

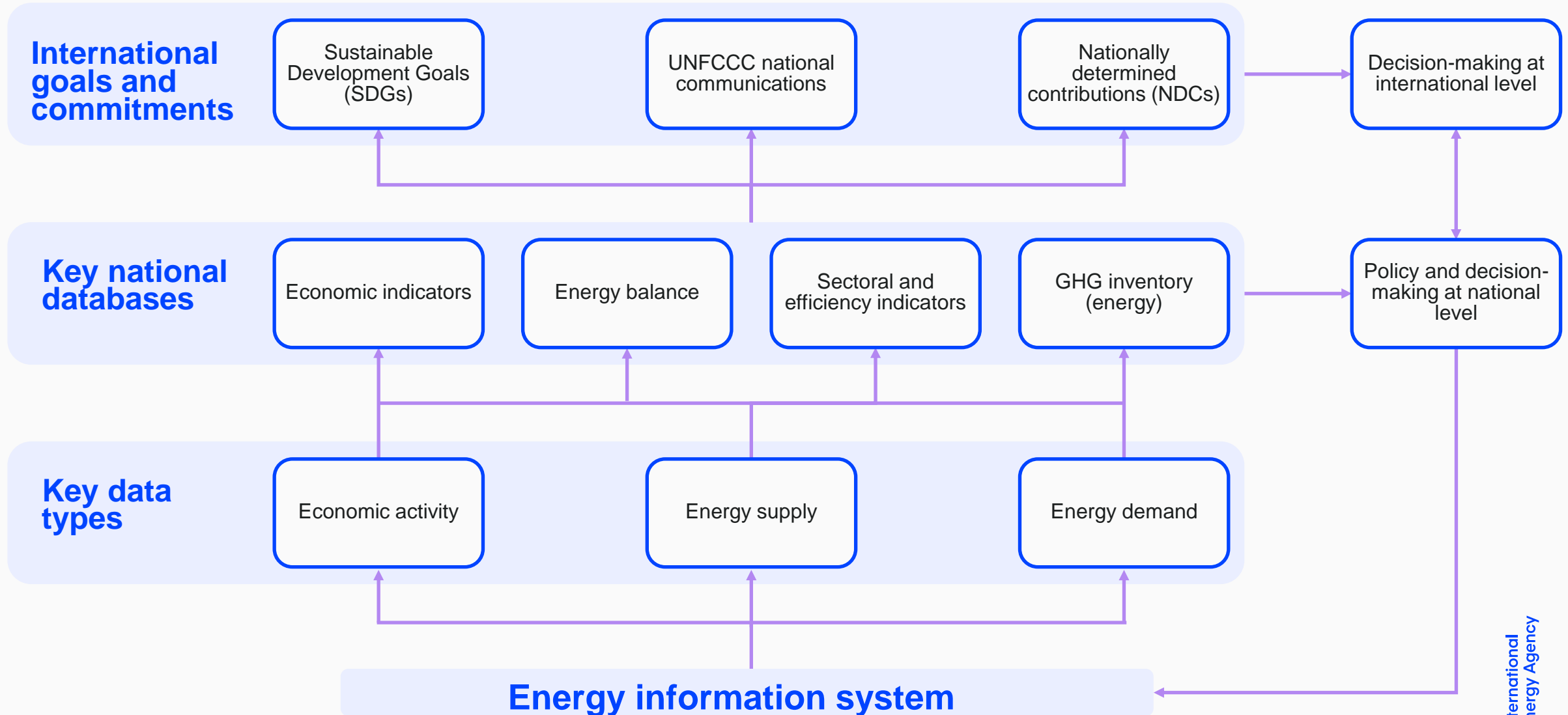


A guide to designing an energy statistics roadmap

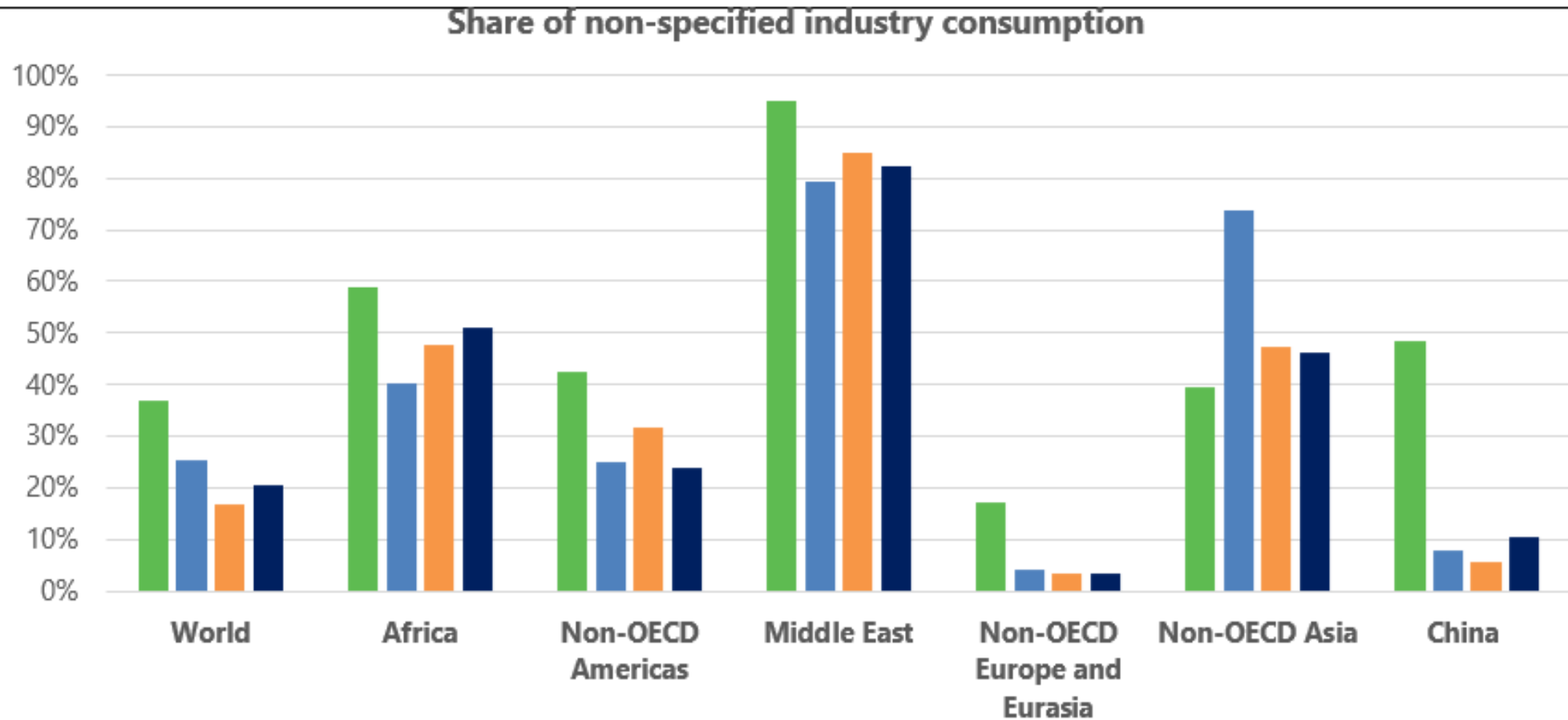
Roberta Quadrelli, IEA Energy Data Centre

UNECE Expert Forum for Climate Change Statistics, August 2024

Energy data key to track national and international policies



Energy demand data require global improvement – example for industry

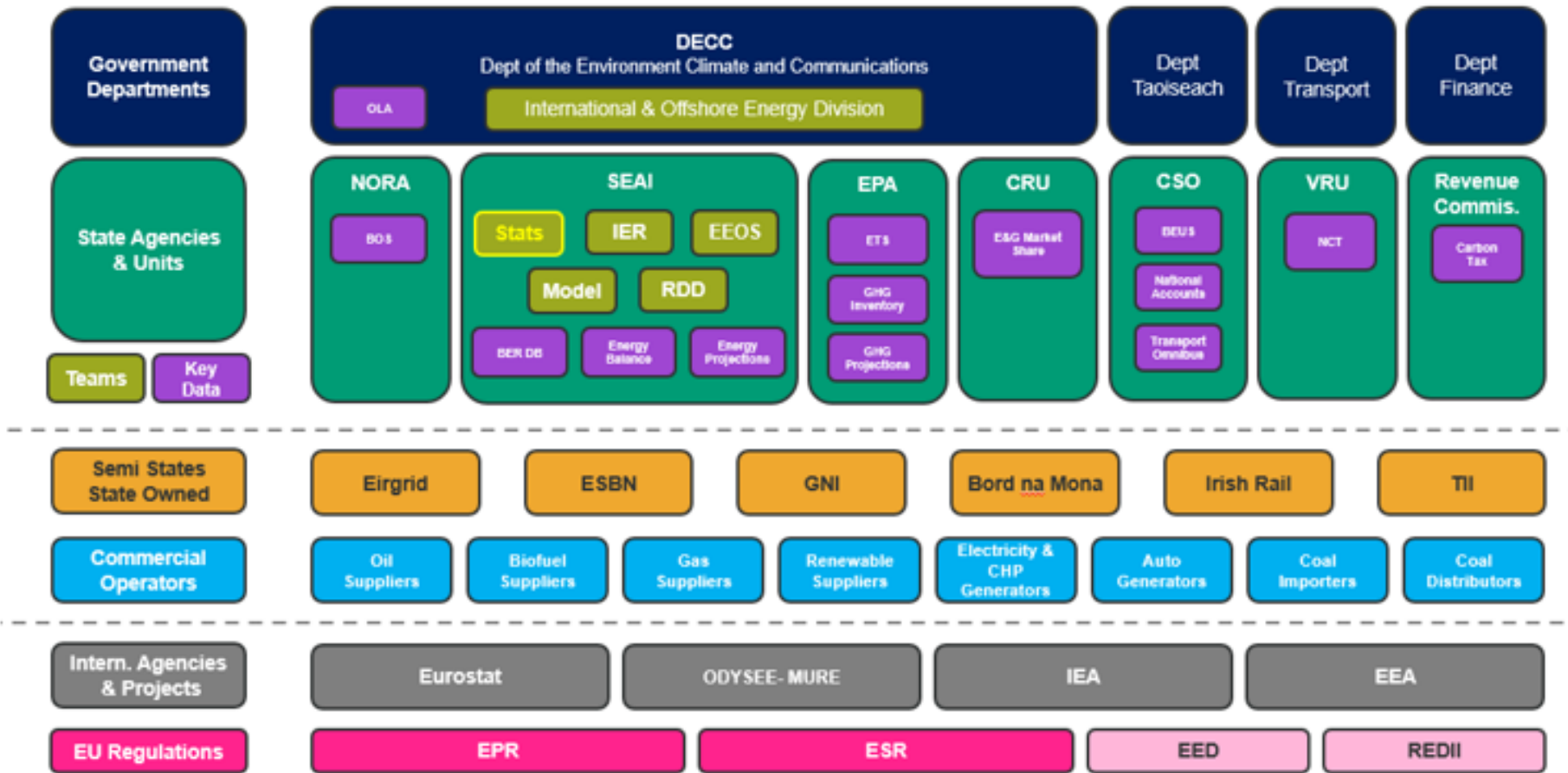


National energy information system require improvement, across countries

Developing complete energy data requires a solid information system

Example of national energy information system described by an IEA member

National Energy Information (Eco)system

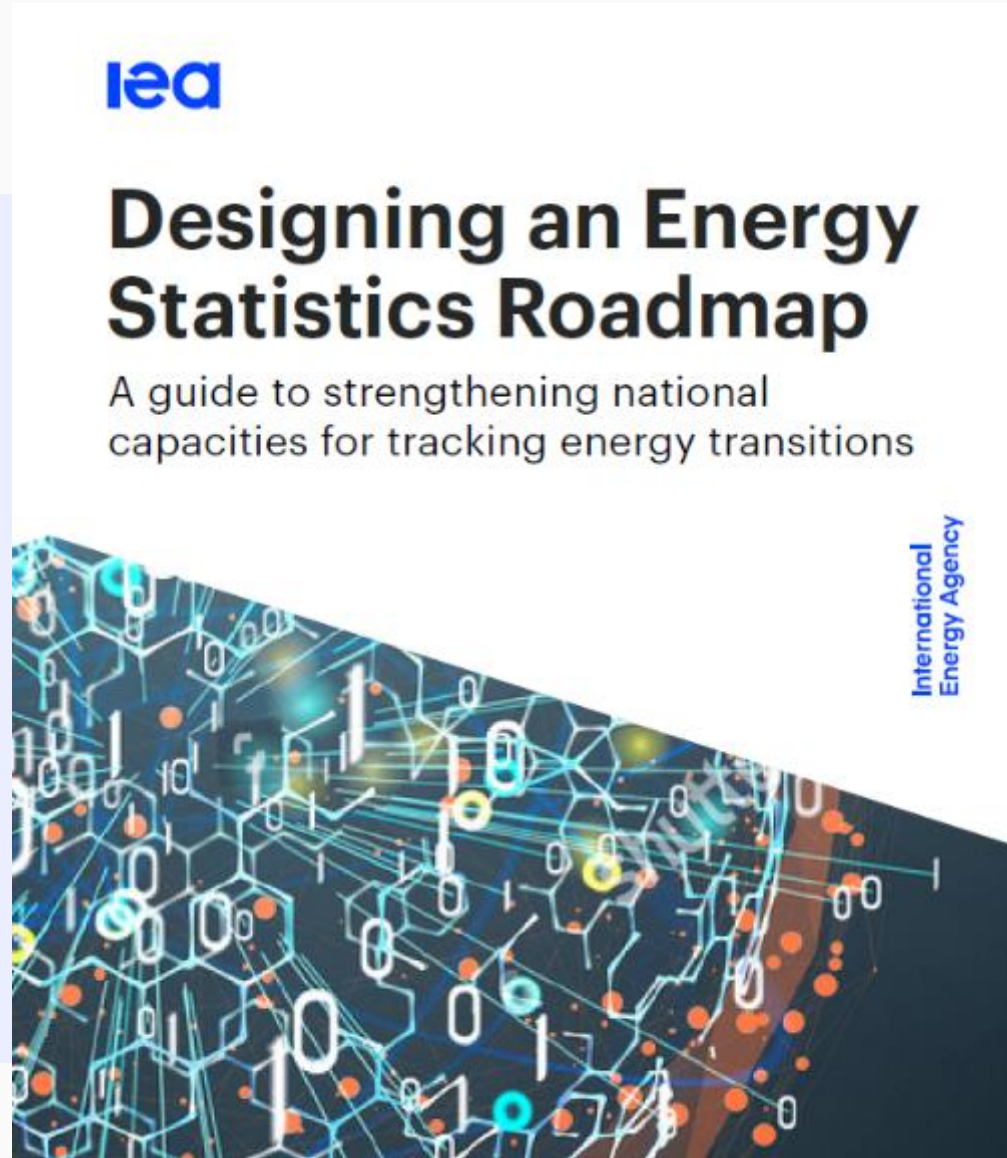


Key question: How to design a national energy information system?

Upcoming IEA guide – release expected in September

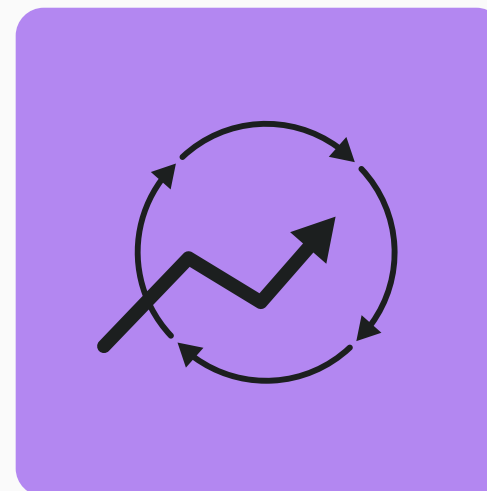
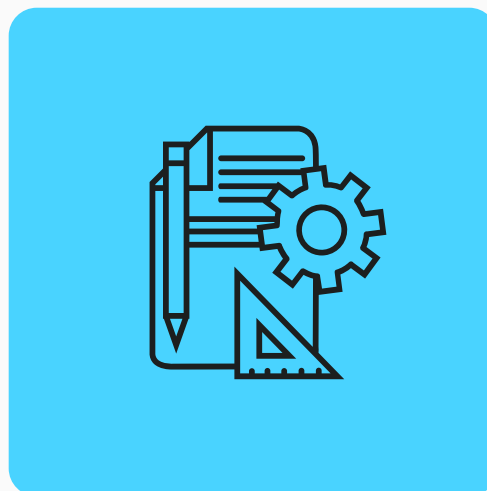


Based on IEA's **international collaborative experience**, including energy statistics capacity building programs; and **consultation** of several country data experts



What the IEA Guide offers

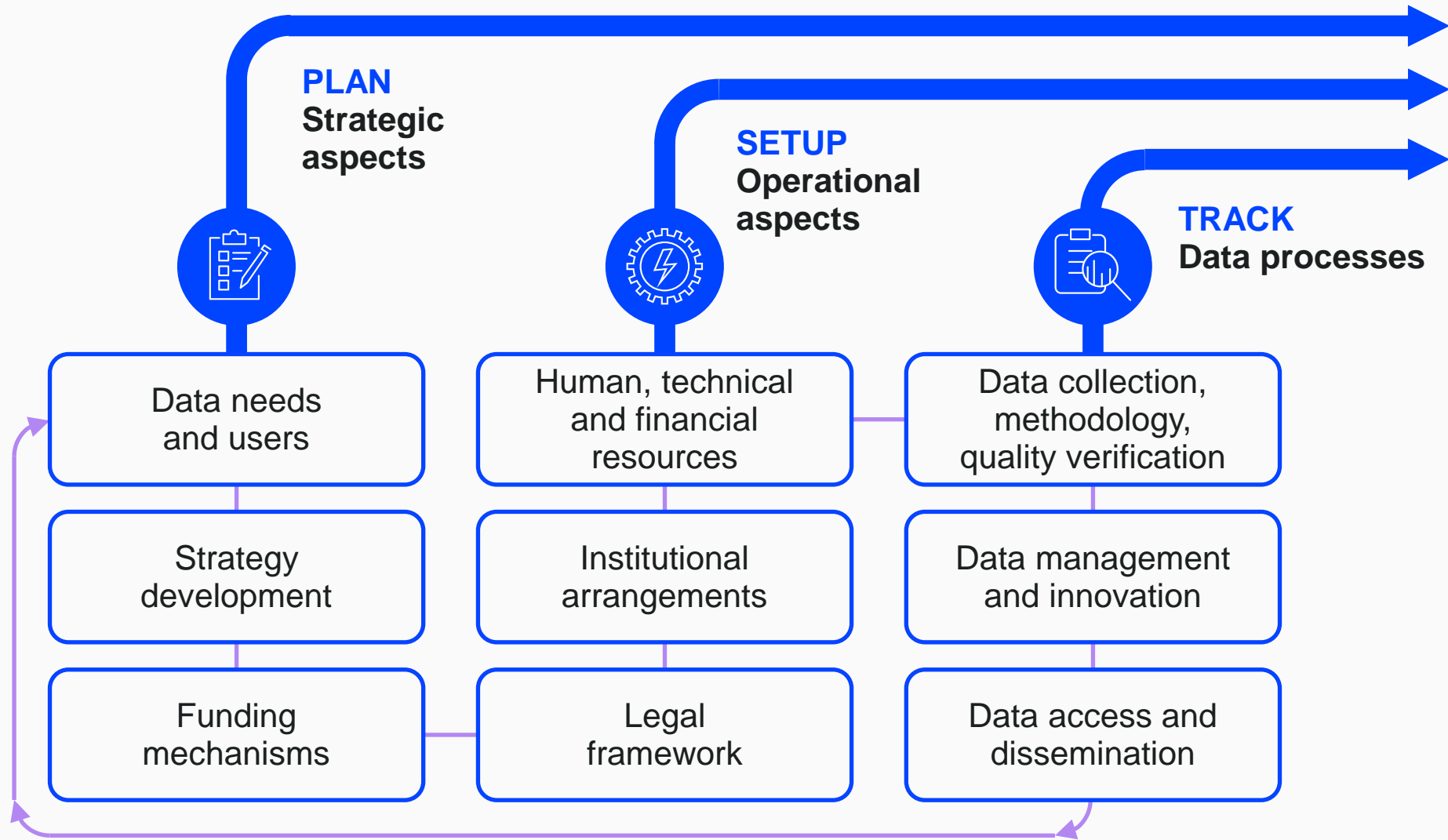
A comprehensive assessment framework for national institutions to assess existing national energy information systems



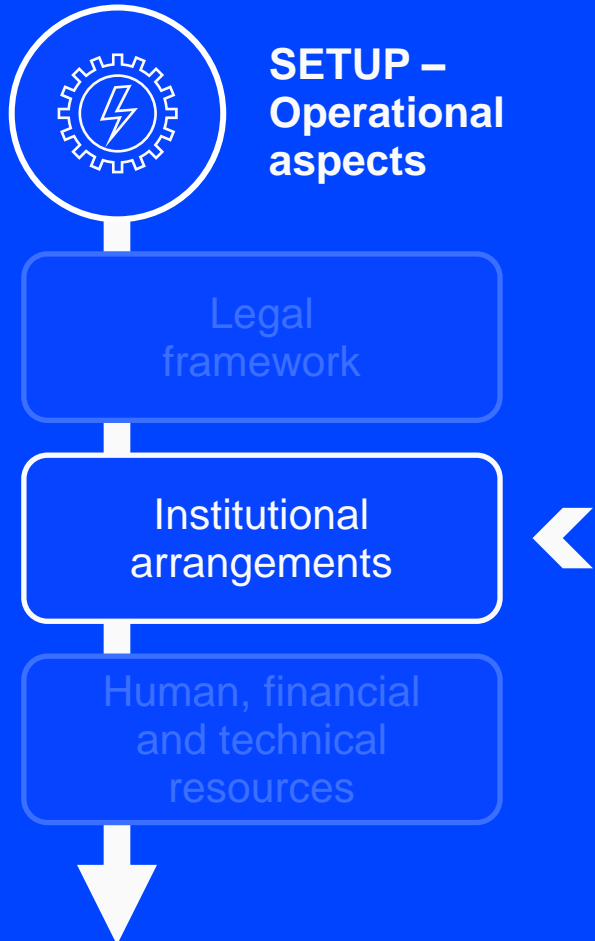
A guide for the development of national energy statistics roadmaps

The proposed framework helps understand strengths, weaknesses, and action priorities, based on experiences from across countries globally

The IEA framework for developing national energy statistics



All components require dedicated work



The Guide describes each component – example for “SETUP - Institutional Arrangements”

- Institutional arrangements for energy data collection & dissemination vary across countries
- Two extremes:
 1. The ministry responsible for energy policies (MoE) is also the primary data collector; little to no interaction with the NSO.
 2. The NSO is legally responsible for collecting, validating and disseminating energy information; MoE may use outputs, but interaction between the two state bodies is limited.
- Possible that several stakeholders are involved in provision, validation and release of energy statistics
- Institutional arrangements fill data gaps and avoid duplicated work
- Requires clear picture of relevant stakeholders, interlinkages and mandates, ensuring cost-efficient use of resources



It provides guiding questions for each component

Example for the dimension “PLAN – Long-term objectives”

Data needs and users

- *What relevant energy policies are in place requiring data?*
- *Is it clear who the data users are?*
- *How are the evolving data needs identified and addressed?*

Strategy development

- *What currently guides the development of energy statistics?*
- *Is there a strategy to produce and develop energy data? Who’s coordinating it?*
- *Is the strategy regularly updated to respond to changing needs?*
- *Are energy statistics connected to policy design and evaluation?*

Funding mechanisms

- *What entities are funding energy statistics and through what mechanisms?*
- *Are the funding mechanisms sustainable for routine/additional work?*

It provides Good practices for each component based on country experiences

Example for “SETUP - Institutional arrangements”

Best practices

Low-hanging fruit

- The entity responsible for producing official national energy information is in frequent communication with national stakeholders to facilitate data exchanges and control data quality
- If the entity responsible for producing official national energy information is different than the NSO, they coordinate their energy data collection and dissemination activities
- If responsibility for international reporting falls to different entities (e.g. energy vs. climate), they coordinate their work to harmonize information.

Medium-term goals

- There is a dedicated entity for coordinating energy statistics activity, with sufficient mandate and tools to collect and disseminate energy information (See also “Legal framework”)
- Responsibility for compiling and publishing energy statistics, energy balances, and energy efficiency data is clearly defined
- There is a dedicated aggregator at the national level, even if responsibility for primary data collection falls to multiple entities
- The entity responsible for producing official national energy information maintains a publicly accessible, centralized repository for energy information
- Data are uniformly applied across government reporting channels to avoid inconsistencies in different policy documents



Formalization of Institutional Arrangements: Canada

- **Natural Resources Canada (NRCan):**
 - Responsible for energy end-use data across regions and sectors, based on data from Statistics Canada (StatCan) and other sources.
- **Memorandum of Understanding** between NRCan and StatCan (signed 2013, renewed 2019)
 - Governs data collection, sharing and disclosure confidentiality and use, and departmental access to information
- **Fosters trust and collaboration among institutions and survey respondents, ensuring data security and confidentiality**



Formalization of Institutional Arrangements: Canada

- Letters of agreement:
 - Govern **implementation** of data collection and sharing
 - E.g. annual **trilateral letter of agreement** between NRCan, Environment and Climate Change Canada, and StatCan **establishes details for sharing three data products**:
 - 1) Report on Energy Supply and Demand
 - 2) Annual Survey of Industrial Consumption of Energy
 - 3) Survey of Secondary Distributors of Refined Petroleum Products
- Includes **detailed schedule, deliverables and payment obligations**
- Letters of agreement between NRCan and StatCan **covers details of survey implementation**, e.g. Survey of Household Energy Use and Survey of Commercial and Institutional Energy Use
- Regular meetings including **working groups, committees and senior management** address specific needs and issues, and implementation of the signed agreements

It provides a description of the framework for a set of contributing countries

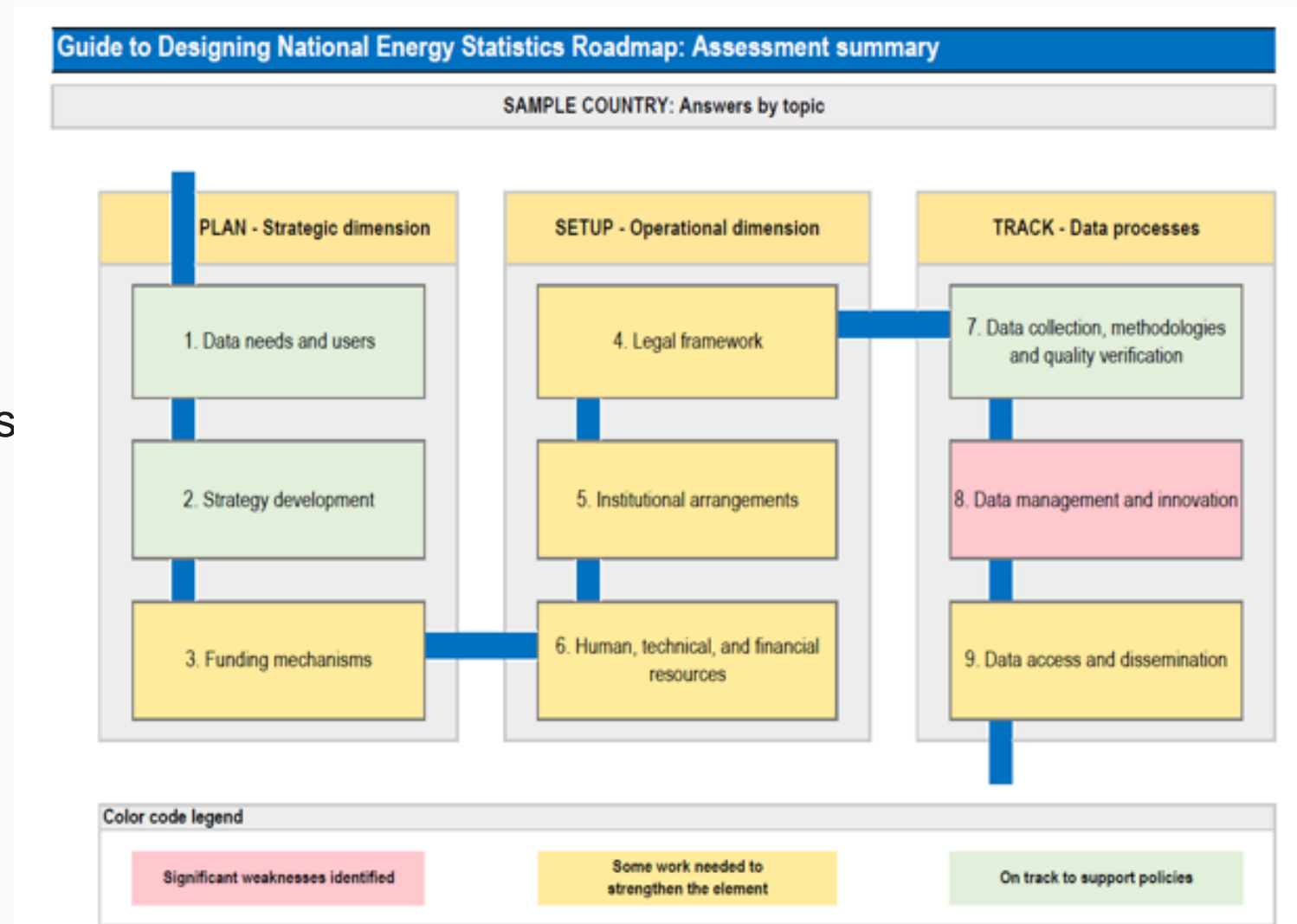
PLAN	Strategic aspects of the framework
Data needs and users	<p>Energy data are collected to produce annual statistics. However, some gaps exist as the available data are not enough to fully inform policy makers or for planning. Data are not robust enough as they need strengthening for accuracy and completeness.</p> <p>Additional data requests outside of regular data collection are collected and assessed on case-by case basis to see how these data could be collected. For instance, a query can be sent to the utilities to see if such data exists, and if it is, then a tool can be developed to capture that data.</p>
Strategy development	<p>There is no written long-term data strategy, but it would be good to create one. There is a need to work more closely with the Ethiopian Statistical Service (ESS) to include questions on energy supply and consumption data requirements in their welfare monitoring surveys (which are conducted every 5 years).</p> <p>Also, a long-term objective is to work on automation and to develop an online data repository. Data are currently input manually, but work is ongoing to develop an online reporting platform through a consultancy. The National Energy Database and Information System (NEDIS) is valuable for storing energy data in sustainable manner. Due to technical and financial issues, the NEDIS has not been operational since March 2024.</p>

Excerpt of a country summary (Ethiopia) from the Annex of the Guide.

The Guide is accompanied by an assessment tool (Excel)

The roadmap assessment tool:

- Mirrors the structure of the roadmap
- Helps quickly identify strengths and weaknesses
- Generates a report that can easily be shared



Output report of the tool. Colours reflects different levels of maturity of individual components

IEA keen to support national capacity development through training and bilateral work with interested countries



Analysis of stakeholder mapping for energy statistics (“SETUP – Institutional arrangements”) at an IEA workshop on “Designing a national energy statistics roadmap” held in Addis Ababa (May 2024).



The IEA Guide Designing an Energy Statistics Roadmap

Thank you for your
attention!

- While energy data are very relevant for national and international policy, significant data gaps exist across countries globally
- This guidebook supports professionals and decision-makers, describing strategic pathways for improving energy statistics
 - **Assessment framework** helps identify strengths, weaknesses, and action priorities
 - Facilitates development of **strategic action plans and resource allocation**
- Through this guidebook, the IEA aims at **assisting countries to develop national energy information systems**, regardless of their current status, with the ultimate benefit of improving global data.

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