



Beyond pure access to energy

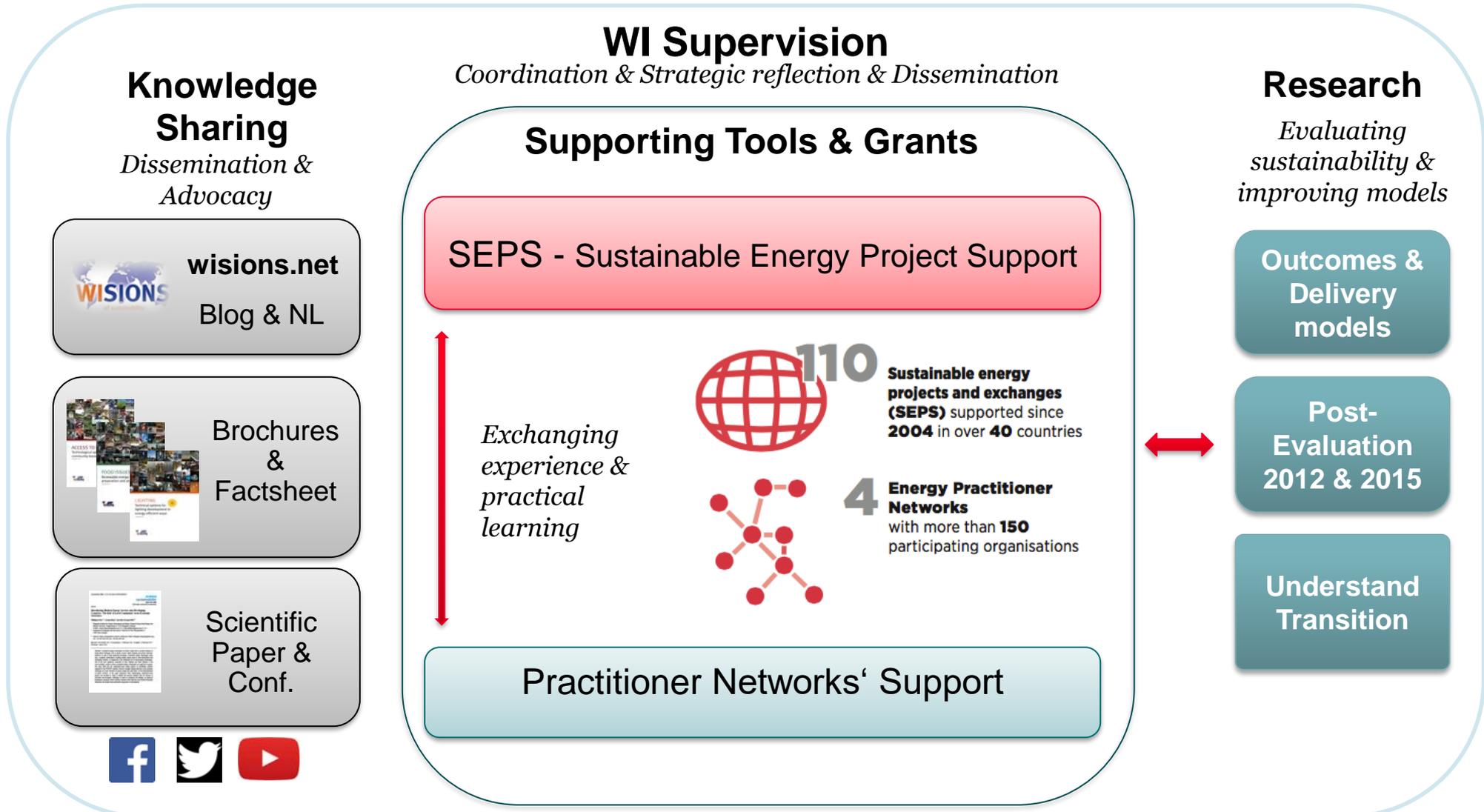
– Analysing the impact on “productive use” of small-scale energy projects

EEAP 2019, Bangkok

Julia Terrapon-Pfaff, Marie-Christine Gröne, Carmen Dienst, Willington Ortiz

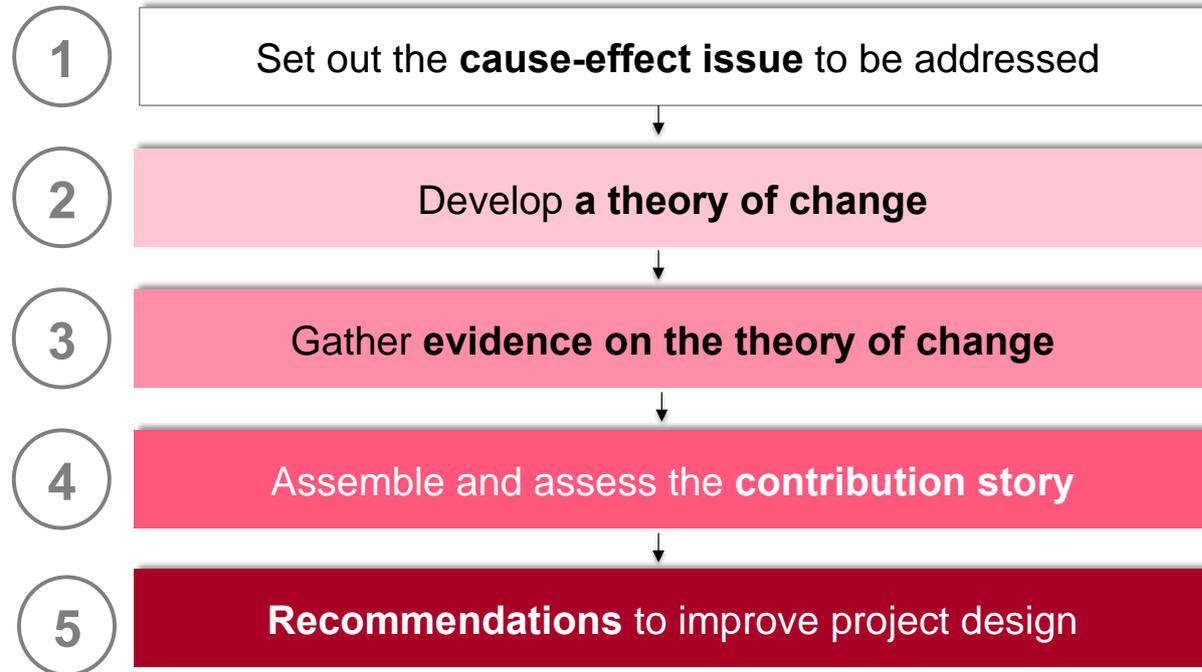
Presented by: Chun Xia-Bauer

WISIONS started in 2004, with the mission to **empower individuals and communities** in the Global South to **transform the production and use of energy** so that it effectively enables sustainable development.



- A **large number** of energy projects in developing and emerging economies, **only limited evidence** exists about the actual contribution to **sustainable development**
 - **System evaluation** instead of individual projects evaluation → development effectiveness across technologies, energy needs and regions
 - **Quantitative experimental or quasi-experimental** approaches prevailing for impact evaluations in the development sector → **“What works”, NOT “HOW”**
- ➔ **Systematic evaluations of the outcomes, impacts and mid-term sustainability of small-scale energy projects supported by the WISION initiatives.**

Theory-based evaluation: Contribution Analysis (Mayne 2001)



- **Semi-structured in-depth interviews:** Very good overall response rate resulting in an **evaluation sample of 30 projects: Cross-sectional** in terms of renewable technologies, human needs and geographical regions
- **Secondary data:** project documentation, in-depth analysis of relevant scientific and grey literature

Evaluation Approach

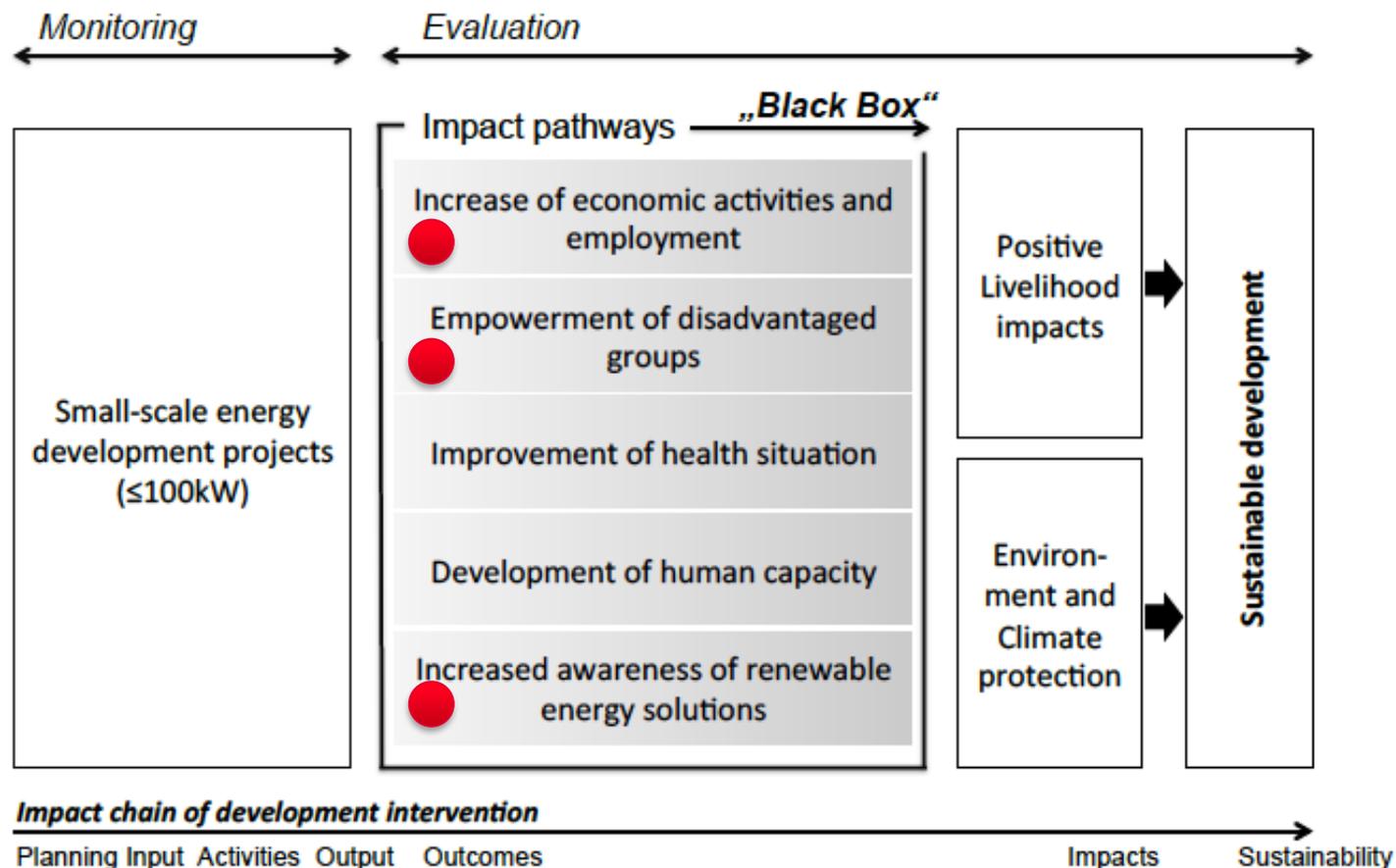
Contribution Analysis

1

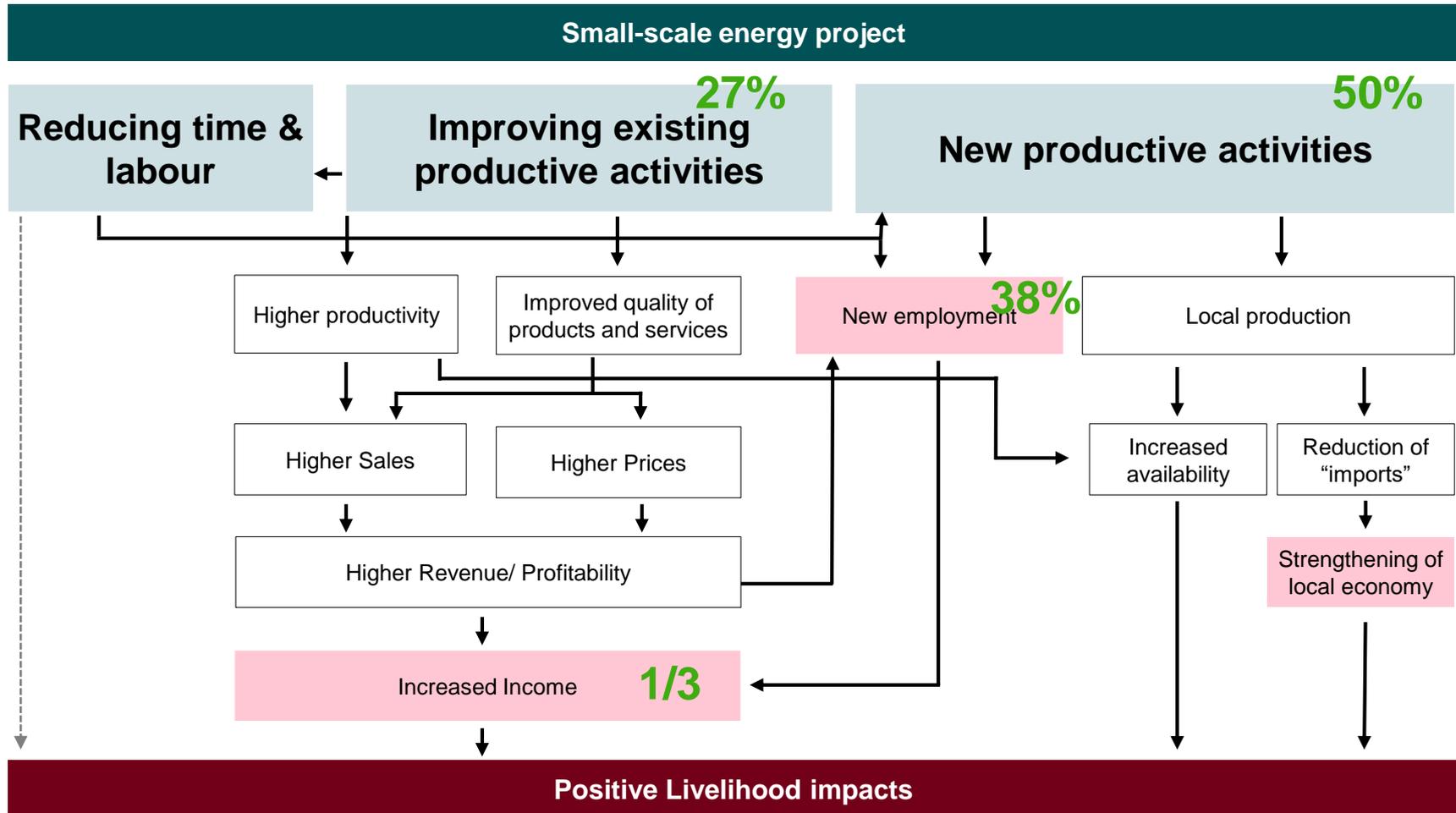
Contribution challenge: access to sustainable energy services can improve livelihoods and support sustainable development

2

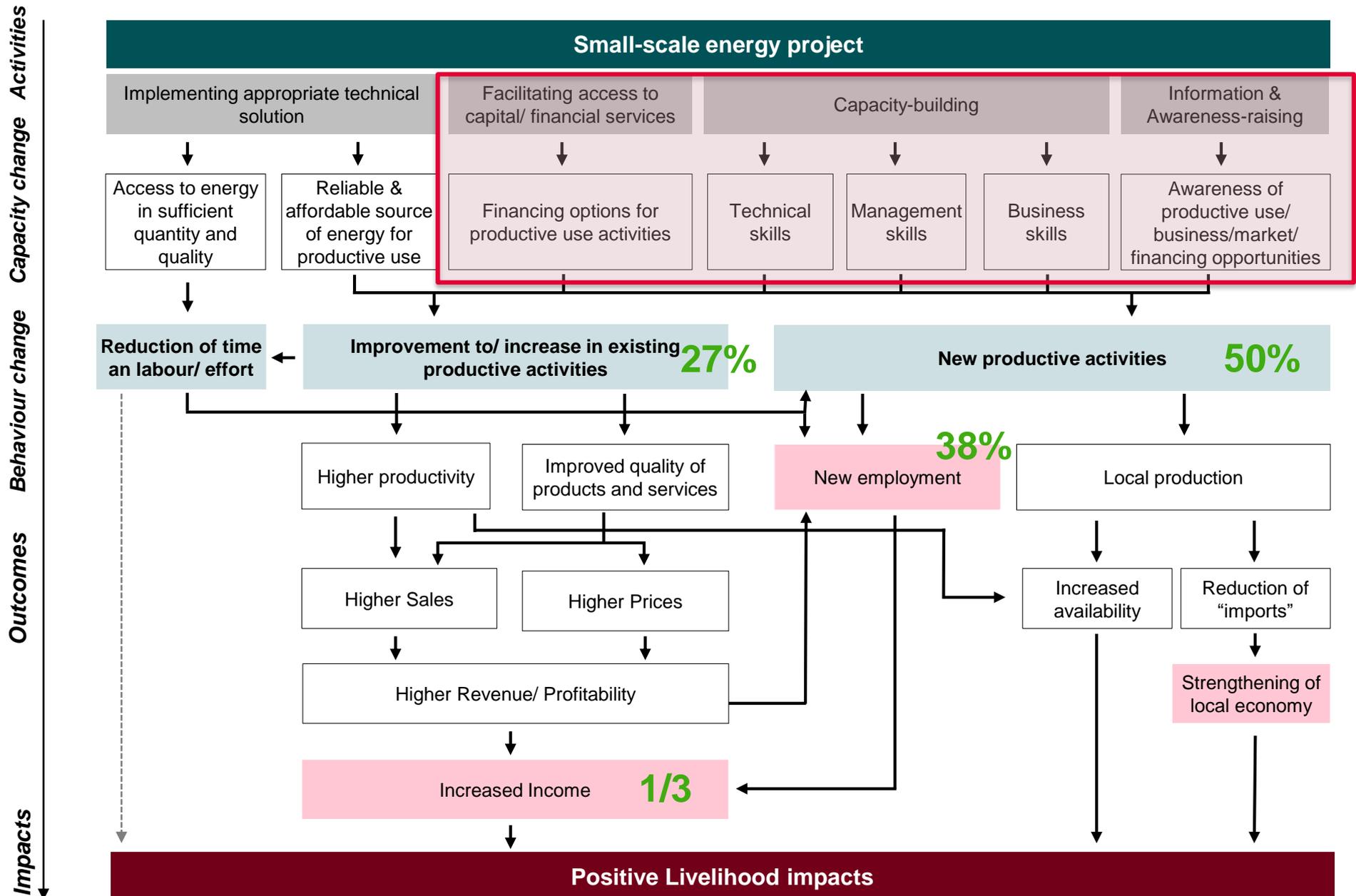
Develop a theory of change



Productive use of energy → Increase economic activities and employment



Productive use of energy → Increase economic activities and employment



Contribution to economic development – What is important?

- **Access to energy does not automatically trigger productive use activities** these need to be integrated in the project
- Beneficiaries need training and **knowledge about business opportunities and skills** – not a one-time training, but continuous capacity building
- **Market value chain analysis** at the beginning of the project necessary & assessment of existing productive use activities & interest of potential beneficiaries
- Physical and social **access to markets**
- Analysis of the **whole value chain** – avoid increase of inequalities & assess type of work created
- **Entrepreneurial spirit** – Fostering entrepreneurial mind-set
- **Financing options** do not only have to be available but **need to be accessible for small-scale entrepreneurs**

Methodology insights:

- A theory-based evaluation approach in the form of a contribution analysis → What+ Why and How.

Limitations:

- Only focus on three selected impact pathways and these impact pathways needed to be simplified
- Impossible to gather empirical information on all aspects and links established in the theories of change

Key message: Technological solutions that enable the access to energy along does not necessarily lead to sustainable development.



**Wuppertal
Institut**



Thank you very much for your attention !



For further information please visit
our websites:

www.wisions.net

www.wupperinst.org



WISIONS on Facebook

Learning from experiences

Cameroon Sustainable Sun Bakeries Program

Objective

To introduce the environmentally friendly concept of solar baking and provide opportunities for women to gain their own income

Technology applied/ Approach

Implementation of a pilot bakery to bake bread locally and reduce the price for the consumers

Lessons learned

- Long time to get a tax exemption (more than 1 year)
- Setting up a revolving fund to reinvest into new bakeries was not possible as revenues are too small compared to high initial costs for solar bakeries
- Education institutions should be involved for training



SEPS
Project