




Matching Tech Startups with Corporates in Emerging Markets to Build Commercial Partnerships

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Health 2.0 

A large graphic on the right side of the slide showing a piece of light blue paper with a torn, irregular edge, revealing a darker blue background underneath. The text "Break into an emerging market" is written in bold black font on the light blue paper.

Break into an emerging market

Executive Summary

TechEmerge is a unique platform to connect technology companies from around the world with corporates & government institutions in emerging markets to conduct pilots and build commercial partnerships

- TechEmerge Program was piloted in Healthcare in India, to accelerate commercial adoption of new technologies with the goal to increase access to affordable quality services and improve patient outcomes
- Key takeaways of pilot:
 - IFC proved successful to source, validate and select technologies relevant to local service providers: matched top 17 tech companies (from pool of 330+) with 15 Indian Providers, to implement 22 projects reaching over 20,000 patients. 8 commercial contracts signed (2 with matched partners, more expected), and Techco's raised \$7.7M+ during the program, and one exit of \$102M
 - Feedback survey showed strong support for TechEmerge platform by tech companies and local providers
- Now looking to take lessons learned, and scale the program – first focusing on health, building on the knowledge and network from India pilot, then expanding to other sectors
- In parallel, will work on continuity and financial sustainability of Program
- Israel making an additional contribution to support Phase 2 of the Program – \$800K
- **Next Steps:** TechEmerge Multi-Donor Trust Fund (MDTF) Amendment to incorporate additional contribution from Israel, call for funds from Finland for scale up phase, quickly launch Brazil Health, and plan for Indian Health round two, SSA Health and development of Service Delivery Platform

- **TechEmerge Global Program Overview**

- Phase 2 of TechEmerge Program
- Next Steps
- Annex: Update on India Health Pilot

Building on lessons from India pilot, now looking to scale TechEmerge to a Global Program covering multiple sectors & geographies

- **Structured process** to support & facilitate transfer of:
 - **digital technologies** from where they originate
 - **to emerging markets** where they are needed most,
 - and **accelerate commercial** adoption by large corporates & gov'ts
- **Plan to expand to multiple geographies & sectors.** With an immediate focus on scaling **TechEmerge Health to other geographies**
- **Later followed by expansion into other sectors** (e.g., smart energy, smart cities, agritech, edutech, etc.)
- **Aggregate Impact** to be achieved within 8 years (5yr implementation + 3yr post-implementation period):



4,000+

Pipeline of tech companies globally, across sectors

100+

Best-in-class tech innovators matched & piloting technologies with local partners in EMs

100+

Clients & prospective clients in EMs with access to new tech that can improve operations

1+ million

People benefiting from improved services thru deployed technologies

\$100+ million

Facilitated commercial transactions and/or financing opportunities*

Program will focus on three core elements:



SCALE

to other Geographies & Sectors
to increase reach and impact

CONTINUITY

by building a Service Delivery Platform
to offer continuous services, enable efficient replication
and reduce costs

SUSTAINABILITY

by developing Financial Sustainability Model
to diversify funding and build financial sustainability into
Program

Program to support acceleration of innovative technologies in multiple sectors

Disruptive technologies with transformational impact potential are emerging across many sectors. In consultation with internal & external stakeholders (IFC Depts, WB GPs, development partners), the following priority sectors/thematic areas have been identified, along with sample technologies:



DIGITAL HEALTH

- Point of care diagnostics
- Remote monitoring
- Clinical data analytics
- Patient engagement, etc.



SMART ENERGY

- Energy storage (lithium ion, zinc air & flow batteries)
- IOT integration & data analytics
- Smart meters, smart grid tech, smart inverters/switches (re: solar PV)
- Demand side energy management
- Green building tech (e.g., re: heating, cooling, ventilation, lighting & energy consuming systems, advanced insulation & thermal materials, etc.)



SMART CITIES

Technologies related to:

- Improving urban environments
- Housing
- Transportation, e-logistics
- Water & sanitation services, etc.



AGRITECH

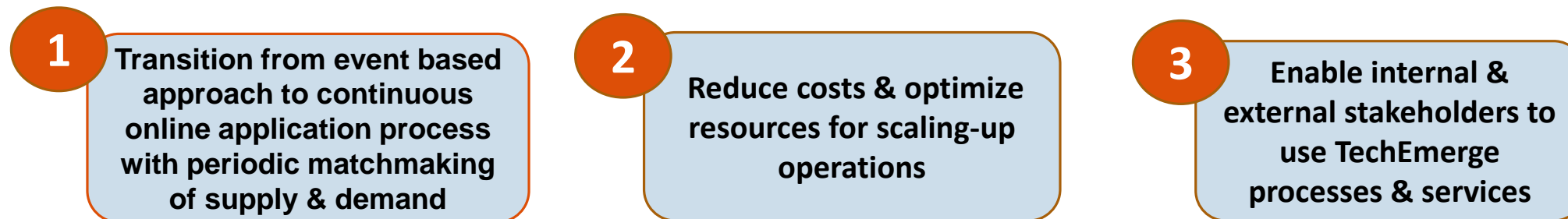
- Precision agriculture (drones & robotics, big data, smart equipment & sensors, farm management software)
- Irrigation technologies
- Traceability & packaging, processing, etc.
- Waste reduction (e.g., cold storage), input tech (e.g., fertilizers, pesticides, soil amendments, seeds & feed)








EDUTECH

- Distance learning tools
- Alternative learning tools
- Training, including augmented reality, skills assessments, etc.

- To enable rapid scale-up, the Program will build a Service Delivery Platform (in parallel to TechEmerge health expansion), to:



TechEmerge Platform: across sectors & geographies				
 Online Application	 Online Resources	 Technical Advisory Network	 Industry Network	 Fundraising
Standardize & Automate: <ul style="list-style-type: none"> • Process for call/search of tech • Managing applications • Periodic review/evaluation by IFC and Advisory Network • Matching Innovators & TechUsers • Monitoring field testing support & reporting 	<ul style="list-style-type: none"> • Market/sector needs assessment • Training materials (e.g., webinars) • Legal/regulatory knowledge repository of specific countries (eg. IP, consumer protection laws) • Database and/or links to local resources (lawyers, experts, etc.) 	Build & coordinate sector-specific Advisory Network (spanning technical, business & market knowledge) to support evaluation & validation of Innovator applications and pilot proposals – all advisors sign agreement to disclose conflicts of interest	Facilitate collaboration among Innovators, TechUsers, multinational cos & investors <ul style="list-style-type: none"> • stimulated by analytics & reports/ whitepapers (e.g., on promoting innovation in EMs, lessons from cross-country tech transfers) 	Fundraising across sectors/geographies for TechEmerge program

Platform will be backbone of Program, enabling IFC to significantly improve service level & reduce operational costs

- Could implement “franchise model”, where WBG &/or external partners leverage Platform to promote tech transfer in various sectors/ geographies
- IFC will maintain quality control, and platform will have robust data security system



Moving towards a self-sustaining business model

	Startup Funding		Moving to self-sustaining business model		
Timeframe	2-3 years		In year 4-5 transition to new model		
Funder Type	Donors	Corporate Sponsors	Subscription Fees	Service Fees	Success based Earnings/ Fees
Examples	Finland, Israel (interest from other donors)	National and multinational companies, e.g., Medtronic, GE, VC Firms, etc.	TechUsers	Innovators participating in program (once shortlisted)	Equity, warranties, royalties, soft loans,
Reasons	Support development mandate, and trade facilitation	Branding, CSR, access to information on new technologies/growing companies	Continuous access to info & database of high-quality Innovators/ technologies	Access to services during preparation & matchmaking event, and support during field-testing	Access to program services, introduction to clients, pilot funding, etc.

Exploring various options

- TechEmerge Global Program Overview

- **Phase 2 of TechEmerge Program**

- Next Steps
- Annex: Update India Health Pilot

Roll-out/Implementation plan – now moving to Phase 2

Phase 1: The Pilot

- Validate & fine-tune approach, processes, governance, etc.
- 1 sector, 1 country

Health India

Phase 2: Expansion

- Replicate pilot success by expanding into next geography
- Scoping additional sectors
- Plan for scale-up phase, including establishing a global platform

Initial Focus on TechEmerge Health:

- Expand into LAC (**Brazil Health**)
- **2nd round India Health**
- **Scoping SSA Health**

Scoping across other sectors (e.g., smart energy, agritech, smart cities, etc.)

Build Service Delivery Platform to enhance efficiency & reduce cost

Phase 3: Scale Up

- Full scale implementation of program in multiple sectors and multiple geographies

Continue TechEmerge Health, and launch TechEmerge in other sectors

Launch global service delivery platform, with continuous enrollment and matching of innovators & tech users

Phase 4: Sustain

- Building financial & operational sustainability, minimizing need for external support



TechEmerge Phase 2

- Immediate focus is to expand **TechEmerge Health** to leverage knowledge and network from India pilot
 - To solidify learning in health sector and prove TechEmerge concept is transferrable to other regions – launch TechEmerge Health in LAC region, specifically **Brazil Health** as it has many similar characteristics to Indian market, while having its own obvious nuances
 - Leverage network and knowledge built in Pilot phase, by holding a **second round of TechEmerge Health in India**
 - **Build TechEmerge Service Delivery Platform** for increased efficiency and to enable rapid scale-up
 - Move to more challenging markets – scoping for **Africa Health**, including determining modifications required (e.g., possible sub-regional approach)
 - Develop various **funding mechanisms** to diversify funding sources and build financial sustainability into the Program
- Scoping across other sectors (e.g., smart energy, agritech, smart cities, etc.) and prioritize specific technologies and geographies for rollout, contingent on available funding

TechEmerge Phase 2 – indicative budget

PHASE 2 – INDICATIVE BUDGET

Brazil Health	\$1.8M
India Health – round 2	\$1M
Service Delivery Platform	\$400K
SSA Health (cost depends on # of countries covered)	<u>\$2-3M</u>
TOTAL	\$5.2–6.2M

In parallel:

- develop various **funding mechanisms** to diversify funding sources and build financial sustainability, and
- **scope Program expansion across other sectors** (e.g., smart energy, agritech, smart cities, etc.)

AVAILABLE FUNDING

Balance from Indian Pilot	~\$ 150K
Finland funds for scale up phase	\$1M
New Commitment from Israel	<u>\$800K*</u>
TOTAL	~\$2M

* Israel's additional contribution requires an amendment to existing Multi-Donor Trust Fund Agreement , for which Finland is also a signatory

In active discussion with a number of donors to support the Program, as well as in discussion with the World Bank Health GP to enhance collaboration to engage public hospitals

Agenda

- TechEmerge Global Program Overview
- Phase 2 of TechEmerge Program
- **Next Steps**
- Annex: Update India Health Pilot

As an immediate next step, expand TechEmerge Health to Brazil, for proof of concept in second market

BRAZIL


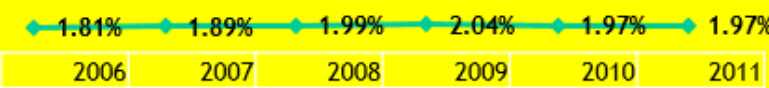

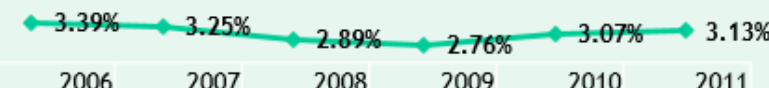

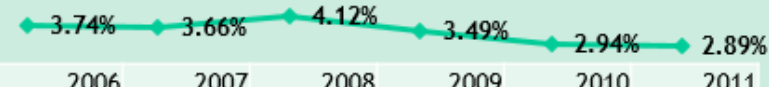
- Leverage knowledge & network built up in healthcare/health tech sector:
 - Strong health tech pipeline (700+ health tech companies expressed interest in India pilot + IFC health tech pipeline)
 - 35+ health Technical Advisors (providing guidance, supporting innovator selection, reviewing pilot proposals, etc.)
 - Continuing to set up network of strategic partners (e.g., Medtronic, BD, GE, Philips, Bosch, VCs)
- IFC wants proof of concept that TechEmerge can scale to other geographies – Brazil has many similarities to Indian market, yet program would need to be tailored to local context and needs

HEALTHCARE IN BRAZIL: LARGE COMMERCIAL & DEVELOPMENTAL OPPORTUNITY

KEY FACTS:

- Population: 208 million (5th largest in world)
- GDP (2015): \$1.8 trillion (7th largest in world)
- Brazilian healthcare market estimated to grow to \$232 Billion by 2021
(8th largest healthcare market in the world, 3rd largest private health sector, and 2nd largest private health insurance market)
- Regulatory changes in Jan.2015 (permitting foreign equity in hospitals) has been game changer and is spurring (foreign) investments in the market

Increasing healthcare expenditure signals attractive market:

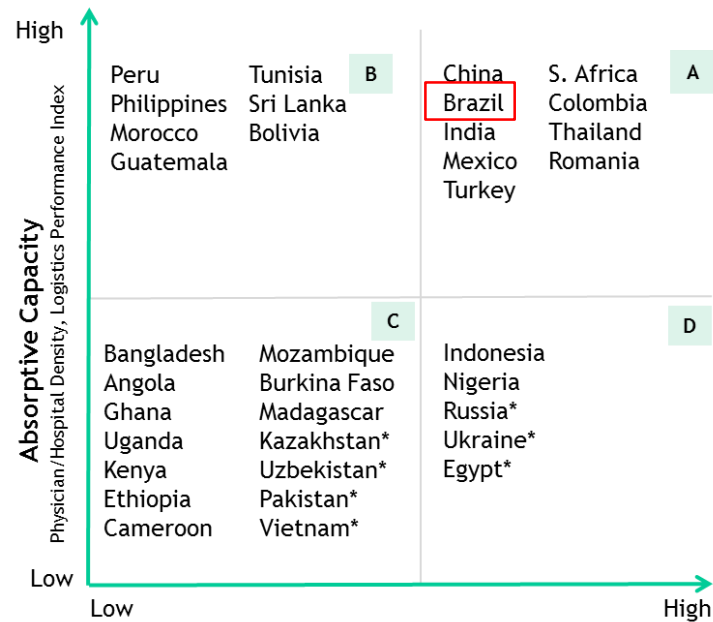
Emerging Market	Healthcare Expenditure CAGR % (2011-2016) (US\$B)	% of <u>MedTech</u> Spend Compared to Total Healthcare Expenditure*												
 Brazil	18.9%	 <table><tr><td>1.81%</td><td>1.89%</td><td>1.99%</td><td>2.04%</td><td>1.97%</td><td>1.97%</td></tr><tr><td>2006</td><td>2007</td><td>2008</td><td>2009</td><td>2010</td><td>2011</td></tr></table>	1.81%	1.89%	1.99%	2.04%	1.97%	1.97%	2006	2007	2008	2009	2010	2011
1.81%	1.89%	1.99%	2.04%	1.97%	1.97%									
2006	2007	2008	2009	2010	2011									
 India	14.8%	 <table><tr><td>3.39%</td><td>3.25%</td><td>2.89%</td><td>2.76%</td><td>3.07%</td><td>3.13%</td></tr><tr><td>2006</td><td>2007</td><td>2008</td><td>2009</td><td>2010</td><td>2011</td></tr></table>	3.39%	3.25%	2.89%	2.76%	3.07%	3.13%	2006	2007	2008	2009	2010	2011
3.39%	3.25%	2.89%	2.76%	3.07%	3.13%									
2006	2007	2008	2009	2010	2011									
 China	23.7%	 <table><tr><td>3.74%</td><td>3.66%</td><td>4.12%</td><td>3.49%</td><td>2.94%</td><td>2.89%</td></tr><tr><td>2006</td><td>2007</td><td>2008</td><td>2009</td><td>2010</td><td>2011</td></tr></table>	3.74%	3.66%	4.12%	3.49%	2.94%	2.89%	2006	2007	2008	2009	2010	2011
3.74%	3.66%	4.12%	3.49%	2.94%	2.89%									
2006	2007	2008	2009	2010	2011									

Source: World Bank, Espicom, World Medical Factbook 2012, WHO, OECD, PwC, Internet World Statistics

Brazil Healthcare: strong commercial and developmental opportunity (1/2)

BRAZIL

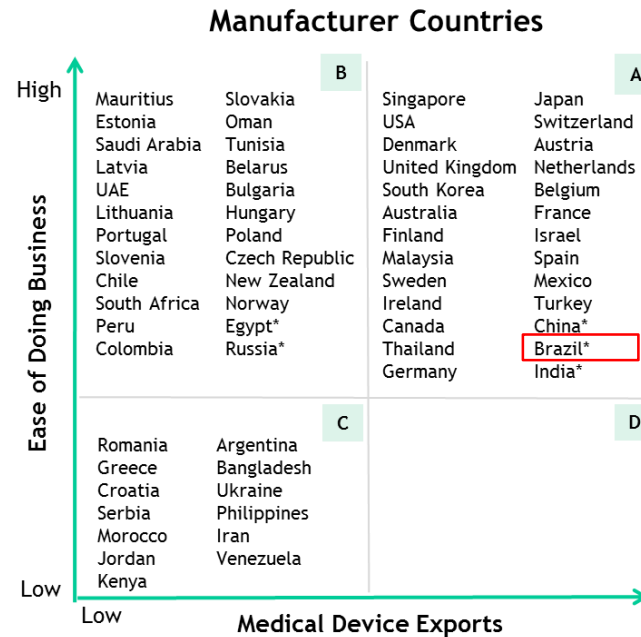
- 1 High absorptive capacity and expenditure capacity
- 2 Ease of doing business & competition
- 3 Strong Market Attractiveness



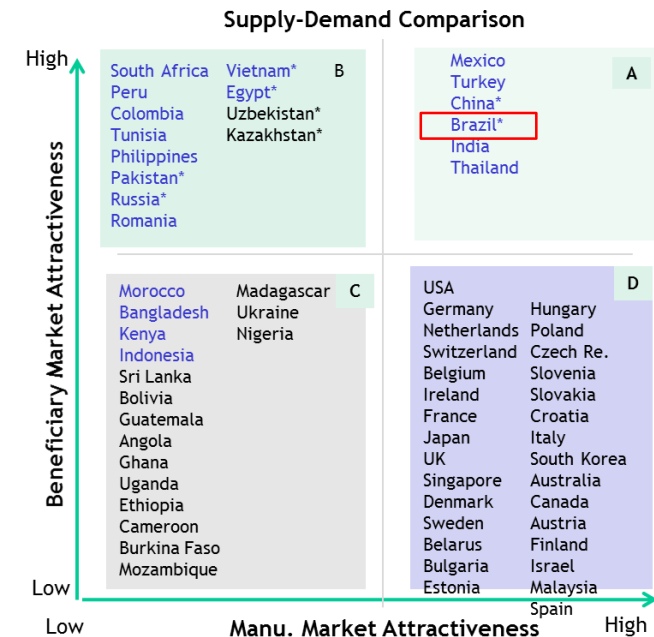
- Quadrant A**
- Mature healthcare systems
 - Ability to absorb and maintain high and low medical technologies
 - Annual healthcare expenditures, skilled work force, can sustain costs and utilization of medical technology investment



Source: World Bank, Espicom, Transparency International



- Quadrant A**
- Mature MedTech markets
 - High presence of MNCs
 - Ability to manufacture & export high and low medical technologies
 - High ease of business score represent favorable environment for medtech operations



- Quadrant A**
- Can serve as host and beneficiary market
 - Sizeable, mature local market; potential to export to other EMs
 - A center for EM-specific innovation
 - Opportunity for collaboration to drive innovation, promote continued growth

4

Strong Development Impact Potential

- Brazil faces increasing burden of non-communicable diseases such as heart disease, diabetes and cancer
- Growing and aging population (life expectancy has grown by 7 years in the last two decades)
- Large income disparities between regions and states
- Shortage of hospital beds (Brazil falls below an average planning norm of 3 beds per 1,000 population)
- Limited access to primary care (currently only provides access to 57% of the population)
- Out of pocket expenses remain relatively high. Despite social health insurance (75% population coverage) and private insurance via corporates, there are service coverage gaps

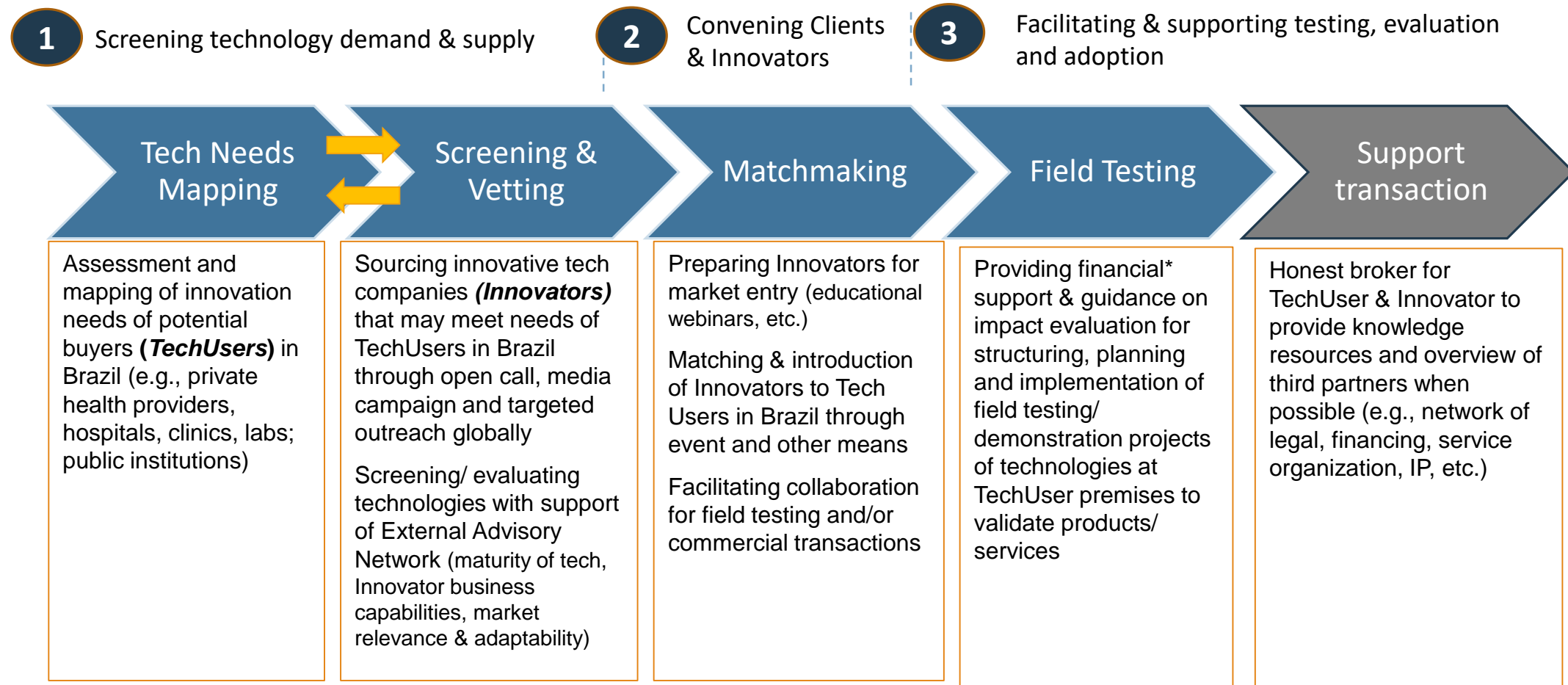


- **Key challenges remain in the Brazil Healthcare system, and TechEmerge can spur adoption of new technology to improve quality of care and patient outcomes**

Expanding program to Brazil, while maintaining structured process

BRAZIL

18-24 months program with structured process for accelerating adoption of technologies in Brazil by:



Program implemented in partnership with strong network of stakeholders in ecosystem

BRAZIL

IFC has a strong footprint in the Brazil Healthcare Ecosystem

Indicative

Healthcare service providers



Includes both IFC clients and others in our network

Investors/ accelerators



Local partners



The National Private Healthcare Association – with 85 members representing 16% of private healthcare in Brazil providing over 20,000 beds.



Leading digital platform in Brazil serving a network over 1,100 hospitals.



Produces largest health conferences in Latin America, incl. Healthcare Innovation Show and Saude Business Forum that bring together over 4,000 attendees.

India Health: launch 2nd round to leverage knowledge & network built in pilot phase

INDIA

- Leverage knowledge & network built up in India healthcare/health tech ecosystem:
 - **700+ health tech companies** expressed interest in India pilot
 - **20+ Indian Healthcare Providers** signed on to TechEmerge program. Of the 15 Providers that piloted technologies, 100% said they want to participate if IFC runs Program again, and 100% said Program should be offered on a continuous basis.
 - **35+ Technical Advisors** including India market experts
 - **Continuing to set up network of strategic partners** (e.g., Medtronic, BD, GE, Philips, Bosch, VCs), at both local and global level
- Second round could be done faster, more efficiently, and at less cost (e.g., \$500K pilot funding, and ~\$500K operational costs, some of which could be cost-recovered through various funding mechanisms)

ADVISOR NETWORK / PARTNERS



HEALTHCARE PROVIDERS IN INDIA

- Hospitals, Clinics, Labs
(IFC clients & non-clients):



- Starting to scope **Africa Health** – TechEmerge included in WBG Digital Economy Strategy for Africa
- Determining required modifications for more challenging markets
- May take regional approach, exploring East Africa, such as Kenya, Tanzania, Uganda, Rwanda, and/or other countries

SPURRING ADOPTION OF DIGITAL HEALTH SOLUTIONS IN AFRICA

- Mobile point of care diagnostics
- Remote monitoring
- Telemedicine
- Data analytics
- Patient engagement



HEALTH-TECH COMPANIES GLOBALLY

IFC VC clients & prospects

Minimum selection criteria:

- Commercially proven product/ service
- Scalability
- Ability to allocate resources for entrance into emerging markets

Access to customers, partners and investors



Access to innovation to improve care

Information & access to partners

PARTNERS / ADVISORS



HEALTH PROVIDERS / OPERATORS IN EAST AFRICA

IFC clients & other operators in:

- Kenya
- Tanzania
- Uganda
- Rwanda

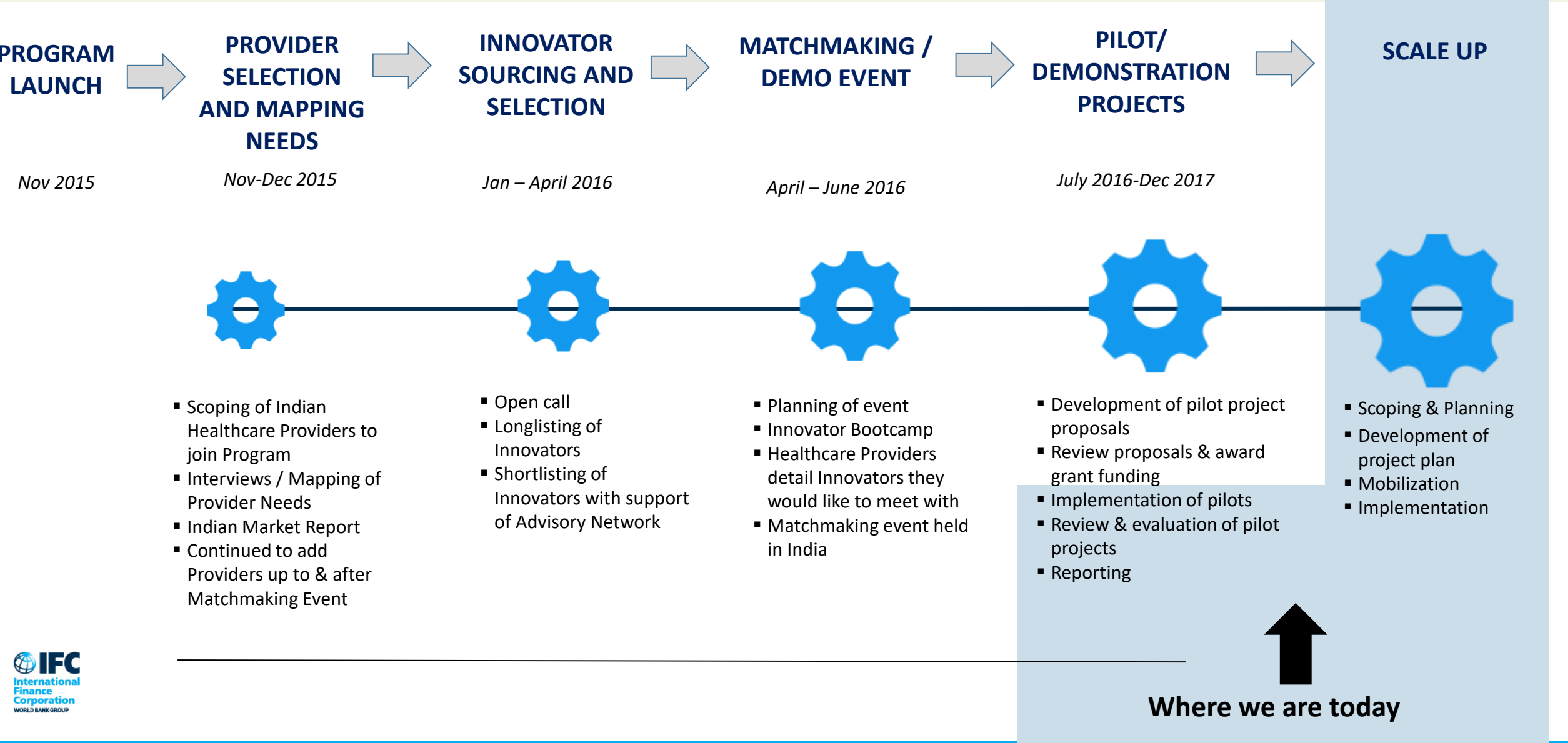
Example



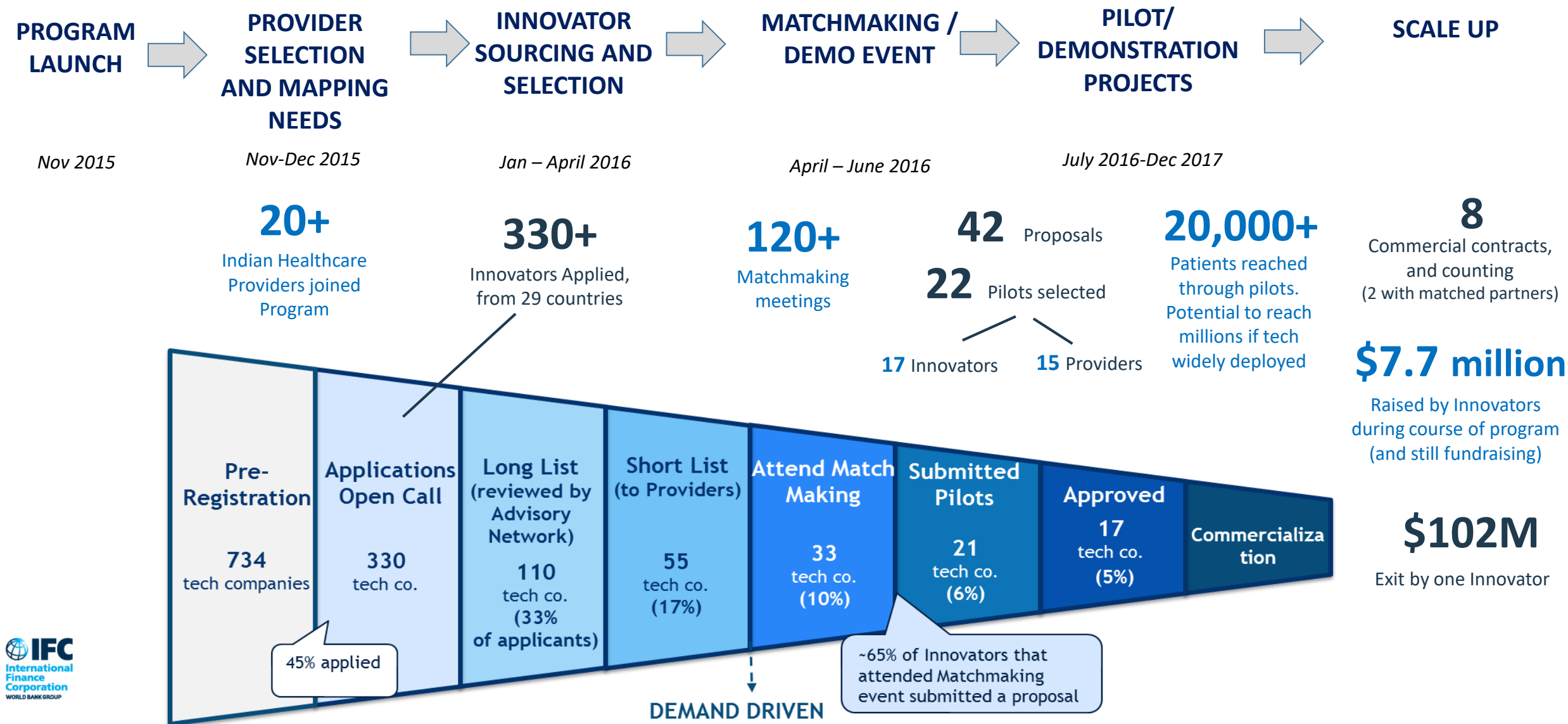
ANNEX:

TechEmerge India Health Pilot

Program Overview — Pilot phase India Health



TechEmerge Pilot results to date — Health India



Health tech companies see strong positive impact of program

- Supported first entry in new market, and wider deployment of technology
- Enabled access to key decision makers – and opened doors for others
- Strong visibility through conferences and events that enhanced business relationships & fundraising
- Selected top 17 tech companies:
 - Raised **\$7.7M** during course of TechEmerge program
 - \$102M** exit by one Innovator
 - Started 22 pilot projects
 - 8 commercial contracts signed in India** (2 with TechEmerge pilot partner, more expected)

100%

of Innovators say that the program has brought value to the company

“The program has bolstered the credibility of our technology when talking with potential partners.”

- Ceeable

“TechEmerge is better than incubation and mentorship programs generally, in the sense that it is helping us to validate the market and also refine our product directly along with potential customers.”

- Bodhi Health Education

“The TechEmerge program has been tremendously helpful, and allowed us to identify credible experts in the field of gynecology to launch cervical cancer screening efforts in India.”

- MobileODT



Indian Healthcare Providers see value in TechEmerge program and think the service should be offered on a continuous basis

A survey was sent to the 15 Indian Healthcare Providers piloting technologies under the Program:

- **95%** said the program helped increase awareness of new technology solutions
- Almost **80%** said the program saved them time in identifying/validating new technology
- Close to **90%** said program vetting gave them increased confidence in technology/tech company
- **80%** said program increased ability to work with startups
- **50%** are interested in continuing to work with innovator post-pilot; remaining said it's too early to tell
 - **100% interested in participating if IFC runs the program again**
 - **100% said platform should be done on a continuous basis**

“We liked the initial vetting and categorization done by TechEmerge which gave us confidence that the best in class has been hand picked for pilots.”

- Apollo

“This is a very well curated program... and I am sure it will keep becoming better. Making it regular will be key.”

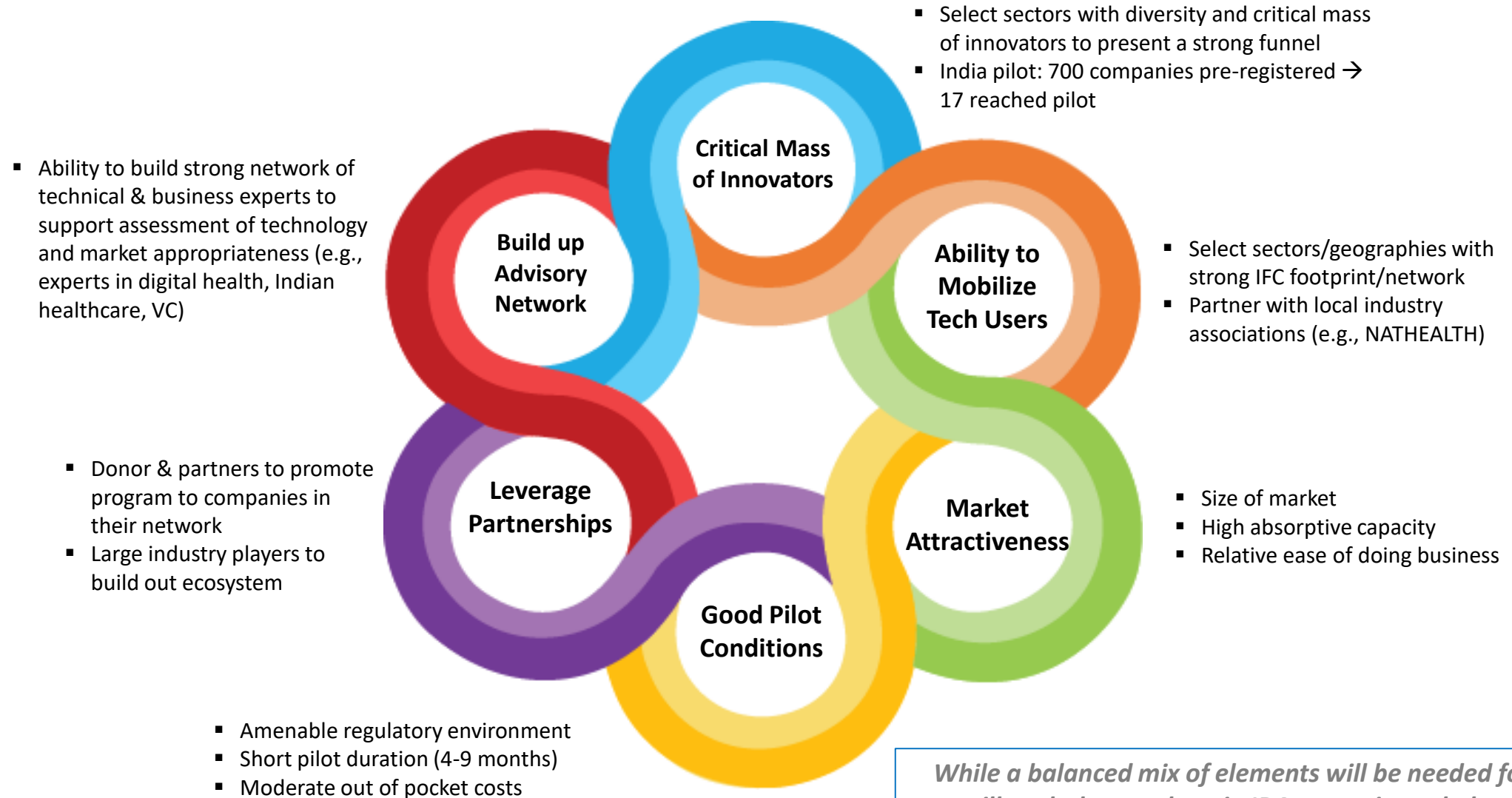
- Max Healthcare

“Interaction with the promoters of many startups was very beneficial. We would love to meet these young people more often.”

- Cygnus Medicare



Based on lessons learned from India health pilot, entry into new geographies/sectors will be initiated in line with evaluating success criteria



While a balanced mix of elements will be needed for success, IFC will push the envelope in IDA-countries to help create markets