In Bangladesh, VisionSpring relies on the national distribution capacity of a single large partner, BRAC, a well-established non-governmental organization (NGO) for development.

Similarly, a leapfrog can be diversified (scaled up functionally) in multiple ways. This form of scale-up offers the largest number of useful variations. For example, diversification can provide an exit strategy after a project achieves its original goal. Text to Change, a social enterprise focused on mobile solutions for social change with over a hundred projects in 23 countries, switched the focus of one of its interactive campaigns in Tanzania from information for pregnant women to nutrition and food advice. The organization realized its users had become much more knowledgeable about prenatal issues since the beginning of the programme in 2012.

Diversification can also be used to cross-subsidize one product or service with revenue generated by another. LV Prasad Eye Institute, an NGO managing over 120 comprehensive eye-care facilities in India, is able to subsidize high-quality free treatment for more than 50% of its patients with revenue from the sale of services such as better rooms or in-room internet to those who can afford it.

Functional scale-up is also a means towards forward/backward integration of the value chain in order to offer a more complete value proposition. Clínicas del Azúcar, a chain of one-stop diabetes management clinics for underserved people in Mexico that reduced the annual cost

of care by 70%, began selling health insurance to its customers, thus offering them a comprehensive package of care at low cost.

A leapfrogger can integrate with the existing health system (scaling up vertically) in various ways, ranging from sharing know-how with government to becoming an implementation partner. While it is very challenging to scale up vertically because of the number of stakeholders and the complexity of health systems, it is ultimately essential for system transformation. Integration can be a two-way process: the model can be adjusted to fit the existing health framework and/or the system can be changed to integrate and institutionalize the leapfrog once the model has reached critical size or relevance. In the same way as diversification, vertical scale-up can also provide a compelling exit strategy.

In South Africa, for example, a partnership of various private actors led to a maternal health mobile platform called Mobile Alliance for Maternal Action (MAMA), which has been adapted to become a nationwide initiative of the Ministry of Health under the name MomConnect. The system is still operated by the non-governmental partners, but the government now has an active leadership role and the system is deeply integrated with the government's database. For instance, information about each of its newly registered mothers is transferred to the ministry's Central Pregnancy Registry.

Different scale-up options are suited to different strategic goals. In practice most projects will have multiple, overlapping goals requiring different scale-up types. That is why projects are often scaled up in all three ways, simultaneously or sequentially.



Entrepreneurs tend to focus first (and often exclusively) on replication, as it can be very useful in building a project’s credibility or in achieving sufficient mass to attract the attention of government and investors.

As the project moves from the pilot phase to scale-up, however, the leapfrogger may begin to face increasingly urgent strategic questions on how to go forward, with regard to the scale-up’s financing, pace and management. For instance, horizontal scale-up can have different paces of execution: smooth, stepped or great leap.⁵ The leapfrogger may also have to consider or reconsider the question of which partnerships and operating models can maximize the project’s impact (see Exhibit 4).

The responses to these strategic questions are shaped by endogenous and exogenous factors. Endogenous factors are those that are intrinsic to the innovation and its business model. These include aspects such as the value proposition, the organizational capabilities and the founders’ aspirations. For example, a leapfrogger focused on social impact might immediately share the innovation with multiple partners and governments to reach the largest possible number of people as quickly as possible.

Exogenous factors are those pertaining to the health system itself or its social context (see Section 4). Demand for an innovation, for example, is a critical exogenous factor. So is the availability of human, financial and governmental resources. A strongly supportive government, for instance, can enable a leapfrogger to quickly scale up vertically, by integrating the leapfrog directly into the existing health system and by leveraging the system’s current resources.

By systematically considering the most important of these factors and by understanding each strategic question on its own, a leapfrogger can create an effective strategic plan. The resulting road map will pave the way for a successful implementation of the scale-up. As one leapfrogger said: “Going through the process was painful, but it forced us to think systematically and strategically about every aspect of our model. It helped us generate insights on our scale-up strategy and we found solutions to challenges we had considered insurmountable.”

Exhibit 4: Framework on How to Think about Strategic Planning



Source: Leapfrogger interviews, BCG

m2m: The Long Journey of a Successful Scale-up

mothers2mothers (m2m) is a non-profit international organization that was launched in South Africa in 2001. Its mission is to train, employ and empower mothers living with HIV, who are called Mentor Mothers, to eliminate the transmission of HIV from mothers to babies and improve the health of women, their partners and families. Since its creation, the programme has scaled up along each of the three dimensions: horizontal, functional and vertical. It is now active in six countries in Sub-Saharan Africa and reached more than 10% of HIV-positive mothers worldwide at its peak of activity in 2011.

Horizontal: Because of the urgency of reducing paediatric HIV rates, the lack of “competitors” (nobody else tackled the issue) and the availability of funding (exogenous factors), m2m decided to concentrate on delivering one specific service directed at preventing mother-to-child transmission of HIV. It scaled up very quickly by replicating its model in other countries and in different demographic and cultural contexts. This was in line with the founder’s aspirations to improve the lives of as many women as possible as quickly and as efficiently as possible (endogenous factor).

Functional: As the model became more integrated into national health structures, m2m began to align its work more closely with the governments’ reproductive, maternal, newborn and child health (RMNCH) priorities. This has led m2m to enhance the services provided by Mentor Mothers to include basic education, screening and referral services for TB, malaria, cervical cancer, nutrition, family planning and other RMNCH issues. The impetus for the change came from needs expressed by patient mothers and Mentor Mothers, as well as from ministries of health and international health policy bodies, which asked for a more integrated approach to RMNCH issues (exogenous factors).

Vertical: The Mentor Mother model has been recognized as a best practice and been adopted by national governments and ministries of health in many of the countries where m2m works. In Kenya, the government has mandated that all clinical service providers implement the model, employing guidelines and a curriculum developed in partnership with m2m (endogenous factor). In South Africa, the Department of Health has also adopted the model, and five of the nine provincial departments of health are planning to integrate it into district health structures.

B. Key Lessons Learned

Key lessons can be learned from leapfroggers who have gone through the scale-up process. The 10 lessons below have been drawn from successful or promising leapfrogs in different regions, concerning different health system components and relying on different innovation types (see Exhibit 5).

1. Anchor innovation in fundamental human behaviour

A leapfrog’s key aspects should appeal to a universal human trait. This will make any required behaviour change easier and will also make the value proposition obvious. The leapfrog will be more easily adopted by beneficiaries, yield longer-lasting impact and be easier to replicate across cultures. m2m’s Mentor Mother model, for example, has “peer mentorship” at its core. HIV-positive women are empowered and motivated through their employment as Mentor Mothers. Pregnant women are motivated to change their behaviour by their desire to act in their unborn child’s best interests and their willingness to trust someone from their own community who has lived through similar circumstances.

2. Adapt to survive, diversify to thrive

The model must be able to adapt to local and changing circumstances while staying focused on its value proposition. At the same time, the leapfrogger should explore possibilities for product and service diversification while keeping in mind what belongs to the model’s core and what can be compromised. Adaptability combined with appropriate variability is key to long-term success. mothers2mothers adapted its model to local circumstances by enrolling HIV-negative Mentor Mothers when necessary. They also expanded the model to target tuberculosis and other child and maternal health issues. Throughout these changes, m2m has kept focus on the principle of peer mentorship, which is essential to the programme’s value proposition.

3. Empower communities to shape and own the model

Local ownership, instead of a top-down approach, should be encouraged by testing and modifying the model according to local feedback. A participatory approach will result in much higher impact due to greater involvement and stronger emotional connection by local participants. When individuals feel empowered, they stop thinking like passive beneficiaries and become active change agents. For instance, One Family Health manages a nurse-run, business-franchise chain of primary-care clinics (“health posts”) established through a public-private partnership in Rwanda. The model relies on its nurses, who feel and act like the owners of their health posts, which they can shape at their discretion (e.g. by changing the number of employees) to maximize reach and impact in their communities.

4. Broaden the horizon beyond health

Leapfroggers should be on the lookout for ideas and partnerships outside the health industry. Many relevant innovations occur elsewhere (e.g. in telecommunications),

and many changes in apparently unrelated fields affect the health ecosystem (e.g. urban planning). By broadening their horizon, leapfroggers can find inspiration in new ideas that can enhance the initial value proposition. Clínicas del Azúcar, for instance, made use of the idea that diabetes care is similar to auto sales, insofar as trust building and client proximity are key to success. The organization brought in the chief executive officer of one of the biggest Honda dealerships in Mexico as an adviser to train its personnel and develop innovative sales techniques.

5. Target the gap: high government priority and low capability

Ideally, leapfroggers should provide a solution to a high-priority need that government cannot address on its own. Aligning a project with national goals and priorities is likely to increase its traction with authorities. An example of targeting the perfect gap is provided by North Star Alliance, which runs a network of 35 roadside drop-in clinics (converted blue shipping containers) across 13 countries in Africa. The objective is to provide quality health services to truck drivers and sex workers who usually don't have access to healthcare and who play a critical role in spreading diseases such as HIV across territories. Governments have been unable to reach these mobile populations, who also suffer because they tend to be seen as socially unacceptable. North Star Alliance provides a solution to this challenge and has been supported by various ministries in, for example, Kenya.

6. Engage with government at all levels and at all stages

Leapfroggers should seek support from authorities by understanding their needs, by adapting their leapfrog to ensure its relevance to national priorities and by seeking authorities' feedback. "Don't push me the innovations that I don't need. Listen to me and understand where my weak capabilities are and offer me something accordingly," advised one health minister interviewed. Governments are expanding their role in health, and innovators should connect with them at every level. The cooperation of central government is necessary in adapting the existing policy framework to accommodate leapfrogs, and local governments are necessary for implementation. Developing relationships with government can facilitate the integration of an innovation into the mainstream health system and pave the way for system transformation. For example, Friendship, an initiative that sends hospital ships and other medical support to remote Bangladeshi river and coastal communities, meets with district and sub-district officials every month. This improves coordination and has resulted in land grants for clinics. Friendship also regularly works with Bangladeshi health departments during floods, operating clinics in the field and providing data to the authorities. In addition, Friendship engages the federal government, a key health player in Bangladesh, in an effort to establish a broad public-private partnership to provide care to isolated communities.

Exhibit 5: 10 key lessons for a successful scale-up



Source: Leapfrogger interviews, BCG

7. Engineer system reactions

Leapfroggers should encourage positive chain reactions (e.g. serendipity) among the system's stakeholders. In Nigeria, for example, a public-private partnership between Kwara State, PharmAccess Foundation (an international NGO that seeks to improve access to basic healthcare in Sub-Saharan Africa) and a private insurer is providing subsidized health insurance to poor Nigerians. This has eased the financial burden on patients and has initiated a virtuous circle of other effects. Increased health coverage has led to an increase in demand for health services, which has led to an increase in the number of health workers needed. That has produced additional jobs (especially for women), and the new revenue from those jobs has led to broader health insurance coverage. The various aspects of any health system are highly interdependent, and even a small actor can have a big impact if it focuses its efforts carefully.

8. Create win-win situations through mutually beneficial partnerships

An important step for leapfroggers is to align with partners strategically by identifying how the leapfrog can add value and by building strong partnership structures. This will encourage a high level of stakeholder engagement and more equitable risk distribution among partners. Sproxil, a company that makes mobile phone-based medical product verification technology, for example, identified and leveraged the various incentives of the medical product system's stakeholders. By aligning the interests of manufacturers who want to sell their products, beneficiaries who want high-quality medicines and the official authorities who want to stop counterfeiting, Sproxil was able to create a win-win situation for all and has verified more than 13 million products to date.

9. Connect with other leapfroggers through an umbrella initiative

Leapfroggers can create synergies with each other and avoid duplicating effort by creating or joining an umbrella initiative. This can lead to greater impact and to better resource allocation. Window of Opportunity, for example, is a five-year initiative led by PATH, an international NGO focused on innovation that aims to improve the health and development of children under two years old in South Africa and Mozambique. One of the project's goals is providing technical support, funding and coordination to community-based organizations that are selected through a competitive process. The 29 organizations that are currently backed by Window of Opportunity meet on a quarterly basis to share best practices and training techniques. For some weaker organizations, linking up with partners has been crucial to their development.

10. Collect, evaluate and communicate results

In the design stage, leapfroggers should think about the evidence that they will need to collect and should design their data systems accordingly. Any data that can be collected (ideally, electronically) should be measured from day one. Robust metrics will help attract attention to the model, convince stakeholders and promote consensus among policy-makers. Naya Jeevan, which provides access to affordable quality healthcare in Pakistan through a micro health insurance model, conducted an analysis of the primary, secondary and tertiary healthcare utilization of its health plan members in collaboration with the International Labour Organization's Impact Insurance Facility. This analysis helped to convince a number of Naya Jeevan's corporate clients of the cost-effectiveness of primary preventive healthcare and the need to provide specific health interventions as a part of a comprehensive health strategy for low-income stakeholders in their corporate value chains (employees, informal domestic workers of corporate executives, suppliers, distributors, retailers, etc.).



4. What Makes It Possible: The Enablers of Scaling-up

A. Key Enablers

Enablers are important factors that support a leapfrog's scale-up but lie outside the leapfrogger's control. Well-developed mobile technology infrastructure, for example, would be an essential enabler for any number of leapfrogs. An initiative such as SMS for Life, which uses mobile phone reporting to improve the management of malaria in rural

areas in Tanzania, could not succeed in a region lacking functional cell phone towers.

Enablers fall into five broad categories: market conditions; institutions and policy; population and society; infrastructure; and stakeholders and partnerships (see Exhibit 6). While the presence of every category of enabler is not necessary to the success of a leapfrog, some types of enablers are truly critical to particular innovation types.

Exhibit 6: Leapfroggers Must Navigate Enablers Carefully for Success

1 Market Conditions	Open market: regulation allowing for market pricing and for the successful entry of non-state-owned enterprises; low transactional costs
	Market gap: recognized current or future widespread demand that cannot be satisfied with current solutions
	Funding availability: access to public, private and/or philanthropic financing for short- and long-term needs
2 Institutions and Policy	Steward of health: government has a clearly formulated vision and strategic priorities demonstrating a commitment to tackle health issues through policies, resource allocation and initiatives in collaboration with other stakeholders
	Policy environment: flexible and receptive legislative framework that facilitates innovation and investment in health (e.g. property rights protection), as well as a stable and predictable policy environment
	Forward-looking education: stakeholders are investing in and are supporting innovative educational and vocational systems that yield a skilled, adaptable workforce
3 Population and Society	Empowered health consumers: individuals have access to comparative information (e.g. via the internet), are equipped to process it and are able to choose and influence different health options
	Community engagement: culture that is open to change; willingness of local communities to get involved in innovative projects and to share the risks
	Digital literacy: basic technological competence throughout the population (e.g. the ability to read, write and send an SMS text)
4 Infrastructure	Minimum infrastructure: leapfrogs usually require basic infrastructure such as electricity and transportation networks
	Existing health resources: presence of public or private health resources and infrastructure (e.g. point of sales or distribution channels) that can be leveraged by the leapfrogger
	Technological diffusion: existence of technological infrastructure such as widespread mobile networks or data systems
5 Stakeholders and Partnerships	Partner presence: motivated stakeholders that can be partners in the leapfrog's design and implementation
	Catalyser: presence of public or private actors who act as catalysts by setting up partnership structures with clear responsibilities and who create an environment of trust in which information can be shared
	Umbrella initiatives: the ability to link complementary leapfrogs to create synergies and avoid redundancies

Source: Leapfrogger and government officials interviews, BCG

B. The Role of Government

In emerging economies, more than in developed ones, governments have to play multiple roles in health (steward, provider, payer, investor, etc.). They usually have to fill gaps because demand for healthcare may be low, infrastructure may be insufficient, local markets may be underdeveloped and some stakeholders may be absent or inadequate.

The government's health policy and actions should not be limited only to ministries of health, but should also involve those who are essential to the broader health agenda, such as the ministries of agriculture, finance, labour and infrastructure. Leadership should come from the very top of the executive power to ensure inter-ministerial collaboration and coordinated action. Finally, the focus of governmental action should be broad. As one minister of health put it aptly: "Traditionally our role has been dubbed as the Ministry of Disease. This paradigm must change immediately." Indeed, health ministries should also consider supporting health promotion and well-being.

Government, in its broader definition, is able to influence most enablers across all five categories. Each of the health system's stakeholders will have their preferences and priorities, but it is government that has the ability to frame an overall health vision and agenda, to find a balance among all the different stakeholder views and interests and to coordinate stakeholder efforts. For these reasons, an attempt at holistic transformation of an emerging economy's health system is unlikely to be successful unless the government is the primary steward of the health system.⁶

When government is the primary steward, even a small change in policy environment can make a significant difference. For example, half of the people in the world who need glasses need reading glasses. In many places, they can easily be purchased over the counter. In other places, however, reading glasses are sold only with a doctor's prescription. Changing the prescription policies in these latter countries would remove a large obstacle to VisionSpring and other enterprises that design and distribute low-cost glasses for poor people.

Another enabler on which government can have a high impact is technological diffusion. Indeed, there are rapid solutions, such as tax breaks, to problems in deploying a minimum degree of connectivity across the country.

Government efforts to foster enabling environments can be a first step towards broader system transformation, as such efforts can help break the health systems' inherent inertia and give a clear signal of commitment that will prompt the necessary cooperation of other stakeholders. Funders, for example, are more likely to invest in leapfrogs once they have seen evidence of strong government support.

However, having a strong steward of health is a necessary but not sufficient condition. Achieving health system transformation depends on the participation of various stakeholders, such as the private sector, international organizations, public investors and NGOs. Many stakeholders have an important role to play through partnerships, but in emerging economies, focusing on the government and its ability to create an enabling environment is a key first step in achieving health system transformation.



5. Achieving Health System Transformation

A. Moving from Single Leapfrogs to System Transformation

While leapfrogging an entire system is an aspiration, a goal that may not be attainable in the near term, it can be a powerful guide in determining the path towards an ideal vision and in mobilizing stakeholders to begin the journey. Transforming any health system towards sustainability is a big task. Especially for an emerging economy, such an effort is comparable to rebuilding a ship at sea in the middle of a storm.

There are practical reasons for optimism, however. During this initiative, the various country engagements have provided opportunities to begin testing the initiative's findings and recommendations in Nigeria and the Republic of South Africa, two emerging economies at different stages of health system development, each with diverse challenges and stakeholders. The results – thus far at the pilot stage – have been encouraging.

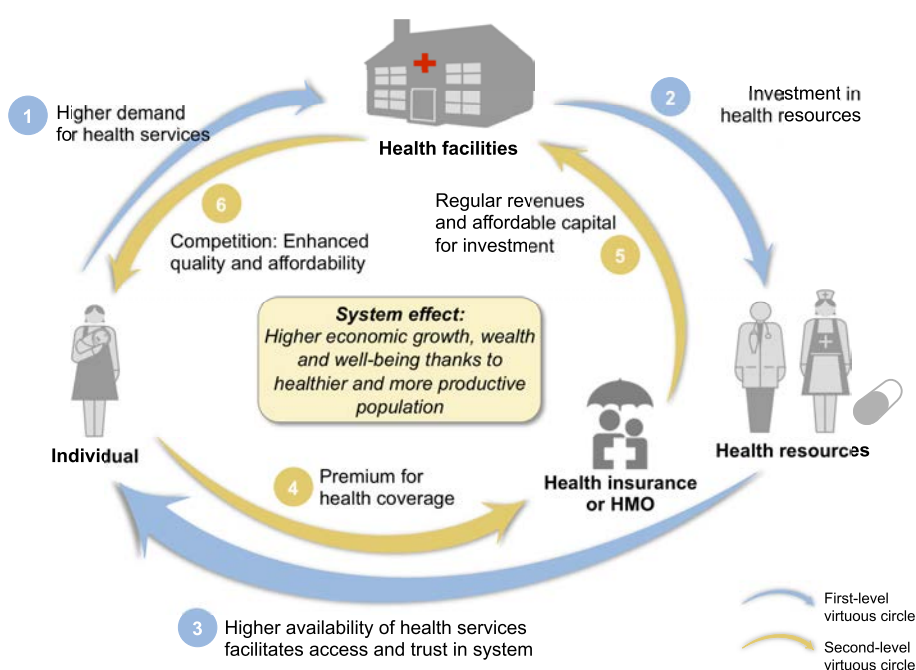
The Nigerian engagement started at the federal level, where the leapfrogging approach to transformation received government endorsement, especially in the context of the country's ambition to achieve universal health coverage.

That would be impossible for Nigeria to accomplish if the country were to follow a traditional development path, given the current coverage rate (around +5% in 2014), available resources and population growth, as well as changes in epidemiology.

Strategic design and implementation planning were then anchored at the state level in Ogun because the state government demonstrated stewardship by formulating a vision, defining priorities and showing a commitment to tackle health issues in partnership with other stakeholders.⁷ Ogun State decided to focus on a package of mutually reinforcing leapfrogging initiatives concerning the development of primary healthcare. The choice was strategic. Focusing on primary healthcare not only allows for the realization of specific goals quickly and cost-effectively (e.g. in maternal and child health), but also encourages long-term thinking on how to establish a system in which health is promoted at the grassroots level by empowered individuals and communities.

Transforming a health system from the primary level up ties stakeholder efforts to the practical issues of prevention, demand creation and service delivery: Where, how and with what services, payment schemes and promotions can a health system best serve its citizens? These questions are the starting point for changes in any of the health system's components.

Exhibit 7: Creating Virtuous Circles among Single Leapfrogs Can Contribute to System Transformation



While the Ogun engagement is at an early stage, many lessons have already been learned, and other states in Nigeria are volunteering to test the leapfrogging approach. Our research and experience (see Sections 3 and 4) have emphasized the importance of simultaneously pursuing a collection of leapfrogs that reinforce each other during scale-up to enhance efficacy and impact (e.g. under an umbrella initiative). In nascent systems with scarce resources, following such an approach can be powerful. It can initiate virtuous circles that strengthen and successfully scale up each leapfrog and that then can instigate broader system change. Exhibit 7, based on numerous interviews and country-level observations, presents a synthesized illustration of how a generic package of leapfrogging initiatives, similar to those in Ogun State, could eventually contribute to the transformation of the health system. The leapfrogs used to illustrate the mechanisms of the virtuous circles involve both the demand and supply sides of health systems and draw on examples (proven or emerging) from Sections 3 and 4. They have not all been proven, but they are all very promising.

A virtuous circle can begin with (1) creation of demand for health services by, for instance, prevention and awareness campaigns (e.g. Text to Change spurs demand creation using text messages). Increased demand leads to an increased need for health resources such as workforce and drugs, which then leads to (2) more revenues for healthcare facilities to pay for these resources (e.g. the m2m model in which increased demand for services led to the employment of lay health workers).

(3) Service availability and service quality increase people's overall satisfaction with and confidence in the health system. This leads to positive recommendations to friends and family, which further increase demand for health services (e.g. One Family Health benefited from positive word of mouth that increased demand for its services). This can be conceived of as a first-level virtuous circle: bringing people to the health facilities, equipping and staffing those facilities, and increasing access to services.

In a second-level virtuous circle, (4) individuals start to see the benefits of the system and start contributing to health insurance. The system moves away from out-of-pocket payment. Even partial subsidies of insurance premiums will encourage a broader population to subscribe to common insurance schemes (e.g. Naya Jeevan increases the number of people contributing to an insurance scheme by offering subsidized micro health insurance financed by corporations or individual philanthropy). A burgeoning market for health insurance fosters higher, more predictable and more stable funding for providers. (5) As a result, banks, for example, are encouraged to invest in and lend to providers and entrepreneurs (e.g. the Kwara insurance scheme, in which a health maintenance organization guarantees health providers a set amount of money per registered patient for primary care service). Such funding flow can help health providers improve their operations and capital investments and help to reach economies of scale. Open markets allowing for competition enable (6) the emergence of innovative service delivery models by tapping into a society's entrepreneurial potential (e.g. Clínicas del Azúcar, a model



that offers customer-centric diabetes services alongside those offered by the public health system, was founded by a local leapfrogger).

This second-level virtuous circle reinforces itself: people's trust in a health system and their willingness to contribute to an insurance scheme both grow as people benefit from better service and results. The overall leapfrogging package will prompt a series of reactions that can eventually lead to a healthier and wealthier population through higher productivity and greater well-being.

While this package approach is more complex than approaches relying on a single leapfrog at a time, it allows for positive synergies and spillover effects across multiple, interrelated initiatives. The final impact is significantly increased, and instrumentalism, which is often responsible for missed opportunities and for delays, is avoided. The results in Ogun are still preliminary, but it is estimated that Ogun will reach its objective of a 70% coverage rate three times faster and 25% cheaper than would have been possible with a traditional development approach. Reaching such a goal faster and at a lower cost is the essence of leapfrogging.

A dual focus on successful scale-up of single leapfrogs and on a vision for system transformation is essential to health system leapfrogging. System transformation builds on the scale-up of single leapfrogs, which in turn need enabling conditions, stakeholder cooperation and government stewardship to achieve something bigger than the sum of their individual successes.

Two considerations are critical: First, how can the right set of leapfrogging initiatives be designed, combined and sequenced around the right priorities and the right set of partners? Second, how can this be brought to life through effective government stewardship, positive market conditions, adequate investment and capable project and change management with appropriate monitoring and feedback loops in place?

Certainly more research is required to hone this approach and to confirm its impact. However, the basic concepts and strategies for scaling-up micro-level leapfrogs and packaging them to achieve system transformation are compelling. The implementation may be complex but the prize is tremendous.

B. Final Thoughts

The health systems leapfrogging journey has been rewarding. It has already begun in a few emerging economies, and more will follow. Economic and policy conditions are favourable in emerging economies. Pandemics, such as Ebola, and the push for universal health coverage have convinced stakeholders to seriously look at building sustainable health systems. There is a plethora of available and affordable innovation (from both within and outside the health sector) in technology, operating models

and behaviour change. Emerging economies are currently well positioned to seize these opportunities as they focus on reaching better outcomes quickly, cost-effectively and with scale.

This initiative's research demonstrates that there is a critical mass of key learnings on scaling-up strategies and best practices. The hope is that these findings will empower and enable leapfroggers, governments, investors and other public- and private-sector actors in this extremely promising and necessary work.



Endnotes

¹ *Health Systems Leapfrogging in Emerging Economies, Project Paper*. January, 2014. Geneva: World Economic Forum, p.4.

² *Health Systems Leapfrogging in Emerging Economies, Project Paper*. January, 2014. Geneva: World Economic Forum, p.6.

³ *Health Systems Leapfrogging in Emerging Economies, Project Paper*. January, 2014. Geneva: World Economic Forum, p.9.

⁴ *The New Prosperity: Strategies for Improving Well-Being in Sub-Saharan Africa*. May, 2013. The Boston Consulting Group, pp. 9-12.

⁵ *Nine Steps for Developing a Scaling-up Strategy*. 2010. Geneva: World Health Organization.

⁶ For more information on the notion of a “steward of health”, see *Towards Better Stewardship: Concepts and Critical Issues*. 2002. Geneva: World Health Organization.

⁷ Ogun State, with a population of 5 million, is Lagos State's only land neighbour. It has been going through rapid industrialization and urbanization and has been confronted with long-standing issues around communicable diseases and RMNCH and the rapid rise of non-communicable diseases. It is representative of many highly populated parts of Sub-Saharan Africa.

Acknowledgements

This publication synthesizes the insights and contributions of many individuals through workshops, interviews, group meetings, emails and desk research. The project team wishes to thank them for their time, dedication and guidance.

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In addition, the project team expresses its gratitude to the following contributors and colleagues for their support throughout the project:

Karim Bouzid, The Boston Consulting Group
Yvette Braam Morris, Vice-President, Public Strategic partnerships, Royal Philips
Giorgio Cometto, Adviser to the Executive Director, Global Health Workforce Alliance
Sarah Gelfand, Deputy Director, International Partnership for Innovative Healthcare Delivery
Pamela Hall, Managing Director, GE Healthcare Africa
Philip McMinn Mitchell, Finance Specialist, The Global Fund
Emmanuel Odu, Director, Community Health, NPHCDA, Federal Ministry of Health, Nigeria
Kelechi Ohiri, Adviser to the Federal Minister of Health, Nigeria
Olumide Okunola, Senior Health Specialist, International Finance Corporation
Romain de Saint Périer, The Boston Consulting Group
Don de Savigny, Professor, Swiss Tropical and Public Health Institute
Olaokun Soyinka, Health Commissioner, Ogun State, Nigeria
Michael Tuil, The Boston Consulting Group
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Emre Ozcan, Project Leader, The Boston Consulting Group, Seconded to the World Economic Forum



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