

Energy Statistics and Indicators Training

Tbilisi (Georgia), 5-9 November 2012

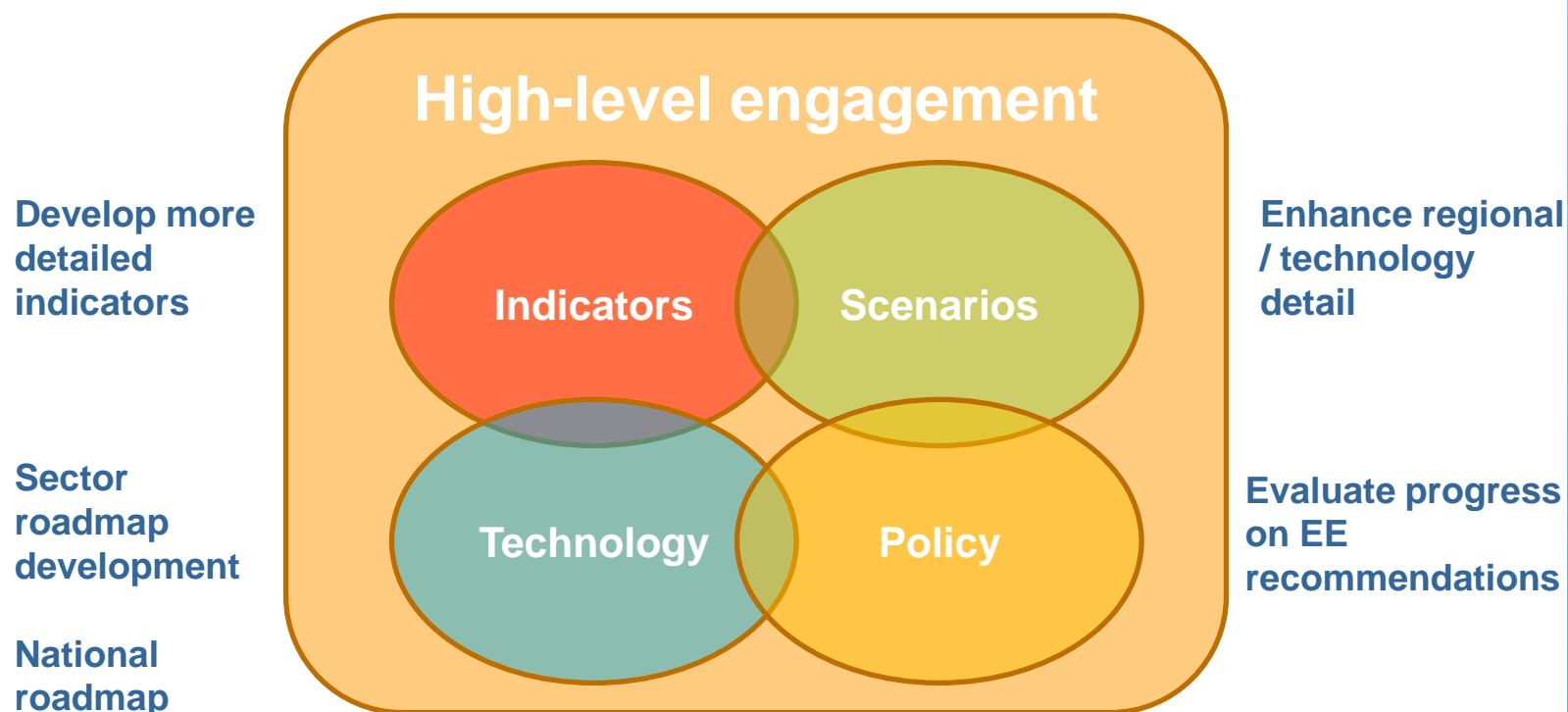
Energy Efficiency Indicators Overview

Worldwide Trends
in Energy Use and
Efficiency

Key Insights from
IEA Indicator Analysis

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The IEA has a broad range of activities to help countries exploit cost-effective energy efficiency potentials



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What are energy indicators?

- Any data or information which “indicates” an energy situation or an evolution in the energy situation
 - E.g. oil production, growth in imports, etc.
- However, people usually call energy indicators a ratio between an energy consumption divided by “something”
 - Population, GDP, floor area, etc.
- The most often used energy indicators are:
 - Energy consumption per capita
 - Energy consumption per unit of GDP

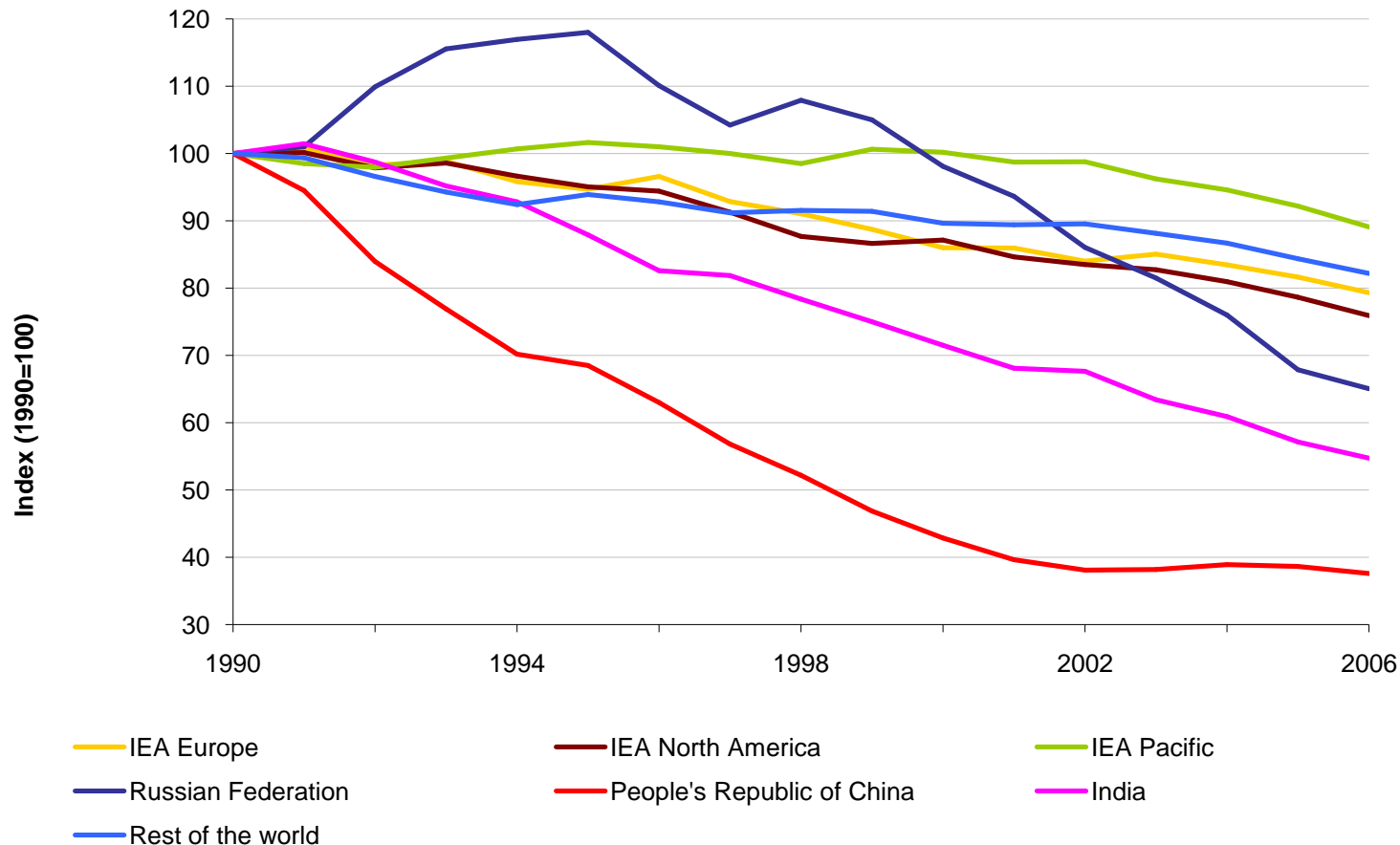
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Energy Consumption per Unit of GDP

Index for 1990 to 2006



All countries and regions experienced a decrease in their energy use per GDP

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What are Energy Efficiency Indicators?

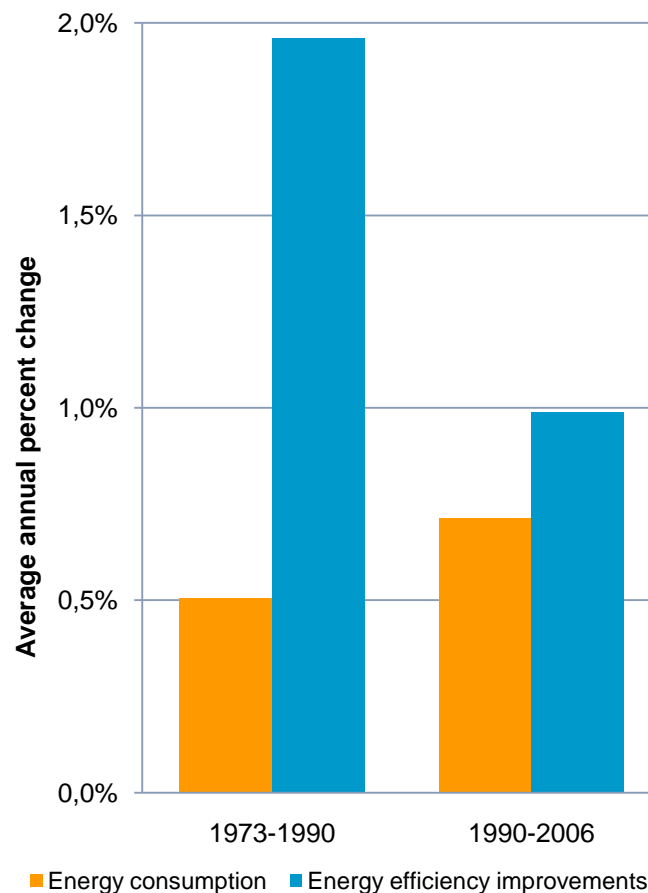
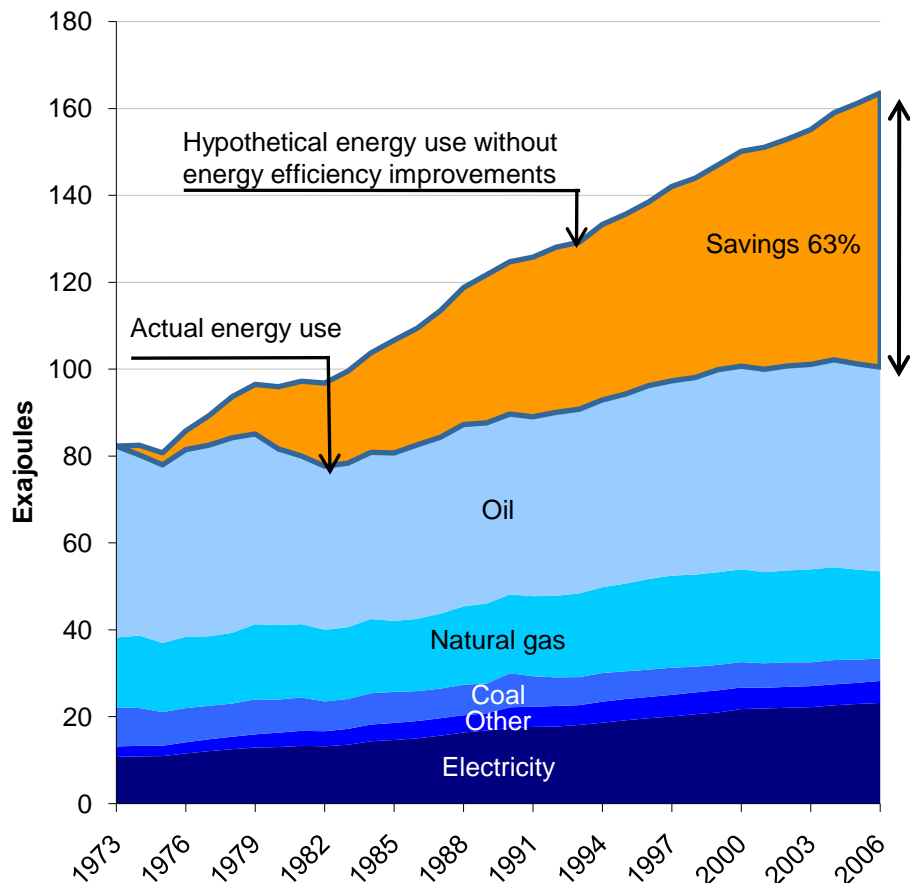
- Tools: based on detailed statistics to analyse energy use and efficiency trends
- Examine impacts of economic activity and structure, income, prices, policies, etc
- Support national policy-making and are used to shape priorities for future action and to monitor progress
- Used for estimating CO₂ savings, so a key element of environment policy tool

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Highlights energy efficiency



Policy changes in response to the oil price shocks did more to restrain growth in global energy consumption than policies implemented since the 1990s

Worldwide Trends in Energy Use and Efficiency

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Overview of IEA Indicators Work

- Establish a harmonised framework for data collection and analysis
 - Harmonisation => Comparability
 - Comparability => Understanding of global trends and drivers
- Produce meaningful cross-country analysis to provide guidance to policy-makers on:
 - Underlying drivers (economic activity & structure, income, prices...)
 - Trends in energy use and CO₂ emissions
 - Energy efficiency opportunities and progress
 - Policy effectiveness

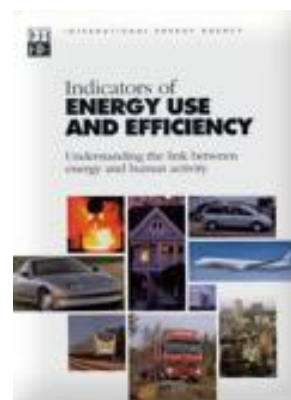
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The Early Days....

- Data for only 11 IEA countries
- Long lags in data availability
- Minimal country involvement
- Low profile in IEA and non-IEA member countries
- Little political support



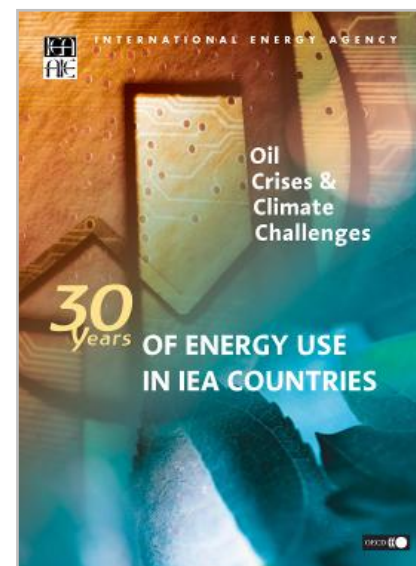
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From 2000...Growing interest!

- Increase in countries to 14
- Still long lags in data availability
- Countries more involved, links with ODYSSEE
- 30 years is IEA best-seller
- Growing political interest



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Now....Everyone's a fan

- Data for 22 IEA countries, start to include others
- Lags in data availability reduced
- Significant country involvement and strong co-operation with ODYSSEE
- Key IEA activity - many reports
- Significant political support at highest levels



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Progress has been achieved through co-operation

- Member and non-Member countries
- ODYSSEE network
- APEC
- Industrial associations
- WBCSD
- ISO/IEC
- World Bank
- United Nations
- Asia Pacific Partnership

The importance of collaboration



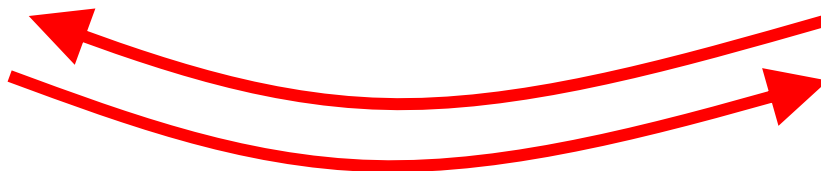
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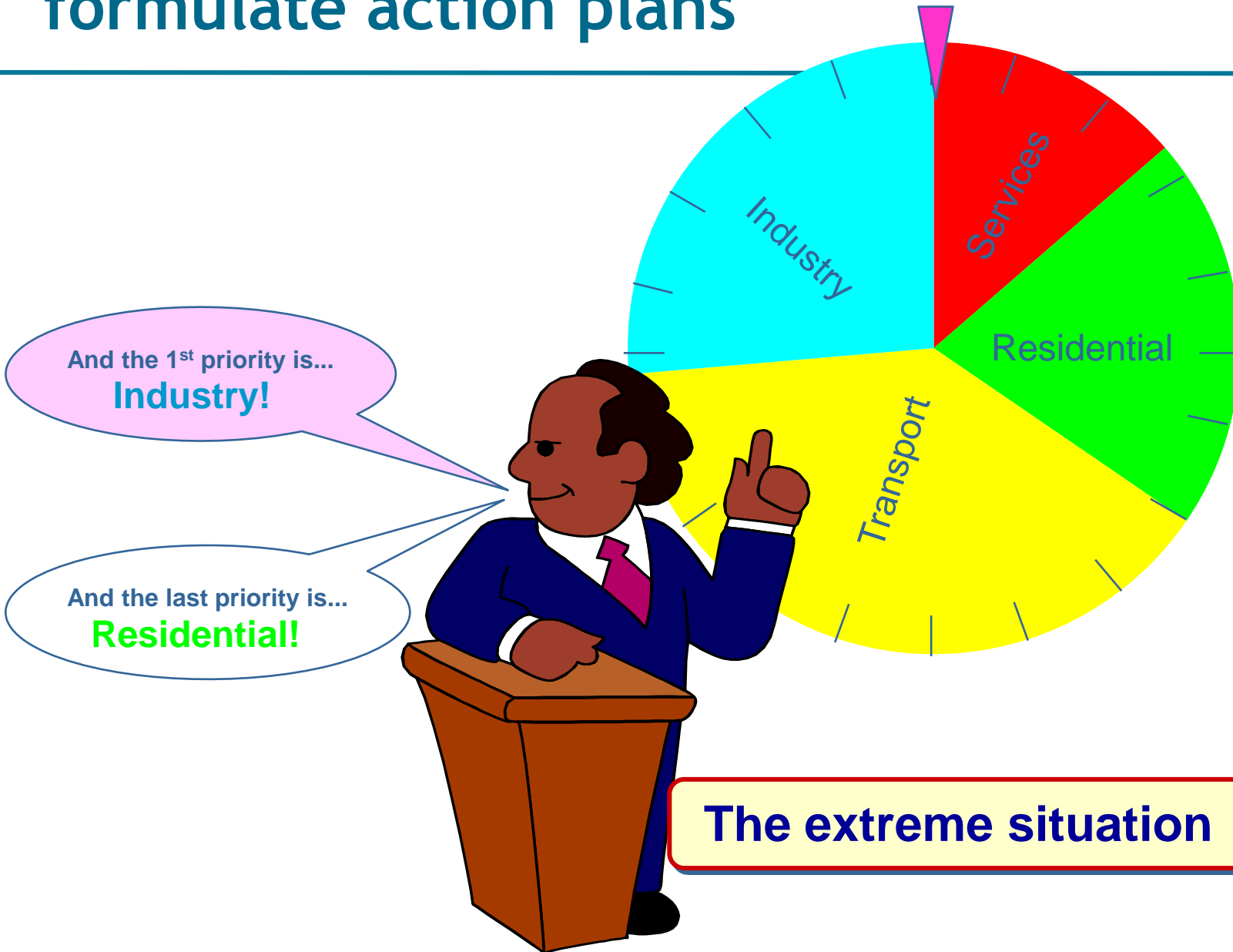
Collect, process, release the necessary detailed statistics



Importance of a dialogue between the three parties for having a better understanding of the needs, expectations as well as problems and issues of the other parties



Indicators are needed to formulate action plans



The extreme situation

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Limit the data collection to what is necessary

But what is necessary?

Modelling

Census

Data quality / timeliness

Appliances

Energy data

Residential

Industry

End uses

Process

ISIC: 2, 3, or 4 digits

Priorities depend on many elements: climate (heating vs. cooling), structure of the economy (industry vs. services) size of the country (transport, domestic aviation), energy mix (biomass), electrification rate, GDP/capita, ...

Surveys

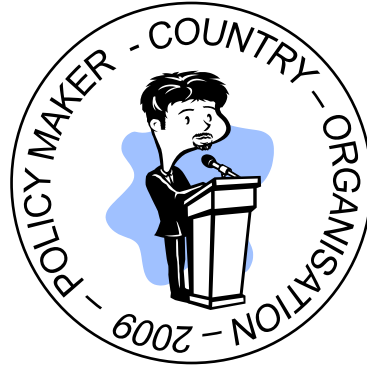
transport

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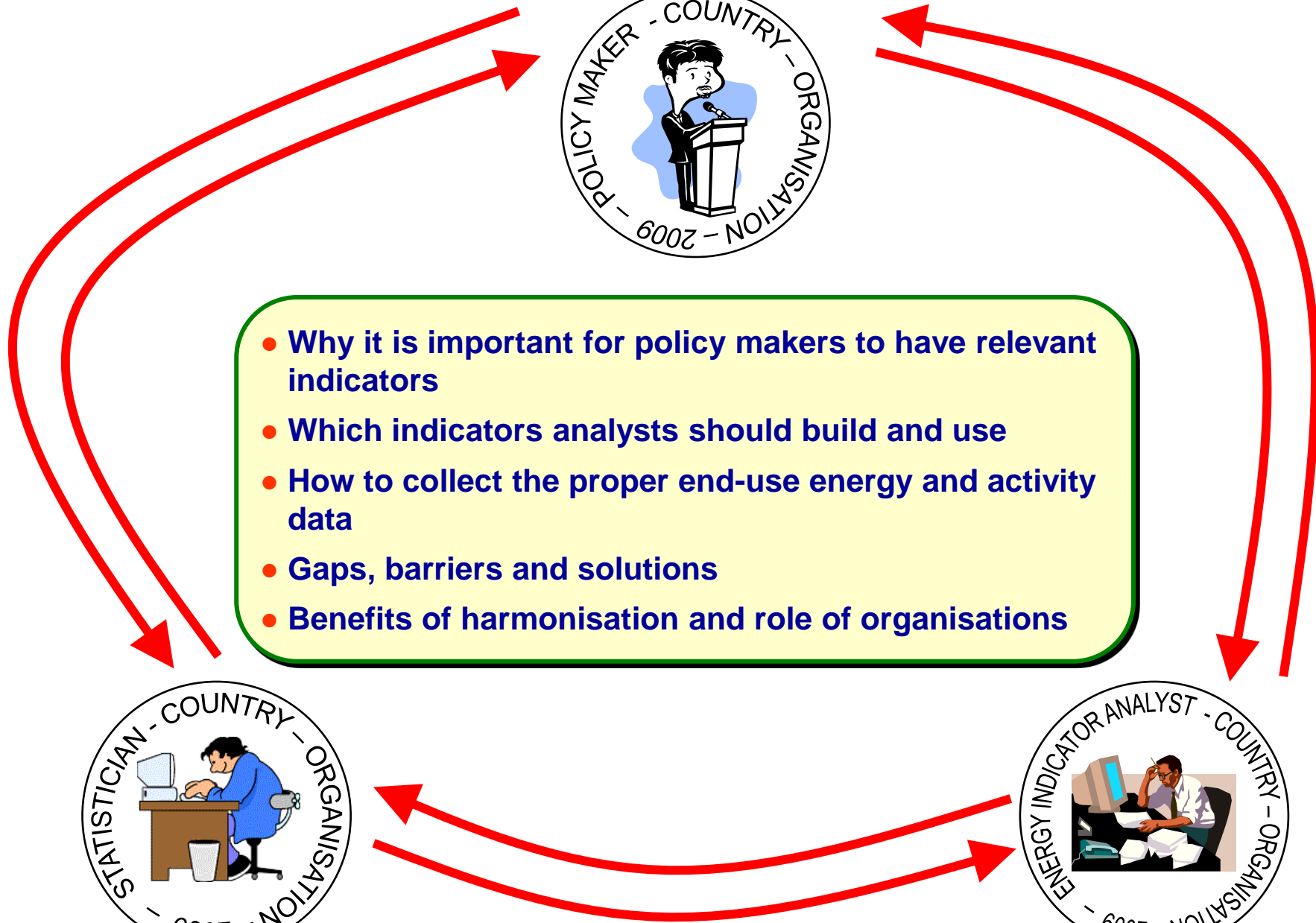
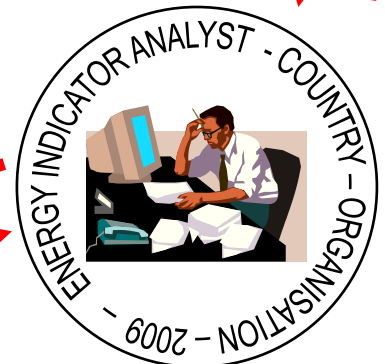
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Objectives: a Better Understanding



- Why it is important for policy makers to have relevant indicators
- Which indicators analysts should build and use
- How to collect the proper end-use energy and activity data
- Gaps, barriers and solutions
- Benefits of harmonisation and role of organisations



The next day

■ Indicators overview

- The energy efficiency indicators template - the need to go beyond what is collected in the balance
- Understanding energy efficiency indicators

■ Energy efficiency indicators

- Practical exercises 1: how-to?
- Practical exercises 2: Decomposition

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**You can contact our indicators
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