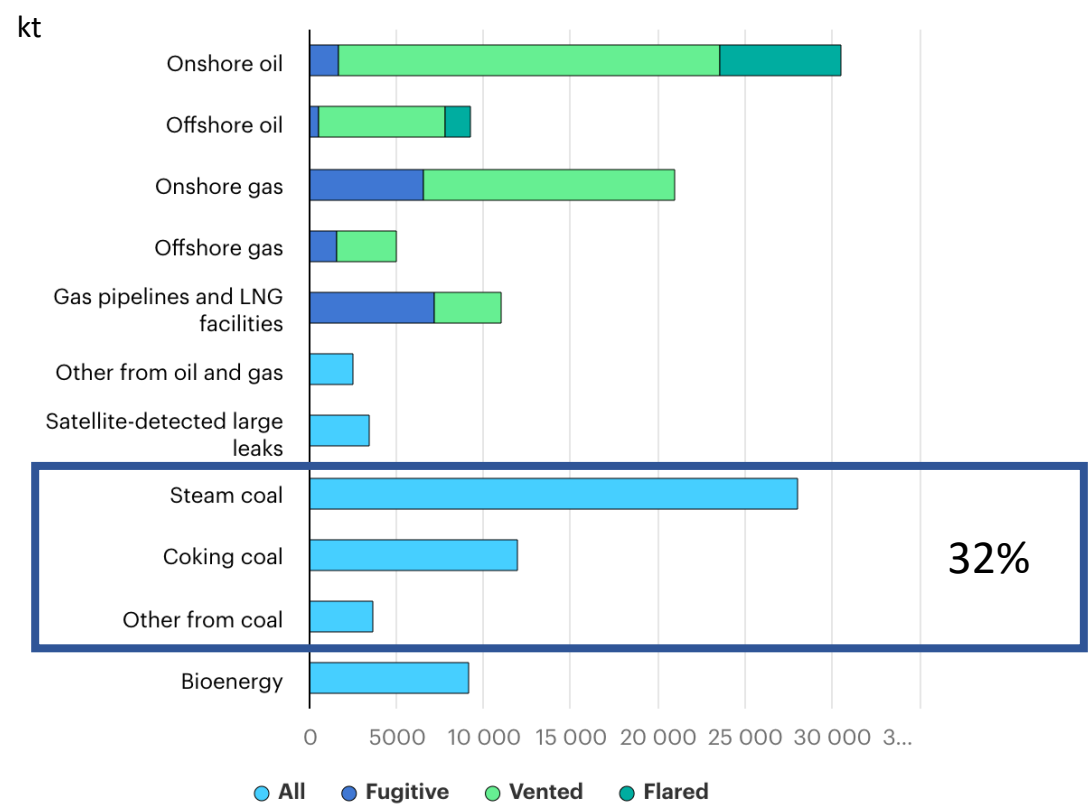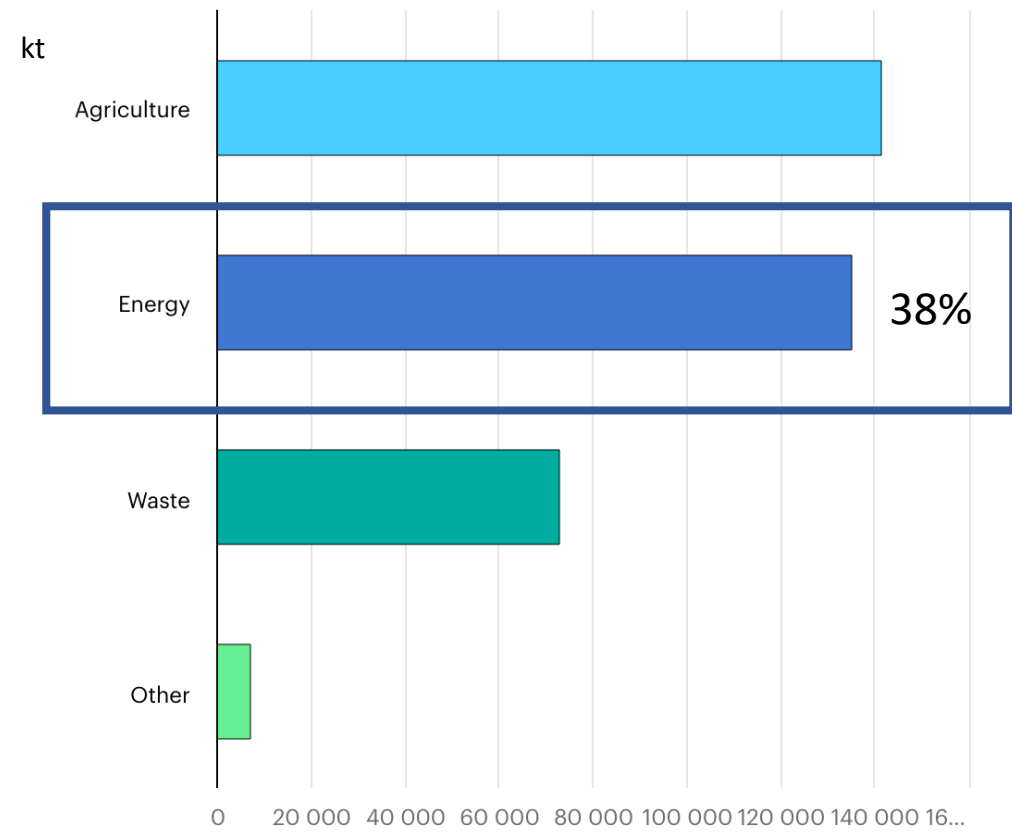March 2022

International Methane Emissions Observatory

Manfredi Caltagirone

Global Methane Emissions from Energy & Coal Sector

International Energy Agency (2022), Methane Tracker Database, IEA, Paris.

IMEO as implementing vehicle for the Global Methane Pledge

111 Countries/parties that have signed on to the EU- and US-led Global Methane Pledge

70% Portion of the global GDP covered by signatories

**30%** Collective methane reduction target by 2030

50% Global anthropogenic methane emissions covered by the Pledge

The Verification Role of IMEO in the EC Methane Legislative Proposal

1. [...]the International Methane Emissions Observatory shall be attributed **a verification role with respect to methane emissions data**, in particular with regard to the following tasks:

   - **aggregation of methane emissions data** in accordance with appropriate statistical methods;
   - **verification of methodologies and statistical processes** employed by companies to quantify methane emissions data;
   - **development of data aggregation and analysis methodologies** in accordance with scientific and statistical good practice to ensure a higher level of accuracy of emission estimates, with **appropriate characterization of the uncertainty**;
   - **publication of aggregated company reported data** by core source and by level of reporting, classified by operated and non-operated assets, in compliance with competition and confidentiality requirements;
   - **reporting** of findings on **major discrepancies** between data sources.

2. The Commission may **submit methane emissions data** to the International Methane Emissions Observatory, as made available to it by the competent authorities in accordance with this Regulation.

3. The information produced by the International Methane Emissions Observatory shall be **made available to the public and the Commission.**

Article 10, Regulation Of The European Parliament And Of The Council On Methane Emissions Reduction In The Energy Sector And Amending Regulation (EU)

IMEO interconnects better data with action on transparency, science, and implementation

UN environment programme
50 1972-2022

SCIENCE

TRANSPARENCY

DATA

IMPLEMENTATION
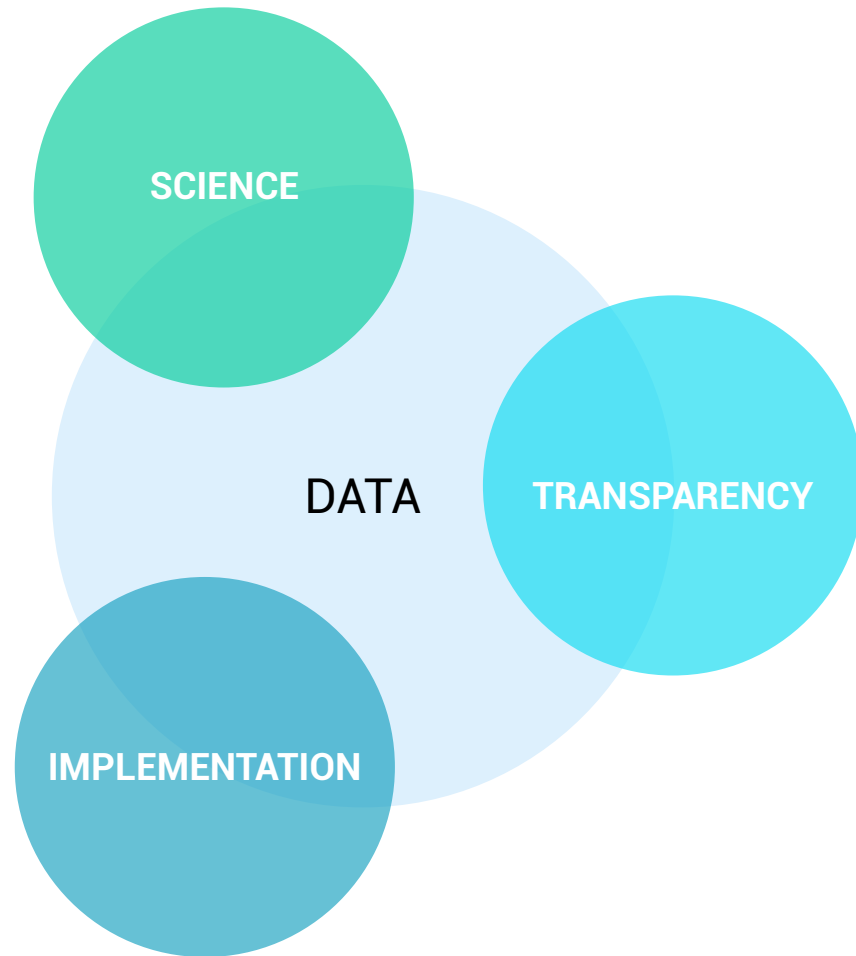
Close the knowledge gap
on fossil fuel methane emissions through **peer-reviewed studies and data reconciliation.**

Provide accurate, unbiased and up-to-date information
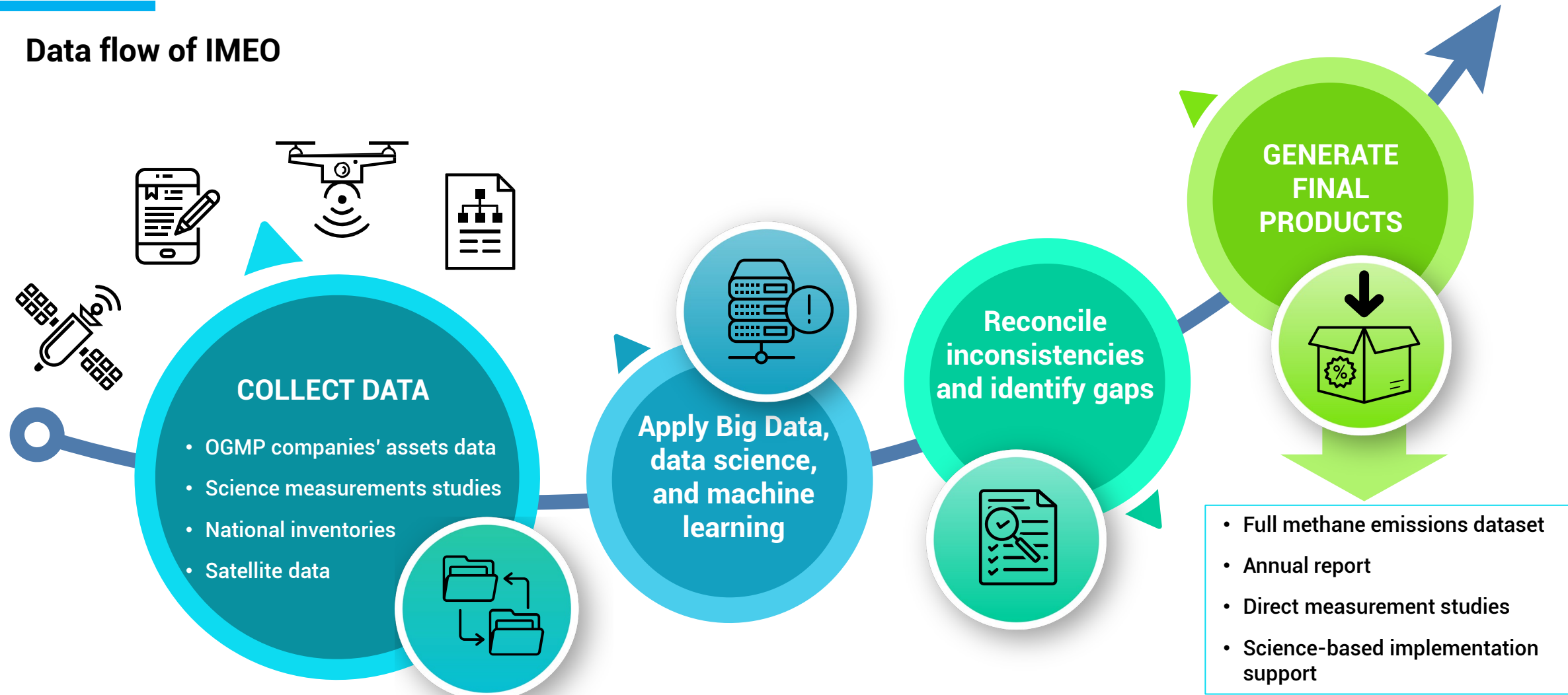on methane emissions attributable to fossil fuel operations

Raise awareness and increase the capacity of governments
to pursue **science based-policy options** to manage methane emissions from the fossil fuel sector.

A revolutionary approach to data will create the best existing picture of methane emissions globally

Data flow of IMEO

COLLECT DATA

- OGMP companies' assets data
- Science measurements studies
- National inventories
- Satellite data

Apply Big Data, data science, and machine learning

Reconcile inconsistencies and identify gaps

GENERATE FINAL PRODUCTS

- Full methane emissions dataset
- Annual report
- Direct measurement studies
- Science-based implementation support

UN environment programme
50 1972-2022

Initiating impactful new studies on coal methane emissions

UN
environment
programme

Poland
Direct measurements of coal emissions connecting bottom-up, top-down, and satellite measurements to develop emissions estimates for individual mines.

Satellites
Use TROPOMI data to characterize emissions at a basin- and country-scale and test how point source information can improve the results of regional quantification.

Australia
Pilot study in the Bowen Basin to reconcile bottom-up and top-down measurements using multiple methods with the goal of applying to a broader scale.

March 2022

Thank you

Manfredi Caltagirone