



Multiple Impacts Calculation Tool

# CALCULATING MULTIPLE IMPACTS IN EUROPE

*MICAT Webinar Series (WEBINAR #1)*

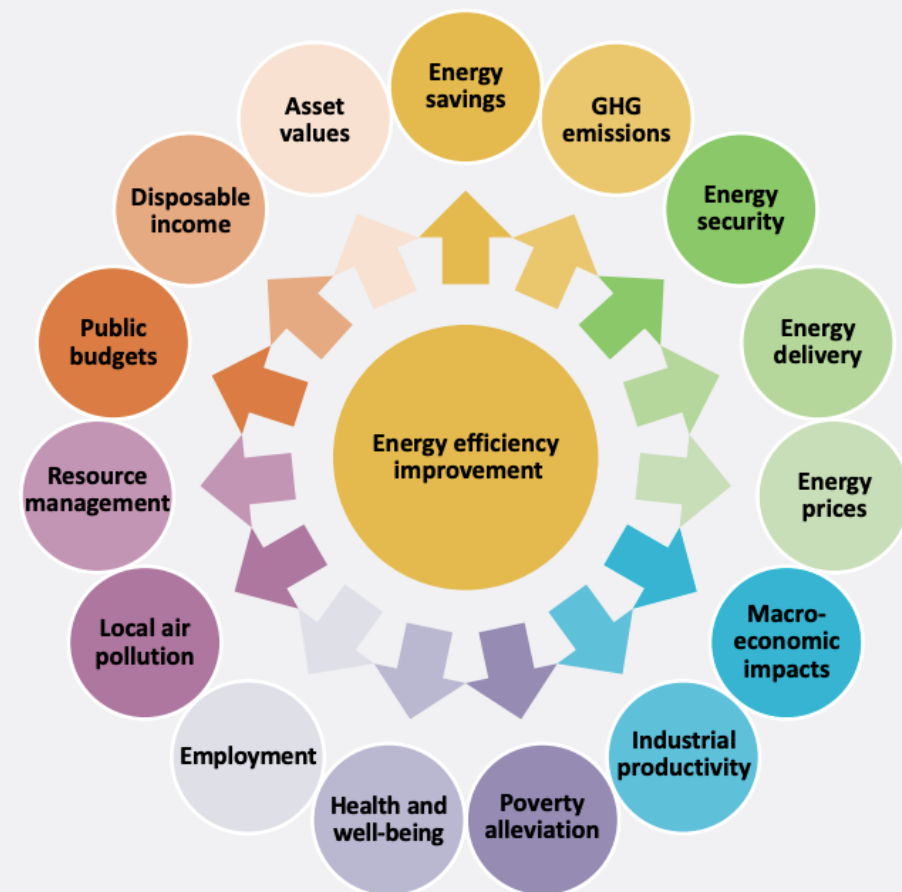


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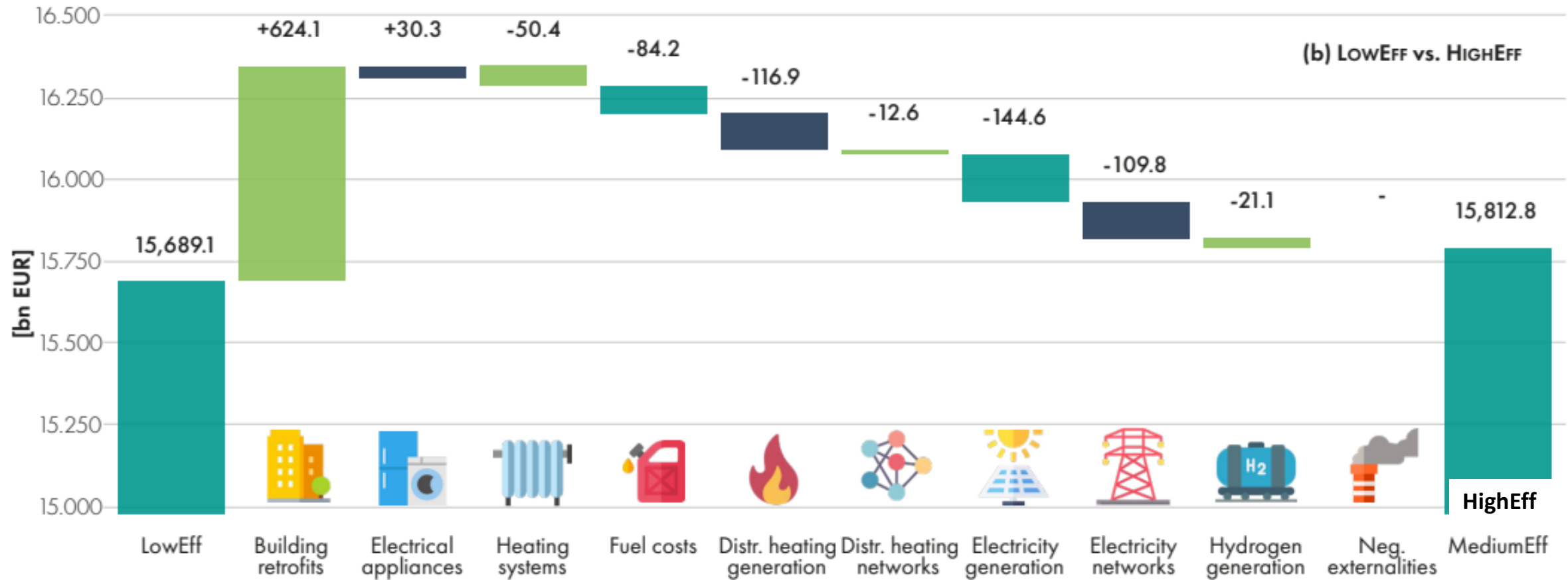
# Multiple Benefits of Energy Efficiency – Policy Needs

- AKA co-benefits, ancillary benefits, non-energy benefits, multiple impacts
  - accompany energy efficiency projects and provide **additional arguments to implement EE measures, but are rarely reported**
  - explicitly mentioned in EC's policy-making (e.g. EPBD, EED) and reporting (Art. 3 recast EED, NECPs) **but rarely quantified**
- Art. 3 of recast Energy Efficiency Directive EED (Energy Efficiency First EE1st Principle):

<<... Member States shall promote and, where cost-benefit assessments are required, ensure the application of **cost-benefit methodologies that allow proper assessment of wider benefits of energy efficiency solutions from the societal perspective** >>



# Energy System Cost 2020-2050: not a clear argument for Energy Efficiency First

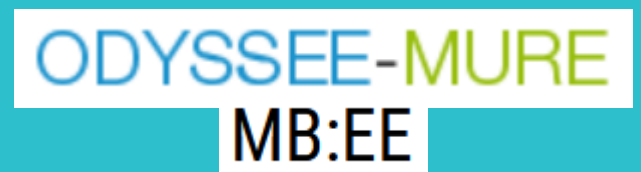


# The MICAT Approach

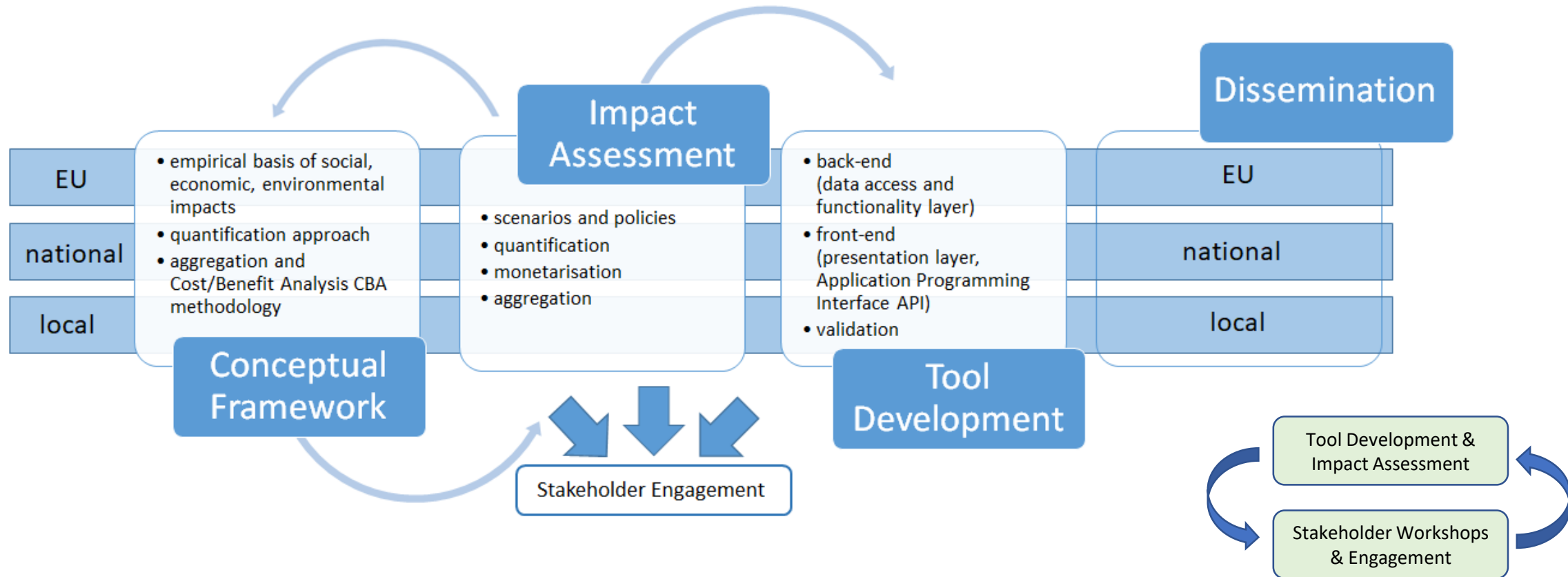
Development of a comprehensive approach to estimate **Multiple Impacts of Energy Efficiency** by providing a **publicly available and easily usable online tool**.

- **Improve scientific knowledge** and methods to quantify Multiple Impacts
- Underline the **importance of MIs** in policy evaluations
- **Facilitate assessment of MI** of policies at EU, national and local levels
  - **Quantification and monetisation** of different categories of multiple impacts
  - **Go beyond the approaches** of earlier MB-Tools like in ODYSSEE-MURE and COMBI
  - Cover several **key scenarios**, allow evaluation of customised scenarios and policy measures
  - **Maximise usefulness** for a large target group and cover a wide range of use-cases

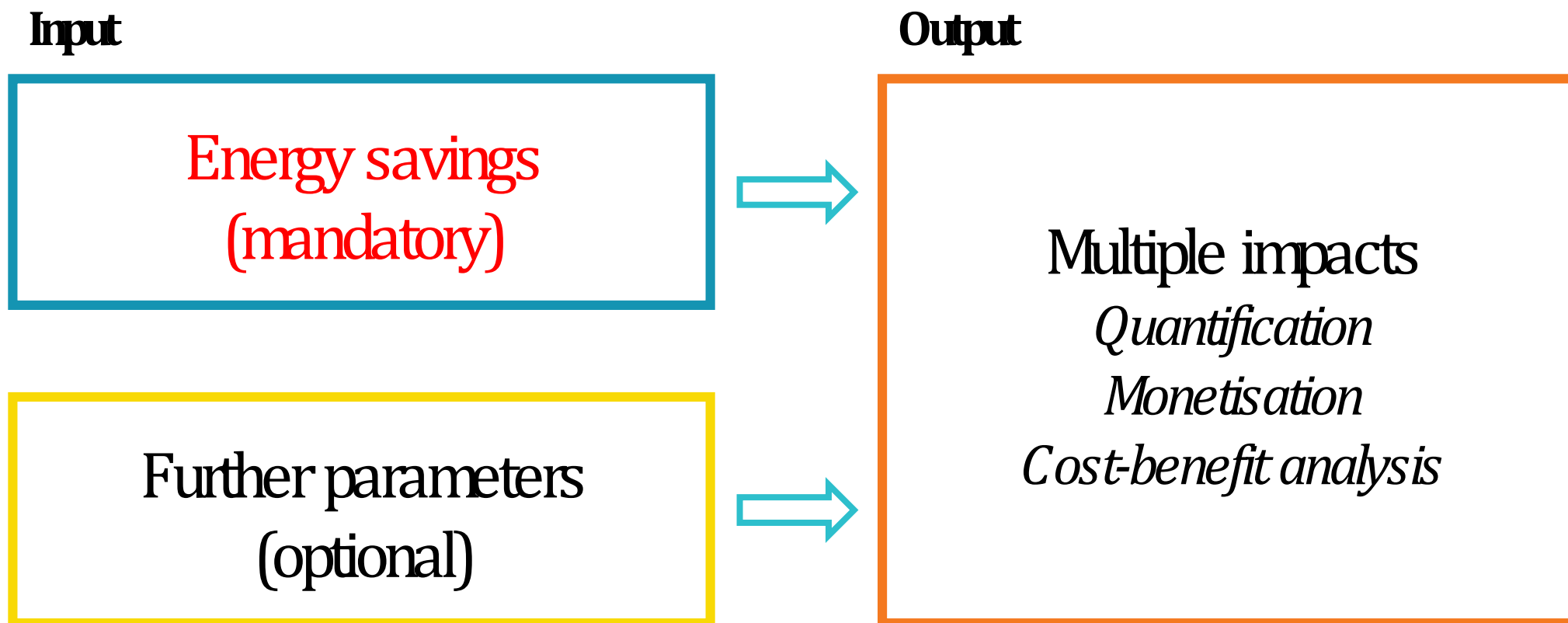
**MICAT: Multiple Impacts Calculation Tool**



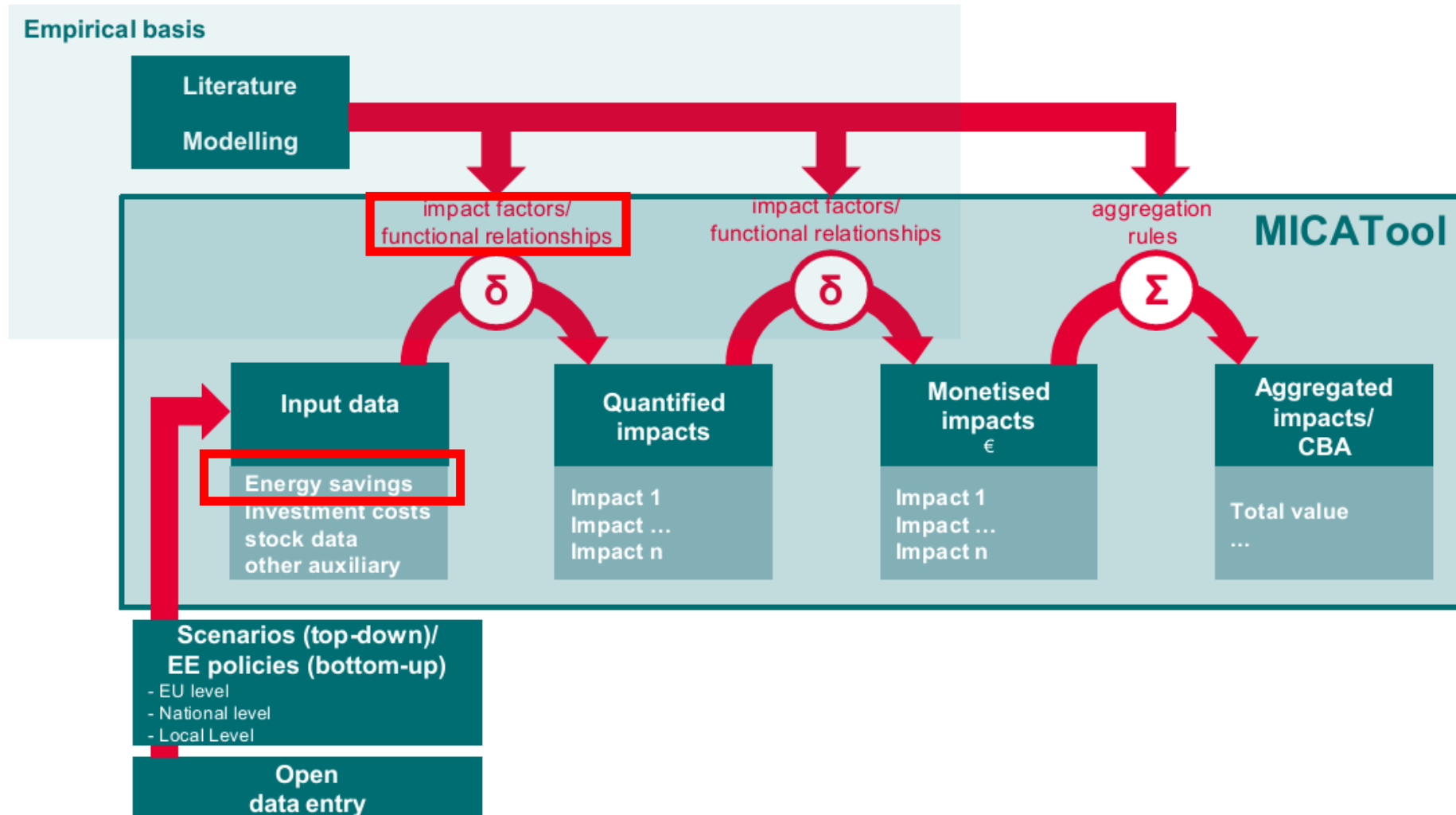
# Conceptual Approach



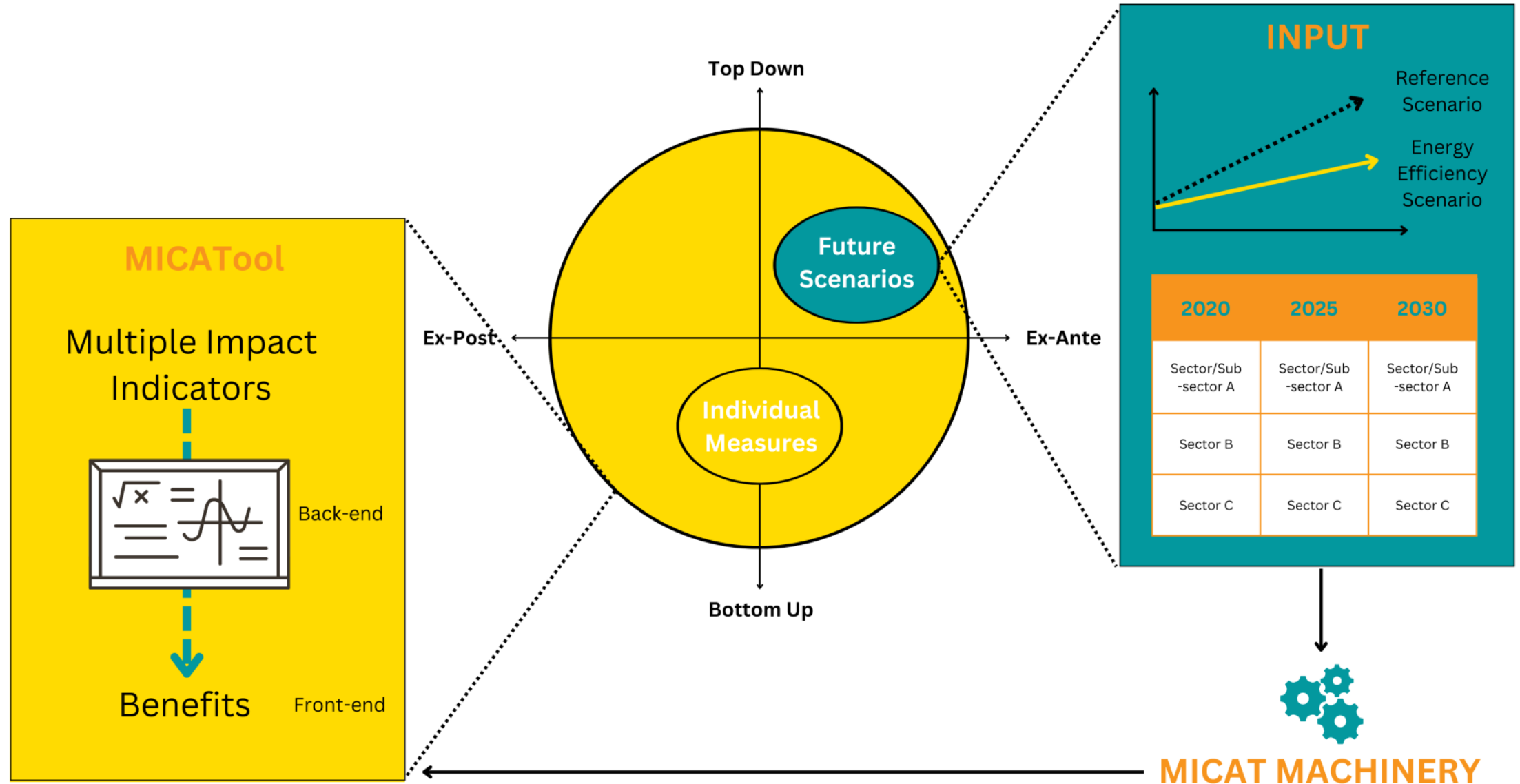
# Quantification: **energy savings** as the starting point



# Quantification: Indicator Approach



# Functioning of the MICATool





# Catch Stakeholder Needs

## Maximisation of the tool's usefulness

- large target group/wide range of use-cases: **input and validation** data from case studies on the three governmental levels
- guarantee to **fit the requirements of stakeholders** and to maximise its use for scientists, stakeholders and policy-makers.
- **making stakeholders familiar** with the tool/approach & get direct feedback

3 Workshops on **three governance levels: local, national, and EU level**



**1. Analyse underlying assumptions and methodology** | Introduction of the project and indicator preferences

**2. Embedding of the tool** | Discussion of an advanced mock-up to enable adjustments



**3. Implementation & Training** | Presentation and introduction into the use of the MICATool

# 3 Groups of Indicators



# Beyond Energy Efficiency: economic impacts

## Key questions:

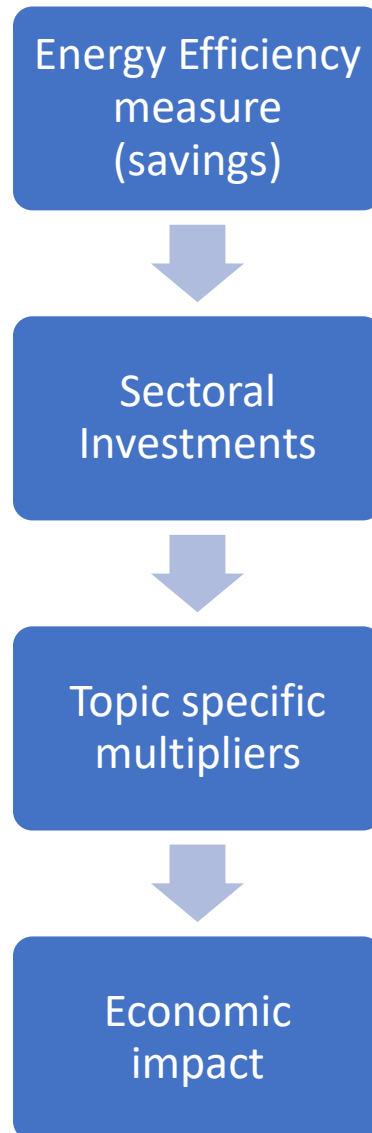
- Do energy efficiency measures impact **GDP**?
- What **sectoral shifts** can be expected?
- Will there be **employment** benefits?
- Are there **competitiveness** gains for the economy?

## Methodology:

- Methodology with Leontieff multipliers: minimal end-user inputs required

## Outputs:

- Estimates of economic impacts
- First step towards understanding economic co-benefits



# The MICAT Webinars

- **Webinar#2** - Multiple Impacts of Energy Efficiency: **Social Indicators**, 06 April 2023
- **Webinar#3** - Multiple Impacts of Energy Efficiency: **Economic Indicators**, 04 May 2023
- **Webinar#4** - Multiple Impacts of Energy Efficiency: **Environmental Indicators**, 01 June 2023
- **Webinar#5** - Energy Efficiency **Needs of EU Actors**: How can the Micatool address these? 06 July 2023

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WEBINAR SERIES: MULTIPLE IMPACTS IN THE EU

The Multiple Impacts of Energy Efficiency: Social Indicators

Florin Vondung  
Senior Researcher at Wuppertal Institute for Climate, Environment and Energy

Join us on 6 April!  
13:30 - 14:30 CET

Leonardo ENERGY  
An initiative by  
Cu European Copper Institute

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WEBINAR SERIES: MULTIPLE IMPACTS IN THE EU

The Multiple Impacts of Energy Efficiency: Economic Indicators

Frederic Berger  
Research associate in Energy Policy at Fraunhofer ISI

Zoi Vrontisi  
Director - Climate and Energy economics at E3-Modelling

Join us on 4 May!  
13:30 - 14:30 CET

Leonardo ENERGY  
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Cu European Copper Institute

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WEBINAR SERIES: MULTIPLE IMPACTS IN THE EU

The Multiple Impacts of Energy Efficiency: Environmental Indicators

Fabian Wagner  
Senior research scholar in the Energy, Climate, and Environment Program at MASA

Join us on 1 June!  
13:30 - 14:30 CET

Leonardo ENERGY  
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Cu European Copper Institute

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WEBINAR SERIES: MULTIPLE IMPACTS IN THE EU

Addressing the Energy Efficiency Needs of European Actors with the MICATool

Ciullia Pizzini  
Senior energy expert at IECEP

Marcelo Lampkowski  
Officer, Sustainable Infrastructure & Data Governance at ICLEI

Niklas Mischkowski  
Officer, Governance & Social Innovation at ICLEI

Join us on 6 July!  
13:30 - 14:30 CET

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- Serving stakeholder needs to better characterize future climate neutrality pathways
- Supporting the analysis of the Energy Efficiency First Principle
- Simplified approach based on indicators linked to energy savings
- Functional relationships to express the impacts
- Empirical foundation on more refined modelling approaches
- Final aim: broad use in impact assessments at European, national and local level

# The Team



Fraunhofer ISI is the project coordinator and in charge of WPs 3 (assessment) and WP4 (tool development). Mainly in charge of **economic indicators**



WI is COMBI's former coordinator. Mainly in charge of WP 2 (Framework) with a major role in WPs 3 and 4 (assessment & tool development). Mainly in charge of indicators on **social indicators** within WP2.



E3M owns PRIMES and GEM-E3 models and has a major role in the framework development of the empirical basis of **economic indicators** within WP2.



IIASA's role is mainly in the framework development of the empirical basis of **environmental indicators** within WP2 (Framework) and supporting WP3 (assessment).



In charge of **stakeholders engagement** on national and EU level, policy feedback and **communication and dissemination**



ICLEI's role is mainly in WP5, leading the **stakeholder engagement on a local level**, and WP6 contributing to the overall conclusions and recommendations.



WSE is mainly supporting IEECP in **communication and dissemination**

# THANK YOU

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