

UNIDO - METI

Sustainable Energy Flagship Programme

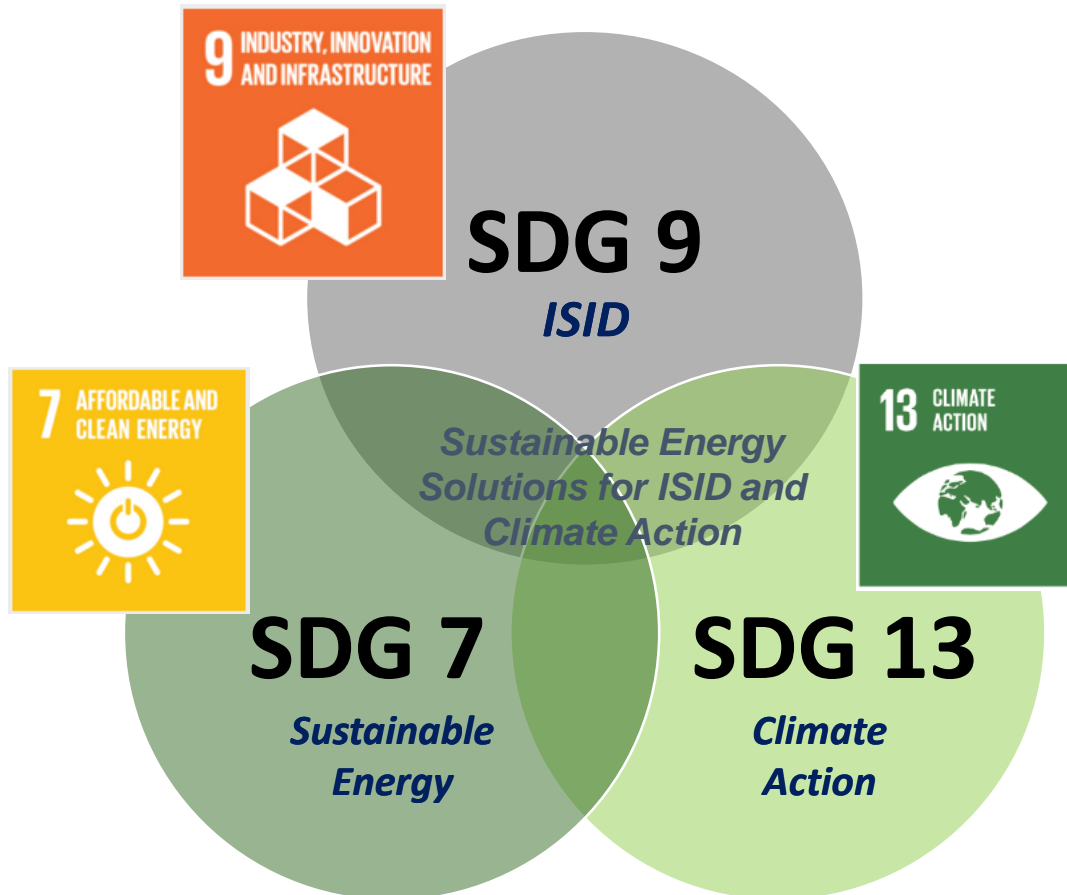
Low Carbon Low Emission Clean Energy Technology Transfer (LCET) Programme

A strategic Partnership between

UNIDO – Ministry of Economy, Trade and Industry (METI), Japan

- Governments of Kenya and Ethiopia

Industry, SDGs and Climate Action



Promoting sustainable energy solutions for developing productive capacities, industrial competitiveness and climate action:

- **Jobs Creation**
- **Business Models**
- **Technology Transfer**
- **Partnerships**

Low Carbon Low Emission Clean Energy Technology Transfer (LCET) Programme

OBJECTIVE: Promoting dissemination of low carbon technologies from Japan to African countries

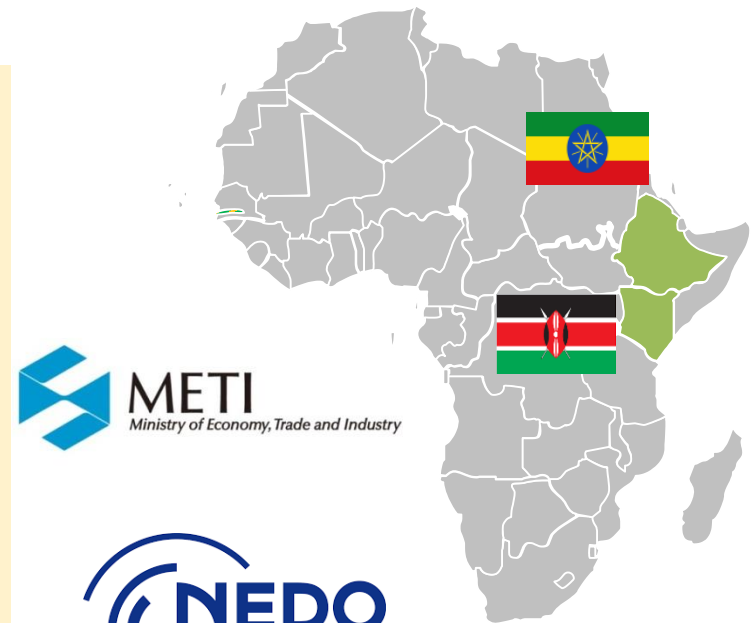
COUNTRIES targeted: Ethiopia and Kenya

BUDGET: USD 11.2 million

DONOR:
Ministry of Economy, Trade and Industry (METI),
Government of Japan

DURATION: 2013 - 2018

“Catalyzing ISID pathways through adoption & dissemination of advanced low carbon low emission clean energy technologies (LCETs)”



JAG Seabell Co., Ltd.

HIDA



Low Carbon Low Emission
Clean Energy Technology Programme
METI-UNIDO Collaborative Initiative

Strategic Approach under LCET Programme

Identification

Identify needs of countries (Kenya and Ethiopia), and the corresponding shelf of low carbon technologies in Japan through ITPO Tokyo

in cooperation with NEDO

Assessment

Conduct feasibility studies on technologies identified, including socio-economic impact analysis and cost effectiveness

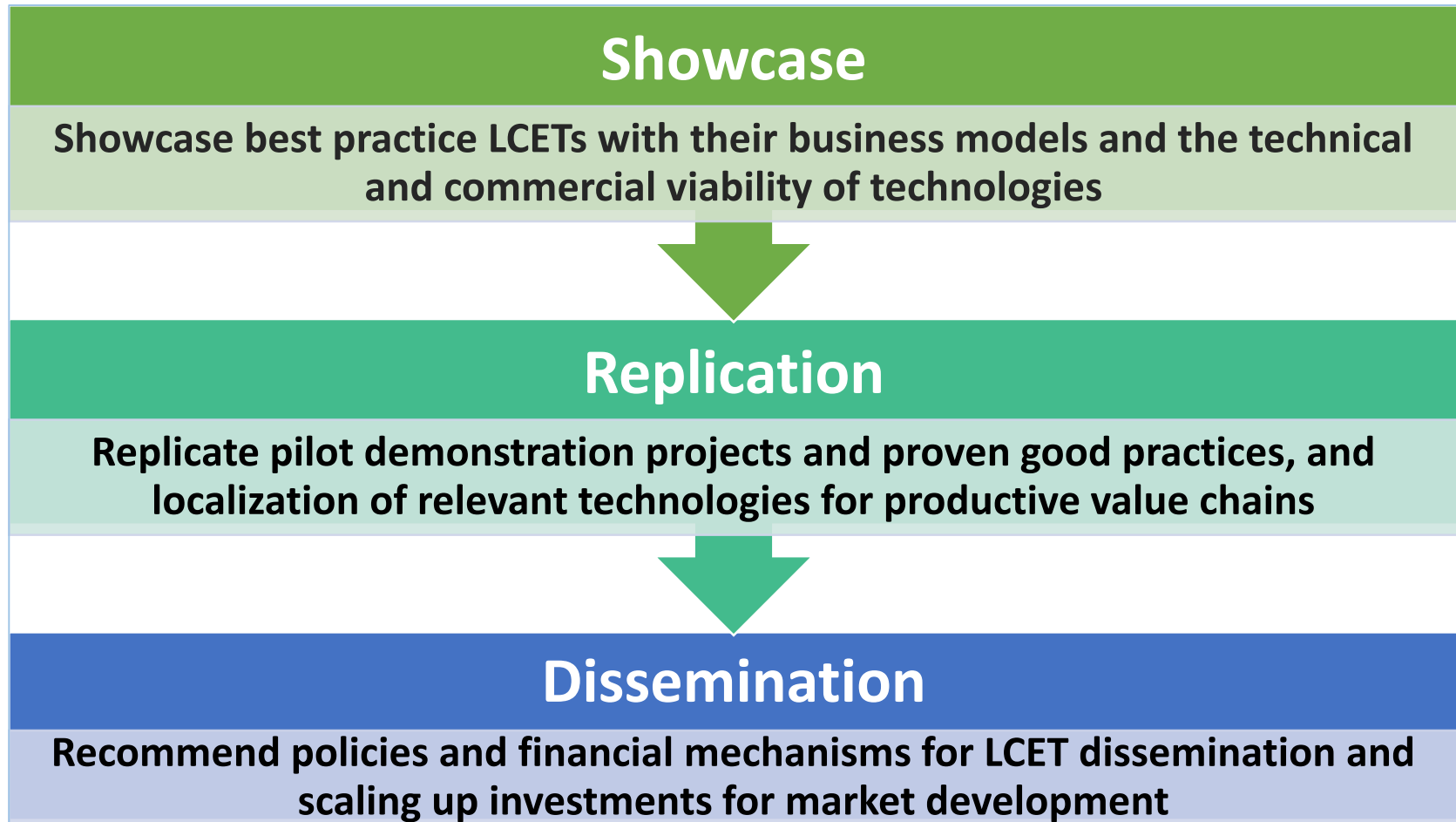
UNIDO's
Expertise and
Procurement

UNIDO Strategic
Framework Approach

Demonstration

Implement identified LCET technologies under demonstration projects, including capacity building for local counterparts

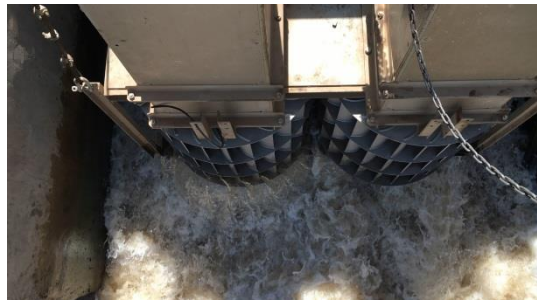
Approach adopted under LCET Programme



Demonstration Projects

Achievements: Technology Demonstration

- **3 installation sites** selected [2 x in Mwea (Kenya) and 1 in Fentale (Ethiopia)] with sufficient head drops ($> 0.5\text{m} < 3.0\text{m}$) and **10 kW ULH-MHP systems** at each site **installed**;
 - Compact structure with generic parts, min. civil works, environmentally-friendly – eliminating major costs of installation
 - Easy to install, operate and maintain
 - High operation hours – ideal for decentralized power generation
 - Tapping into ultra-low head energy potential previously dismissed



Community members observing works on the ULH-MHP system in Fentale (Ethiopia)

Before & After installation of the ULH-MHP at Mwea Irrigation Canal in Kenya



Demonstration Project cont.

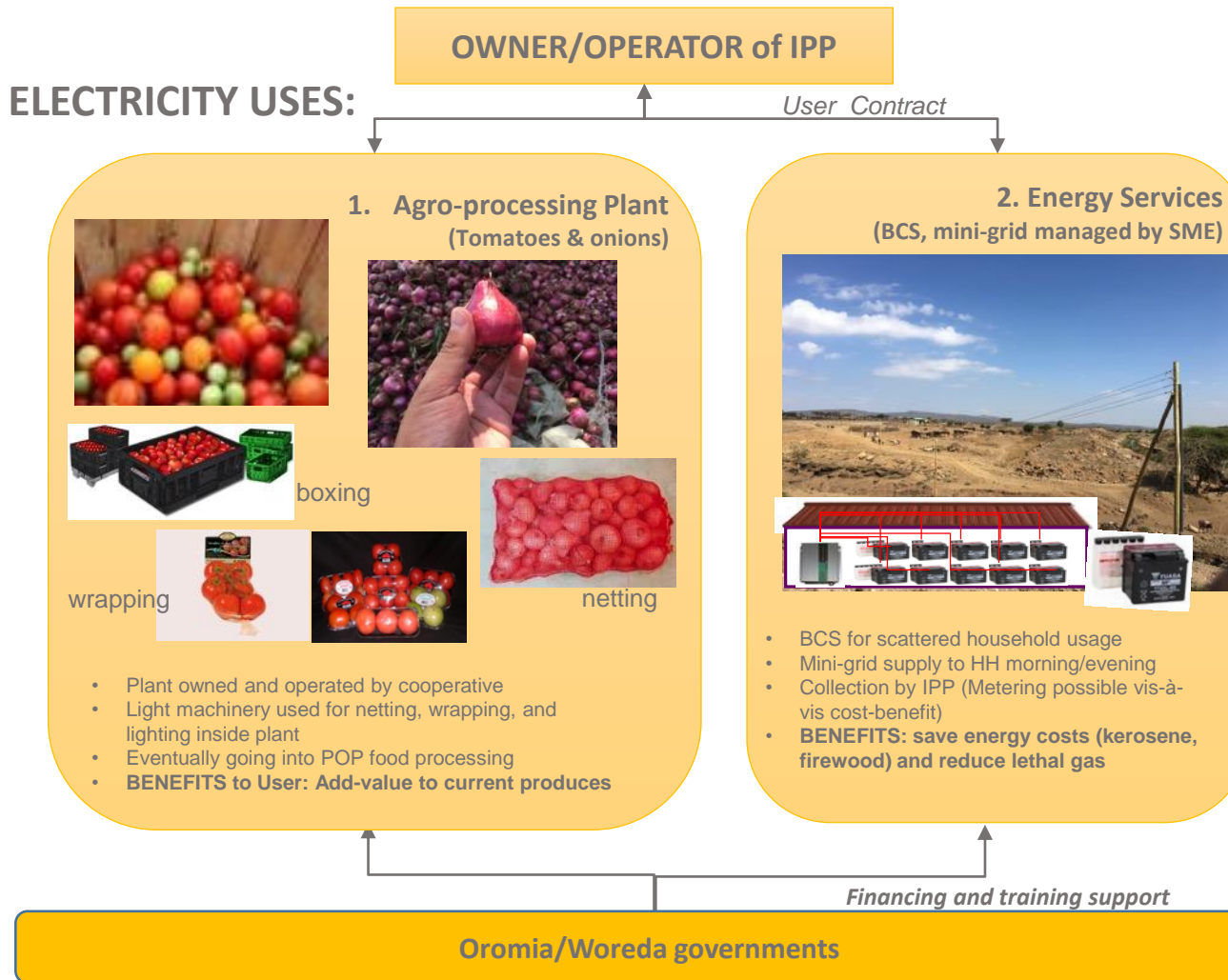
Achievements: Capacity Building

Conducted multifaceted capacity building training workshops reaching to raise local awareness (more than 300 locals reached), elevate technical skills and know-how and develop business opportunities.

- 3 international trainings on LCET and ULH-MHP Awareness conducted in Japan
- Partner: Overseas Human Resources and Industry Development Association, HIDA (Japan)
- Total of 43 energy leaders and energy experts from Kenya and Ethiopia
- Over 10 local awareness raising workshops organized in Kenya and Ethiopia



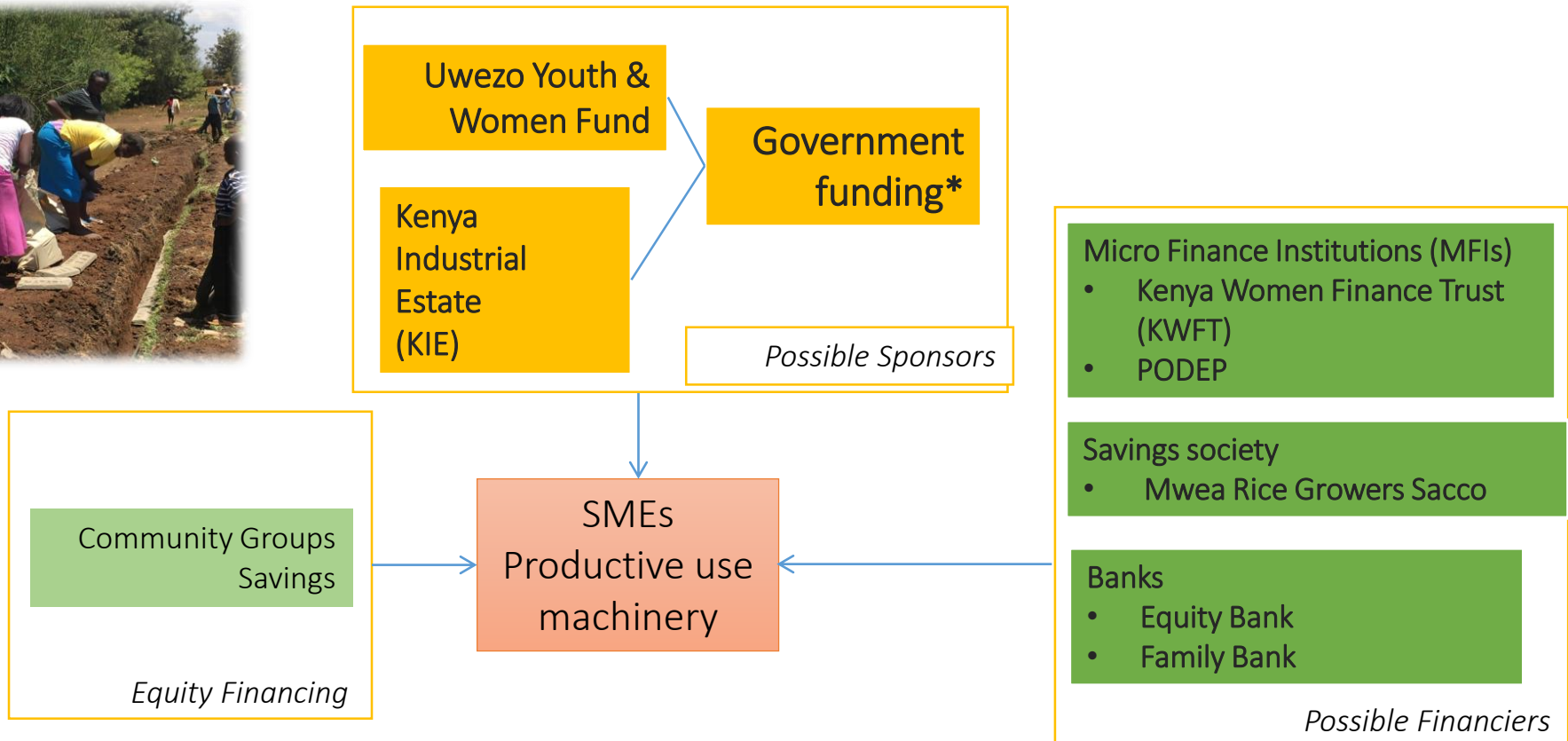
Productive Uses and Ownership in Fentale (Ethiopia)



KEY POINTS

- PPP Model
- Local ownership
- PPAs in place
- Focus on agro-related activities
- Capacity Building and Knowledge Management
- Challenge in tariff setting and collection.

Innovative Financing Schemes for Mwea Project (Kenya)

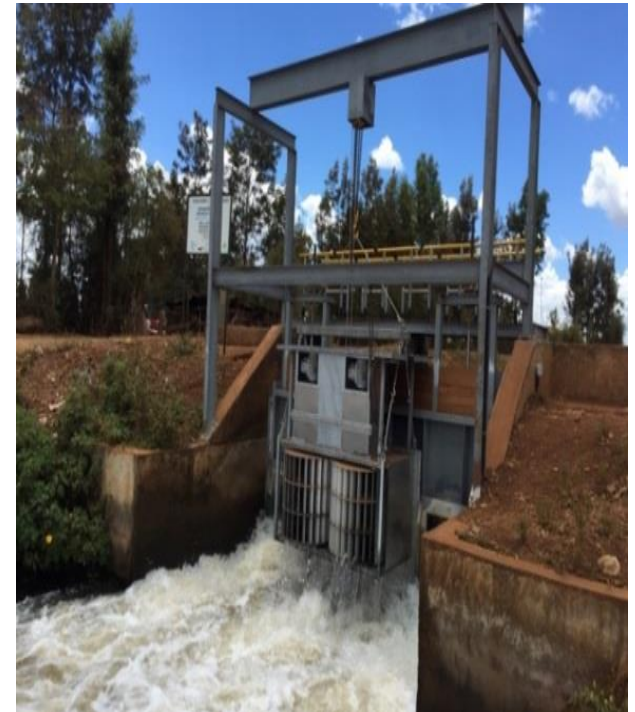


* Loan interest rates are between 0-15% with a grace period of 6 months before repayment period.

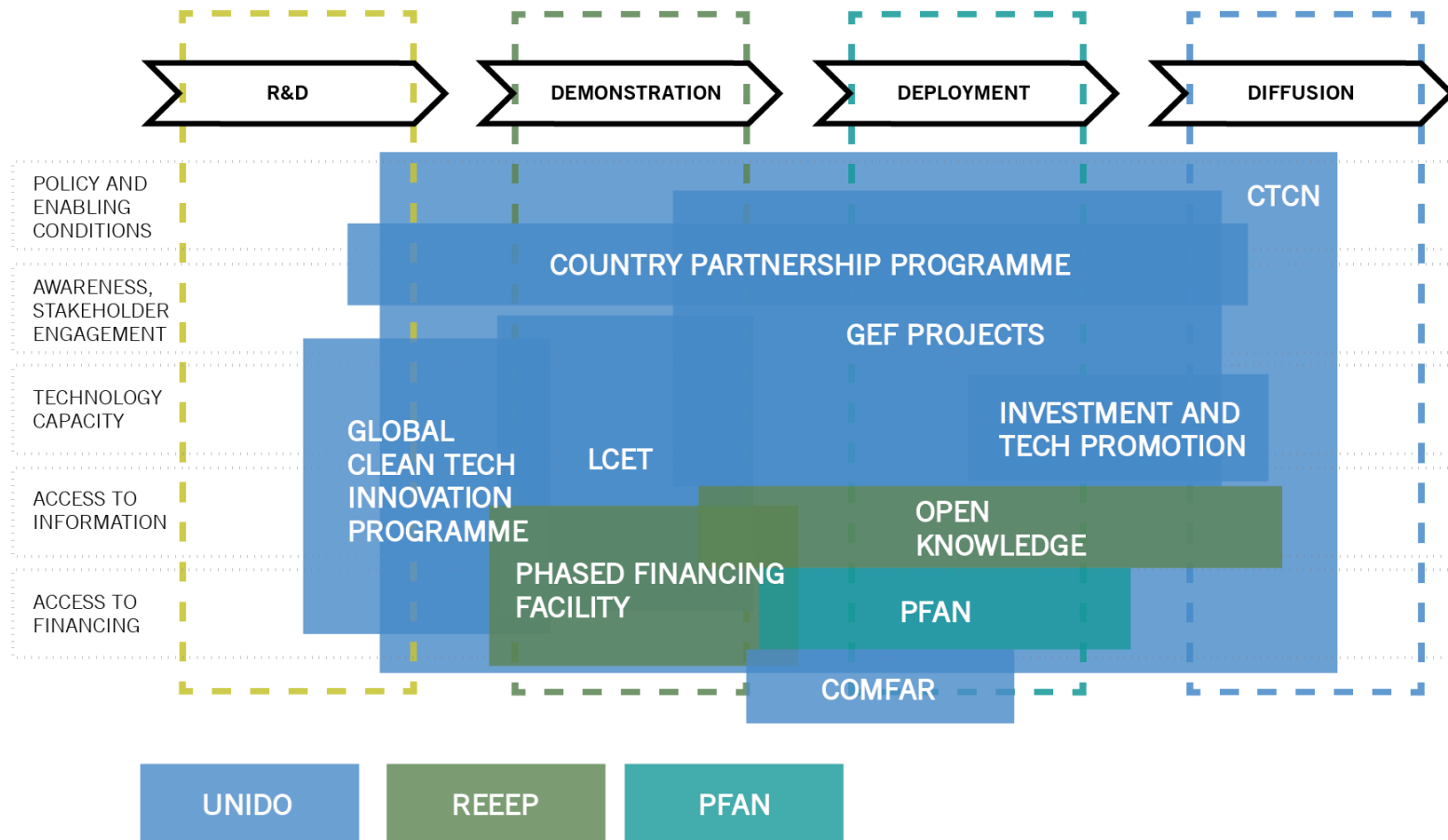
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IMPACT

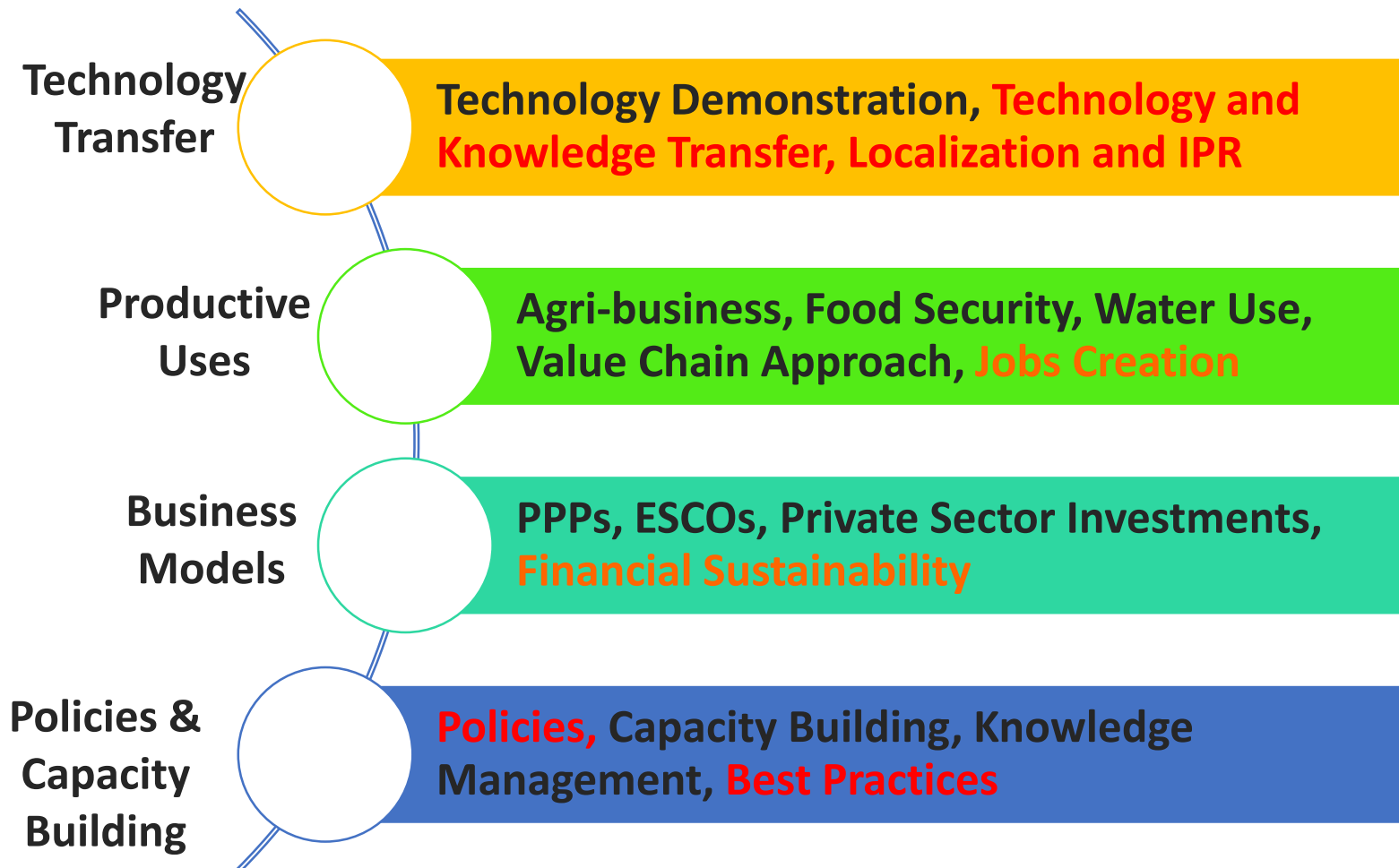
- **TECHNOLOGY DEMONSTRATION** of ULH-MHP system
- Linking the power generated to **PRODUCTIVE USES**
- **INSTITUTIONAL CAPACITY DEVELOPMENT** and knowledge management
- Building **PRODUCTIVE VALUE CHAIN**, creating jobs for local community



Complementarity and Synergies between LCET, CTCN and PFAN Programmes



Way Forward: Technology Localization, Business Models & Partnerships



To conclude, under LCET programme, we aim at

- **Achieving Transformative Impact** by linking the renewable energy with productive uses, value chain and jobs creation
- **Building National Capacity** in Kenya and Ethiopia for absorption and localization of innovative low carbon technologies transferred from Japan
- **Promoting Partnerships and Networking** between Japanese and Kenya / Ethiopian Companies, Institutions and Agencies

Thank you

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