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From: **ramnath ballala** <ramnath@selcofoundation.org>
Date: Mon, Oct 24, 2016 at 5:32 PM
Subject: Reworked questions for the second session
To: Ravi Narayan <chcravi@gmail.com>, Sam Joseph <samjoseph@sochara.org>
Cc: Vivek Shastry <vivek@selcofoundation.org>, Huda Jaffer <huda@selcofoundation.org>

Dear Sir, Kindly find the questions and the information of selco ecosystem.

Second **session:**
First draft: Questions

1. How can the health centres tailor its services to people's/ community needs?
2. How can we make medical technology people centred? E.g. Telehealth? What are currently missing? Where should we position telehealth in the bigger picture?
3. What are the options for the poor if they fall sick?
4. Is the current design of the health centres optimal/ adequate? How can we make it better? More people centred? More holistic, not just a place to come when your are sick but a place of wellbeing.
5. What are the health services currently at a PHC that can be taken to the doorstep of the people? What are the prerequisites and enabling environment that needs to be created?
6. Is the Sub Centre (SC) working to its potential? Are there any more room to upgrade it? If yes what are the new added facilities/services/processes that needs to be incorporated?
7. How can technology enable community monitoring and participation in planning the health activities?
8. How can technology help the role shifting of the health services at the community level?
9. Can Practo model be taken to the rural context(PHC grading, availability of specialists at the CHCs/DHs etc.)? What resources need to be mapped?

MMR India: 174/100,000
Best: Finland 3/100,000

IMR India 41.36/1000
Best: Luxembourg 1.58/1000

Reworked questions

Question 1: How should effective health centers be structured?
(For Moderator- This group/ panel discussion can lead to: idea of a health center being physical only vs non physical space, the types of services that need to be provided in a built structure vs need to reach people in other ways, the options that under-served and vulnerable populations should have when they fall sick, will evolving technology in the future impact the idea of a physical public health center and how (eg- 5-10 years down the line)...)

Question 2: How would you approach re-designing current and optimal health centers?
(For Moderator- This group/ panel discussion can lead to: does design of health center from an accessibility and infrastructure perspective change based on type of service being provided or geographical context, can the perspective and terminology change/ shift from a medical/health center to a "wellbeing center"/ not just a place to go when people are sick- would this lead to optimization of human resources)

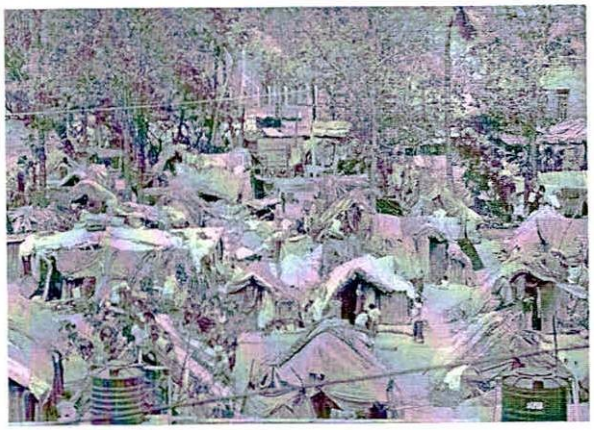
Question 3: Can technology enable community monitoring and participation in planning the health activities?
(For Moderator- This group/ panel discussion can lead to: what types of technologies..how this may lead to better design or services and overall resources, can it lead to more qualitative data and mapping of resources or be bundled/ leverage with other services for water, education etc.)

Best regards,

Ramnath Ballala,
SELCO Foundation, Bangalore, India
+91 7259014965 (Work)

our Approach

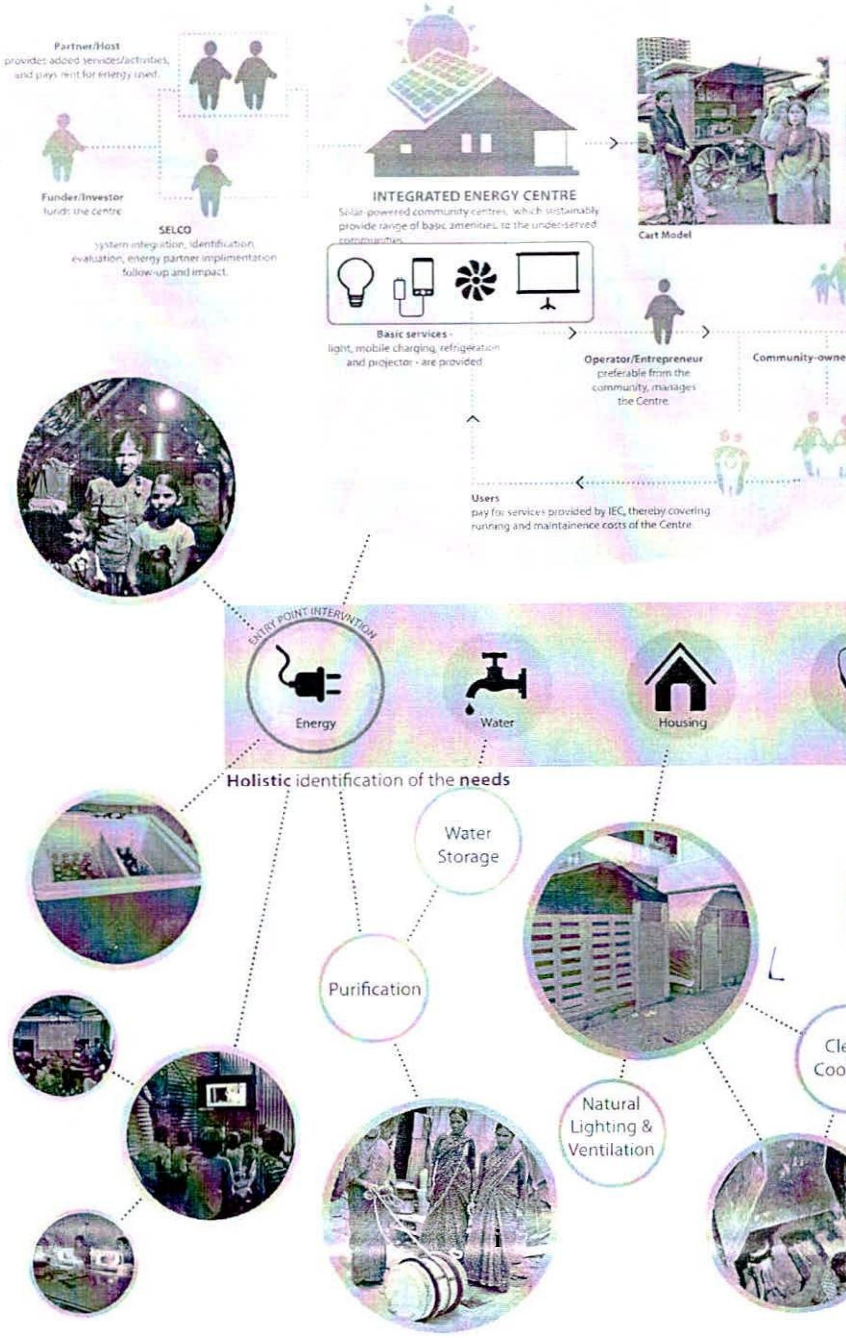
Our process begins with a mapping & profiling exercise to understand the needs of the community holistically. We start with an entry point intervention which would address the most pressing need of the community, collaborating with partners where necessary. In an urban scenario this could be energy, where as in tribal it could be health.



An energy intervention could lead to the formation of an Integrated Energy Center which begins by providing basic energy access and moves on to adding a variety of other services such as mobile charging, refrigeration, community TV, Laptop, internet download etc; depending on the communities needs.

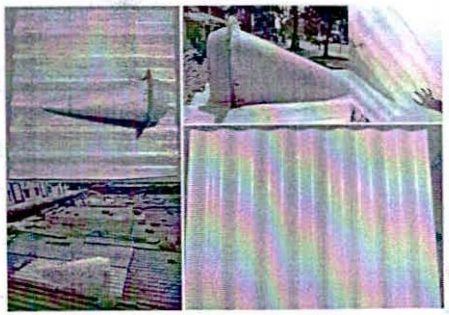
Each intervention would also have an operational and financial model that makes it viable and sustainable, independent of SELCO. For example the IEC could have an operator, entrepreneur or community owned model. Physically it could be on a cart, in a newly built unit or within an existing structure.

Post the entry point intervention we would work on other identified needs such as water access, housing, livelihood, health etc.



What we mean by
'Holistic Solutions'

Inclusion: For Siddhis, the bank guarantee went up to 100% initially as no bank was willing to lend to them. Over time, the banks were convinced of their financial reliability which has opened access to institutional finance that could become a catalyst for development in the long term.



From Scratch: Custom designed FRP sheet that provides diffused lighting and improved ventilation (20-30%)

Loan item: Airlite was made available as a loan item through SEWA banks in Ahmedabad.

Awareness: Natural lighting and ventilation has a direct impact on well-being, health and productivity of the inhabitants.

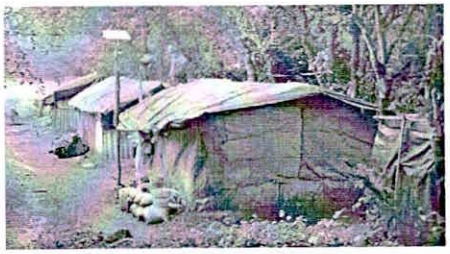
Development of Products & Package: Temporary and portable homes designed with local materials that provide improved head room, day lighting and cross-ventilation. Components may be availed individually (door, window, framework, roofing) or as a whole solution.

Value add services: Providing additional services that complete the infrastructure required in a home- chimney, cook stove options, water percolation pits, water storage and purification products/services.

Incentivized Financial Model: Housing is a low priority investment for migrants, hence we can incentivise it through provision of critical services such as access to finance & family health programs.

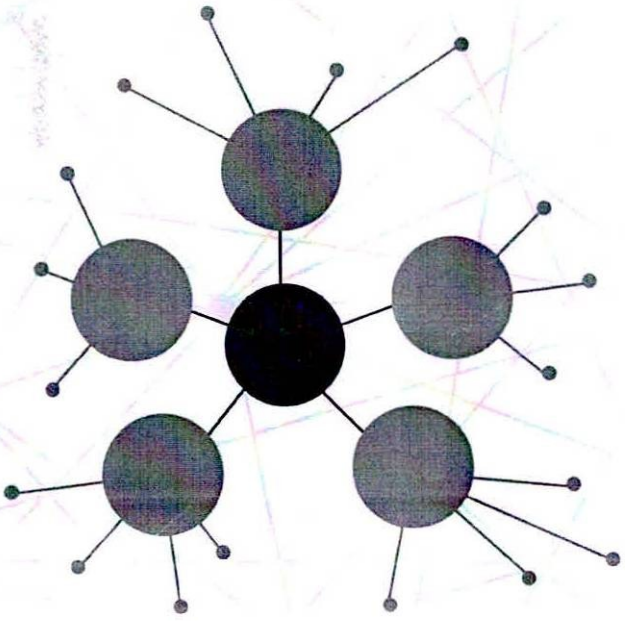
Awareness: Repeated community meetings are required to generate awareness for the need to improve housing, and its impact on well-being, health and overall productivity.

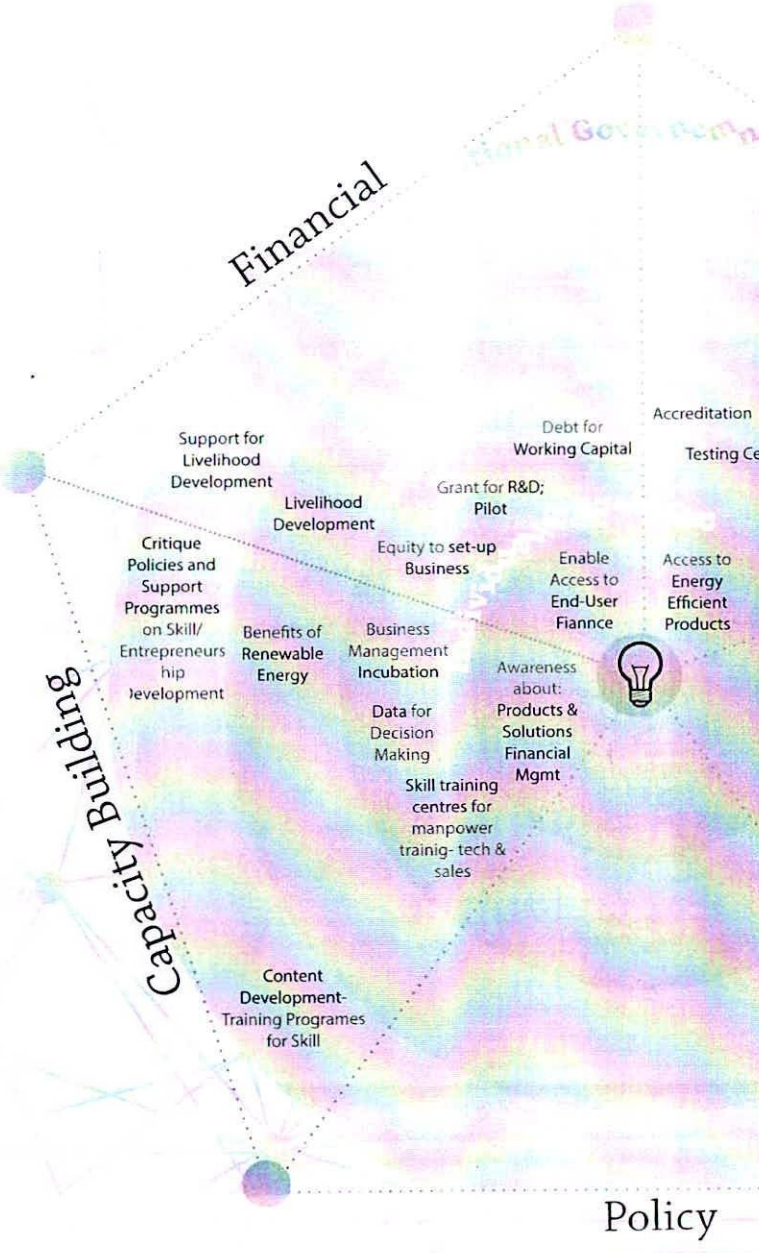
Model Houses: Building model units through identified operators/entrepreneurs providing a sample for others to look at and replicate. Hence raising the bar for acceptable housing standards for migrants.



What do we mean by 'Ecosystem'?

Organizations, in the space of energy access, by virtue of the very challenging missions they pursue irrespective of domain, operate in difficult environments across the world. Local bred innovations, supply chains, enterprise and end-user centric financing, appropriate technology, innovative human resources, potential access to markets for finished goods are some of the pieces. Absence of one or more slows the ability of any enterprise, organization or government to deliver solutions efficiently to the poor.





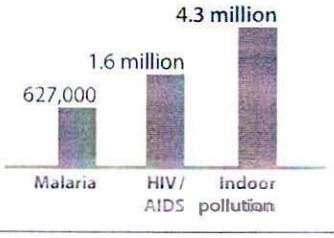
Energy access, poverty alleviation and sustainability

India has a population of approximately 1.2 billion[1], of which 21.9 %[2] lives below poverty line. **India has 306.2 million people without electricity, and 705 million people who rely on wood and biomass for cooking.[3]** Depending on fossil fuels means depleting an already dwindling resource; indoor pollution and mostly women and young girls spending countless hours in search of firewood, often robbing them of opportunities.

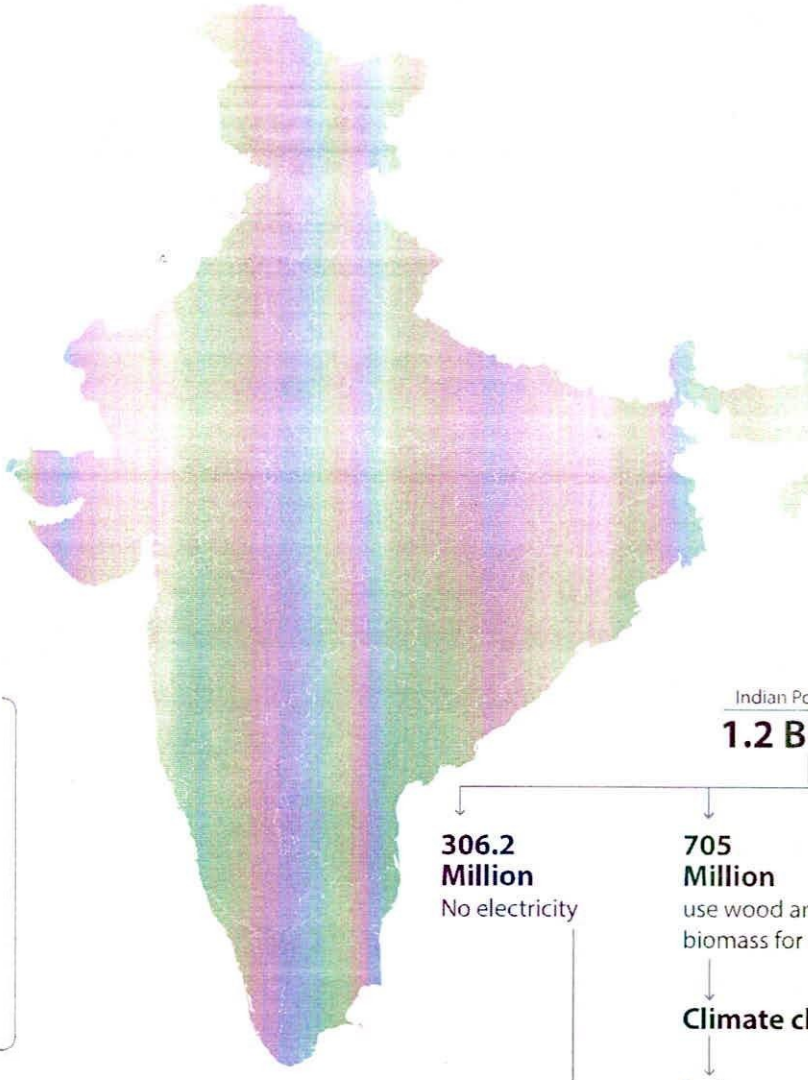
One of the answers to decrease this socio-economic divide while preserving the environment is to rethink ways in which clean energy solutions, poverty alleviation and sustainability (environmental, social and financial) are connected. The solutions lie in better technology, affordable finance or induced market linkages. SELCO's interventions demonstrate how using sustainable energy can directly lead to better quality of life and increased incomes for the poor and can be replicated.

1 http://www.worldometers.info/world-population/india-population/
2 http://blogs.wsj.com/indiarealtime/2015/02/05/india-hits-its-u-n-poverty-cutting-target-but-misses-others/
3 http://news.nationalgeographic.com/news/energy/2013/05/130529-surprising-facts-about-energy-poverty/#

World Population
7 Billion



Indoor pollution caused due to lack of clean energy alternatives causes maximum number of death world over



Indian Po
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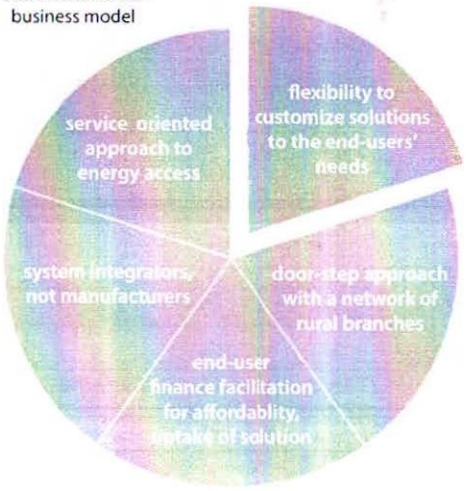
SELCO India (1994)

For Profit, Social Enterprise

To enhance the quality of life of under-served households, institutes and livelihoods by providing customized sustainable energy solutions that become assets for the poor through a network of customer energy service centers.

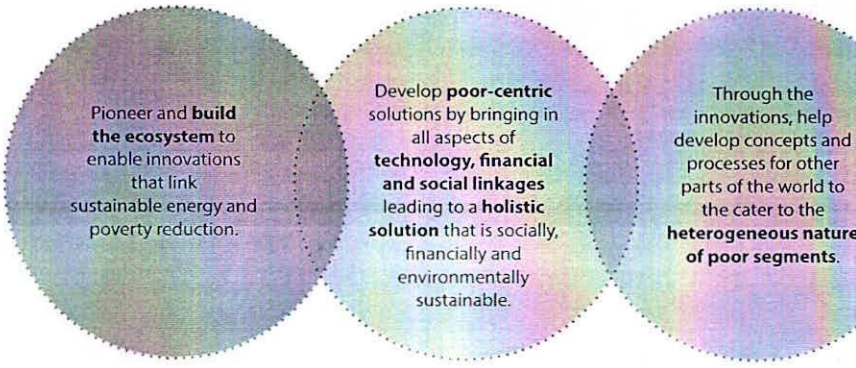
SELCO'S
socio-commercial
business model



SELCO Foundation (2010)

Non Profit, Research and Development wing

To develop innovative sustainable - social, technical and financial - models that impact energy access, climate change and poverty alleviation. SELCO Foundation uses a holistic ecosystem approach to impa areas of wellbeing and livelihood.



Pillars of SELCO Foundation

Investment for

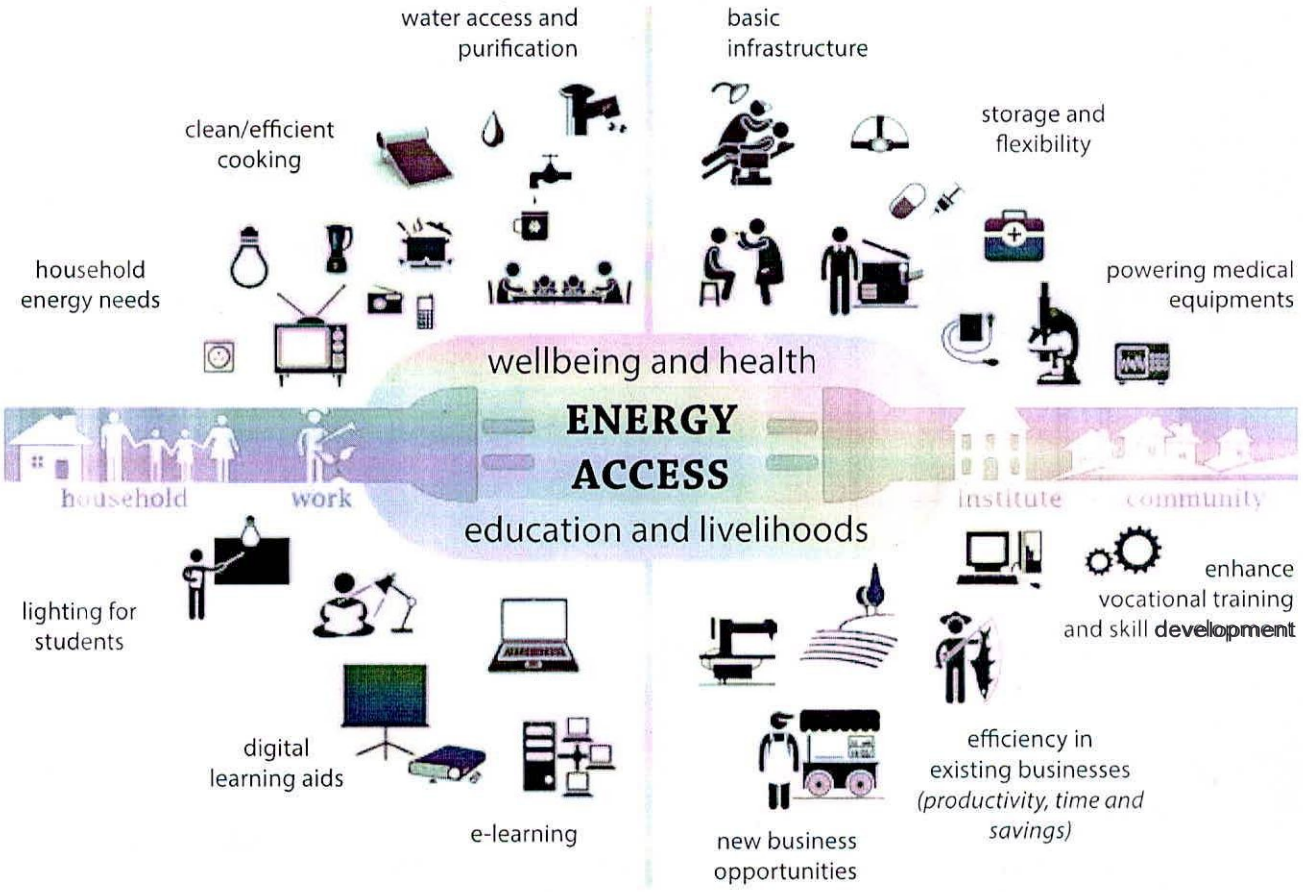
To invest in small and medium size sc
and develop investment, deb
sustainable energy

energy access

Impact Areas

Climate change and poverty is a challenge for many of the developoing countries in the world. The issues of the poor cut across boundaries, especially between the countries in the Global South. Many a time the problems might be the same but the solution is always re-invented: which is leadingto inefficient ways of capital utilization and slower rate of poverty reduction: which is leading to inefficient ways of capital utilization and slower rate of poverty reduction: **a problem that SELCO FOUNDATION in India aims to solve in a small way.**

The figure shows how access to energy can impact areas of wellbeing, health, education and livelihoods across household, work, individual, institute and community levels.



What do we mean by 'Holistic'?

Each part of the above-mentioned eco-system has to be solved innovatively and in a sustainable manner that can be replicated, with a certain degree of variation, anywhere in the world. The targeted solutions have to be favorable to local conditions and in line with the needs of the local poor. Therefore based on various factors influencing the need of an end user-affordability, **geography** (slum or rural or hilly region), **occupation** (daily laborers or street vendors or home-based workers), **built environment** (design of houses), **functionality** (cooking or reading or livelihoods), **usage** (portable, stationary, brightness, no. of hours)- solutions have to be designed to suit that context.

The solution is not just focused on one aspect, say technical, but also includes other aspects like market linkages, access to credit, local culture etc which include financial and social aspects. If all the three are considered and combined while designing a solution it makes it more feasible and long term. Understanding the needs and aspects' surrounding a potential issue leads to an **'end to end' solution** encompassing technical, financial, social aspects: thus creating a "holistic" solution.

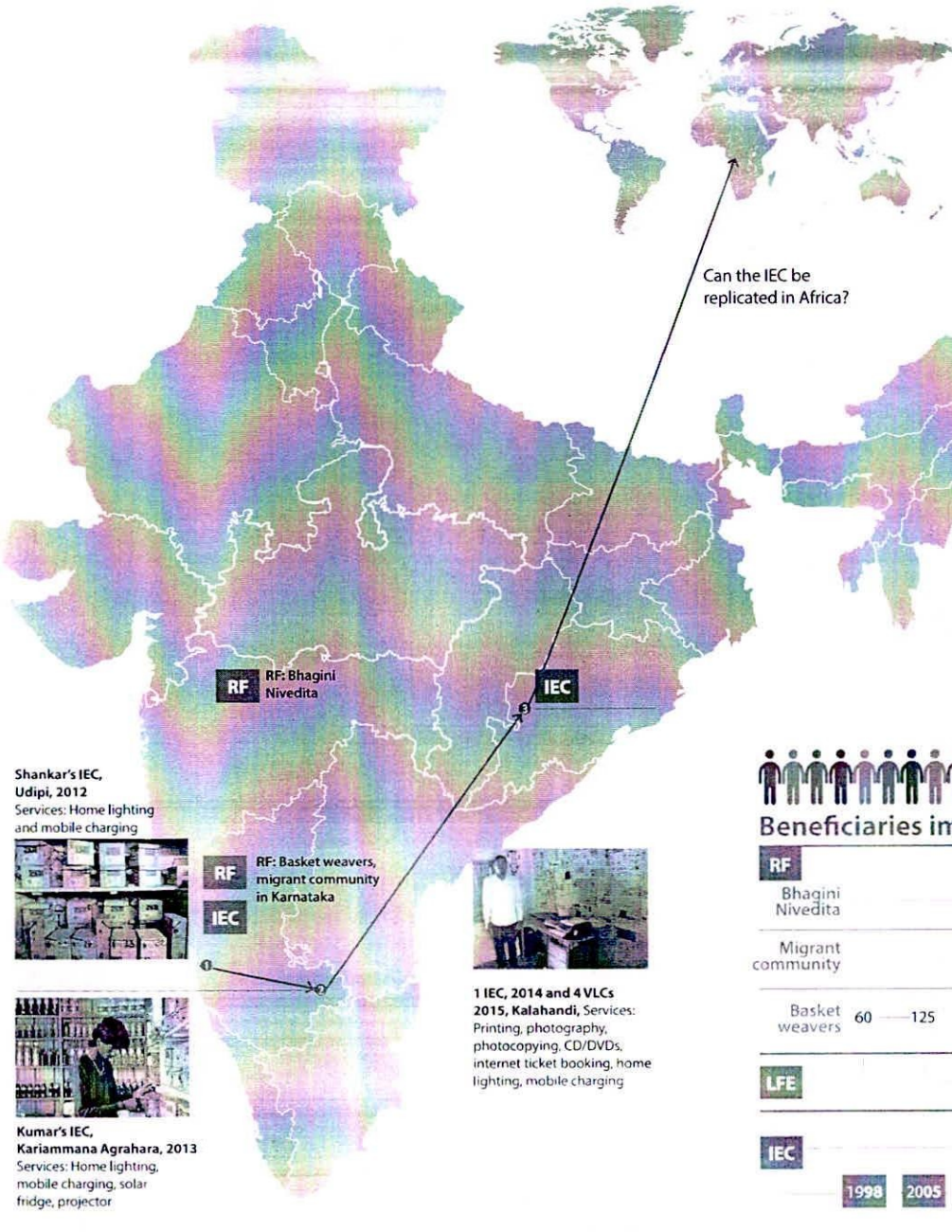
Replication

Scaling of solutions is critical, but SELCO Foundation does not define scale as 'super-sizing the organization to spread innovation' (which is convention in the business world). Instead, the foundation is driven by an open source philosophy which believes that effective, efficient and ethical scaling can be achieved through adaptation or replication of solutions suited to specific contexts. It is observed that as one reaches out to the lower rungs of the economic ladder and deeper into an array of energy services, complexities emerge from varied local conditions or contexts. To ensure that interventions impact and sustain it is important to localize the solutions as well.

Revolving fund
Tribal communities in remote locations are viewed as largely un-bankable. A financial mechanism like a revolving fund can be successfully used to plug in access to credit for remote communities to purchase long term energy solutions. A revolving fund is a fund that is continually replenished as and when loan recipients pay back their loans and the recovered amount of money is used to finance new recipients.

LFE – Light For Education:
This is a unique program of providing sustainable energy solutions to power the lighting needs of school going children and in the process also creating awareness towards renewable energy sources and the importance of a clean environment.

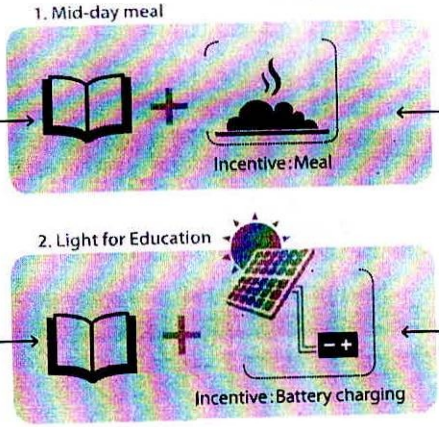
IEC- Model/Concept Replication:
Integrated Energy Centres are solar powered community centre s that can host a range basic services and activities lacking in an under-served community. The centre aims at positively impacting quality of life and livelihoods by addressing fundamental energy needs and services relying on energy. The services, activities and structure of an IEC are generally designed depending on the need in a particular community. Each IEC is custom designed to best suit local environments and situations such that every aspect of it can be sustainable.



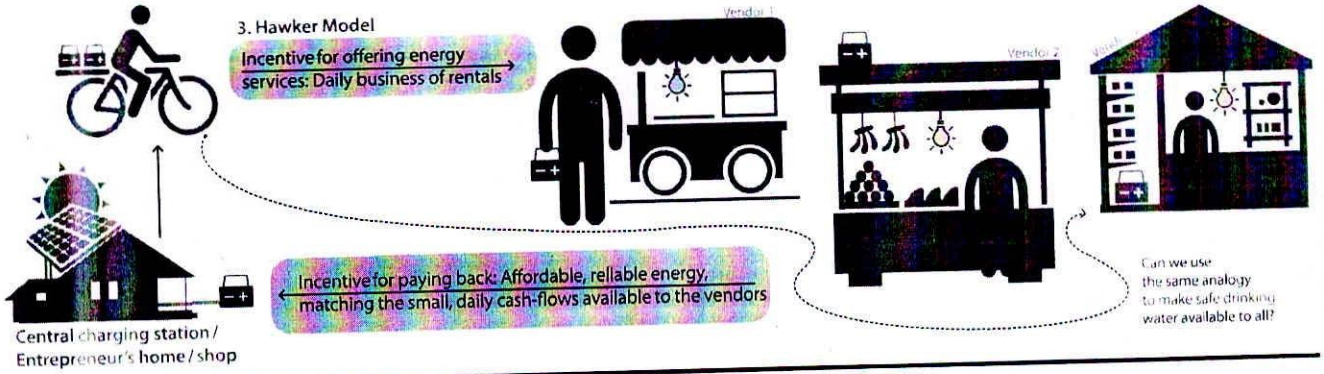
learning through 'Analogies'

INCENTIVES

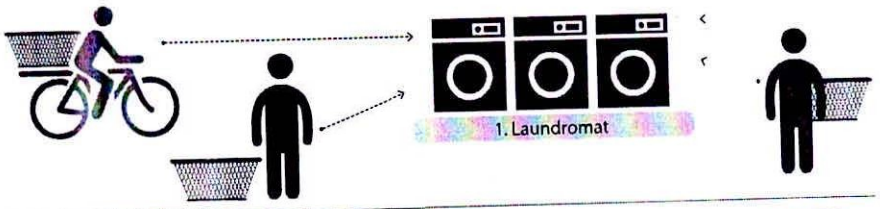
1. Mid-day meal
2. LFE
3. Hawker model

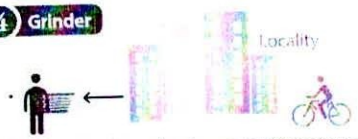


Like the mid day meal scheme (1) where the nutritious meal provided to the students becomes an incentive for the parents to send their children to school, in light for education programme (2) charging of the home-based study lamp at school acts as an incentive for students to attend school. Thereby students have a clean source of light and are able to do their homework light. This has been found to improve attendance in rural schools. Further analogies can be drawn through the hawker model (3) where in the central charging station is the entrepreneur(s) home/ shop and he distributes lights to street vendors.



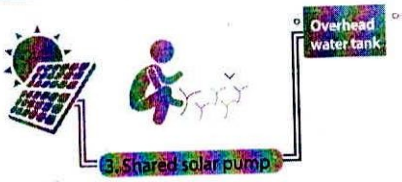
SHARED vs INDIVIDUALLY OWNED RESOURCES 1. Laundromat 2. Mini-grid 3. Solar pump 4. Grinder

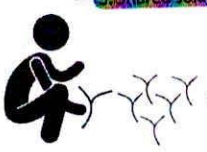


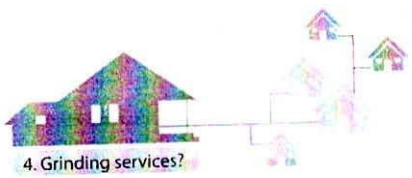


All houses in a locality need not have a washing machine - one that might be used only for 20 to 30 mins a day. A laundromat (1) allows for washing machine usage for a fixed period of time, against a fee. Such shared resources ensure energy efficiency and economic viability. It challenges the present pattern of consumption. Same analogy can be applied to the use of shared solar water pumps (3). They can be shared by multiple farmers and the water is pumped during the day time into a storage tank. The irrigation occurs (via drip irrigation) during the night time thus avoiding the 40% day time evaporation. Variability of water utilization (depending on cropping patterns) and combining with efficiency (drip) banking on a large storage systems leads to economic viability for the farmers. Can grinding (4) be offered as an service through a common energy centre for fixed time and a small charge?

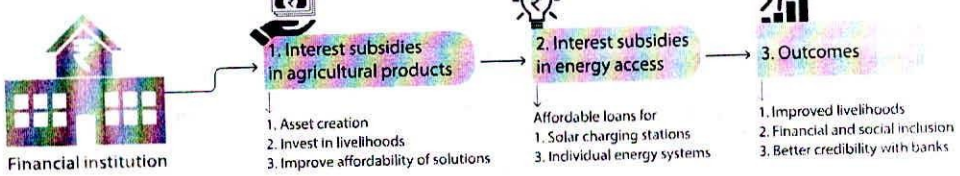
Similarly, mini-grids (2) make sense when there are variable income generating loads, that could act as base loads or operate at different times - thus can dip into the common supply/storage systems. One is not forced to keep individual storage systems and is not limited by individual capacities.







INTEREST SUBSIDIES 1. Agriculture 2. Energy access



Interest subsidies in agricultural products were provided from nationalized banks for poor farmers, so that farmers could increase their asset creation, invest in livelihood generating equipment and be able to afford solutions designed for their use. Similarly vulnerable entrepreneurs catering to energy access needs of a poor community have utilized interest subsidies to be able to afford the loan on solar charging stations or individual energy systems. This in turn has led to better credibility from the banks, financial inclusion and improved well being and livelihoods.