# POWERING PRODUCTIVITY

## Lessons in Green Growth from the EEP Africa Portfolio

**Webinar**
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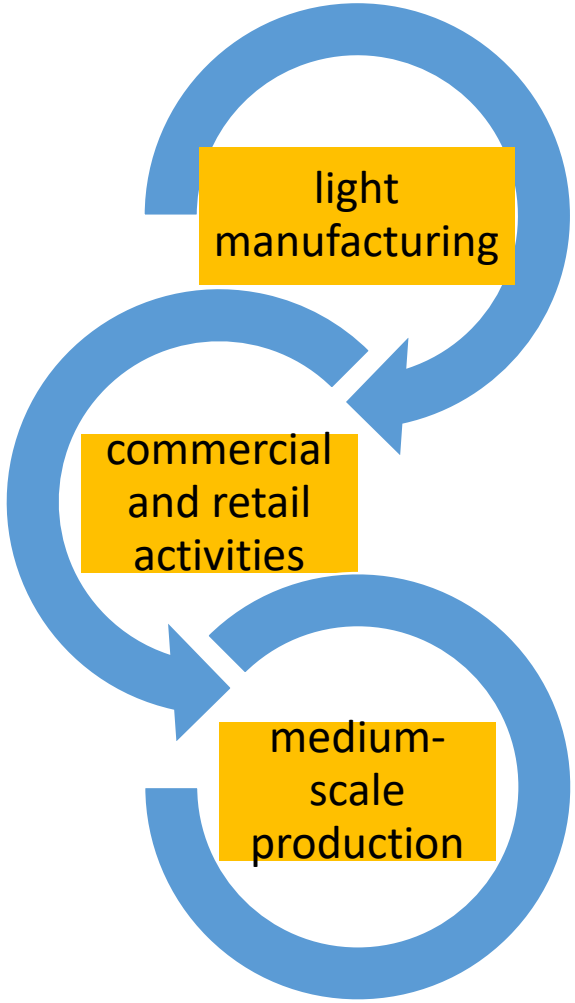
# A definition of the productive use of clean energy

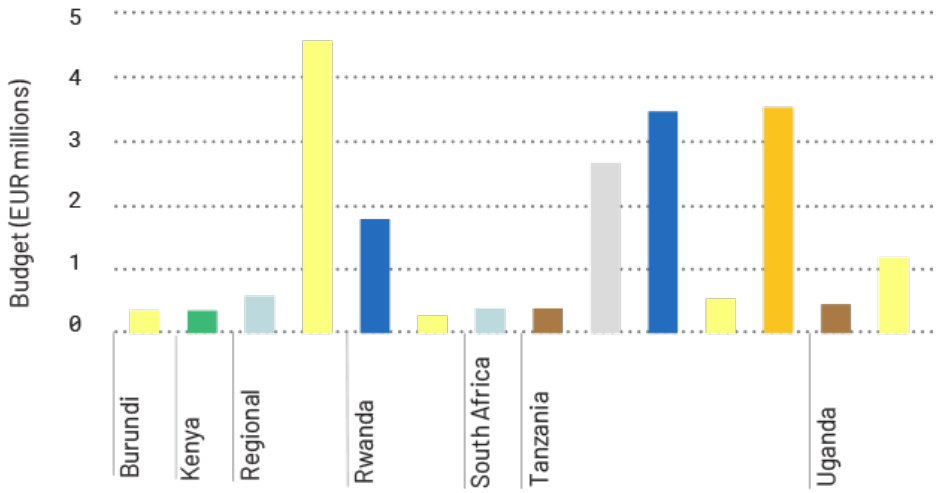



*The productive use of clean energy can be defined as agricultural, commercial and industrial activities that generate income and are powered by clean energy sources. These activities increase productivity, enhance diversity, and create economic value (ARE, 2015; NREL, 2018).*

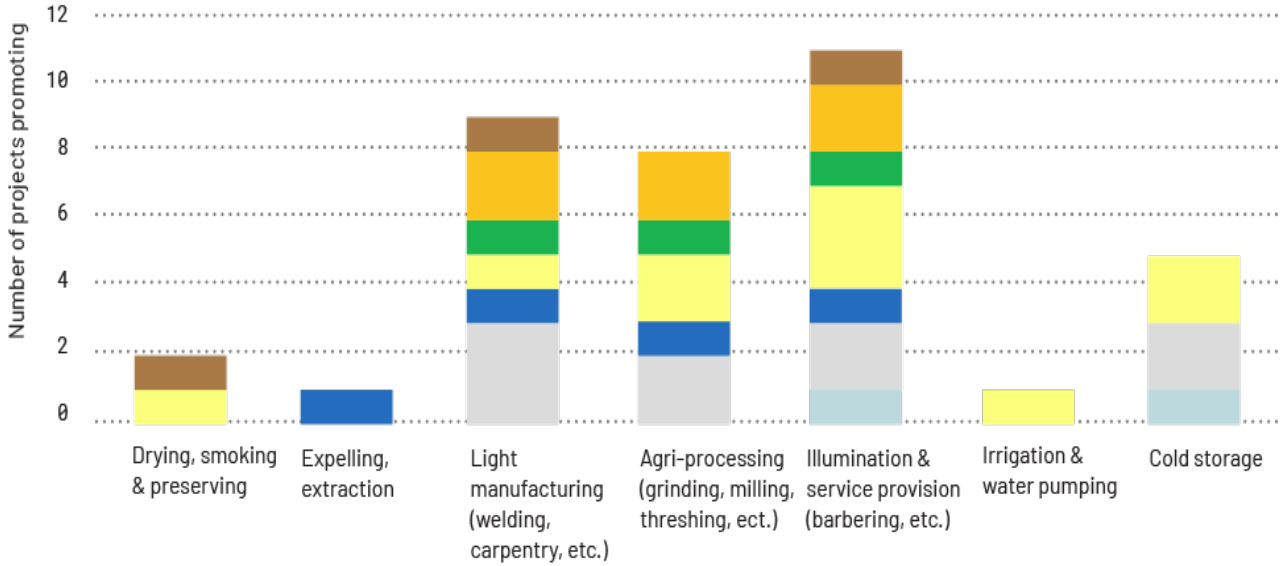
EEP Africa

# EEP Africa Portfolio: Projects promoting productive uses

**Total project cost, per technology and country, for completed productive use projects**




**Productive activities supported by EEP Africa financed projects**





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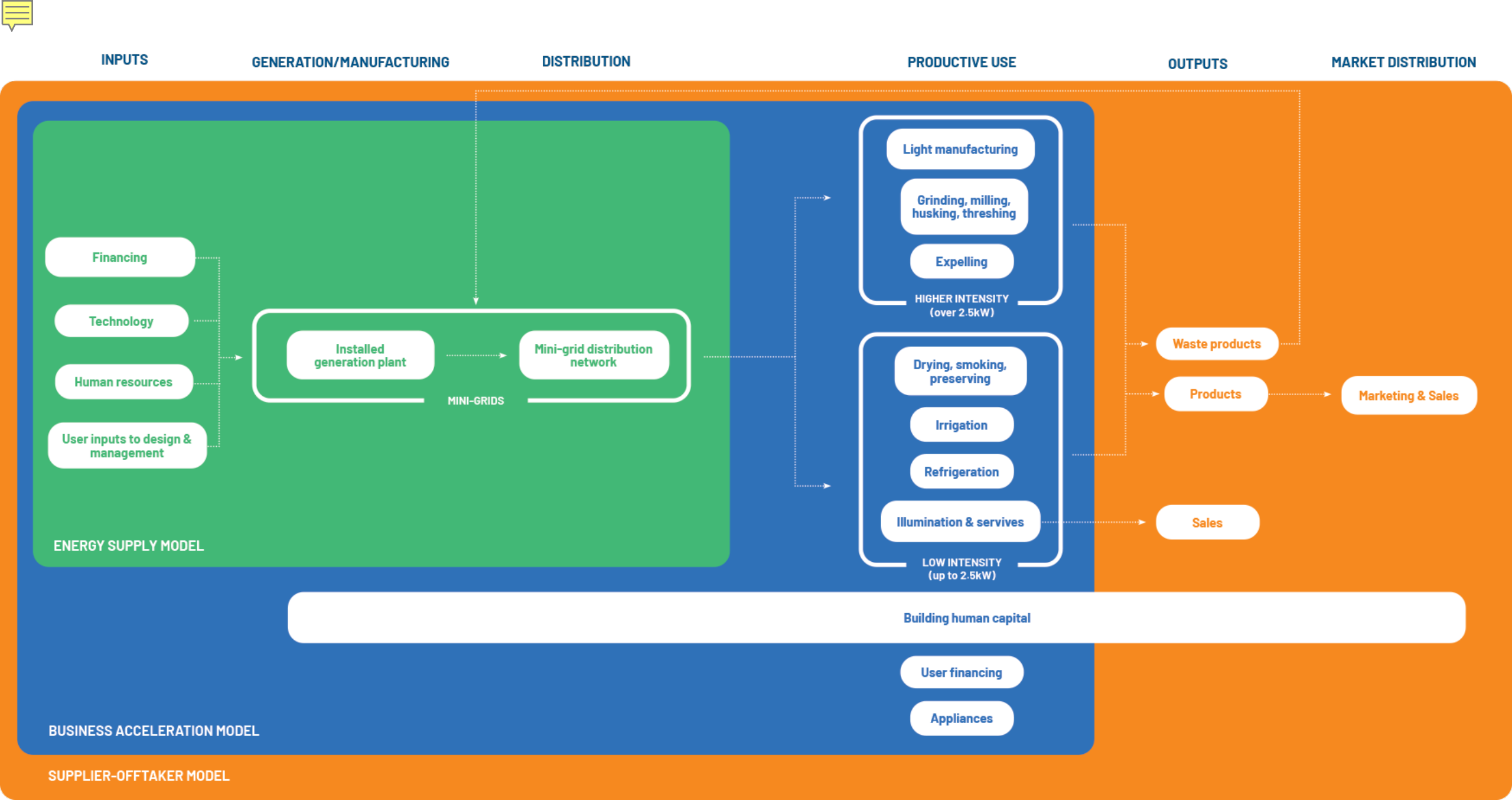
# MINI-GRID BUSINESS MODELS


INPUTS
GENERATION/MANUFACTURING
DISTRIBUTION
PRODUCTIVE USE
OUTPUTS
MARKET DISTRIBUTION
Financing
Technology
Human resources
User inputs to design & management
Installed generation plant
Mini-grid distribution network
MINI-GRIDS
ENERGY SUPPLY MODEL
Light manufacturing
Grinding, milling, husking, threshing
Expelling
HIGHER INTENSITY (over 2.5kW)
Drying, smoking, preserving
Irrigation
Refrigeration
Illumination & servives
LOW INTENSITY (up to 2.5kW)
Waste products
Products
Sales
Marketing & Sales
Building human capital
User financing
Appliances
BUSINESS ACCELERATION MODEL
SUPPLIER-OFFTAKER MODEL

# STAND ALONE SYSTEMS

## FOR PRODUCTIVE USE

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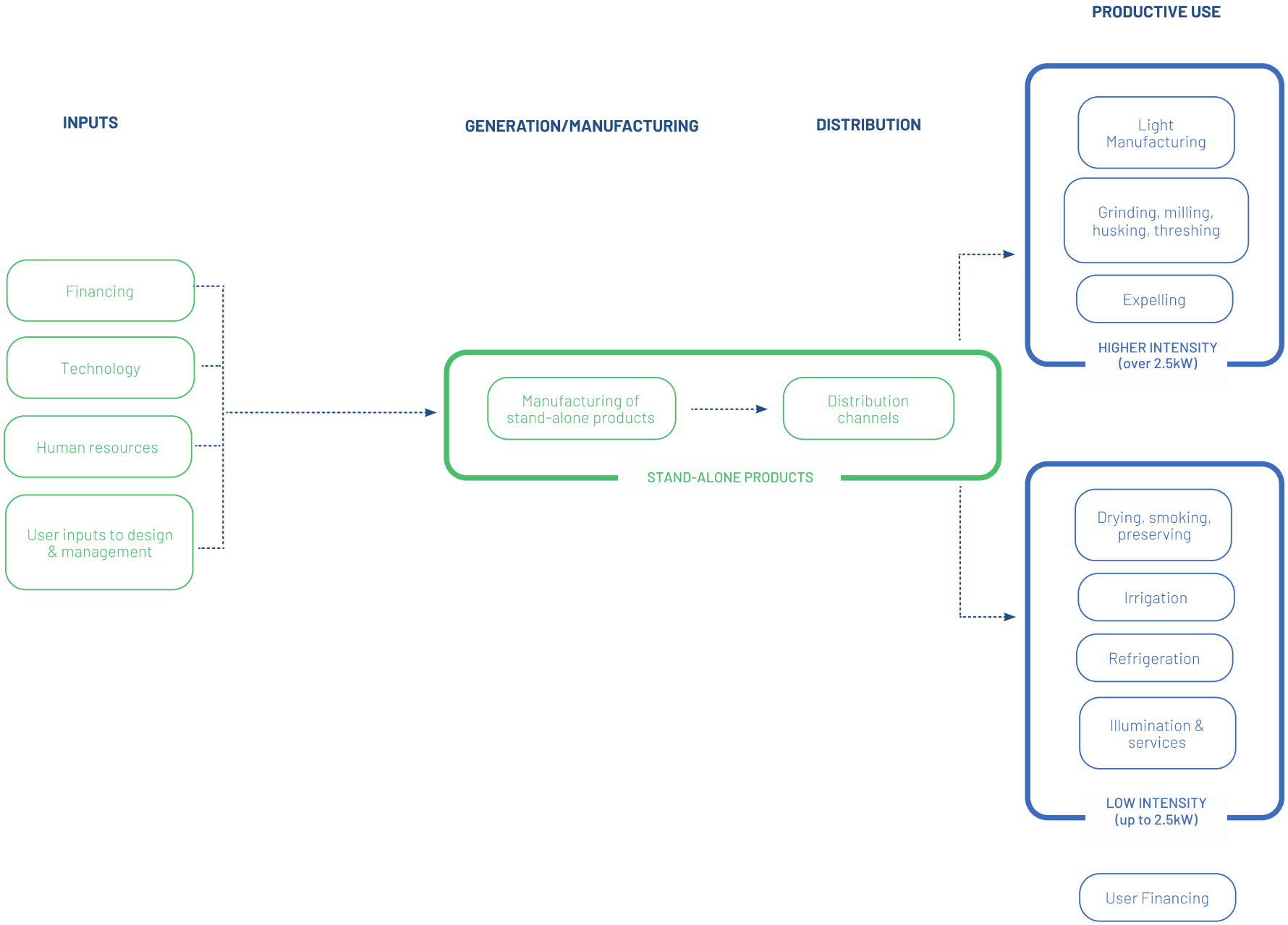
INPUTS
GENERATION/MANUFACTURING
DISTRIBUTION
PRODUCTIVE USE
Financing
Technology
Human resources
User inputs to design & management
Manufacturing of stand-alone products
Distribution channels
STAND-ALONE PRODUCTS
Light Manufacturing
Grinding, milling, husking, threshing
Expelling
HIGHER INTENSITY (over 2.5kW)
Drying, smoking, preserving
Irrigation
Refrigeration
Illumination & services
LOW INTENSITY (up to 2.5kW)
User Financing

# Conclusions

- Combining access to energy with the right resources, financing and access to markets can drive green growth.
- Productive use take place in a broader system. Models have evolved to fill gaps in the value chain.
- Understanding energy needs is complex and requires continuous adaptation.
- Business models need to incentivise productive users but should be cautious of trying to adjust user behaviour to suit optimal technical performance.
- Newer and innovative approaches combine durable, efficient stand-alone solutions with the IoT to provide value added, user-oriented services.

# Recommendations

**Driving green growth:**

- Expand early-stage financing to test productive use applications and innovations
- Support the potential for productive use throughout the value chain

**Facilitating green growth:**

- Adapt project design to the local context
- Address the impact of tariffs and demand management on productivity
- Incorporate innovative financing mechanisms for appliances
- Commit to long-term business development support
- Develop partnerships to draw on institutional strengths

**Promoting inclusive green growth:**

- Strengthen the role of women and youth as agents of change in productive uses
- Expand financing mechanisms that facilitate productive use and clean energy affordability for the bottom-of-the-pyramid