

# Lighting a Billion Lives

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# Lighting a Billion Lives

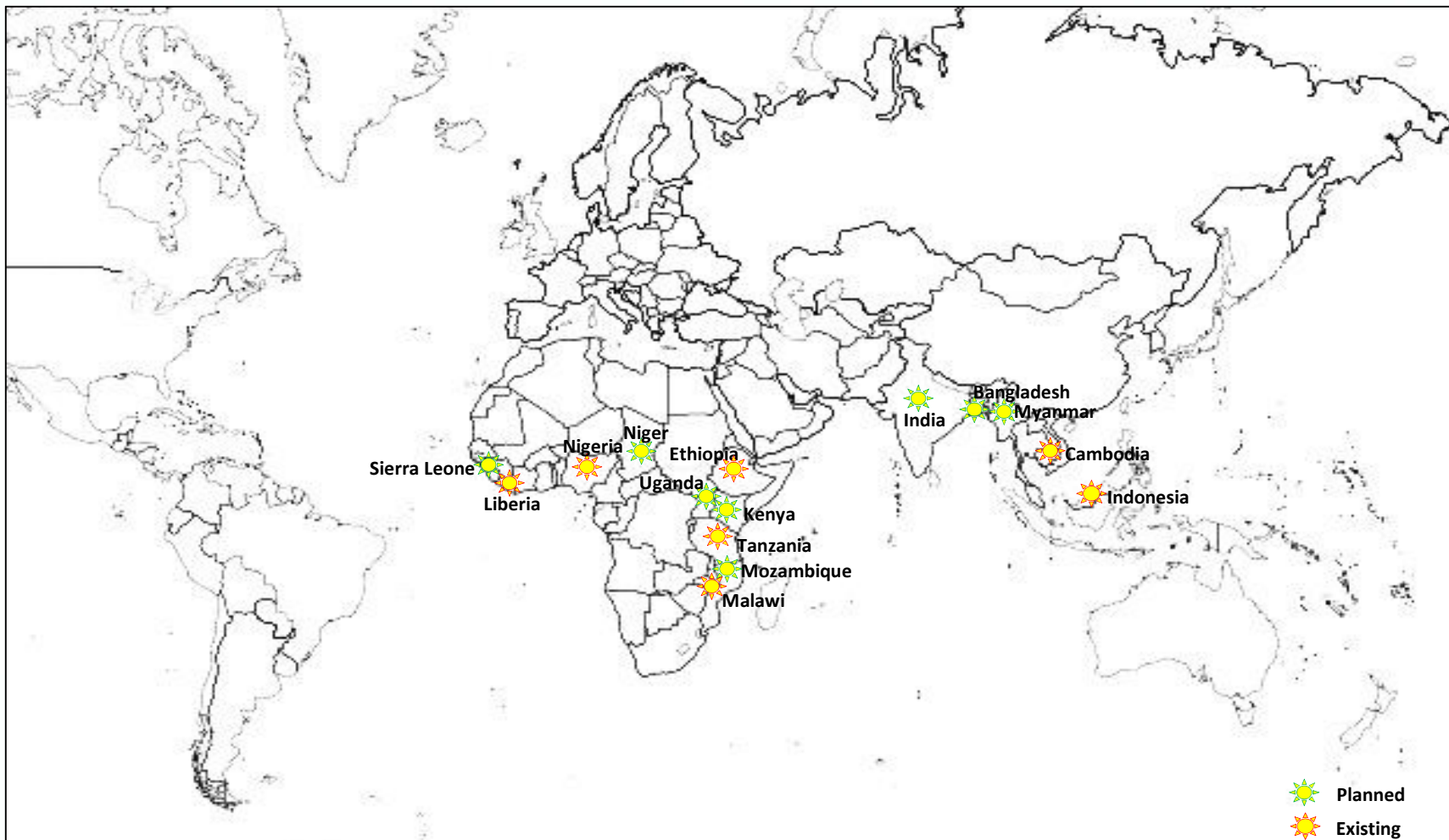
*A Solar Lighting Program launched by The Energy and Resources Institute*



*We commit to  
enable a  
billion lives to  
access light  
from solar  
technologies*

**Official launch by  
Hon'ble Prime Minister of India, Feb, 2008**

# LaBL Global Scenario



# Off-grid Solar Lighting Market In India

## Then (2008)

- **64 million** households using kerosene
- **2-3** major manufacturers of solar lanterns
- Dissemination - **> 5,000** units per month
- **CFL** based lighting
- Largely **Lead Acid** batteries

## Now (2014)

- **79 million** households using kerosene
- **More than 10** large scale manufacturers
- Dissemination - **< 100,000** units per month
- **LED** based lighting
- **LiFP/ Li-ion/ NiMH** batteries

# Key Mantras

Grassroots Networks based business models – empowering local entrepreneurs



Entrepreneurship in energy provisioning and energy for livelihoods – Market value chains and linkages to livelihood activities



Developing viable scenarios for private sector and financial institutions – Mix of Grant equity debt – business pathways



Quality and durability – constant focus on product innovation, customisation



# Quality



Minimum threshold technical specs to enable suppliers/ manufacturers gain access to the support ecosystem created by TERI

Higher technical specifications to incentivize competition among top performing Technology providers

360 Degree feedback from community – constant innovation and customization to incorporate local concerns

## Expansion and Consolidation



EXPANSION

### Intensifying efforts for leveraging

- Aligning lighting with the national and international development priorities
- Integrating access to energy with innovative financing and ongoing government interventions
- Designing and implementing customized CSR packages for leading PSUs and corporate houses

CONSOLIDATION

### Sustenance of existing infrastructure of about 2,000 Solar Charging Stations/ Micro-grids

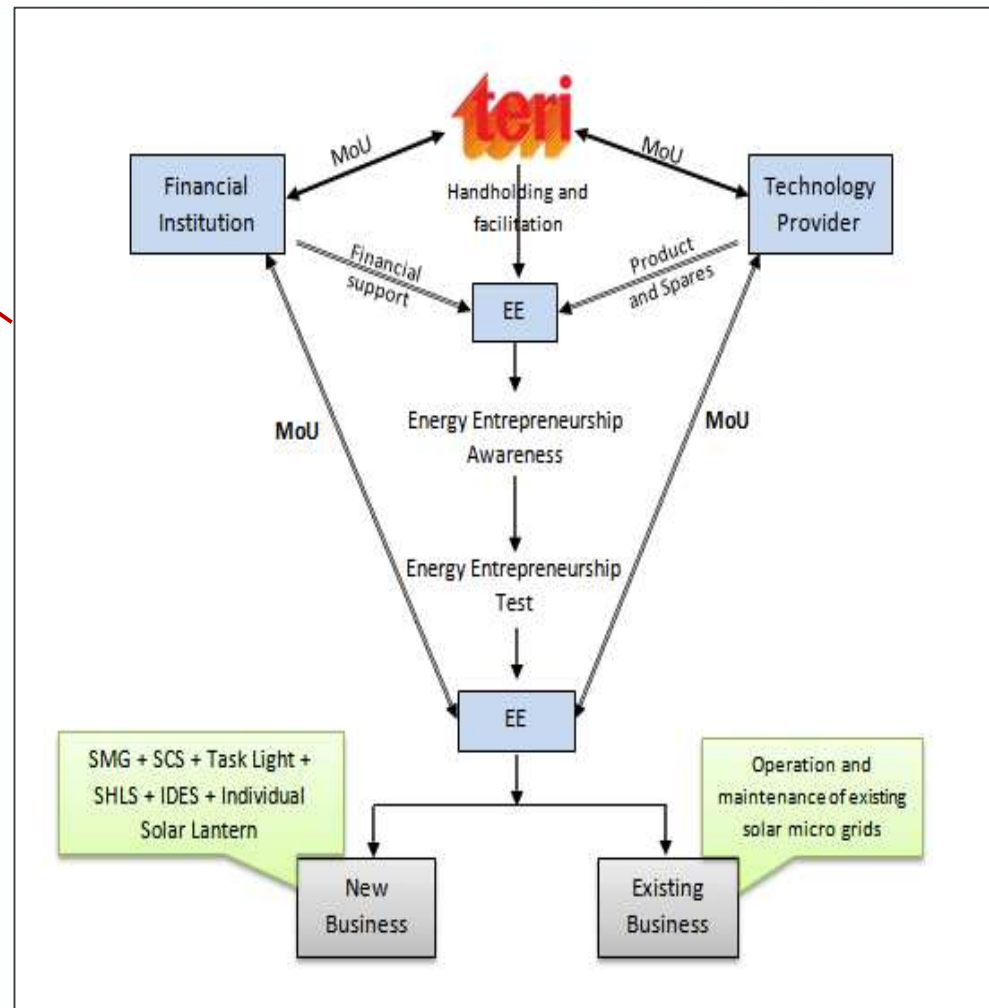
- Capacitating local enterprises to serve as Energy Enterprises (under DFID project)
- 100+ EEs already commissioned in 6 states
- 405 EEs to be set-up by end of 2014

So far, LaBL has created 100+ such energy enterprises (EEs) / UTTAM URJA SHOPS.

## Last Mile Access



Creation of local level enterprises that not only support the after sales and service of LaBL approved products but also act as hubs of multi-brand retail network for clean energy products



## Partnerships

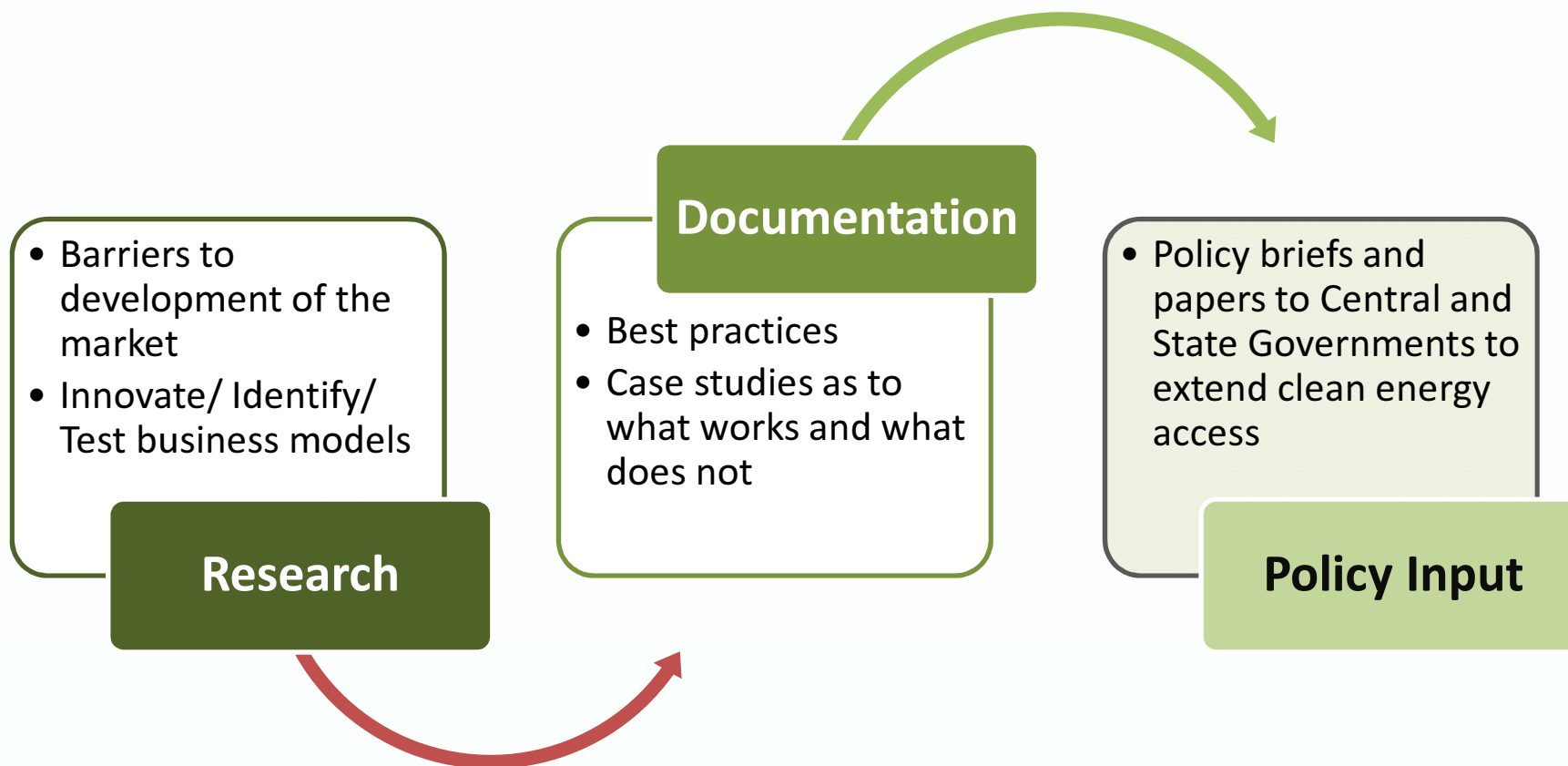


- Central/ State Governments
- Jeevika (BRLPS)
- DPIP/ MPRLP/ NRLM
- Dept. of Education
- LWE districts
- MNRE

- Financial Institutions
- Aryavrata Gramin Bank
- Kashi Gombi Grameen Bank
- Madhya / Uttar Bihar Grameen Bank
- Narmada Malva Grameen Bank

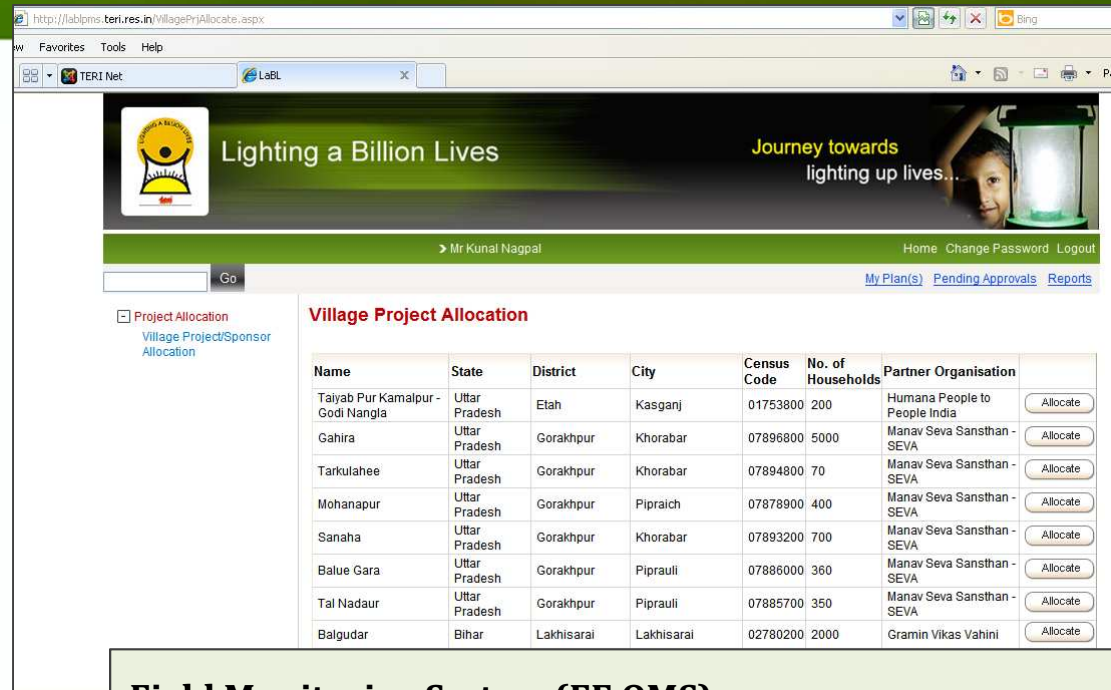
- Rural Distribution/ Marketing Networks
- D.Light
- Barefoot Power
- Luminous

# Knowledge Management



# LaBL Project Monitoring System (PMS)

- In-house developed system, the PMS can be applied to other Energy Access programs
- IT enabled, web based system
- Offers granular, village level details including census codes, status, partner information, etc
- Easy to access, central database on all program implementation details and identified potential sites



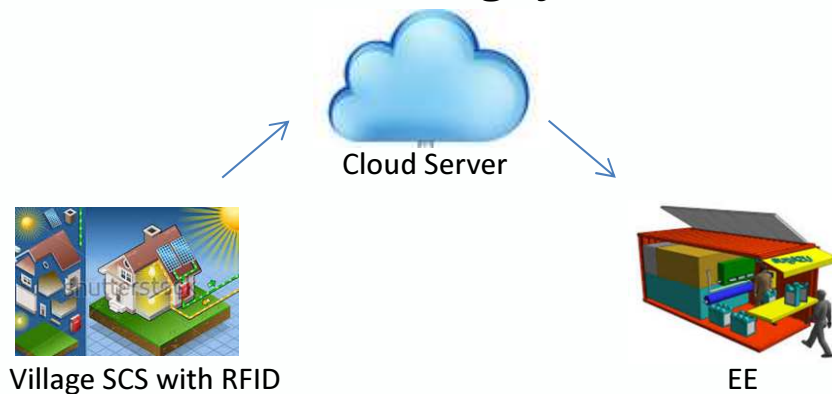
Name	State	District	City	Census Code	No. of Households	Partner Organisation	
Talyab Pur Kamalpur - Godi Nangla	Uttar Pradesh	Etah	Kasganj	01753800	200	Humana People to People India	<input type="button" value="Allocate"/>
Gahira	Uttar Pradesh	Gorakhpur	Khorabar	07896800	5000	Manav Seva Sansthan - SEVA	<input type="button" value="Allocate"/>
Tarkulahee	Uttar Pradesh	Gorakhpur	Khorabar	07894800	70	Manav Seva Sansthan - SEVA	<input type="button" value="Allocate"/>
Mohanapur	Uttar Pradesh	Gorakhpur	Pipraich	07878900	400	Manav Seva Sansthan - SEVA	<input type="button" value="Allocate"/>
Sanaha	Uttar Pradesh	Gorakhpur	Khorabar	07893200	700	Manav Seva Sansthan - SEVA	<input type="button" value="Allocate"/>
Balue Gara	Uttar Pradesh	Gorakhpur	Piprauli	07886000	360	Manav Seva Sansthan - SEVA	<input type="button" value="Allocate"/>
Tal Nadaur	Uttar Pradesh	Gorakhpur	Piprauli	07885700	350	Manav Seva Sansthan - SEVA	<input type="button" value="Allocate"/>
Balgudar	Bihar	Lakhisarai	Lakhisarai	02780200	2000	Gramin Vikas Vahini	<input type="button" value="Allocate"/>

## Field Monitoring System (EE OMS)

- Part of PMS, enables proper monitoring post installation
- Provides monthly data on usage activities, performance, etc
- Facilitates timely intervention for rectification, replacements, etc

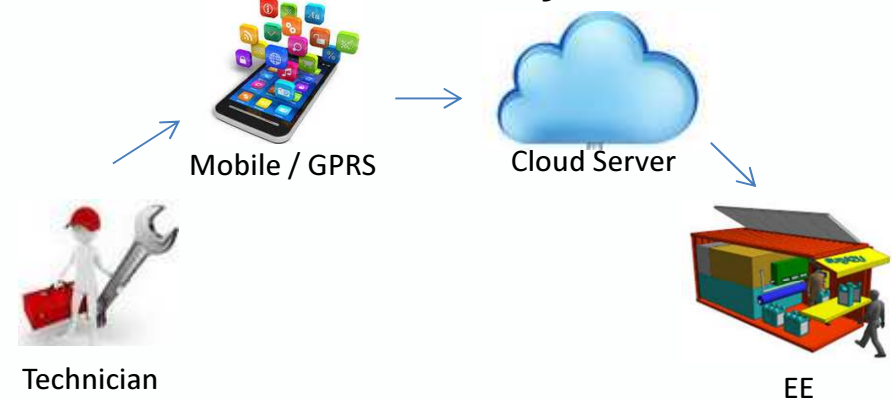
# Innovation

## *RFID enabled remote monitoring system*



- Automated
- Real time access to SCS operations
- Most accurate indicative of financial health of the SCS
- Most accurate indicative of functionality status of the SCS
- Facilitates quick response time to after sales service from EEs

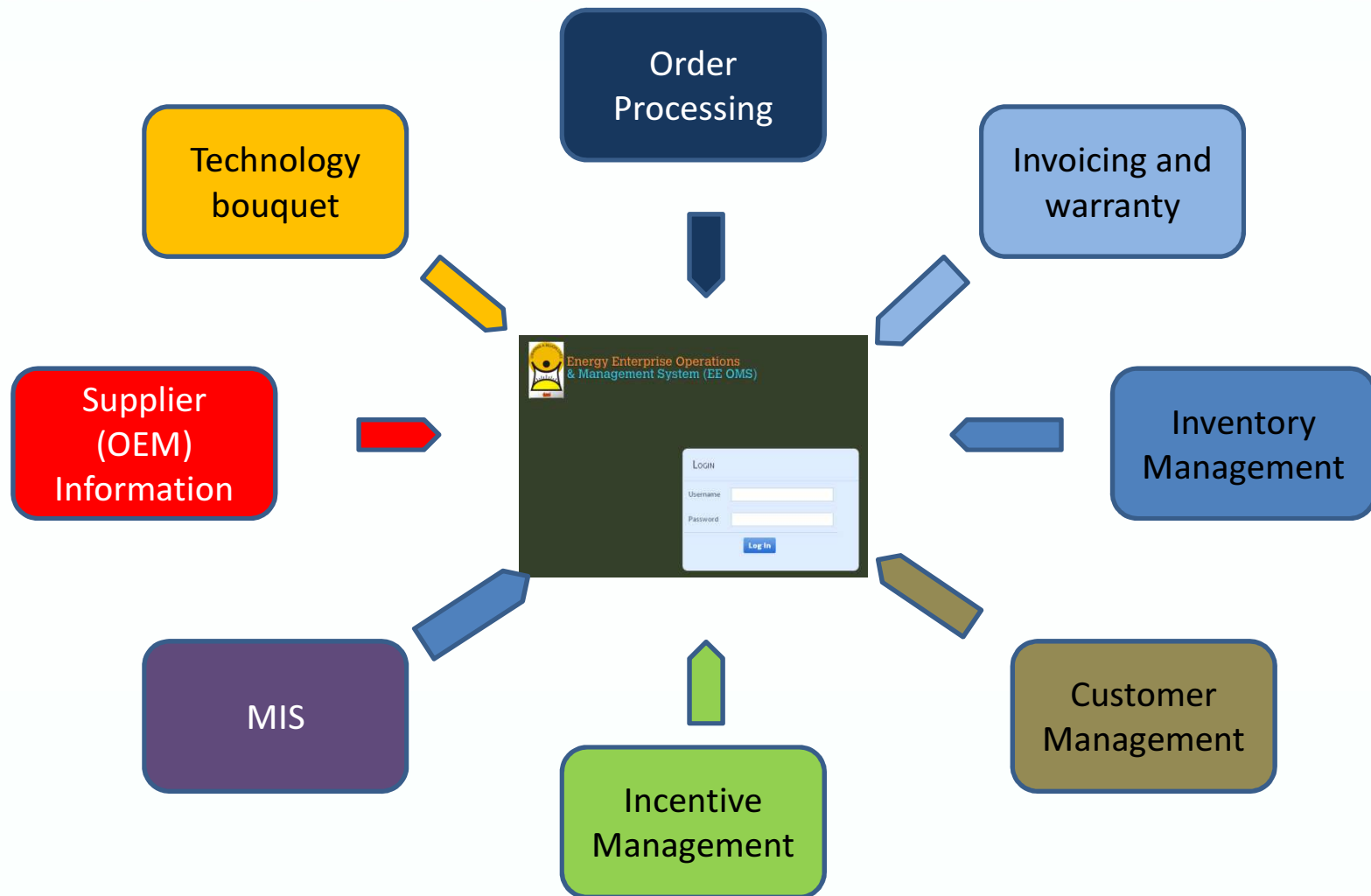
## *Android based LaBL Application for fault rectification*



- Automated
- Seamless fault rectification management at the EE level
- Insights on complaints handling response time
- Insights on common faults and clusters facilitating inputs on technology design
- Data on repeat offenders for training, hand holding etc.

**Note:** Currently in Pilot Phase

# Web (cloud) based EE Operations and Management System (EE OMS)



**Note:** Currently in Pilot Phase

# Approach to scale-up

- 1. Extensive capacity building** - technical as well as institutional skill building for key actors (through DFID-TERI Energy Access Project)
- 2. Develop delivery models** while addressing deficiencies in the value chain
- 3. Stimulate the financial sector** through business opportunities that lie within the solar sector (creating revolving fund, tying up local financial institutions with international funding agencies/banks etc.)
- 4. Replicate successful institutional and financial models** (through developing local partnerships –
  1. Bangladesh - BGEF
  2. Ethiopia - Solar Energy Foundation and HoAREC
  3. Kenya - UNIDO/Energy + and ACTS
  4. Niger - PlanetWorkshops
  5. Sierra Leone - UNIDO
  6. West Africa – ECREEE
  7. Uganda – Umeme



**Thank You**