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ACTION FOR INDIA
Scaling Social Impact Through Technology

AFI Forum 2012

Agriculture

Education

Energy

Healthcare

Livelihoods

GROWING SOCIAL INNOVATION

LEVERAGING TECHNOLOGY AND GOVERNMENT

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In Sanskrit, Dasra means “Enlightened Giving”

Dasra is India’s leading strategic philanthropy foundation. Dasra works with philanthropists and successful social entrepreneurs to bring together knowledge, funding and people as a catalyst for social change.

We ensure that strategic funding and capacity building skills reach non profit organizations and social businesses to enable them to have the greatest impact on the lives of people living in poverty.

ACTION FOR INDIA

Scaling Social Impact Through Technology

Action For India’s core mission is to work with young social innovators in India, be it founders of for profit social enterprises or not for profit NGOs, and help scale the impact of their organizations. Action For India is inspired by, and formed with the support of, Sam Pitroda, Advisor to the Prime Minister of India and Chairman of India’s National Innovation Council.

Using an integrated perspective on the potential of technology and government to achieve scale, Action For India fosters solution-driven dialogue among stakeholders (non profits, social businesses, corporates and government).

Action For India seeks collaborative approaches to scaling innovations in the agriculture, education, energy, healthcare and livelihoods sectors. The purpose of the annual Action For India Forum is to bring social innovators in these sectors together with stakeholders to generate insights, connections and collaborations.

Contact information:

info@dasra.org
www.dasra.org

info@actionforindia.org
www.actionforindia.org

Action For India Inaugural Forum 2012

Message from the AFI President

Dear Reader,

India is full of ingenious and resilient entrepreneurs working at the grassroots level to solve critical social problems in a variety of sectors. But in a country of over 1.2 billion people we need solutions that scale. At Action For India our goal is to help entrepreneurs overcome the barriers to scaling their innovative solutions.

In January of 2012 we held the inaugural Action For India Forum in New Delhi that brought together 100 of India's Young Social Innovators (YSIs) from around the country along with Sam Pitroda and members of his team at the National Innovation Council. They were joined by nearly 100 "influencers" – successful social entrepreneurs, government officials, corporate leaders and impact investors. I confess I have rarely been as inspired as I was that day. I truly believe the YSIs are at the heart of India's progress and we must do everything we can to help them scale. That's why AFI has an aggressive plan of work in the coming year: a Growth Prize competition for innovators (in collaboration with Ashoka), regional forums in each zone, a 2013 forum and expanding the technology, business and financial resources available to YSIs.

At the forum we released this first-of-its kind report, commissioned by Action For India and researched and compiled by Dasra, India's leading strategic philanthropy organization. I would like to extend my sincere thanks to everyone who contributed their time and insights towards shaping this report. In particular, I would like to thank the numerous YSIs who agreed to be interviewed. Thank you to our 'Sector Champions', Mark Kahn (agriculture), Sridhar Rajagopalan and Aditya Natraj (education), Harish Hande and Svati Bhogle (energy), Dr. Ashwin Naik (healthcare), William Bissell and Dilip Chenoy (livelihoods), whose expertise has guided us. Thank you to Desh Deshpande, Co-Chair of the Obama Administration's Council on Innovation & Entrepreneurship, who generously shared his experience and wisdom with us. And a special thank you to the team at Dasra, who have worked with incredible enthusiasm and dedication to create this report. Above all, I would like to express my gratitude to Sam Pitroda, for inspiring us and being a champion of our work.

I invite you to learn more about Action For India by visiting our website at www.actionforindia.org (you can also watch the forum videos here). If you are interested in joining us in this work through collaborations or partnerships please do contact us at: info@actionforindia.org.

Sincerely,
Sanjay Kadaveru
President
Action For India

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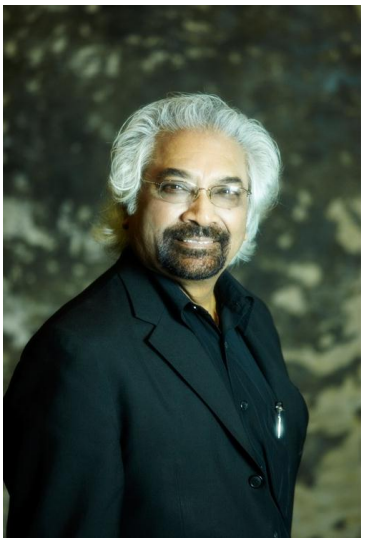
Foreword by Sam Pitroda

Advisor to the Prime Minister - Public Information Infrastructure & Innovations
Chairman, National Innovation Council
Honorary Chairman, Action For India



Our mission, at Action For India (AFI), is to create a platform where social entrepreneurs can come together, learn from each other's experiences and collectively leverage the handles of government and technology as tools for scaling social impact. The driving force behind AFI is the question that plagues us all. How do we make a meaningful impact on social problems given India's many complexities?
Before we attempt to solve this question, we must understand three fundamental challenges in India: disparity (between urban and rural, rich and poor, educated and uneducated), demography (how do you design a future for the 1+ billion people of India?) and development. While much is happening in India on these fronts, it is not happening fast enough. Action For India is a step in the right direction and reflects bottom up youth driven change, the need of the hour. I was so impressed by the passion and the quality of the young innovators I heard and met at the Forum in January, they truly represent the future India.

Today our situation may be the same as in the 1980s but the opportunities are different and in this regard the government of India is striving to realign its focus on expansion, excellence and equity.

"The best brains in the world are solving the problems of the rich, who really don't have any problem; we need to solve the problems of the poor"

- In the agricultural sector, we are looking to build participatory platforms bringing agriculture education into schools, and are looking specifically at creating institutions which leverage information and communications technology.
- In education, there are eight bills pending which address social equity and quality education. One of the things we are actively working on is building libraries in the country. We will then look at forming a commission which will be responsible for expanding and modernizing them.
- In the energy sector, innovation and out of the box ideas are going to be required. For example, how do you design a small air conditioner using a solar panel that only cools the 100 square feet around you?

- For health care, we must pay more attention to low cost solutions because we cannot reach out to our large scale problems with western models. In India we must realize that health is a responsibility first and a right later.
- To address the issue of livelihoods, issues of mentoring, venture capital, angel investors, public private partnerships and marketing help – all these parameters are going to be included in the Prime Minister's innovation fund. Identifying people with vocational skills and creating this database, providing adequate training and institutes and finally, getting funding to provide for the above.

All these are priority issues and we all must independently and inter-dependently strive to solve them. In my closing remarks at the Forum I made several final recommendations and suggestions which I want to share here.

- A national portal on social entrepreneurs where we can bring together ideas and people more effectively
- A white paper on social entrepreneurship and its surrounding regulatory environment
- More dialogue and discussion on tax and incentivization
- More connections between innovators and professionals bodies such as FICCI/CII
- Conducting pilots of innovative social ideas in smaller regions before attempting to scale
- AFI institutionalize its conference and make it an annual affair
- Finally, a meeting with the rural development minister for getting financial support for all of the above mentioned recommendations

We have 550 million young people below the age of 25; without innovation we won't be able to meet their aspirations. Lots of things are going on in India, but the pace of development needs to be changed substantially. I hope through the Action For India and the Prime Minister's National Innovation Council, we can ignite young minds and we can begin to question and hopefully create innovation for delivering prosperity to a large number of people in India.

Sincerely,
Sam Pitroda
Advisor to the Prime Minister - Public Information Infrastructure & Innovations
Chairman, National Innovation Council

"I am absolutely amazed, pretty impressed, with all of you. You guys are just terrific. I wish more people would know about you, so later we'll talk about how to multiply. I mean, this is really India, this, the future India. All your ideas are great. I see a lot of energy. I see a lot of action. I see lots of clarity. Lots of good stuff…"

Sam Pitroda

Big Challenges……

85% Farm households earning < $1/day

43% Planted area is irrigated

80% Public school budget directed towards teacher salaries

125,000 Villages are off grid

<15% Population with health coverage

20% Of global maternal and child deaths in India

406 million Are employed in the informal sector

……Big Opportunities

45% Workforce employed in agriculture

14% Agriculture's contribution to GDP

85% Children enrolled in the public education system

90% Households use kerosene where cheaper alternatives exist

7 million Pool of doctors across India

4x Increase in incomes through skills training

Executive Summary

India has been heralded across the globe for its innovation in industrial, financial and technological arenas. Economic liberalization in 1991 led to a significant increase in competitiveness in the Indian economy and highlighted the importance of innovation. As a result, India is now the second fastest growing trillion-dollar economy and has reaped numerous associated benefits. However, this innovation-fuelled growth has been far from inclusive, with 42% of the population living below the international poverty line of US$ 1.25 per day.[1]

Currently the scale and reach of social enterprises is small in comparison to the magnitude of the social problems they work to improve

Despite a number of social enterprises working towards alleviating poverty, various socio-economic issues continue to persist on a large scale. Some of these include low education levels, poor health outcomes and little or no access to basic inputs to improve livelihoods. Unfortunately, the scale of these problems is exponentially larger than the ability of social enterprises to grow their solutions - alone. A new phase of unleashing social innovation is required that spreads India's growth phenomenon to those previously left out it, and serves as the basis for an inclusive and sustainable economic paradigm.

Challenges in Scaling Social Impact

Mission-driven enterprises face the biggest challenges in scaling social impact. While there are success stories like Akshaypatra, Pratham, SELCO, Servals and FabIndia, others are small in comparison to the magnitude of the social problem they work to improve. It is imperative to accelerate the growth of social innovation. Fortunately, an increasing number of entrepreneurs, funders, experts and other leaders are working towards solving this problem in India. However, understanding the underlying challenges faced by social innovators in achieving scale is an essential prerequisite to tailoring solutions. Four common challenges highlighted by all sectors during one-on-one interviews and sector discussions are:

1. Access to Blended Capital and Mentoring Support
2. Lack of Big Data to Make Better Business Decisions
3. Shortage of Skilled Human Resources
4. High Upfront Cost for Behavior Change

[1] Planning Commission, India Human Development Report 2011

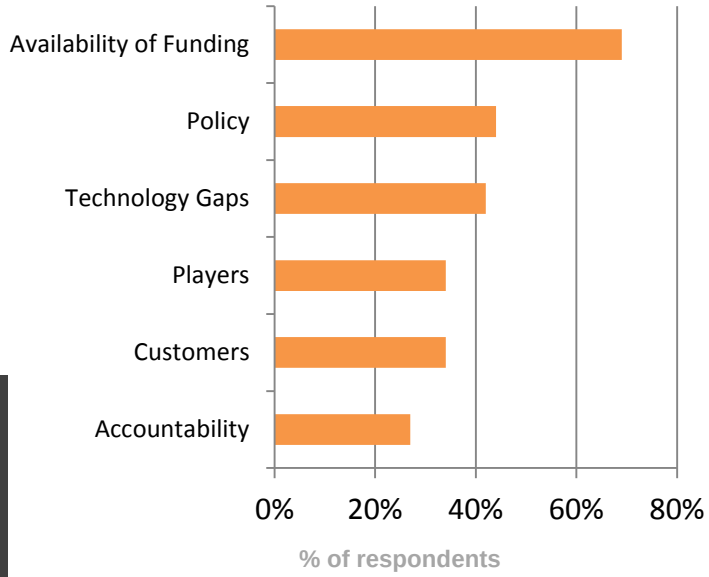
1. Access to Blended Capital and Mentoring Support

Innovative models, especially those in the social sector, often face difficulty in accessing start-up capital with a combination of grants, debt and equity. In the last few years, social venture capital firms have been instrumental in providing risk capital and support to early-stage small business ventures. However, there is a growing need for more risk-taking, longer-term capital, grants to fund proof-of-concept and cheaper uncollateralized loans for working capital. Since many non profits are limited to only accessing grant funding due to regulatory restrictions, there is a growing prevalence of hybrid models, where a non profit and for profit entity work towards a common social mission.

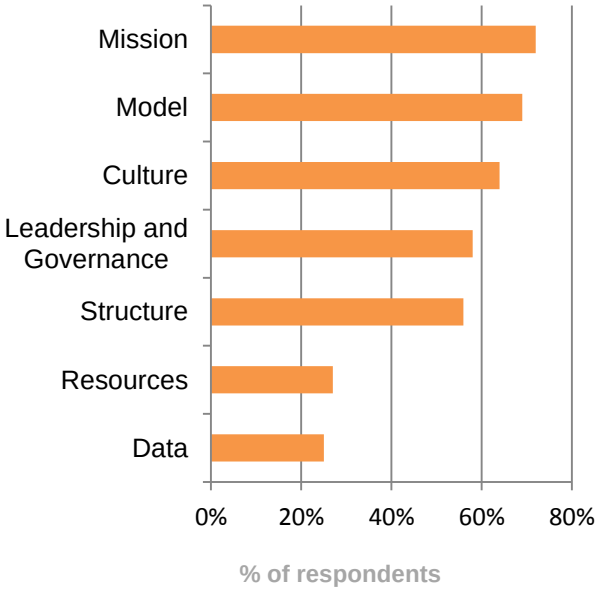
It is evident from the survey conducted that AFI's Young Social Innovators are extremely mission-driven. In addition to funding, many non profits and social businesses mentioned the need for skilled mentors to assist with industry- specific expertise and business planning and management capacity building support as challenges. This type of mentoring and capacity building support often improves the attractiveness of an entrepreneur to funders.

Over 72% of survey respondents stated mission as one of their strongest scaling capacities, followed by codification of their model and strong organizational culture.

Key challenges to scale



Strongest to weakest scaling capacities



2. Lack of Big Data to Make Better Business Decisions

Considering the increasing prevalence of devices such as mobile phones, energy meters and weather sensors, there is a greater ability to sense, create and communicate data, which when captured and analyzed can lead to both process and product innovation

Interestingly, data was ranked the lowest scaling capacity for social enterprises in Dasra's survey of young social innovators. However, data was consistently cited as a critical area where technology could be best leveraged, especially for 'Big Data'. This refers to datasets whose size is beyond the ability of a typical database software tool to capture, store, manage and analyze.[2] Such technology cannot be managed by a non profit or social business but is essential in making better business decisions. Many participants stated that the availability of up-to-date data on their end users would enable scaling and better delivery of products and services since the government census and human development index reports are outdated.

Considering the increasing prevalence of devices such as mobile phones, energy meters and weather sensors, there is a greater ability to sense, create and communicate data, which when captured and analyzed can lead to both process and product innovation. Also, as companies and organizations interact with individuals and conduct business there is additional data generated, which can be an effective feedback loop for understanding and meeting customer and beneficiary needs. The lack of robust systems for capturing this information was stated as the weakest scaling capacity both at an organizational level and for the social sector at large.

3. Shortage of Skilled Human Resources for all Sectors

Respondents from all sectors emphasized the challenge of attracting talent with strong execution and management experience, especially at senior management levels. The constraints on funding and weak reporting structures further limit the ability to attract experienced people. Furthermore, there are critical skills shortages within each sector such as teachers in education, doctors in healthcare and maintenance workers in energy, which many innovators stated as an underlying challenge to scaling their impact.

[2] McKinsey Global Institute, Big Data – The next frontier for innovation, competition and productivity

4. High Upfront Cost of Behavior Change Communication

One of the most significant challenges to scaling stated by the AFI's Young Social Innovators is existing mindsets and engrained behaviors of potential customers or beneficiaries that restrict adoption of new innovative products and services. The investment required to increase awareness regarding the benefits of purchase or adoption is too large, given the small margins that many of these business models survive on. Similarly, there is added pressure on non profits to manage their cost per beneficiary as an indication of efficiency. Therefore there is limited incentive to invest in behavior change communication where achieving impact requires a longer gestation period and is difficult to demonstrate.

Despite the key challenges to scaling, these are the key success factors highlighted by AFIs Young Social Innovators as critical to enhancing growth potential:

7 Key Success Factors

- **Strong Team**
- **First Movers' Advantage**
- **Strong Technology Platform**
- **Ability to get Funding**
- **Competitive Pricing**
- **Calculated Risk Taking**
- **Credibility with Customer**

The Role of Technology in Scaling Innovation

Implementing innovative technology is difficult and sometimes counter-intuitive to traditional business operations. However, non profits and social businesses are most agile and passionate about investing in technology for both product and process innovation, especially where social impact is significant. Many champions and innovators highlighted the role of technology in process improvements, rather than models that lead with technology inputs.

"Technology plays a big role, however for successful innovation, one must understand the issues first, only then will technology be useful"
Desh Deshpande, Deshpande Foundation

Many highlighted the tremendous benefits that have been realized from leveraging Information and Communication Technology (ICT), specifically in sustainable human development and poverty eradication. There is agreement that field of ICT for scaling social innovation has come to a turning point. Considering the past decade has witnessed the most dramatic growth in the history of global computing and communications, with the potential for the near-ubiquitous spread of mobile telephony among the masses and the Internet.

Why invest in ICT for enhancing social impact?

" ICT dramatically improves communication and the exchange of knowledge and information to strengthen and create new social and economic networks. Its uses and applications are pervasive and cross-cutting and can be applied to the full range of human activity, from personal use to business and government. It propitiates an acceleration factor through the power of the network that becomes ever more powerful and useful the more people are connected to it, thus creating network externalities or exponentially increasing returns as network usage increases. And it fosters the dissemination of information and exchange of knowledge by separating content from physical location and overcoming distance."

Source: UN ICT Task Force Innovation and Investment, April 2005

Sector Champions and Young Social Innovators highlighted three areas where technology could enable the scaling of social innovation. These are:

1. Gathering, Monitoring and Analysis of Data
2. Developing an Open Multi-stakeholder Platform for ICT and Development
3. Automation in Training and Skills Development Programs

1. Gathering, Monitoring and Analysis of Data

Computerized data management systems will permit tracking information at organizational, sector and regional levels. This requires upfront investment ICT infrastructure, which is often challenging for social enterprises considering cost pressures associated with creating affordable products and services.

2. Developing an Open Multi-Stakeholder Platform for ICT and Development

Crucial in the poverty context, ICT can also radically reduce transaction costs. Replication of content is virtually free regardless of volume, and costs for distribution and communication are marginal. Central to many social enterprises, ICT's power to store, retrieve, sort, filter, distribute and share information can lead to substantial efficiency gains in production, distribution and markets, and benefits for social processes.[2] A platform that specifically addresses the needs of developing software and MIS relevant to social enterprises is critical to achieving scale.

3. Automation in Training and Skill Development Programs

Developing simulators and technology-enabled training programs can ensure quality skills development across all sectors. This will not only enhance the skills training quality but will also increase the capacity to train a larger number of workers in a time-efficient manner since organizations are often constrained by the number of quality trainers and long distances.

Forging Deep Partnership between Government and Social Innovators

There is a growing need for the government to support innovation and growth by leveraging cross-sector support. Dasra's discussions with champions and social innovators indicated that the government has been efficient at providing funding (although government payments are often delayed) and developing supportive policy that enables some (mainly energy) social innovations to grow. However, many indicated that there is a need for more regulatory frameworks that support social innovation.

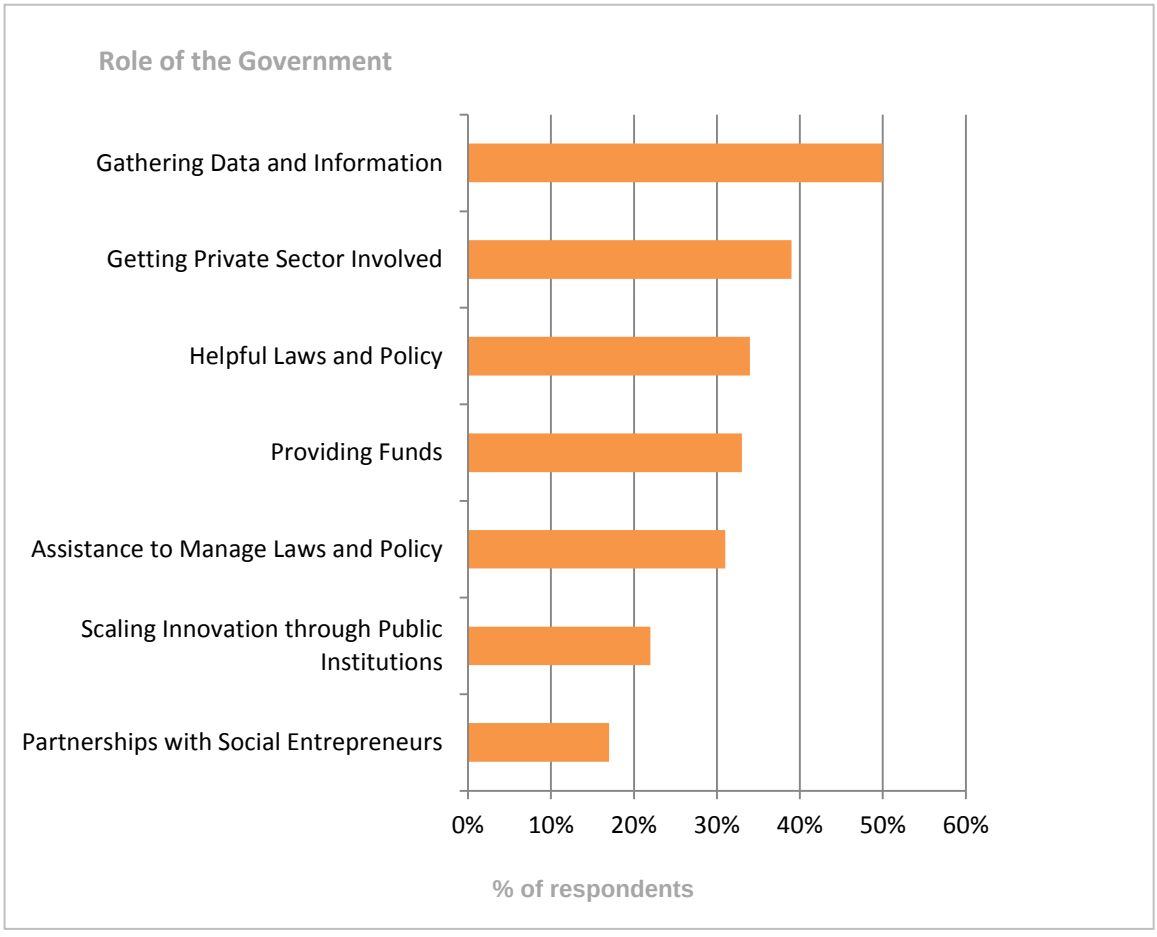
"Policy is largely skewed towards helping larger and established players. The policy framework is a hindrance towards innovation and promoting young start-up enterprises"
Piyush Jaju, ONergy

Also, greater transparency is required on the implication of taxes and policy decisions for non profits and social businesses. Currently, the regulatory and policy environment favors the larger players and creates an unfair advantage for established corporates while posing a disadvantage for smaller social enterprises.

"Regulations have opened up regularly and in the right direction, though frameworks for creating a level playing field are missing"
Abhishek Sinha, Eko India Financial Services

Our research revealed four areas where government can enable the scaling of social innovation:

1. Deepen and Update Regional Data
2. Create Institutions that Enforce Quality Standards
3. Increase Availability of Funding and Strengthen Ecosystem Players
4. Develop Policy Frameworks Specifically Supporting Social Innovators



1. Deepen and Update Regional Data

Both Central and State Governments need to invest in building state-of-the-art database management systems that track people, behavior, economic status, choices and demographics. This will enable more innovation and better decision making. In fact, several social enterprises stated gathering data and information as the most critical role played by the government.

2. Create Institutions that Enforce Quality Standards

There is a growing need to maintain a certain level of quality in product and delivery while scaling solutions to social problems, which requires monitoring and enforcement. Examples of these institutional frameworks exist and are best done by an independent institution 'fostered' by the government.

Over 50% of the respondents interviewed felt that the government should play a greater role in gathering data and information on the social sector

3. Increase Availability of Funding and Strengthen Ecosystem Players

The Government should not only increase its funding pool for social innovation, but should create incentives for commercial banks, venture funds and corporates to support the growth of social innovations by enhancing tax breaks and providing subsidies. There is also a need to invest in different players in the ecosystem so as to minimize the direct involvement the Government has in supporting innovation. Many innovators are concerned that too much government control could stifle social innovation.

Therefore, the government should focus on strengthening enablers such as capacity building intermediaries, technical assistance providers, accelerators, incubators, high net worth individuals, financial institutions, mentorship programs, academic institutions and research centers.

4. Develop Policy Frameworks Specifically Supporting Social Innovators

As current policies are most favorable towards large players, the Government needs to create more enabling policies and regulatory frameworks that meet the needs of growing social enterprises. Also, creating taskforces that provide clarity on the implications of current policy for social enterprises would be useful since many enterprises lack the know-how and resources to evaluate the benefits or drawbacks of specific policies.

Collaboration between Key Stakeholders

Defining engagement with clear roles helps all stakeholders gain a deeper understanding of the problems faced by social enterprises, creates opportunities for new and better solutions and builds more effective organizations. Ultimately, a well-defined ecosystem will lead to scalable, high-impact innovations that have the potential to transform lives and ensure inclusive growth for India.

Non Profit

- Building Community Linkages
- Delivering Behavior Change Communication
- Supporting Proof of Concept
- Developing Training Programs

Social Business

- Applying Technology Transfer
- Delivering Last Mile Products/ Services
- Developing Niche Markets

Corporates

- Deepening Distribution Channels
- Offering Management Experience
- Providing R&D Budgets
- Funding

Government

- Introducing Supportive Tax and Policy
- Creating Big Data
- Enforcing Quality Standards
- Funding

Please note:

The following pages outline key scaling challenges faced by individual sectors and ways of leveraging technology and government to catalyze social change.

The findings are a result of:

- **Interviews conducted with sector champions**
- **Cross sector discussion with Sam Pitroda and sector champions**
- **Interviews conducted with young social innovators across the five sectors**
- **Survey results circulated amongst 100 young social innovators**
- **Presentations from the inaugural forum**
- **Post inaugural forum feedback**

To access the complete report, please visit:
http://actionforindia.org/?page_id=874

AGRICULTURE

In India, close to half the population of 1.2 billion people is dependent on agriculture as a means of livelihood. However, inspite of having 52% cultivable lands and highly fertile soils, average yields are a mere 40% of the world's average and 85% of farm households earn less than US$1/day[1].

Agriculture is a highly fragmented industry here with 99.2% of people involved in unorganized and unprotected work.[3] The farmers are highly dependent on natural factors such as rainfall, which leads to massive discrepancies in year on year yields and high instability in their incomes. Rising prices of agricultural inputs such as seeds, fertilizers, water, electricity and labor combined with an estimated 51% of cultivator households being financially excluded, the vast majority of which are small and medium farmers[4], calls for addressal of their problems with a sense of urgency.

"While the Indian economy, from 2000-2010 grew almost three times at 7.2%, agriculture GDP grew at a mere 2.3%"[2]

The government of India promotes agriculture by way of allocating numerous subsidies and by implementing the public distribution system. Corporates are involved in contract farming and/or backward integration of agriculture allowing them to directly engage with the farmers. Social businesses are identifying market led solutions which integrate innovation and ground level needs and specifically, produce low cost product and supply chain support for small and marginal farmers. Non profits are targeting this sector in a more holistic way by offering long term community based support to farmer groups, promoting resource management and building capacity.

Over the last decade, inspite of increased dialogue and involvement of key stakeholders in agricultural activities, domestic food security has taken a severe beating. Through interviews with sector champions and young social innovators, Dasra has identified key challenges that plague the Indian agricultural scenario and sought optimum ways and means in which technology and government may be leveraged to overcome these problems.

Scaling Agriculture: Leveraging Technology and Government

	Scaling Challenges	Technology	Government
1	Supply chain inefficiency • Long supply chain • Poor market linkages for farmers • Inefficient cold storage and processing technologies • Lack of produce standardization	• ICT platforms for farmers • Low cost storage and processing technologies/participatory technology development • Replacing the old weighing methods with more accurate technologies	• Regional information clusters • Incentivize RnD for storage and food processing technology • Support private investment for shortening the supply chain • Enforce produce standardization across the country
2	Poor awareness and lack of agronomic data • Lack of an enterprising attitude • Inadequate data on key information points such as farmer population, agronomic conditions, regional variance	• Regional information centres/clusters which may be online • Use of mass media channels to spread awareness • Big data collection and dissemination	• Redefine 'kisan' with work and not land holdings • Digitize land records • Extra credits for vocational agricultural courses • Private player involvement in data collection and dissemination
3	Inadequate research and extension services • Focus on management intensive technologies which are more suitable for large farmers • Lack of on ground staff to enable optimal usage of technology	• Online resource sharing platforms • Collaborative approach in research and development efforts	• Collaboration with private players to develop information and extension services dissemination • Devise agricultural policies with a regional outlook
4	Poor financial environment • Inadequate mechanisms of financing • Poor access to available schemes and finances • Lack of patient capital	• Online/mobile banking • Online tools and softwares to reduce the banks transaction times and costs • Unique Identification programme (UIDAI) linked credit stores	• Promote microcredit, insurance and commodity risk management • Subsidize technology for small farmers • Incentivize rural banks to levy/promote existing financing schemes

1

Supply chain inefficiency: exists in all operations involved in movement of produce from the farm to the supplier. The agricultural sector in India presents a long supply chain affecting farmer incomes and in turn the prices paid by end consumers. Inadequate rural road connectivity, lack of supporting infrastructure such as warehousing facilities, cold storage and poor post-harvest technologies results in a loss of 10% food grain production and 25% fruit and vegetable production.[5] Another key challenge which prevents the end users from working directly with farmers is lack of produce standardization e.g. there is no universal grading on the type and weight of a bag of potatoes.

Leveraging technology: Online platforms which provide information to farmers on market dynamics can play a key role here. Low cost storage and processing technologies can be developed towards maximizing productivity. Participatory technology development can influence adoption and technology transfer to the small farmer. Also, technology can be leveraged to replace the old and inaccurate weighing methods which will result in more transparent handling along the value chain.

Role of government: The government must address the need for regional clusters from where information on market dynamics can be shared and disseminated to farmers. Research and development on storage and food processing technologies must be incentivized with financial support. The government must support private investment in supply chain co-ordination and shortening the existing chain, which can include supply chain upgrade, innovations and optimization, process facilitation and reducing transaction costs and risks. Produce standardization must also be enforced across the country which will reduce inefficiencies in market pricing and deliver fair prices to the growers and producers.

"Promethean Power Systems has modified battery technology and applied this to a rapid milk chiller for the small dairy farmer"

2

Poor awaress about agriculture coupled with insufficient agronomic data prevents development of efficient and target-oriented solutions. Agriculture in India is plagued by a lack of enterprising attitude resulting in poor involvement of people and subsequently we have inadequate data on key information points such as % of small vs. large farmers, agronomic conditions and effects of regional variances on productivity.

Leveraging technology: ICT applications such as online platforms which may be region specific can address the challenge of knowledge collection and dissemination. These however need to be coupled with adequate on ground support staff. The challenge of farmer illiteracy can be met through regional clusters, sharing platforms and use of mass media channels. Big data collection for tracking and recording content which may be region specific is another area where adequate technology can be targeted.

Role of government: The government can play a role in promoting a wider and deeper respect for all those who chose to align themselves with the agriculture sector. Land records must also be digitized to protect ownership status. Extra credits may be provided to those who chose agriculture as part of their vocational courses. Data collection and dissemination must be encouraged by private players as this will ensure a higher quality of outputs.

"The word 'kisan' must be redefined to identify farmers with their work and not necessarily just land holdings"

3

Inadequate research and extension services provisions pose another key scaling challenge. While agricultural research and technology development has remained the responsibility of agriculture scientists, the linear system of research → extension → adoption has not been effective in the Indian context. Most agricultural research has concentrated on management intensive crop production technologies which are more resource heavy and therefore adoptable largely by large farmers. The provisions of technology made to the farmers however must be coupled with ground assistance so that the farmer can develop capacity to efficiently use the provisions.

Leveraging technology: Online resource sharing platforms can be leveraged to improve the quality of extension services. Technology can also be adapted to promote collaborative efforts in research across
India and in effect ensure a deeper penetration of high quality extension services.

"***Digital Green*** has developed an innovative participatory framework for improving extension systems reaching out to 75,000 farmers using both their COCO software for exchanging data, analytical tools and interactive phone based feedback channels"

Role of government: The government can play a role here by partnering with private institutions and universities and encouraging higher quality research and technology in agriculture. Along with this, the government must look to collaborate with private players to develop online sharing platforms for information and extension services dissemination. Further, policies on agriculture must also be devised with a regional specific outlook.

4

Poor financial systems and their inadequate access is a great challenge in delivering effective solutions to end users. Currently, small farmers lack capital to invest in agriculture and they are not considered eligible for credit by banking institutions. Lack of collateral security and yield instability makes them high risk segments for loans. Banks in rural India also lack incentivization to provide schemes/financing options to small farmers. Along with this, there is a need for patient capital that can be provided to researchers and developers, which currently is a big challenge.

Leveraging technology: Financial solutions are largely policy driven and technology can only be an enabler in ensuring effective implementation of the policies. However, technology can play a role in providing online and mobile banking services which can improve access of small farmers to financial services. Online tools and softwares can be leveraged by rural banks to reduce transaction times and costs. Biometrics or the in pipeline Unique Identification programme can be linked to credit facilities for small farmers.

Role of government: The government must promote microcredit, insurance and commodity risk management to boost financial inclusion in agriculture. Subsidies must be provided not only for imported or large scale technology but even for low cost solutions which are targeted towards small farmers. Rural banks must be incentivized to levy/promote financing schemes to those who are currently not being able to avail of them.

"Government investment in agriculture declined from 20% of total expenditures in the 1980s to 3.5% in 2010"

EDUCATION

The Indian Education System (IES), is one of the biggest education networks in the world with the largest target audience, youth below the ages of 24 years. However, the system is plagued with severe problems such as poor access to education, low quality teaching, lack of leadership in educational institutions, misplaced political will and inadequate government policies for engaging the private sector.

Access to primary education meets 80% of the demand but one in four children leave school before reaching grade 5 and almost half leave before reaching grade 8. At a secondary level, a further 15% drop out. Overall, only 12% of the target population graduates from higher education institutes.[1] The IES is also widely known for its focus on rote learning , low student: teacher ratios and lack of tracking and monitoring systems to assess performance of the school and the child.[3]

Amongst other interventions, inculcating more child-centric classroom dynamics,[4] use of management information systems and creating a conducive policy and regulatory environment for increased private participation in the sector, may alleviate some of the problems facing the sector.

"Close to 44% of students in grade 5 are unable to read a text prescribed for class 2 and around 60% are unable to perform simple arithmetic"[2]

The government of India through the 'Right to Education' act is aiming to make significant changes in the system but due to 93% of schools being part of the public system, the task of imparting large scale quality services is a mammoth challenge. Corporates and private players are increasingly aligning their interests and corporate social responsibilities with education and social businesses are developing solutions and specific learning products which are low cost in nature. Non profits on the other hand are more proactive in working within communities to boost enrolment and provide remedial education. They work closely with public schools to focus on the quality of the curriculum and imparting child-centric teaching methodologies.

Scaling Education: Leveraging Technology and Government

	Scaling Challenges	Technology	Government
1	Balancing quality education with pressures of scale • Poor overall levels of education • High drop out rates in schools and colleges • Poor quality of teachers	• Standardized national level testing to measure learning outcomes • Teacher certification/re-certification	• Stress on pre- and in-service training • Enforce standardized national level assessments to measure learning outcomes and do this in partnership with private players • Additional budget line items for NGO interventions. In-service training, etc.
2	Poor access to education • Shortage of human resources, poor teacher: student ratio • Poor physical infrastructure	• Resource sharing platforms • Distance learning and online assessments • Online network of experts/mentors	• Make the teaching professional more aspirational and incentivize participation • Additional budget line items for infrastructure development
3	Building and evolving institutional capability and capacity • Lack of management information systems • Lack of leadership • Dealignment of political will from educational involvement	• Management information system for schools • Online leadership certifications (for principals/leaders)	• Partner with professional training institutes • Invest in technology enabled schools • Promote private players to conduct research in education • Enforce use of management information systems across educational institutions
4	Lack of public private partnerships (for key services such as teacher training, after school training, school adoption, vocational education, etc.)		• Create enabling policies /regulations to promote investment • Allow for profits to be involved in school education

1

Balancing quality of education with scaling pressures is a key challenge that is critical to address. With close to 44% of students in grade 5 unable to read a text prescribed for class 2 and around 60% unable to perform simple arithmetic, as organizations scale, the focus on child- centric education must be very strong. Further, in order to ensure high quality delivery of education the teachers need to be trained in innovative child-centric methodologies which are not easy to translate from one classroom to another.

Leveraging technology: Technology can play a key role here by ensuring that modules for child centric development, along with standardized tests to measure learning outcomes are made available nationwide. In order to ensure robust training of teachers, online teacher certification and re-certification (to ensure ongoing training efforts) for different levels of education can be made available.

idiscoveri uses XSEED, a comprehensive platform for student curriculum, assessment, teacher education, instructional leadership, in partnership with schools across the country to improve the quality of teaching.

Role of government: The government must play a role in making available such educational modules through collaborative efforts with private and foreign players and enforce standardization of tests to track learning outcomes. Teacher pre and in-service training must be made mandatory across public schools and there should be additional budget line items for provisions such as NGO interventions/in-service training etc.

Due to the hiring of a large number of teachers under the Sarva Shiksha Abhyan (SSA), 65-80% of teachers in 2015 will be those already in the system, highlighting the immediate need for programmes that can address teacher training5

2

Access to education also poses a major challenge to scale in this sector. The IES is plagued with poor student: teacher ratios and in order to address this problem, the teaching professional needs to be made more
'aspirational' and incentives need to be provided to attract more people to take up the teaching profession. Gaps in physical infrastructure, such as adequate number of schools, colleges and higher educational institutes, coupled with access to electricity, water and basic sanitation facilities also need to filled up or else the demand will not be met with adequate supply infrastructure.

Leveraging technology: Technology can be addressed to develop resource sharing platforms where e.g. lectures can be delivered across schools. Softwares can be developed to provide multi-lingual options for the education modules which can help address one of the tougher challenges in scaling – language barriers across the country. Distance learning can be optimized as well and learning networks, of experts and institutions can be developed to mentor students and address the high dropout rates problem.

Bookbox, creates audio-visual books for children below 10 years of age in a variety of languages and in effect ensures that the ability to read is translated across geographies.

Role of government: The government needs to take a more collaborative approach at addressing this problem of access. They must partner with non profits and private players to promote the teaching profession and provide substantial incentives for people to get involved. Further, they must have additional budget items for focusing on increasing the infrastructural requirements in running and sustaining educational institutions.

3

Building and evolving institutional capability and capacity becomes important when it comes to sustaining scaling up efforts. Research has shown that strong leadership plays an important role in ensuring the way forward for organizations. School management must also be separately aligned from the political will as this is a problem that plagues many of India's educational institutes. Further, it becomes imperative to have management information systems which can monitor the school's functioning and ensure that there is a high level of accountability amongst all public schools.

Leveraging technology: Technology can play a role in providing management information systems. Also online leadership certification courses can be made available for principals and leaders. Kaivalya Education Foundation is a step in this very direction. They focus on training principals/headmasters of schools to ensure the success of the school in the long run.

> ***"Kaivalya Education Foundation*** started a 2-year fellowship programme called 'Gandhi Fellowship' where graduates from elite educational institutions take a four-month training programme and spend the remaining 18 months working with the principals. The idea is to ensure accountability from principals and provide them support so that the schools are sustainable in the long run"

Role of government: The government must begin by investing in technology-abled schools and partner with professional institutes in imparting leadership training. They must also enforce the use of management information systems in all educational institutes.

4

Lack of public-private partnerships in this sector along with private involvement can be a hindrance when going to scale. For key services such as developing educational modules, teacher-training, after-school training and vocational education, the need for involvement of the private sector is very high. In order to achieve scale and avoid the vagaries of changing government policies and top level functionaries, these functions must be performed in a partnership model.[6] The PPP arrangements must be allowed not just for NGOs and for profits but anyone demonstrating capability such as education colleges or university departments.

Leveraging technology:

Role of government: The government needs to focus on creating a more enabling policy/regulatory environment to promote investment. The current regulation requires that all schools function as non profits which in turn prevent private participation. For-profits must be allowed to participate in the IES which will ensure a more disciplined and accountable approach in imparting education.

"The recent partnership approach adopted by the Municipal Corporation of Greater Mumbai for the school improvement programme is an example of high-impact collaboration between social enterprises and the government"

ENERGY

India is the eleventh largest producer of energy and among the top five countries in the world in terms of renewable energy capacity. However, lack of grid infrastructure, compromised connectivity and high costs associated with providing consistent power supply have resulted in India having the highest number of people in the world without access to electricity.[1] One-sixth of Indian villages are entirely off the grid and amongst the other 500,000 with potential access, 50% receive infrequent, erratic and low-voltage power.[2] As a result of the above inconsistencies in power supply and high costs, rural India relies on using a variety of fuels such as firewood, kerosene, dung cakes and LPG which on incomplete combustion are harmful.

"In India, the electricity network is technically within reach of 90% of the population, but only 43% are actually connected because people cannot afford the cost of connection or there is inconsistency in the power supply"[3]

Indian companies are increasingly seeing a market opportunity in providing alternative cooking and electricity products to the nation's rural markets. In order to tap into the villages which are off- grid, region specific innovative solutions will have to rely on available raw materials such as wind energy in deserts, hydro power in mountainous regions or rice husk as is used by Husk Power Systems.

Through the India Renewable Energy Development Authority, the Indian government has mandated that State Electricity Boards buy energy from renewable energy providers and has also unveiled the National Solar Mission. The corporate sector is currently more focused on enhancing the carbon profiles of their companies or cutting down on energy consumption and greenhouse gas emissions. A growing number of social businesses are focusing on product innovation in order to provide low cost energy solutions, building localized distribution channels for their products and providing sustainable payment mechanisms for energy solutions. Many non profits have invested heavily in research and advocacy to ensure informed and effective policy decisions. At a grassroots level, they play a big role in educating the people on cleaner and safer forms of energy and function as links, enabling users to connect with solution providers.

SwitchON, a non profit organization, creates a pipeline for renewable energy products in rural India and builds the capacity of rural entrepreneurs to install, maintain and sell these products in their communities, thereby building livelihood opportunities[5]

Scaling Energy: Leveraging Technology and Government

	Scaling Challenges	Technology	Government
1	Data collection and dissemination • Poor low cost data such as frequency of power cuts • Lack of last mile data • Poor regional understanding	• Region-wise database of state of energy • Potential applications of energy • Data analysis and network of experts	• Promotion of online sharing platforms • Ensure public-private partnership model for data collection and dissemination along with strong regulatory support
2	Low awareness and acceptance of low cost and newer forms of energy • Poor awareness • Higher upfront costs of conversion • Interrupted access to energy • Subsidies available for traditional forms of energy • Lack of skilled on ground staff for installation and maintenance	• Online tools such as mobile SMSes for spreading awareness on energy conservation and highlighting available sources of energy • Database of potential applications of energy • Automated platforms for bridging the gap of skilled on ground staff	• Use mass media channels create dialogue on energy generation, conservation and use • Support online databases with peer review and SOPs • Create incentives for switching to cleaner forms of energy and re-evaluate subsidies on transitional unclean energy forms
3	Developing low cost energy solutions • Adaptive research • Identify solutions based on available raw materials • Minimize costs of conversion	• Online platforms to define on the ground needs • Collaboration of key stake holders involved in development efforts • Participatory technology development	• Incentivize private companies/universities to conduct RnD on low cost energy solutions • Enable technology transfer
4	Poor financial environment • Inadequate mechanisms of financing • Poor access to finances • Need for patient capital	• Online/mobile banking • Online tools and softwares to decrease transaction times and costs • Online sharing of successful financial innovations and models	• Promote microcredit and insurance • Divert subsidies from unclean to clean sources of energy • Incentivize rural banks to levy/promote existing rural financing schemes

1

The collection and dissemination of energy related data, poses a significant challenge for the scaling up efforts in this sector. There is currently insufficient data on the state of energy in India in order to channelize research and development of renewable and cleaner forms of energy as enterprises must have adequate knowledge to adapt their innovations to a particular area.

Leveraging technology: Technology can be leveraged to create a region- wise database on the state of energy in India. Further, technology can be leveraged to identify the applications of energy i.e. whether it can be used for home use, industry needs etc. Resource sharing platforms/mobile applications can be developed for purpose of uploading data from different regions of India and while this needs to be monitored by the correct agencies, it can go a long way in meeting the challenges that regional variances pose. Subsequently, the data which is collected and disseminated can be analyzed online by a network of experts.

Role of government: The government must promote setting up of an online database for the energy sector. However, the government must support this endeavor with strong regulatory support and through a public-private partnership model to ensure high quality data collection and dissemination.

"Data on energy access, frequency of power cuts, availability of raw material, number of people with access to energy is currently inadequate in our system"

2

Low awareness about energy conservation, generation and the subsequent applications of energy has lead to poor acceptance of newer and low cost energy solutions. Due to government subsidies, most of the traditional energy sources are procured at lesser costs. While there may be access to energy, most times this is interrupted and infrequent, hence there is a preference in rural India to stick with sources such as kerosene. With newer forms of energy, comes the need for access to ground staff for installation and maintenance. This is currently a gap in the space and inhibits enterprises from broadening their reach as the investment in training places an unsustainable burden on low margins.

Leveraging technology: With the use of simple technology tools such as mobile SMSes and mass media channels, users can be sent reminders on ways to conserve energy. Further, similar tools and online platforms can be used to highlight the available and popular sources of energy. Importantly, after having access to energy, many rural households are unaware of how to tap into its potential. Creating a database of potential business plans that can result in improving the livelihoods of rural India, would also go a long way. Technology can be used to overcome cost barriers of providing on ground staff by developing automated tools that enhance the capacity of low skilled workers to provide quality and timely maintenance.

"Often enterprises spend large amounts of time building trust, breaking existing patterns of usage and getting customers used to disruptive ways of carrying out traditional activities"

Role of government: The government must leverage their communication channels to create a dialogue on the importance of energy conservation and use of renewable and cleaner energy forms. The above online platforms for generating awareness on energy conservation, generation and subsequent uses must be peer reviewed or supported by SOPs to ensure that information made available at large is accurate. The government must also incentivize rural households to switch to cleaner forms of energy. Creating subsidies for clean energy products and services and revamping the existing ones on unclean forms such as kerosene, will give users choice in lighting solutions as well as promote innovation in enterprises.

3

Developing low cost energy solutions is another important challenge in order to scale energy solutions across India. Innovation requires a good understanding on the current state of energy in India and particularly, of the region at hand. Also, these solutions must be innovative enough to tackle the high upfront costs of conversion which typically result in poor uptake of new solutions.

D.light Designs aims to make traditional lighting fuels like kerosene redundant with its portable solar lighting solutions priced between USD 7 and USD 40. By providing high quality, affordable lighting solutions, DLight aims to improve the lives of 50 million people by 2015[6].

Many of these alternate solutions are dictated by the availability of the raw materials at hand. Husk Power Systems uses rice husk to generate clean and affordable energy by installing decentralized generation and distribution systems.

Leveraging technology: Technology sharing platforms and participatory technology development can be leveraged in order to identify solutions which may be region specific and low cost. There must be online platforms which define the RnD needs i.e. on-ground staff which can correctly identifying the needs of the hour must be roped in to direct the RnD efforts and this must be met with private and collaborative development efforts.

Role of government: The government must incentivize RnD efforts towards the development of low cost innovative energy solutions and must ensure that policy is integrated into the type of research which is being done, also known as adaptive research. An ecosystem that includes tax incentives for corporates and private players, collaborative models with private developers and universities and technology transfers must be developed which will facilitate start-ups to take risks and in effect promote innovation in the energy sector.

"Ability to scale relies on innovation in processes rather than inputs and size of the underserved potential market"

4

Poor financial and regulatory systems are a great challenge in delivering effective solutions to end users. Currently, end users lack capital to invest in low cost solutions and they are not considered eligible for credit by banking institutions. Lack of collateral security makes them high risk segments for loans. Banks in rural India also lack incentivization to provide schemes/financing options to rural households. Along with this, there is a need for patient capital that can be provided to researchers and developers, which currently is a challenge to access.

Leveraging technology: Financial solutions are largely policy driven and technology can only be an enabler in ensuring effective implementation of the policies. However, technology can play a role in providing online and mobile banking services which can improve access of rural households to financial services. Online tools and softwares can be leveraged by rural banks to reduce transaction times and costs. Technology also plays a role in sharing successful models which enable greater financial inclusion of end users.

Role of government: The government must promote microcredit and insurance to boost financial inclusion in energy. The existing subsidies on kerosene are a considerable deterrent and disincentive to the adoption of cleaner energy solutions.

Kerosene and LPG are procured at below market rates due to government subsidies. More than two-thirds of households buy all or part of their kerosene at subsidized prices.[8]

"***Simpa Networks*** sells distributed solar energy systems on a 'Progressive Purchase' basis to underserved consumers in emerging
markets. Customers make a small initial down payment for a high-quality solar PV system and then pre-pay for the energy service, topping up their systems in small, user-defined increments using a mobile phone"[7]

Rural banks must be incentivized to levy/promote financing schemes to those who are currently not being able to avail of them.

HEALTHCARE

India may fast become a popular medical tourism hub but for all its world-class facilities, many Indians in rural parts of the country have little to no access to basic healthcare. India has one of the highest prevalence rates of communicable diseases, maternal and infant mortality. Lifestyle and communicable diseases are also showing rising trends.[1] Although the pharmaceutical and biotechnology sectors in India are making great strides, it cannot be denied that the healthcare system in the country is broken.

There exists a significant mismatch in demand and supply systems with 70% the Indian population residing in rural parts and 80% of doctors, 60% of hospitals and 75% of dispensaries situated in urban areas.[2] The above is aggravated by the fact that less than 15% of the population has any kind of healthcare coverage, be it community insurance, employer expenditure or social insurance.[3]

"According to a report by the industry body FICCI, the Indian healthcare sector is estimated to grow to around US$80 billion in 2012 and US$ 280 billion by 2020"

Delivery points that can provide reliable and quality care especially in rural India need to be set up to ensure deepening of healthcare service provisions. Innovation in products and processes that increase efficiency, lower costs, improve quality and enhance access, are all a growing need. Further, efforts at changing healthcare seeking behavior need to be enhanced or else, advances made in this field will fall on deaf ears.

The government's public health system relies on the state being a provider of healthcare however facilities offered by the government are far too little to meet the demands. Corporates are involved in the running and adoption of hospitals and healthcare businesses such while social businesses are increasingly bringing about innovation in cost and distribution of care as well as increasing access to quality services. The non profits typically focus on organizing delivery and changing health seeking behavior and of late are also collaborating with the government to work on the effective implementation of schemes such as the National Rural Health Mission.

eCompliance, pioneered by Operation ASHA, uses biometric devices to track compliance to TB medication. If a patient is observed to have missed a dose, a counsellor visits them in their home to deliver the dose. By creating staff efficiencies, this system is able to pay for itself within the first few years of setting up[4]

Scaling Healthcare: Leveraging Technology and Government

	Scaling Challenges	Technology	Government
1	Access to healthcare • Physical infrastructure • Human resources • Financial viability/affordability	• Online portal which links healthcare providers • Telemedicine platforms • Online training platforms for healthcare deliverers	• Private incentivization for infrastructural development • Training for support staff in vocational institutes • Invest in telemedicine and partner with organizations providing low cost solutions
2	Lack of information and data on disease patterns, treatment/ re-treatment /compliance, healthcare seeking behaviour, hospital management	• Electronic medical records • Use of smart cards for obtaining centralized data • SMSes for reminders to increase compliance	• Increase the uptake of technology across the public healthcare sector • Emphasis on regulation and accountability
3	Redefining patterns of healthcare usage • Tracking preferred forms of treatment and their outcomes	• Open source database on usage patterns • Collaborative platforms to spread awareness about advances in medicine	• Awareness campaigns and dialogues on redefining patterns of usage • Use of mass media channels
4	Poor financial environment • Inadequate mechanisms of financing • Poor access to finances	• Online/mobile banking • Tracking successful and innovative financial models	• Redefine role from being provider to financier of healthcare • Promote public-private partnership for research in healthcare • Tax incentives for corporates/private players • Incentivize rural banks to levy/promote existing financing schemes

1

Access to healthcare in India in terms of physical infrastructure, human resources and financial viability of available solutions, poses a large challenge to scaling up efforts in this sector. In rural India the situation is significantly worse, with a doctor-to-population ratio that is six times lower than in urban areas.[5] Also, healthcare delivery often requires a continuum of points along which care is provided. From diagnostic centers to ambulances, hospitals, pharmacy shops and treatment centers, all these are required to exist in large numbers and at close distances within each other to provide impact.

Leveraging technology: Telemedicine or online forms of communication such as video/online diagnostics and treatment, which enable a doctor n urban India to reach out to rural communities, may provide solutions to limited existing infrastructure and human resources. An online portal can also link healthcare providers, doctors, nurses, pharmacists and emergency medical services. Technology can also be leveraged for the on-going training of medical staff to ensure that their skills and knowledge are up-to-date and bring best global practices to India facilitating their deeper penetration.

Healthpoint Services India (HSI) addresses the challenge of access to healthcare in rural areas through its 'E Health Point' satellite facilities, which provide families in rural villages with medicine, comprehensive diagnostics and advanced telemedicine services at a low cost. Since their inception in 2009, E Health Points have enabled over 25,000 telemedicine consultations and 12,000 diagnostic investigations.[6]

Role of government: By investing in the public healthcare sector and largely through a public private partnership mode or creating incentives for higher involvement of the private sector, healthcare infrastructure can receive a significant boost. The government must also incentivize the workforce to serve in rural areas and provide extra credits for those opting for this sector in their vocational training. In order to increase the financial viability of available solutions for the poor and rural India, the government must invest in technology such as telemedicine for government hospitals and actively partner with organizations which are providing low cost solutions.

"60% of hospitals and 75% of dispensaries in India are situated in urban areas, however 70% of the population resides in rural areas. In addition, 70% of doctors work in urban India and the ratio of doctors per 1000 people in India is amongst the lowest in the world"

2

Lack of comprehensive information and data regarding disease patterns, patient treatment, re-treatment and compliance, healthcare seeking behavior and hospital management pose a significant scaling challenge. Due to record keeping on paper formats rather than digitalization, there is a lack of available data to identify trends in the Indian healthcare space. The resulting overlapping treatments, immunity due to overuse of medicines and poor patient compliance prevent healthcare providers/researchers from carrying out accurate market analysis to plan new business ideas and expansion.

Leveraging technology: The use of electronic medical records can be used to address the problem of data collection and monitoring. Another effective way of leveraging technology for obtaining centralized data is through the use of smart cards issued by insurance companies.

Although public sector clinics and hospitals have not widely adopted this technology, private players such as Healthpoint Services collect detailed patient data and provide basic information regarding their areas of operation to the government.

Technology can also be used to outsource compliance systems to ensure patient adherence to treatment routines. SMS messages can be used to remind patients about appointments or bring about behavior change by reminding mothers of upcoming vaccination routines.

Role of government: The government on its part is testing the use of smart cards as part of the Rashtriya Svashtra Bima Yojana (National Health Insurance Scheme) launched in 2008.[7] While private players have seen a higher uptake of technology for data collection and monitoring, the government must standardize and enforce the same across the public healthcare system. There has not been enough emphasis on regulation and accountability, resulting in a lack of accreditation or licensing frameworks to assess the quality of care provided. It is imperative that the government take the lead in setting up independent institutions that will work with other stakeholders in the sector to fill the gap in enforcing standards regarding facilities, essential drugs, medical records and waste management.

3

Traditional healthcare seeking behavior and consumer patterns prevents the uptake of new advances in medicine. In many parts of rural India, people stick with old beliefs and traditions, in effect pushing away the advances of medicine. New providers need to establish credibility and gain the consumer's trust and innovations also necessitate medical staff to change their behavior, which can be a time-intensive process with high costs.

Leveraging technology: Technology can be leveraged in a way that knowledge and awareness about medical advances can be made available on a wide scale through social media platforms and use of mass media channels. There can be an open-source database to track healthcare usage patterns and collaborative efforts must be made in this regard.

mDhil, a for-profit company, uses text messaging, mobile web browsers and interactive digital content to provide basic health information to over 150,000 Indian consumers. Consumers pay only Rs. 1 per day for three health messages delivered to their phone.[8]

Role of government: The government must look to launch nationwide campaigns that address the need for a change in traditional healthcare consumption patterns by leveraging existing, mass media channels such as TVs, radios and newspapers.

4

Poor financial environment plagues the healthcare sector in India. The private sector accounts for 80% of healthcare expenditure in India, indicating the preference towards private facilities which tend to be better managed than public facilities. However the higher costs associated with private facilities results in lack of access of healthcare by the poorest segments of society.

Leveraging technology: Over the last few years, online and mobile banking/payment mechanisms have served as helpful aids to promote financial inclusion.

Technology must also be leveraged to track innovative financial models such as Aravind Eye Care System which uses a cross-subsidy model and enables free or subsidized treatments to over 60% of its customers.

Role of government: The government needs to redefine its role from being a provider to a financier of healthcare facilities and can play a significant role by providing financing to end-users through insurance coverage or vouchers. The government, through tax incentives must encourage risk-taking investments and encourage participation of corporates and private players. Rural banks must also be incentivized to levy/promote existing financing schemes which currently are underused due to high costs and transaction times.

"In the last few years, social venture capital firms such as Acumen Fund and Aavishkar have been instrumental in providing risk capital and support to early-stage ventures; however, there is a growing need for grants to fund proof-of-concept and low cost uncollateralized loans for working capital"

LIVELIHOODS

While the Indian economy in the last few years has been enjoying a sustained GDP growth rate of over 6.5%, one of the highest in the world, over 406 million people (90% of the work force) are employed in the unorganized sector.[1] Their working conditions are extremely challenging compounded by poor illiteracy levels and lack of health insurance, old age schemes and workers' unions to demand basic social securities. Additionally, with only 34% of the population engaged in formal banking, India has 134 million financially excluded households, second only to China.[2]

In the next decade, over 500 million jobs will be created in India and 75% of these will be skill based.[3] Adding to this, in 2020 the median age in India will be 28 compared with 38 in America, 45 in Western Europe and 49 in Japan.[4] This ageing economy phenomenon will globally create a skilled manpower shortage of approximately 56.5 million by 2020 and if we are able to create adequate opportunities for vocational training, India could have skilled manpower surplus of approximately 47 million.[5] Providing an unskilled workforce with vocational training opportunities can enhance their productivity and increase per capita from USD 1,212 to USD 4,100 by 2025.[6] Because labor is the main asset of the poor, enhancing productivity is the most effective means of reducing poverty and improving their standard of living.

"Along with approx. 17 ministries of the central govt. providing skills training in their respective focus areas, the National Skills Development Corporation has been set up to function as an apex institution for achieving India's skilling needs"

In the last 5 years the government has focused on expanding opportunities for vocational training for the bulging youth population. Broadly, the private sector contributes to vocational training through on-the-job training opportunities and financially supporting non profits and social businesses as providers of training. Social businesses ensure sustainability by charging a fee for services provided and creating strong linkages to the market. They have been effective in providing low cost, high quality training often with guaranteed employment opportunities in industry. The growth of the services sector and global competitiveness has translated into non profit intervention that focus on wage earning employment opportunities to respond to the demand for manpower, primarily in sectors such as IT, BPO, retail and hospitality. They have also been effective in creating and supporting producer cooperatives to enable fragmented groups to come together and demand fair wages and prices.

Scaling Livelihoods: Leveraging Technology and Government

Scaling Challenges	Technology	Government
1 Robust ecosystem for livelihoods (esp. the unorganized sector) • Make labor focused more aspirational • Tie up with professional training institutes	• Social media platforms can break cultural stigma • Computerized tests can enable pre- and post- training assessments • Online collaborative models for exchange of material • Provision of industry specific certifications	• Promote manual jobs by leveraging mass media channels and support with financial incentives • Mandatory industry specific certifications • Partner with vocational training institutes and hiring agencies
2 Fragmented supply chain • Long value chains • Vast geographical spread and poor rural connectivity • Demand-supply requirements • Leveraging existing facilities	• Online resources/sharing platforms to prevent overlap of time and money investments • Online market places and employment exchange programmes	• Invest more in vocational training • Collaborative approach to develop robust market linkages • Tie up with foreign collaborators to promote high quality skills development
3 Robust regulatory and financial environment • Piecemeal policy and regulation • Poor access to capital • Need for patient capital	• Online/mobile banking	• Invest in social security net for labor class • Effective and timely implementation of policies • Provide working capital to producer groups • Offer subsidies/loans for vocational training

1

The ecosystem of livelihoods must be made more robust i.e. there needs to be a greater focus on making jobs within the unorganized sector aspirational and to ensure that a high level of quality is maintained in training and execution of these jobs. Additionally, organizations focusing on livelihoods development must tie up with professional training institutes and pursue a collaborative model to ensure that they create and maintain the benchmarks for pedagogy and training that meet industry standards. Many a times, products and services are not standardized and mainstream retail chains and large/foreign companies are reluctant to avail of them, severely limiting the market and the upward mobility of the workers.

Leveraging technology: Technology has tremendous potential to transform the nature and volume of transactions taking place in the unorganized sector. Social media platforms can be leveraged to break the cultural stigma associated with manual labor. Computerized tests can enable pre- and post- training assessments along with modularized training which can allow the worker to continuously upgrade his skills. Online collaborative models can be created which allow exchange of training material within the sector in a transparent way so as to ensure nationwide standardization. Industry specific certifications can also be complete online, provided these are made mandatory by the government.

Role of government: The government must make concentrated efforts at promoting manual jobs and ensuring that mass media tools are leveraged to break the cultural stigma associated with them. In order to bring more organization to the unorganized sector, the government must address the need for industry specific certifications which can be leveraged nationwide with the use of technology. It must also actively partner with vocational training institutes and hiring agencies so that it can afford them the leverage of scale and promote a collaborative/partnership model within the livelihoods sector.

"Parents usually aspire for their children to secure desk jobs and organizations offering vocational training often struggle to run at full capacity, especially for the first few years of operation"

2

A fragmented supply chain poses a substantial challenge to this sector. Market linkages facilitate effective flow of information and products to ensure sales. Due to poor infrastructure, inefficient supply chains and lack of standardization, workers and producers in the unorganized sector are often at a disadvantage. Due to the vast geographical spread and diversity of producer groups and workers in the unorganized sector, it becomes difficult to access and collaborate within the space and many times, non profits and social businesses end up investing heavily into the same artisans leaving out a potentially big section of society. Also, for unskilled and semi-skilled workers, the difficulty lies in determining whether their labor is in demand and as a result, they are forced into sporadic work at low wage levels. While there is a need for a higher number of vocational training institutes, existing facilities can also be leveraged more optimally. However, poor rural connectivity currently poses a significant barrier as there ends up being a gap in the demand and supply of trained personnel.

"Online employment linkages such as Babajobs have allowed domestic and blue collar workers to expand their traditional networks and find employment"

Leveraging technology: In order to enhance market linkages and prevent an overlap of time and monetary investments, online resource sharing platforms must be leveraged. Mobile phone penetration has already made it easy and cost effective for producers and workers to connect to the market and also, online market places and employment exchange platforms may be created with the help of technology.

"Drishtee has established an e-commerce platform, Drishtee Haat, for artisans to sell their products to a wider audience than would be physically accessible for them"

Role of government: The government needs to invest more in building vocational training institutes and ensure that they focus on a collaborative approach to ensure more robust market linkages. They must also actively participate with private players in this regards so that a high quality and universal standard of training is imparted. The government can also tie up with foreign collaborators to make the environment for investing in vocational training in India more conducive to investors.

3

A robust regulatory and financial environment is imperative to achieve scale in the livelihoods sector. Policy and regulation has been piecemeal so far, with little to no attention being paid to the heterogeneity of issues faced by workers. Despite having one of the largest banking networks in the world, access to capital remains one of the major challenges faced by workers in the unorganized sector.[7] Revenue models of livelihoods promotion and vocational training organizations are often based on placement fees from industry and in case of attrition, the organization goes into losses. For producer groups, the challenge lies in securing capital to purchase inputs such as raw material and labor months prior to payment being received for finished products.

A study conducted by the All India Artisans and Craftworkers Welfare Association (AIACA) found that providing the appropriate combination of production and finance related inputs could enhance income by over 268%.[9]

Leveraging technology: Over the last few years, online and mobile banking/payment mechanisms have served as helpful aids to promote financial inclusion.

Milaap is using the Internet as a platform to enable individuals around the world to lend money to low-income individuals and households in India through field partners, to help them fulfill their education, healthcare or enterprise development needs

Role of government: The government must ensure effective and timely implementation of schemes such as Mahatma Gandhi National Rural Employment Guarantee Act, National Rural Health Mission, Rashtriya Swasthya Bima Yojana and Sarva Shiksha Abhiyaan. To enhance financial inclusion, the government can provide working capital to producer groups and also look to providing vocational training at subsidized rates/loans and scholarships to students choosing to align themselves with specific livelihoods options. While there are several schemes available for a non profit to secure a grant from the National Bank for Agriculture and Rural Development (NABARD) as collateral for obtaining working capital from mainstream banks, this can be extended to social businesses in order to promote innovative and sustainable livelihoods models.

"It has been estimated that less than 8% of total bank credit finds its way to enterprises in the livelihoods sector"[8]

END NOTES:

Agriculture

1. Indian School of Business, Working paper series, “Can India be the Food Basket of the World”, 2011
2. FSG, “Creating Shared Value in India: How Indian Corporations Are Contributing to Inclusive Growth While Strengthening Their Competitive Advantage” 2011
3. Access, “State of India’s Livelihoods Report”, 2010
4. Ibid
5. Access, “State of India’s Livelihoods Report”, 2010

Education

1. Dasra, “Leveraging the Dividend: Enhancing Employability in India”, November 2011
2. ICICI Foundation, “Indian Public School System: Time for a Quality Revolution”, August 2009
3. ICICI Foundation, “Indian Public School System: Time for a Quality Revolution”, August 2009
4. Annual Status of Education Report (Rural) 2010, January 2011

Energy

1. South Asia Monitor, “India’s Renewable Future: Challenges and Prospects”, Number 98, September 2006 prospects
2. IFMR Center for Development Finance- World Resources Institute, “Power to the People: Investing in Clean Energy for the Base of the Pyramid in India”, 2010
3. Priddle R, “World Energy Outlook 2002”, International Energy Agency, 2002
4. The Ayllu Initiative Energy Map
5. www.switchon.org.in
6. www.dlightdesign.com

Healthcare

1. Times of India, “India fast becoming world diabetes capital”, Nov 12, 2011, accessed at: http://articles.timesofindia.indiatimes.com/2011-11-12/patna/30390589_1_diabetes-capital-diabetes-screening- world-diabetes-day
2. Deloitte and Confederation of Indian Industry (CII), “Medical Technology Industry in India: Riding the Growth Curve”, July 2010
3. Bulletin of the World Health Organization, “India tries to break cycle of healthcare debt”, Volume 88, Number 7, July 2010, accessed at: http://www.who.int/bulletin/volumes/88/7/10-020710/en/index.html
4. KPMG, “Emerging Trends in Healthcare: A Journey from Bench to Bedside,” February 2011
5. Borgonovi V, et al., “Creating Shared Value in India”, FSG, October 2011
6. Bulletin of the World Health Organization, “India tries to break cycle of healthcare debt”, Volume 88, Number 7, July 2010
7. mDhil, “SMS Services”, accessed at: http://www.mdhil.com/sms-services

Livelihoods

1. ACCESS Development Services and Livelihood School, “State of India's Livelihoods: The 4P Report”, ed. Datta S, Sharma V, 2008
2. Swamy V and Vijayalakshmi, “Role of Financial Inclusion for Inclusive Growth in India”, Skoch Consultancy
3. ACCESS Development Services and Livelihood School, “State of India's Livelihoods: The 4P Report”
4. The Economist, “The Other Demographic Dividend”, 7 October, 2010, accessed at: http://www.economist.com/node/17199488
5. Planning Commission, “11th Five Year Plan, Chapter 5: Ensuring Urban and Rural Livelihoods”
6. TeamLease, India Labor Report, 2009
7. Unique Identification Authority of India, “From Exclusion to Inclusion with Micropayments”, Planning Commission, April 2010
8. Planning Commission, “11th Five Year Plan, Chapter 5: Ensuring Urban and Rural Livelihoods
9. Interview with Kirtika Singh, CEO – AIACA, January 10, 2012

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