



## SoLAR Innovation Fund



To develop **mobile solar power (mobile URJA)** units that will deliver affordable and sustainable energy for irrigation with **universal charging** option resulting in a **simplified rental model** having multiple uses.





# Need & Challenges

## PoW

Pumps on Wheels Challenge: It is difficult to move deeper into the fields

## Mobile URJA

Larger pumps with one supercharger ; panels transported where tractors can go – no investment in panels at the site.

Mobile as a “fuel” - no battery, no recurring cost - provides opportunity for new entrepreneurs.

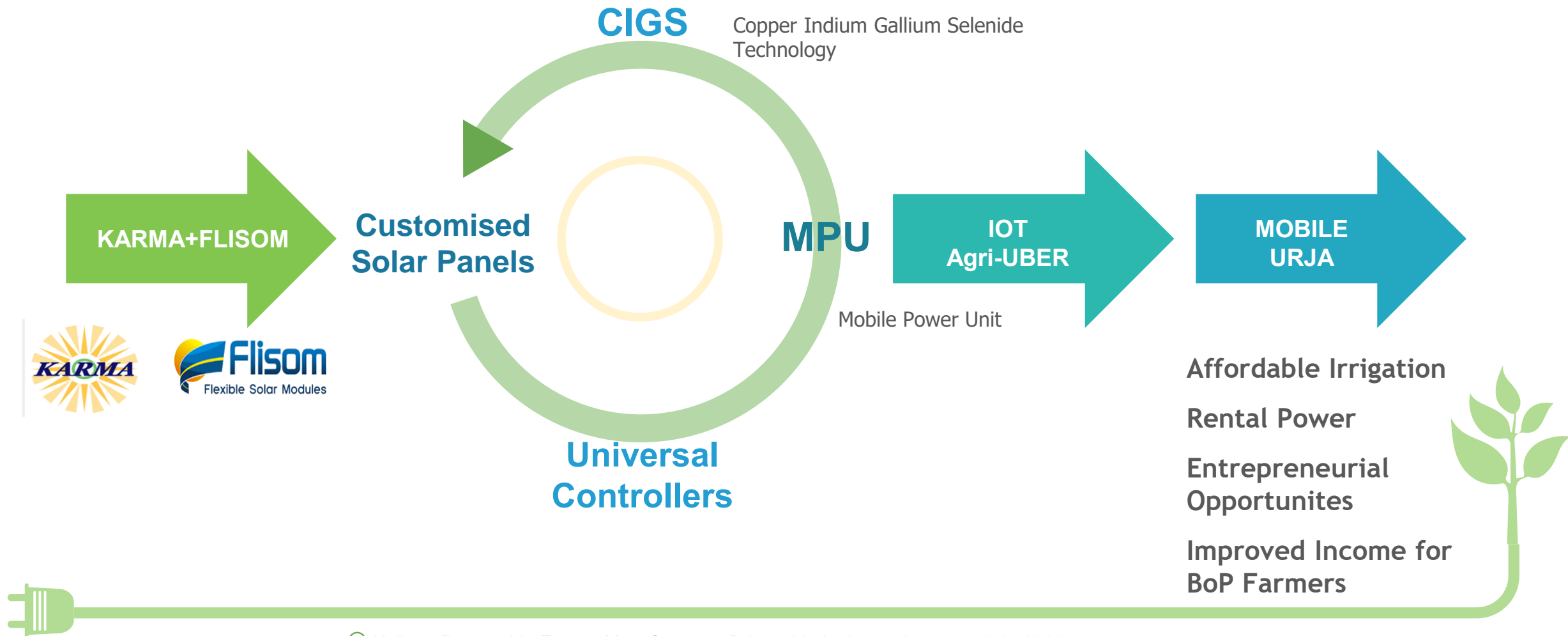
Beyond Irrigation: It can provide power to processing units, Home use etc



# Portable Pump- Sharing Model



# Innovation







# Implementation



## Current Implementation Location

- Uttar Pradesh
- Koraput (Odisha)

## Implementation Partners



FARMER SOLAR CLUB  
formed for entrepreneur  
model

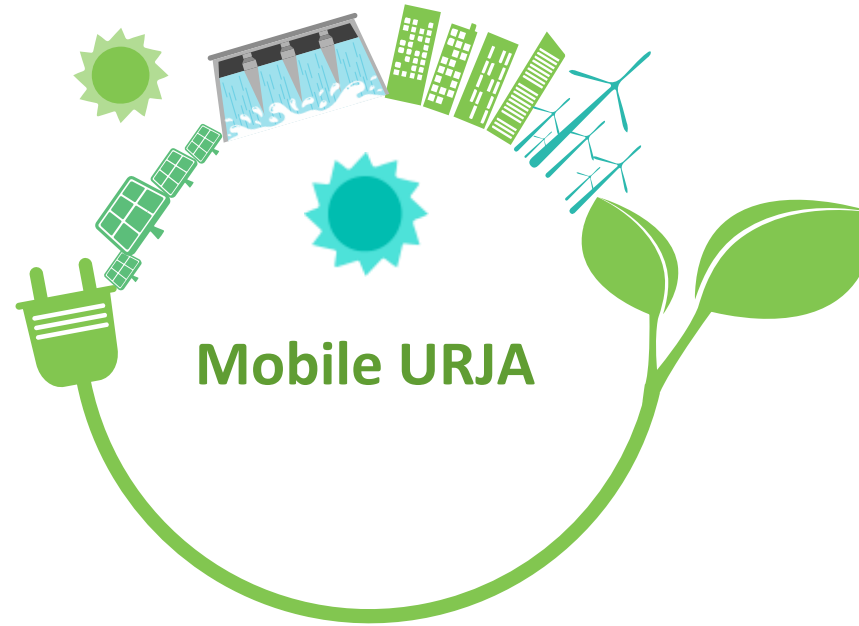


Design Robust &  
Lightweight rugged  
panel on CIGS



### **Current Scenario**

Diesel Irrigation  
Over Utilization of  
Groundwater



### **Proposed Scenario**

Solar irrigation  
Sustainable Utilisation of  
underground water

Addressing The Climate Change

Sustainable Development Goals; SDG 5 (Gender Equality), SDG 6 (Clean Water), SDG 7 (Affordable & Clean Energy), SDG 13 (Climate Action)

# Gender & Social Inclusion

Providing year-round irrigation brings at least 1 lakh income for farmers. (Source: Study conducted by Pragati, Koraput and independently by others like Xavier Institute of Management, Bhubaneswar.)

Additional Income generated if farmer owns Mobile Urja (Through bank finance) by leasing it.

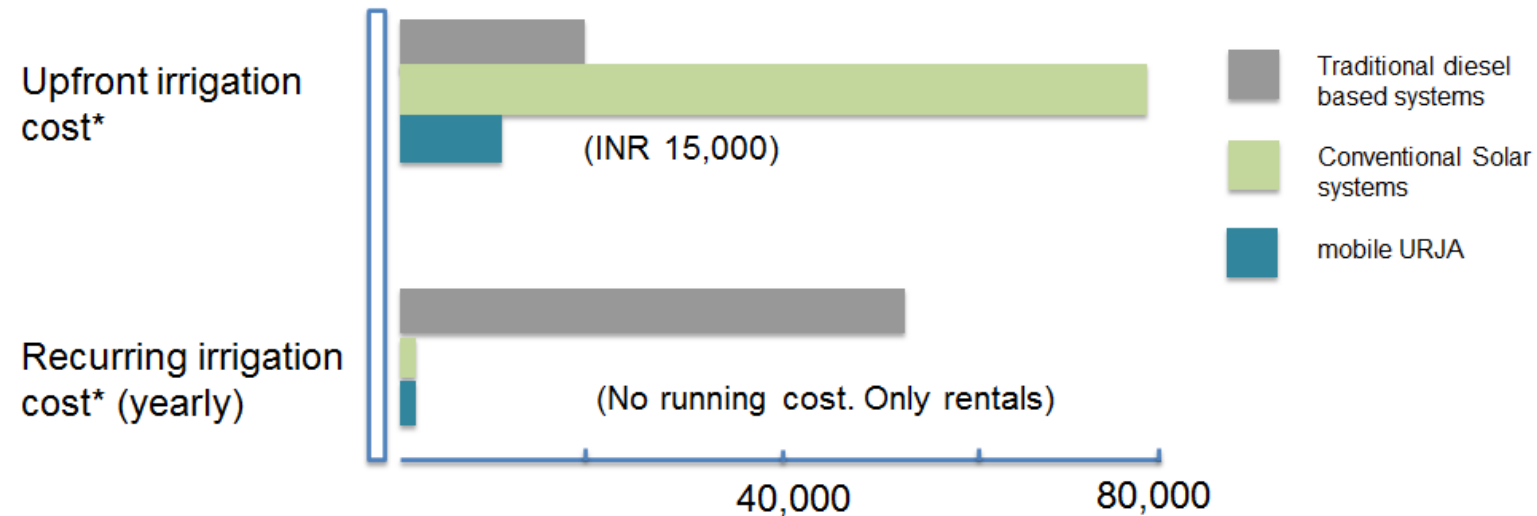
Sustainable Shared model for marginal farmers & technology-based sharing platforms for more inclusivity.

Through partnerships with Pragati & SPARSH by JK, KARMA is reaching out to women farmers who constitute atleast 50% of total farmers.



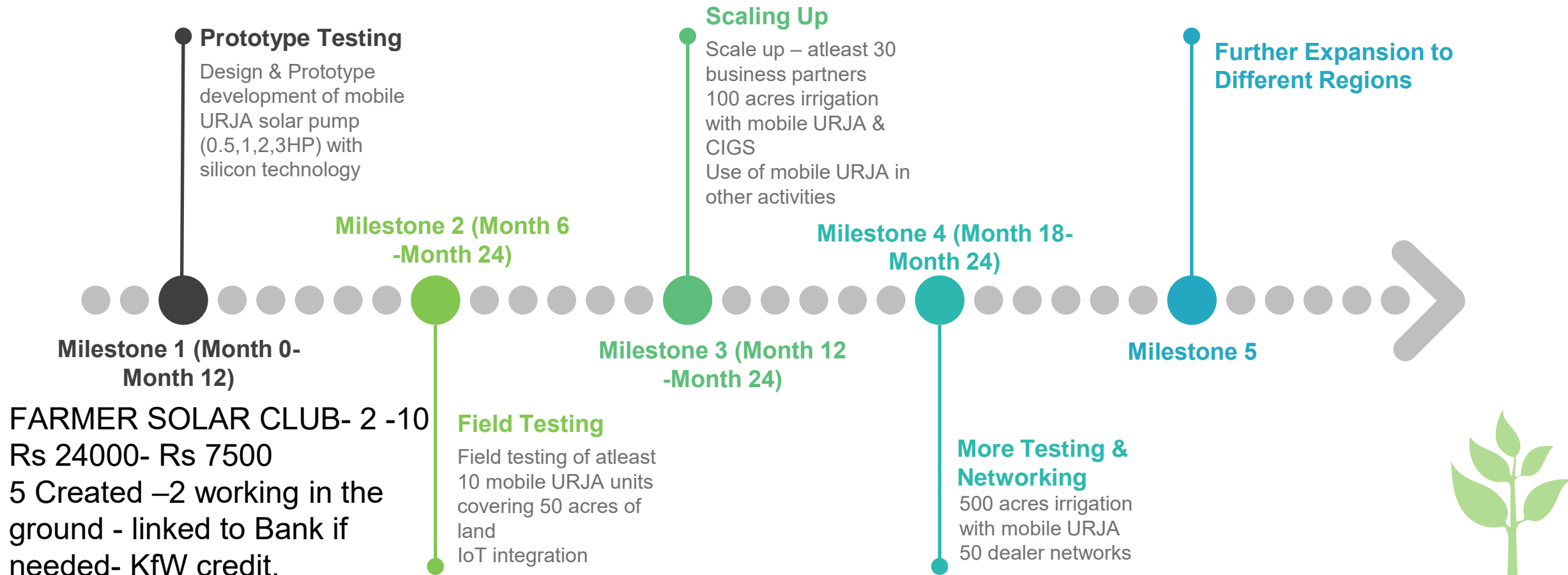
In tribal areas like Koraput, majority of field work is done by women.

Through SPARSH, We plan to build micropreneurs who will manage Mobile Urja, Majority of them women.





# Implementation Plan



Customized FLISOM panel is on the way- should reach by March 15

# OUR TEAM



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Thank You





# Business Model

- **Mobile URJA**

Customized flexible  
Silicon panels

Mobile Power Units  
(MPUs)

Universal controllers

- **End customer benefits**

Affordable Irrigation

Rental Power

Entrepreneurial  
opportunities

Improved income for  
marginal farmers

- **USPs**

Mobile, rugged and  
affordable system

State of the art  
technology

On-site service

IoT soil health  
monitoring

- **Deliverables**

10 mobile URJA  
platforms

1000 acres mobile URJA  
irrigation

Business of 2 crores  
above IUSTEF grant

- **Business Plan**

100 dealers in network

Product awareness

Handholding of  
entrepreneurial initiatives

Scope of \$430 million  
business @ 10% market  
penetration

- **Customers:**  
Marginal  
farmers, SHGs,  
FPOs,  
Cooperative  
groups, CSR  
activities

- **Gross profit  
margin: 40%**

- **Channels  
overheads: 15-  
20%**

- **Fund Requirements**

**2.50 crores** (INR) for  
pilot

12 crores for scale-up

- **Estimated revenues**

First year: 18 lakhs

Second year: 90 lakhs

Third year : 2+ crores



# Business Model to Promote Entrepreneurship through Mobile URJA

- Estimated cost of mobile URJA Mobile Power Unit for an individual : 75,000(1 HP)
- EMI: 2,445.00 (@11%)
- Number of yearly rentals: 300 (1 rental per day, 3 acres per day)
- Feasible charge per acre per day: INR 100 (cost incurred by diesel based pumps per acre per day: INR 110-120, considering 1HP model)

- Yearly minimal additional income: INR 90,000( from irrigation alone)
- Additional yearly expenses: 6,000-8,000(transporting of mobile URJA platform and maintenance)
- **Net minimal yearly profit: 82,000**
- Typical income from cash crops per acre: INR 1-2 lakhs