



# GET.transform Workstream: Long-Term Energy Planning

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GET.transform is co-funded by

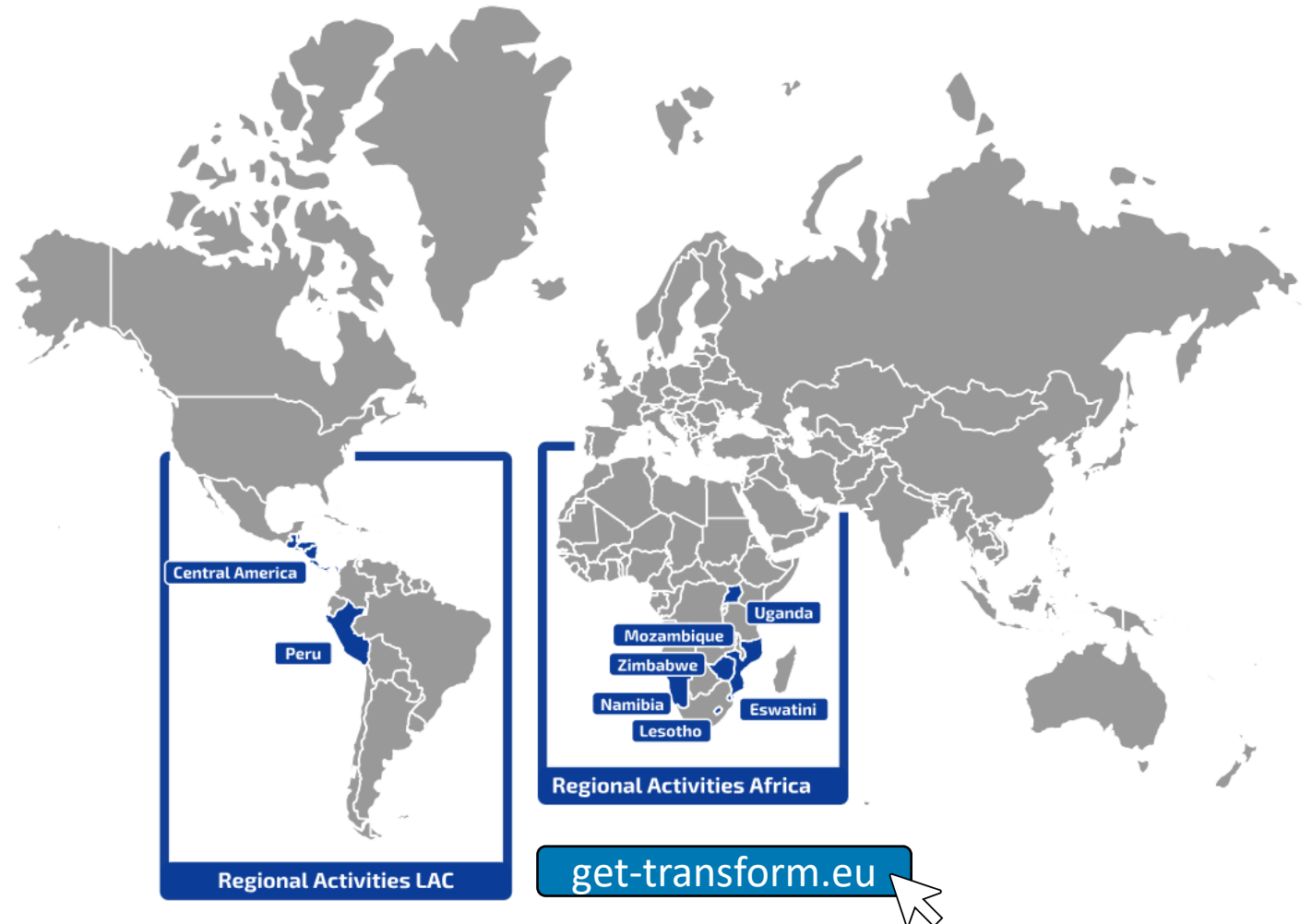


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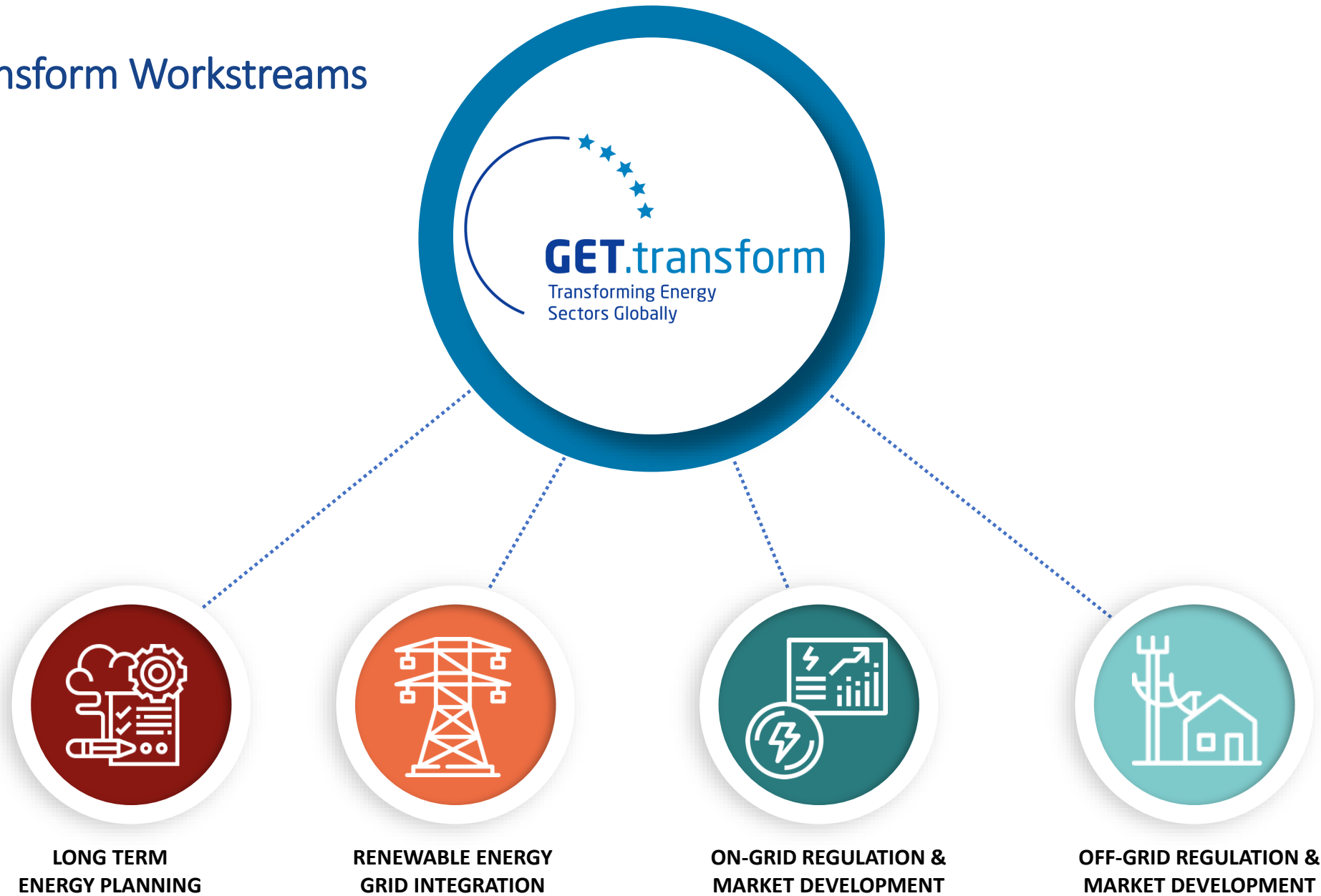
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# What is GET.transform?

- Technical assistance (TA) and capacity building for the **public sector** to establish conducive policy and investment frameworks for the transition of the energy sector
- Hub of expertise with > 50 renowned (inter)national energy experts
- Implementation through **regional** and **country windows** with expert staff on the ground incl. secondments
- **Scaling across countries** through collaboration with regional institutions and other TA initiatives



# GET.transform Workstreams





# GET.transform Workstreams



## LONG TERM ENERGY PLANNING

Developing **integrated energy and power system investment plans**, outlining development paths for energy sector transformation



## RENEWABLE ENERGY GRID INTEGRATION

Updating of **technical power system planning and operational procedures** that enable the operation of renewable energy dominated power systems



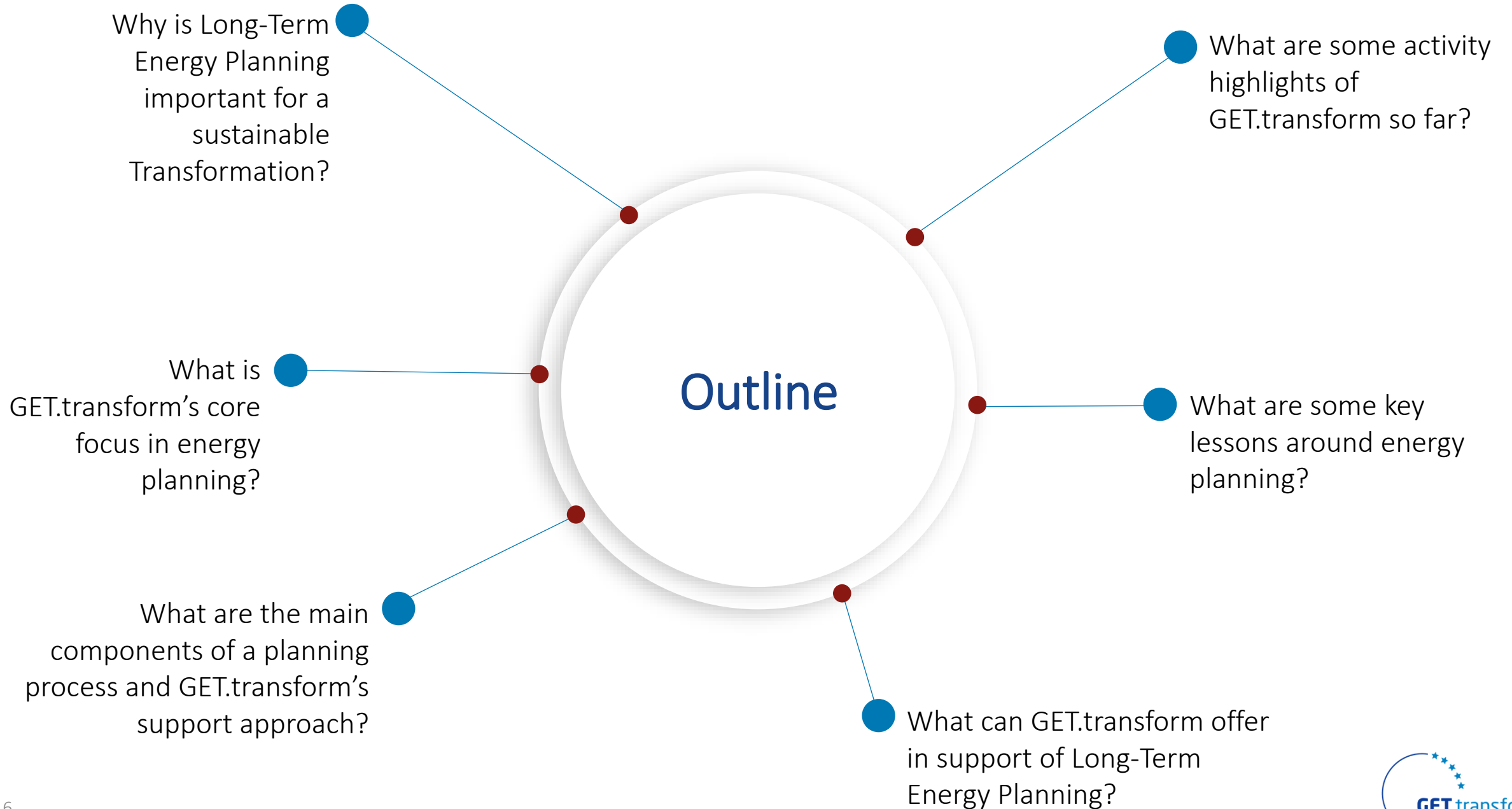
## ON-GRID REGULATION & MARKET DEVELOPMENT

Supporting **institutional reforms** that allow for new market actors and renewable energy participation: market model design, non-discriminatory grid access, cost-reflective services  
Design and management of **solicited auctions** as well as **market-driven mechanisms** for procuring on-grid energy



## OFF-GRID REGULATION & MARKET DEVELOPMENT

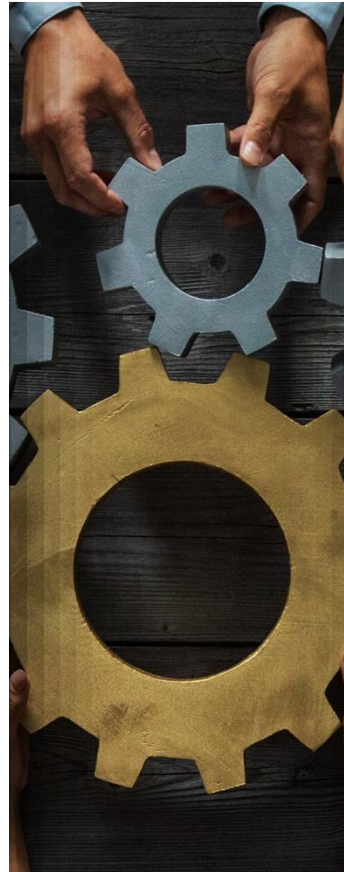
Supporting **off-grid electrification planning** and data management frameworks  
Developing mini-grid **regulatory frameworks** and technical standards and designing award mechanisms for **procuring off-grid energy**



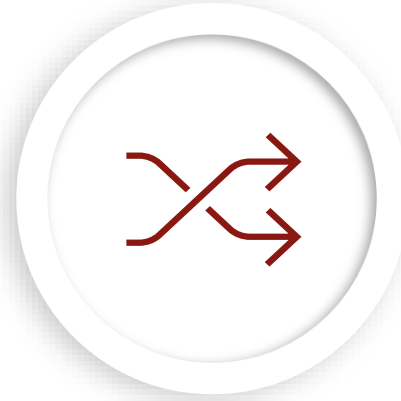
# Why is Long-Term Energy Planning (LTEP) Important for a Sustainable Energy Transformation?



Like a **lighthouse**, **energy planning** makes it possible to **illuminate** a distant horizon for which it is necessary to prepare



At the crossroads where different **economic, social, environmental, geopolitical** and **security** considerations intersect, **energy planning** provides a **consistent framework** to evaluate options for the long-term



A **well-designed energy planning process** provides opportunities to foster **consensus**, build **trust** and **strong relationships** between actors







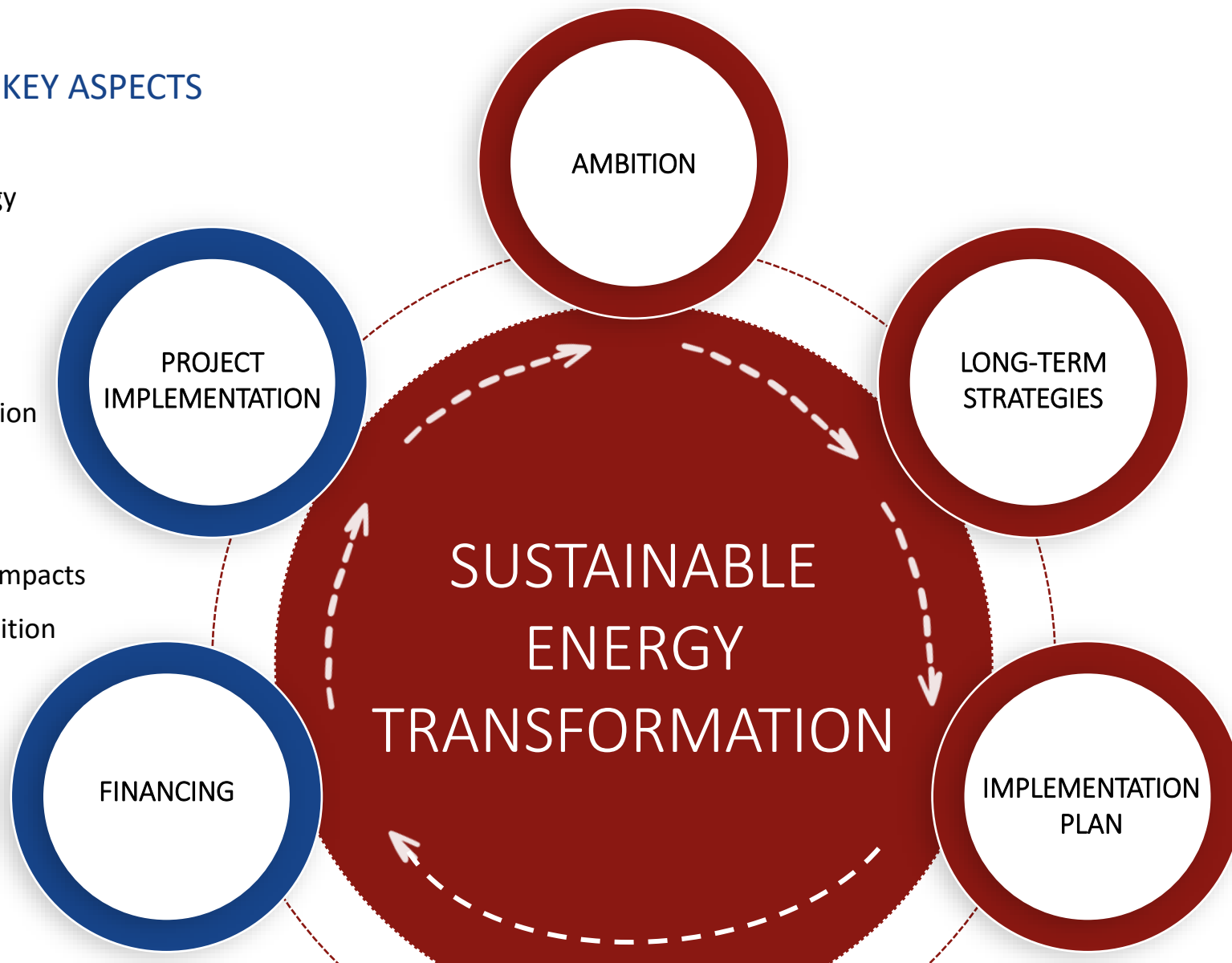
**GET.transform** supports **national and regional institutions** to better capture and represent **energy transformation** challenges and opportunities through structured and participatory **planning processes** and enhanced **long-term energy plans**



# Why is Long-Term Energy Planning (LTEP) Important for a Sustainable Energy Transformation?

## WHAT ARE THE KEY ASPECTS TO CONSIDER?

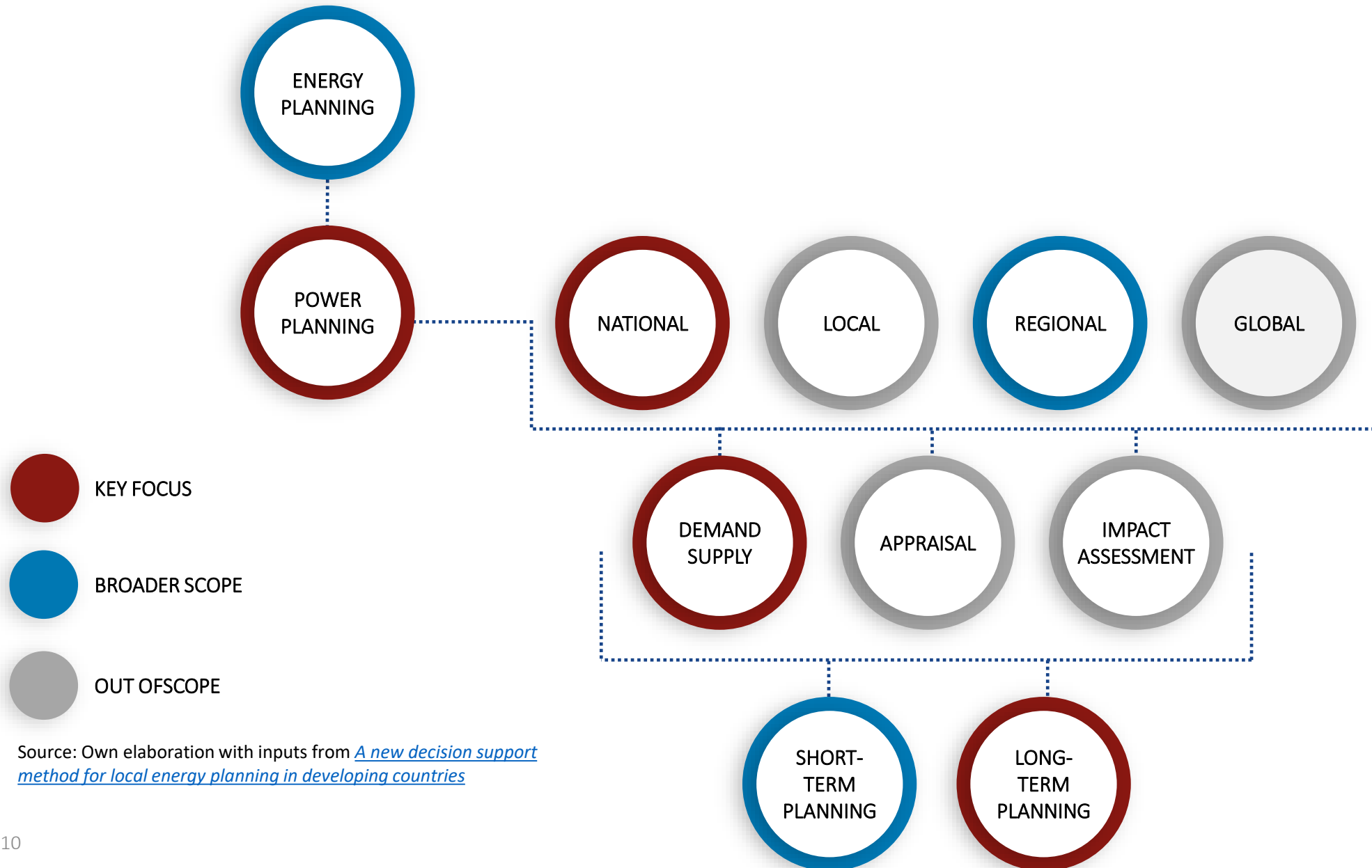
- Renewable energy representation
- Electrification of energy services
- Regional integration
- Climate change alignment
- Socio-economic impacts
- Just Energy Transition



## LONG-TERM ENERGY PLANNING

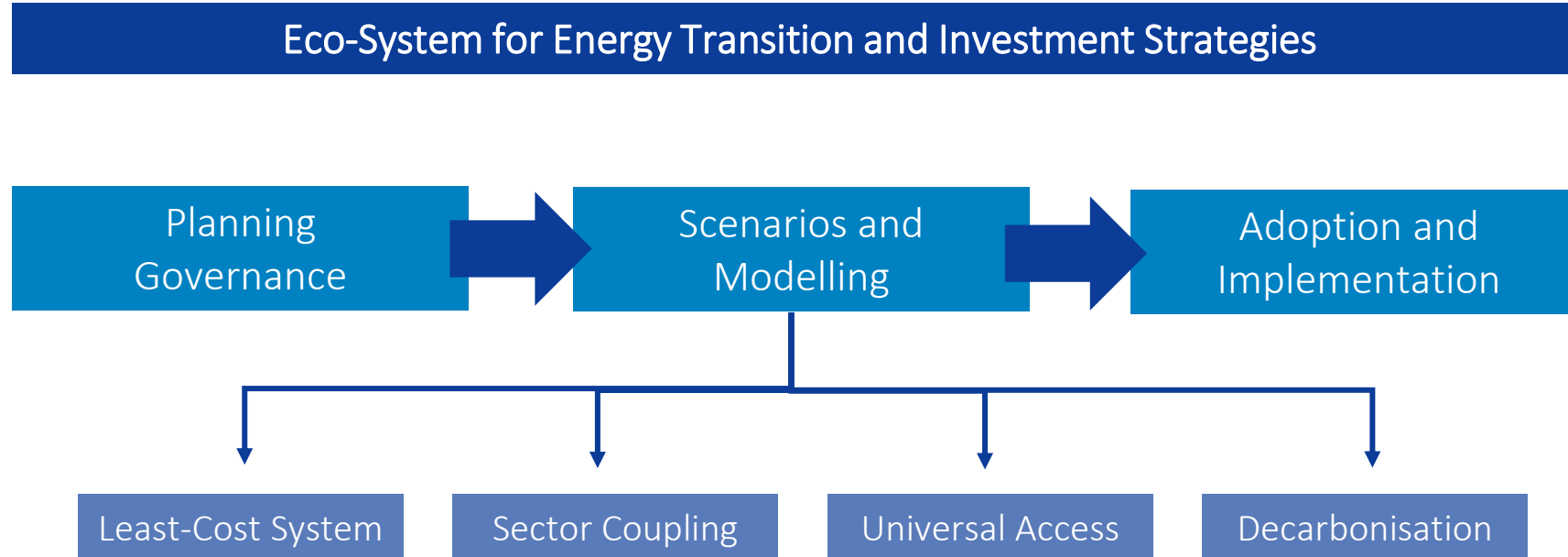
- Supports building a vision for the energy transition
- Transforms ambitions into strategies which in turn generate implementation plans
- Plays a central role in access to finance (via National Plans)

# GET.transform Focus in Energy Planning



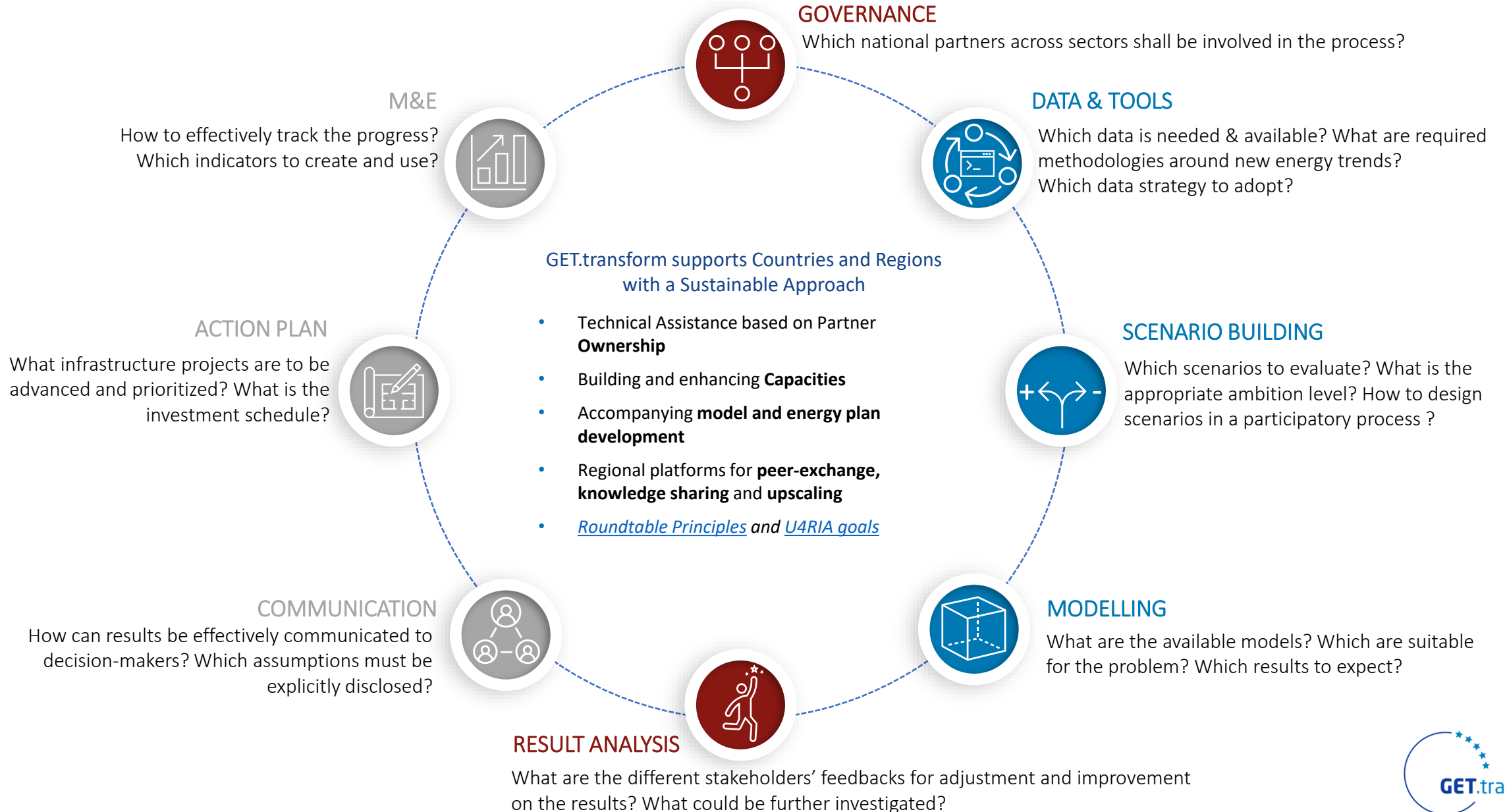
Source: Own elaboration with inputs from [A new decision support method for local energy planning in developing countries](#)

# Long-Term Energy Planning Support Approach





# Prominent Components of the Planning Process



# GET.transform Long-Term Energy Planning Support Highlights

## PERU

Strengthening planning capacities, expanding energy modelling and enhancing the National Energy Plan to advance the energy transition

## LAC REGIONAL

Strengthening capacities through peer exchange and summary of best practices on LTES of 14 LAC countries (jointly with UN ECLAC and IRENA)

## ESWATINI

Supporting investment decision making through an enhanced short-term generation expansion plan

## AFRICA REGIONAL

Supporting knowledge products development for the 5 African Power Pools in the African CMP

Strengthening capacities through peer exchange and summary of best practices on LTES of 10 Africa institutions (jointly with AUC and IRENA)

# Deep-Dive into Long-Term Energy Planning Support in Peru



## OBJECTIVE

Peru strengthens its energy transition **planning practices** and **capacities** and has an updated and official **national energy plan**



## THE CHALLENGES

- **Modelling and scenarios** do not yet properly integrate **transition considerations**, e.g. renewable energy competitiveness, distributed generation, electrified transport, 2050 time-horizon, etc.
- The National Planning Unit faces **capacity challenges** to operate and update the national planning system models.
- The **Planning Process** needs to be revised for the energy plan to be an official national document.



## OUR SUPPORT

Support Peru's **Ministry of Energy and Mines (MINEM)**, with **expertise, capacity building, provision of modelling inputs and methodologies** for the enhancement of the planning system and update of the National Energy Plan



## EXPECTED RESULTS

Improvement of **energy planning practices, strengthened planning capacities, identification of opportunities for the energy transition.**



## SCALING UP

Upscaling through peer-exchange at the Regional Forum of Energy Planners of **LAC – FOREPLEN**



# Deep-Dive into vRES Grid Integration Support in Eswatini: Updating Grid Codes



## OBJECTIVE

- Eswatini strengthens its power sector regulatory environment and harmonises its **grid codes** with the SAPP Regional Grid Code.



## THE CHALLENGES

- **Ensuring alignment** between different grid codes including the revised Network Code and Renewable Power Plant Code.
- **Identifying key stakeholders** with defined roles and responsibilities to understand expectations and **generate consensus** for **successful implementation**.
- Defining a clear **implementation plan** for the **Distribution Network Code** that corresponds to stakeholders' expectations.



## OUR SUPPORT

- Support Eswatini's Ministry of Natural Resources and Energy with **expertise, capacity building, inputs and methodologies** for the enhancement of the National Grid Code.



## EXPECTED RESULTS

- Updated set of existing **grid code documents**, newly developed **Distribution Network Code**, **strengthened** grid codes development capacities.



## SCALING UP

- Upscaling and sharing best practices through **peer-exchanges** at the regional level in the **Southern African Power Pool**.

# Deep-Dive into Short-Term Generation Expansion Planning in Eswatini



## OBJECTIVE

Eswatini strengthens its **capacities** and has an updated and official **Short-Term Generation Expansion plan** aligned with the new Energy Masterplan 2050.



## THE CHALLENGES

- **Modelling and scenarios** do not yet properly integrate **transition considerations**, e.g. renewable energy competitiveness, distributed generation, electrified transport, 2050 time-horizon, etc.
- The National Planning Unit faces **capacity challenges** to operate and update the national planning system models.
- The **Planning Process** needs to be revised for the energy plan to be an official national document.



## OUR SUPPORT

Support Eswatini's **Ministry of Natural Resources and Energy (MNRE)** with **expertise, capacity building, provision of modelling inputs and methodologies** for the update of the Short-Term Generation Expansion plan



## EXPECTED RESULTS

**Strengthened planning capacities, optimized short-term capacity expansion and generation dispatch, identification of opportunities for the energy transition.**



## SCALING UP

Upscaling through peer-exchange at the Regional Forum of Energy Planners of **LAC – FOREPLEN**



# Lessons We Learned that We Want to Help Our Partners with

**1**

The planning process is as important as the model

**2**

Using existing capabilities and building on those help ensure planning sustainability

**3**

Interinstitutional coordination and alignment are key for a holistic transformation

**4**

Participatory processes promote collaboration and help create consensus

**5**

Scenarios are a great way of dealing with uncertainty and exploring alternatives

**6**

Building, reviewing, updating and improving planning processes transparently ensure trust



# What GET.transform Offers

- Trusted **international** and **regional partner** institutions
- Combination of **technical** expertise, **cultural** awareness, **local** knowledge
- **Relations** to public entities internationally, allowing for facilitation of experience exchange
- Long-term staff **on the ground**, close relationships to partners
- In consequence, **in-depth knowledge** on political situation, context, challenges, cooperation between public bodies
- Expertise in **organisational development**
- Partner-centred process with strong ownership, ensuring **sustainability** of the support



# Partnerships and Transformation Experts

## REGIONAL



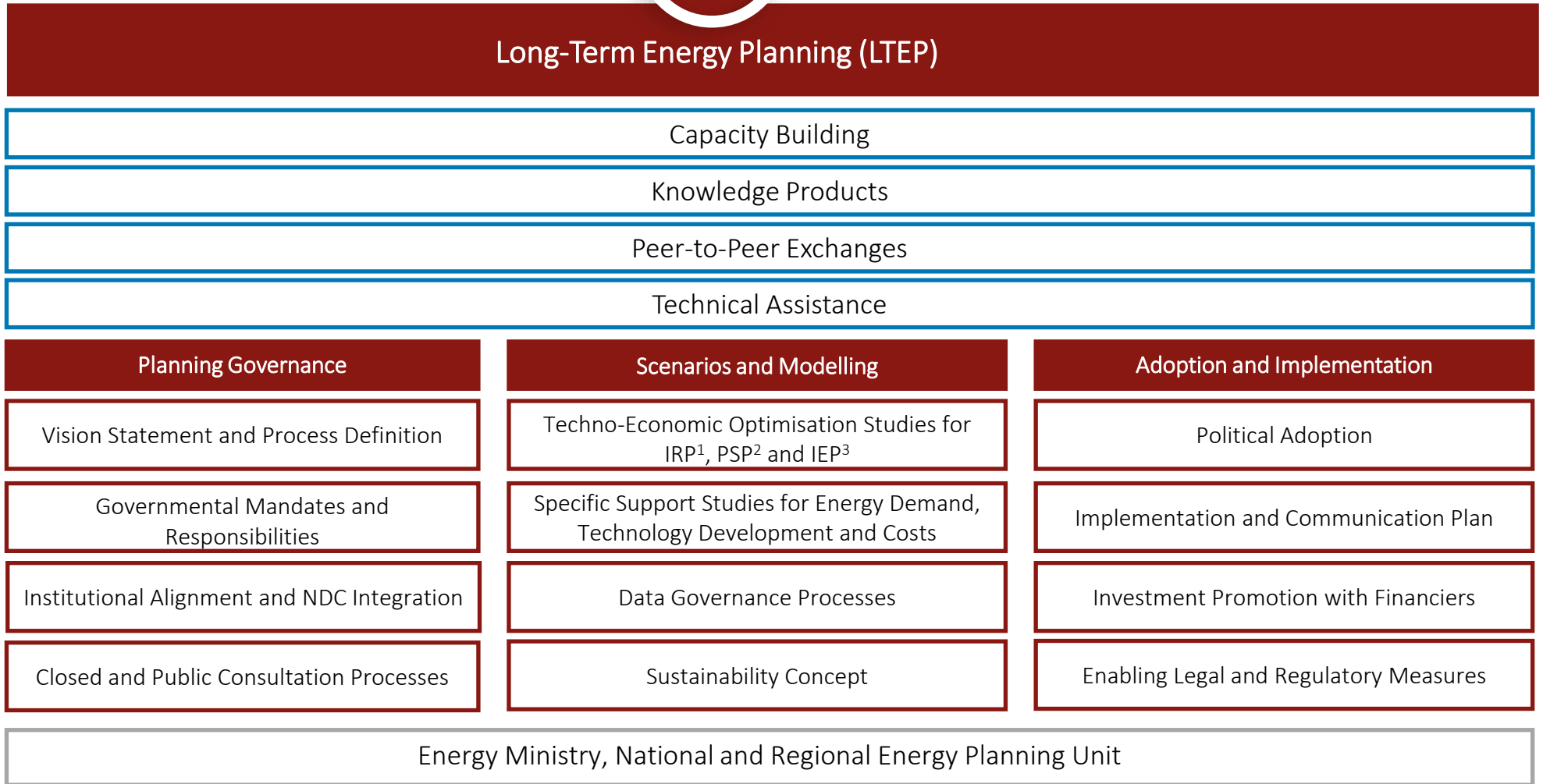
## INTERNATIONAL



## TRANSFORMATION EXPERTS



# Long-Term Energy Planning – Advisory Services



<sup>1</sup>IRP: Integrated Resource Planning

<sup>2</sup>PSP: Power System Planning

<sup>3</sup>IEP: Integrated Electrification Planning







“There is no favourable wind for the sailor who doesn’t know where to go”

Seneca

# Thank You for Your Attention

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