



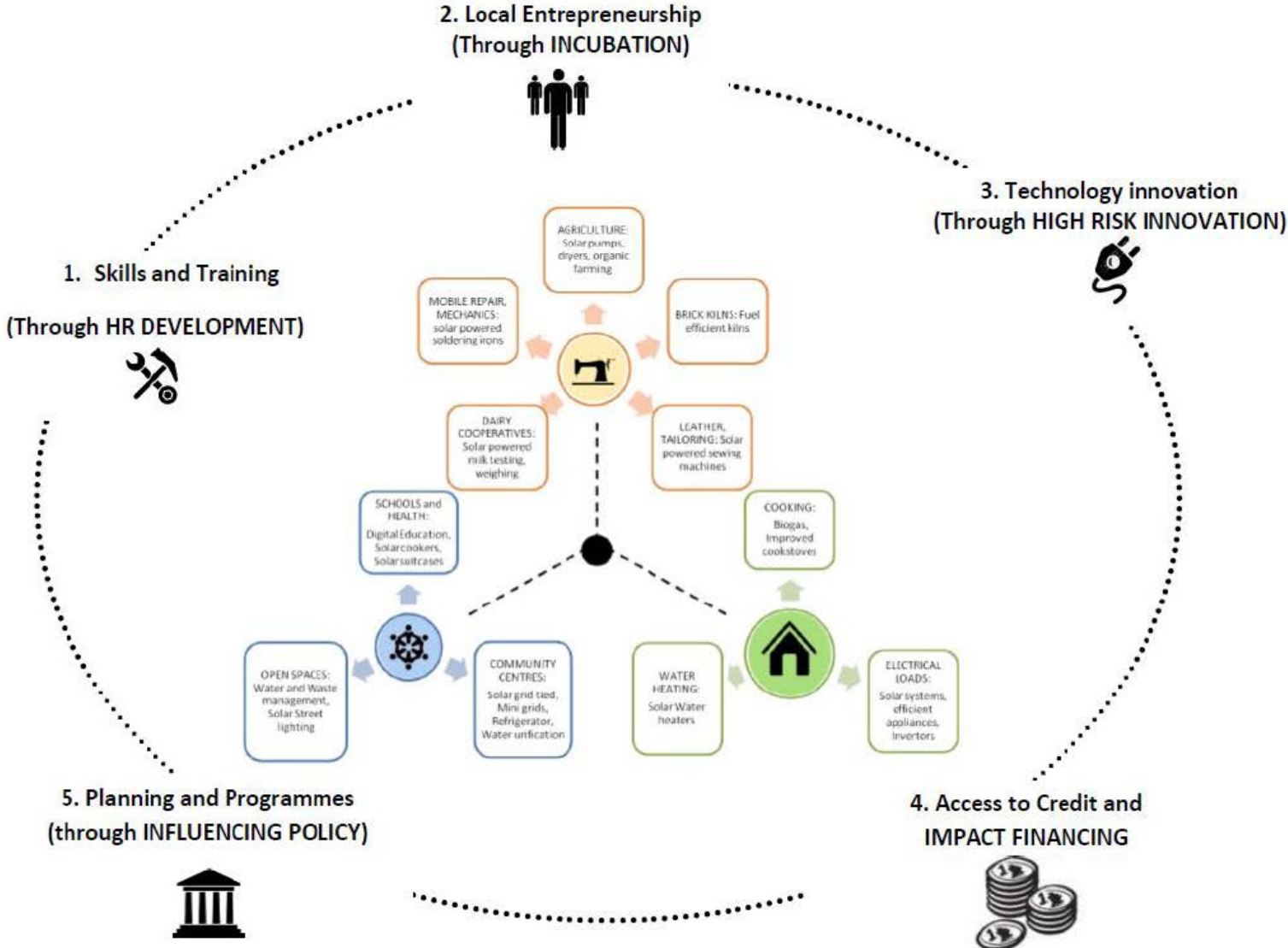
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Ecosystem for Energy and Livelihoods

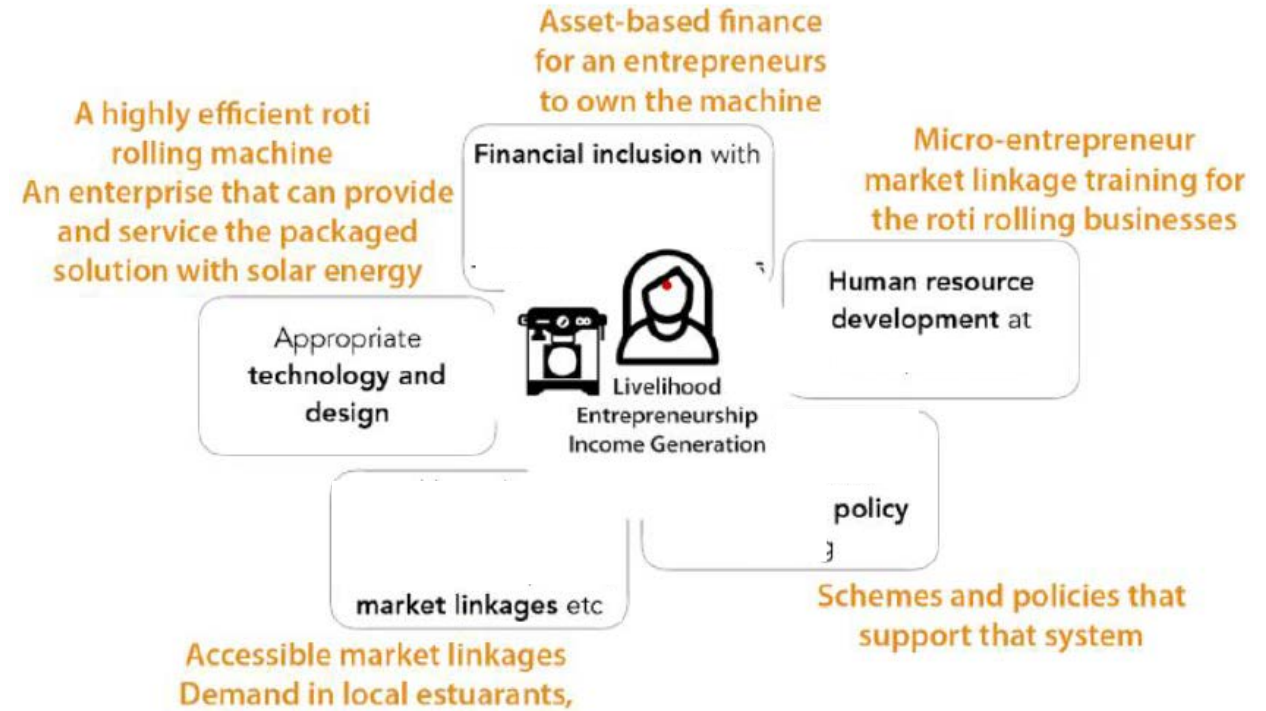
(based on examples from SELCO India and GERES Mali)



Ecosystem for Energy Access solutions



Ecosystem for a productive use solution



Phases of implementation

Phases	Identification	Research	Testing + Prototyping	Programmatic Pilot	Replication and Scale
Typical numbers implemented	1-10	Papers, reports/ documentations	10-30 multiple rounds	30-200	200-1000 (process and ecosystem in place for further scale up)
Activities Overview	Identify (PID), basic understanding and evaluation - implementation (optional) - and case study	In-depth user research and market research Ecosystem Mapping Outlining gaps and opportunities (Mapping typologies and stakeholders, holistic understanding of the livelihood)	Lab testing Field testing End User Feedback Prototyping and testing rounds (need based) tracking and co-development Analysis and report	Programmatic implementation with social and financial model via relevant ecosystem and dissemination channels/ partners Monitoring and Evaluation Documentation of unique processes / models	Ecosystem Building Institutionalization Documentation of unique processes / models

Solutions across textiles, agriculture and dairy, crafts and small enterprise



Blacksmith
Blower



Lok Seva
Kendra



Rice
Huller



Portable
Pump



Roti Rolling
Machine



Milking
Machine



Power
Hammer



Pottery



Sewing
Machine



Egg
Incubator



Agri
Processing
Machines



Rope
Making
Machine

Solar powered blacksmith air-blowers

Blacksmith Blower

- A Solar Powered Blower for rural Blacksmiths. Helps keep the smith's furnace burning using a fan.
- Technical Specifications:
15W motor for Blacksmiths,
55W motor for Silversmiths,60W
new blower from SensoHeat
- Financial Linkages with MFIs
(SKDRDP), Co-operatives and
Banks (PKGB, KVGB)
- Costs:
15W Blower -
INR 16,500
55W Blower -
Approximately
INR 28,000
- Ownership Models Tested:
Individual



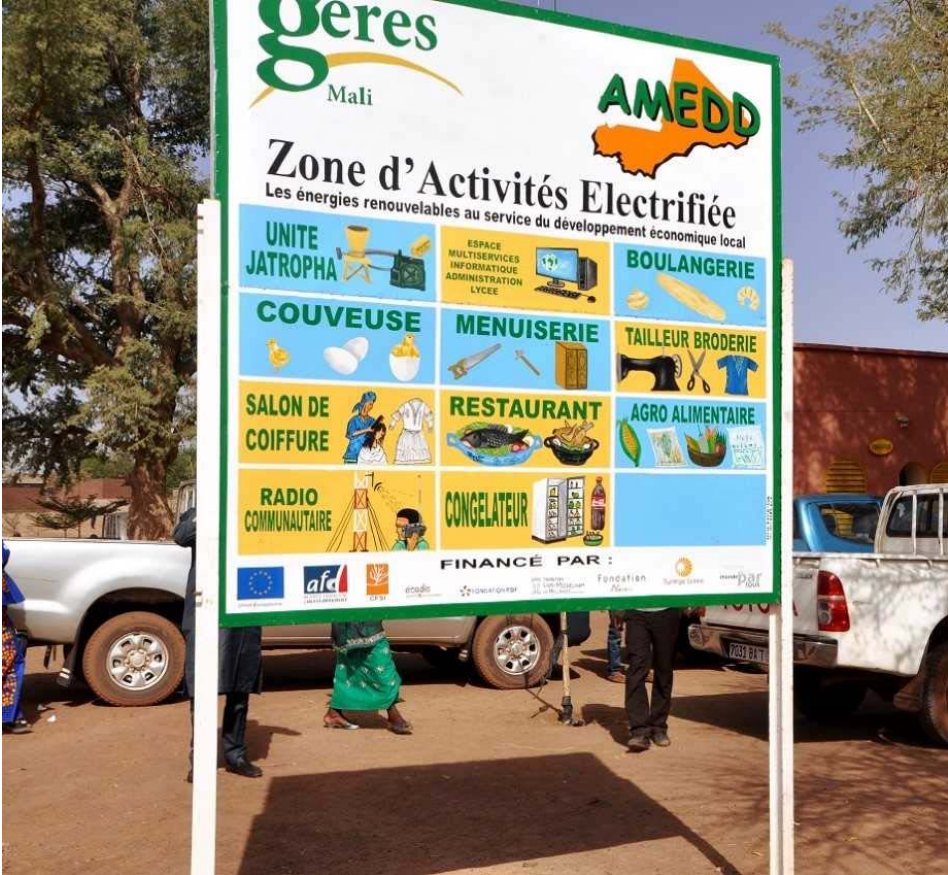
Solar powered sewing machines

Sewing Machine

- Motorised and Solar Powered Sewing Machine with an efficient motor. Currently, a variation with a Hybrid Ultra Capacitor is being tested.
- Types: Straight Stitch, Industrial Machine, Fashion Stitch and High Speed Machine.
- Technical Specifications: 60W and high speed 80W DC motor
- Cost: INR 17,000
- Financial Linkages with NABFINS, SKDRDP, Karnataka Vikas
- Ownership Models Tested: Individual, Micro-Enterprise, Collective, NGO Run
- NGO Partnerships: TIDE, Tribal Health Initiatives



Green Business Area- Micro grid for livelihoods (GERES)



Solar powered agri-processing units ([video here](#))

Agri-Processing

- Solar Powered Agri-Processing Machines: Chill Grinder (10-20 kg/hr), Flour Mill (10-20 kg/hr), Dal Mill (100 kg-hr), De-stoner (150-200 kg/hr)
- Technical Specifications: 1 - 2 HP Machines
- Ownership Models Tested: FPO, Micro-Enterprise
- NGO Partnerships: Sittilingi Organic Farmer's Association, Timbuktu Collective, MYRADA, Vrutti
- Ownership: SHG (Self Help Groups), FPO (Farmers producer organisations).



Key Takeaways

- Business models and viability → fuel savings, efficiency of appliances
- Access to affordable credit and Business support → for local entrepreneurs and small manufacturers
- Institutionalization and Ecosystem building
 - Trainings for local bankers, small MFIs and Target setting (new schemes)
 - Curriculum of Technician training + Rural Development and Self Employment Training institutions
 - Partnerships with local NGOs and organizations
- Micro and Mini Grids don't automatically generate income! (and neither do centralized grids!)
- We need: Efficient Appliances + Patient capital + Business support + Market linkages + Conducive policies

