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Support for setting up national Building Stock Observatories

streamSAVE+ Dialogue Workshop on ‘Data for energy savings calculations: insights from key databases at EU and national level’

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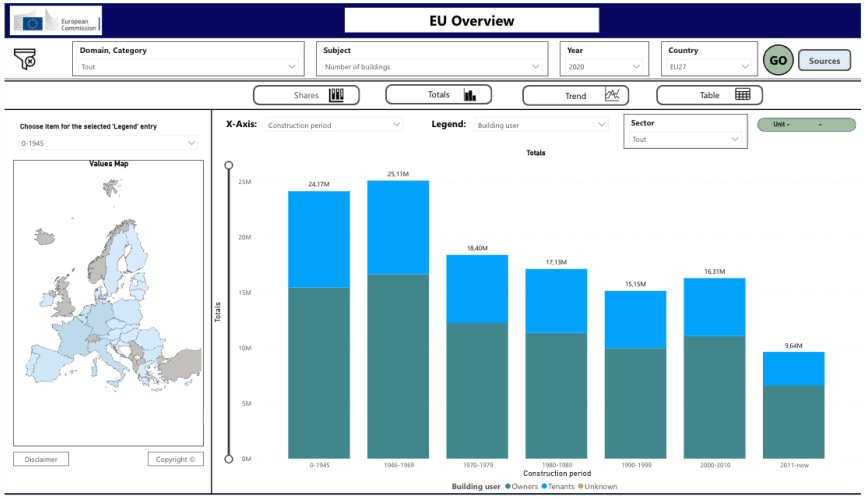
The EU BSO

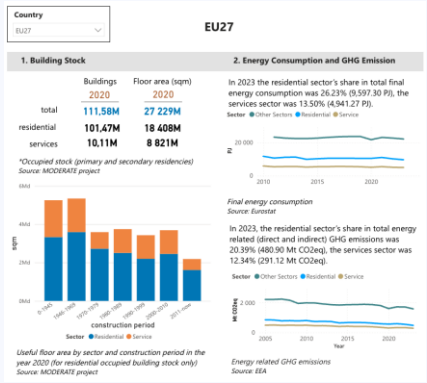
The EU Building Stock Observatory is an initiative of the European Commission, which provides transparent and reliable information and data on the EU's building stock.

https://energy.ec.europa.eu/topics/energy-efficiency/energy-performance-buildings/eu-building-stock-observatory_en

database

factsheets





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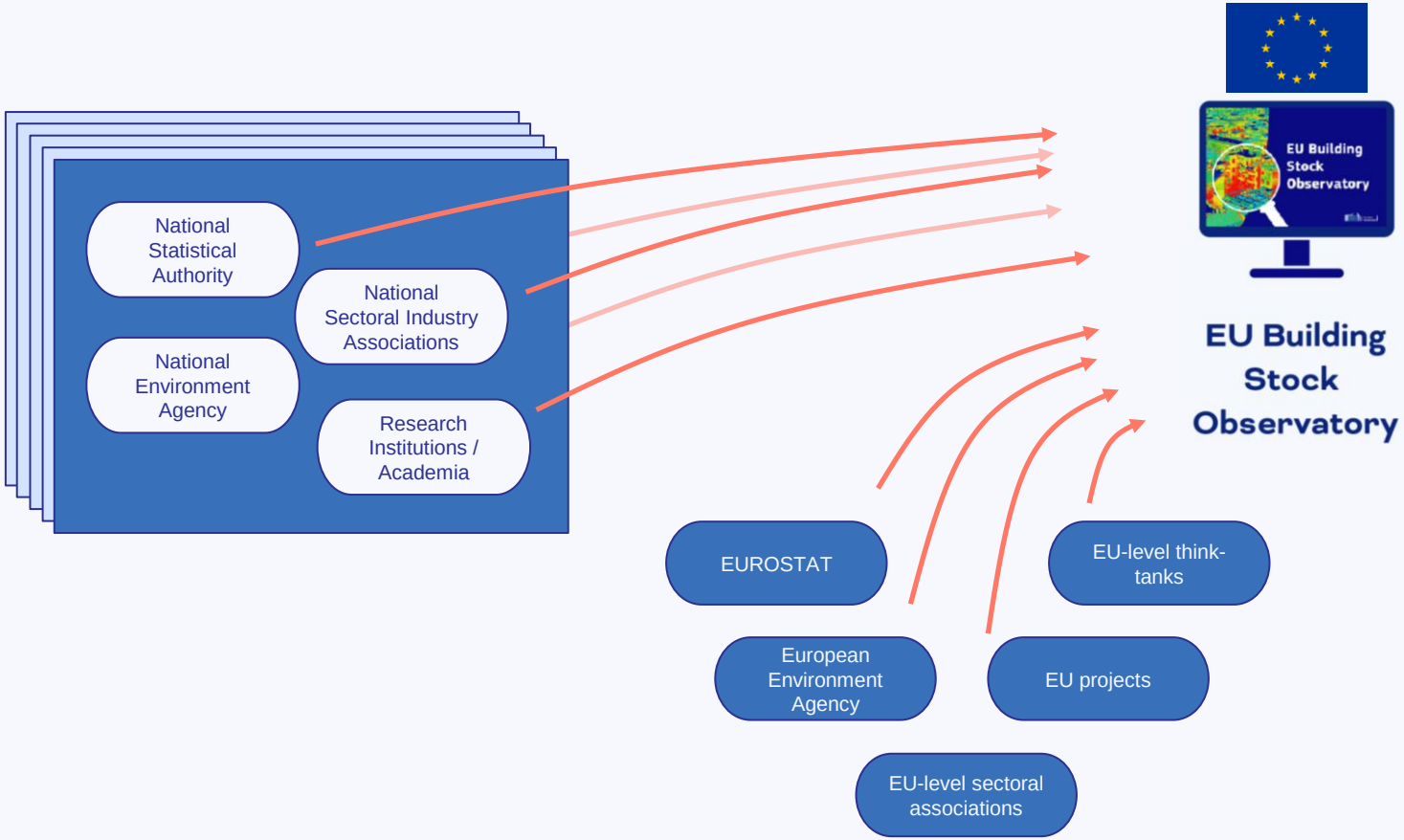
Currently, the EU Building Stock Observatory is fed by multiple types of data, from various sources at the EU level, and from other sources at the national levels.



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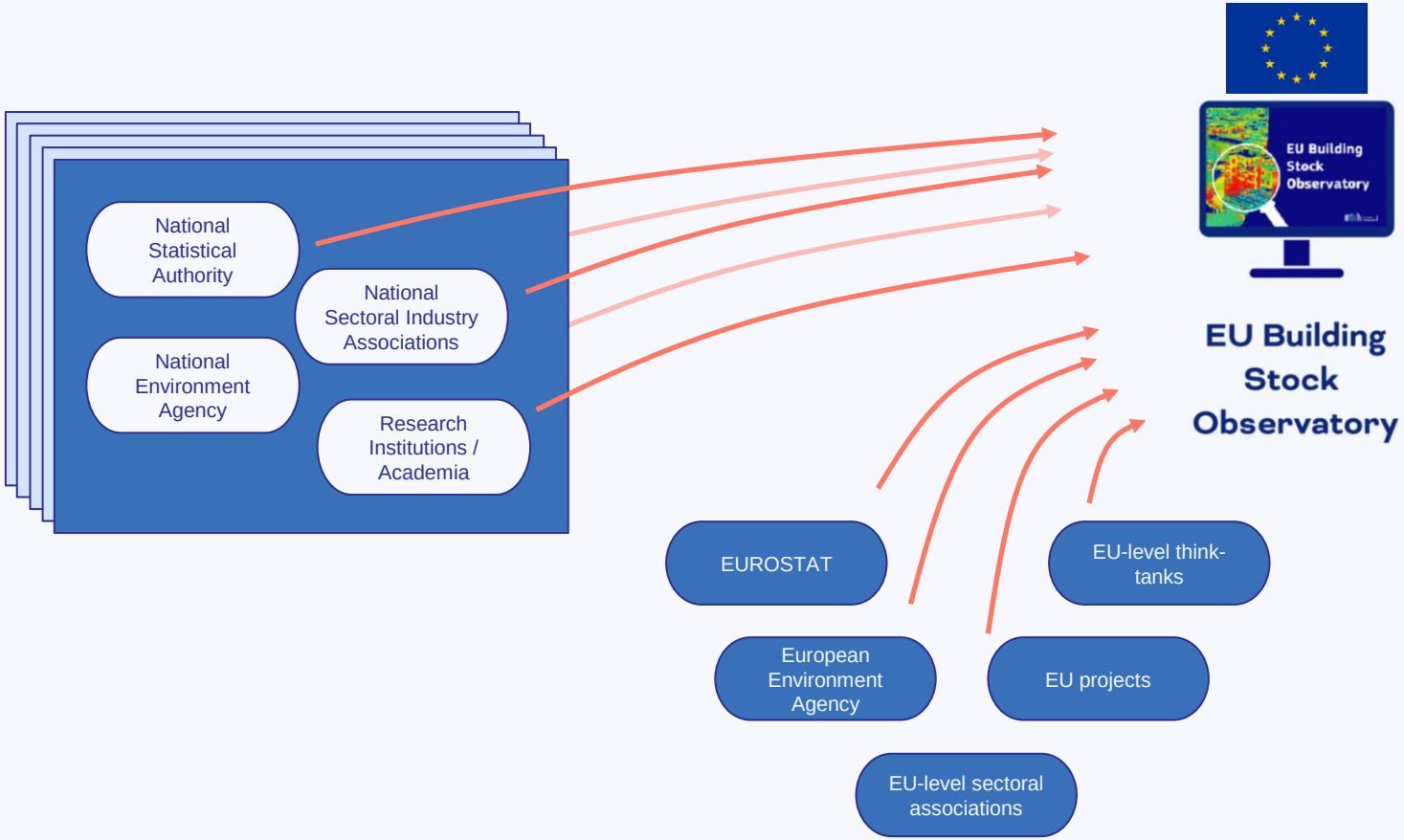
The 2024 EPBD recast requires the creation of national databases for the energy performance of buildings, centralising the data from various sources at the national level,



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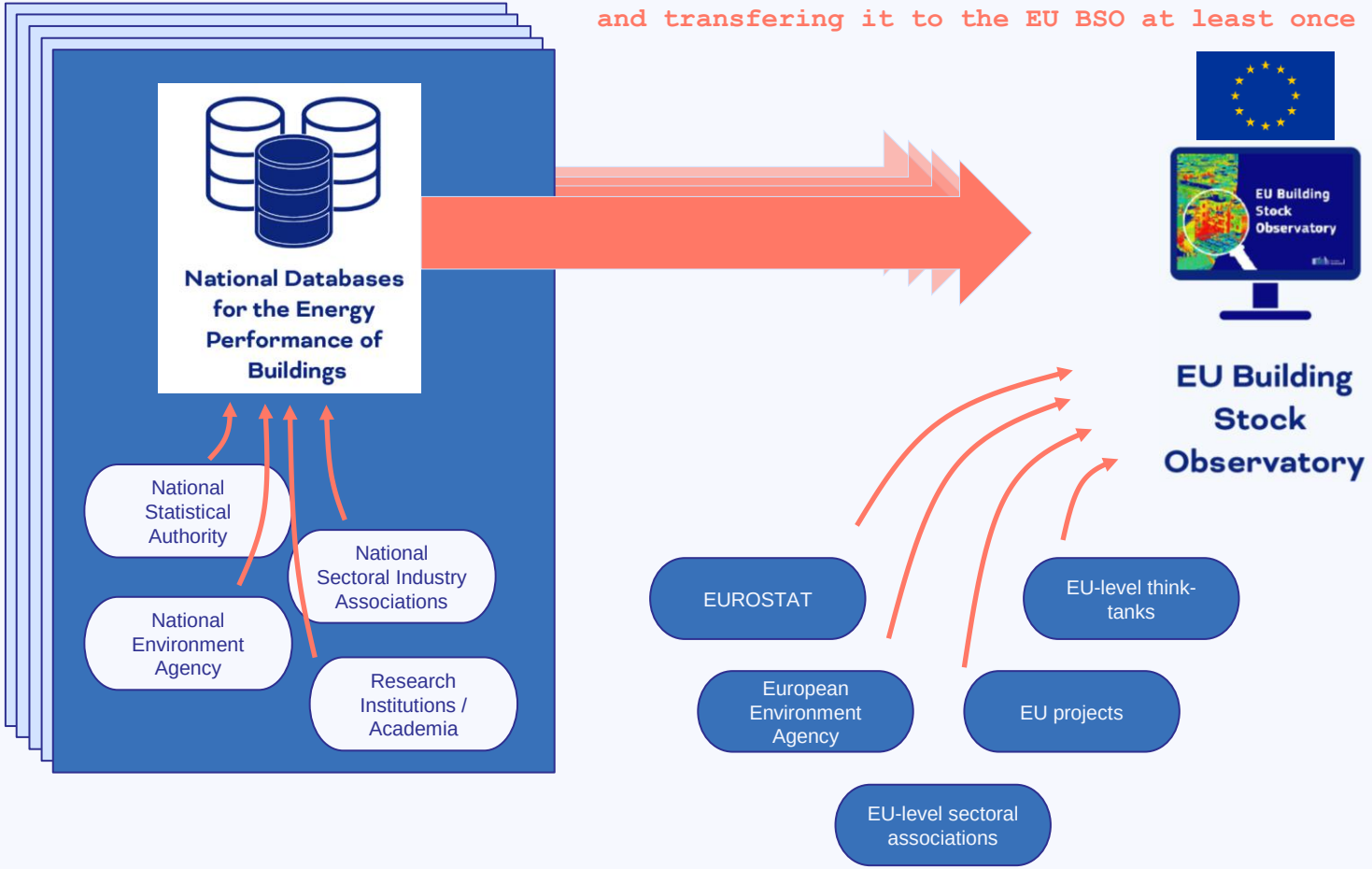
The 2024 EPBD recast requires the creation of national databases for the energy performance of buildings, centralising the data from various sources at the national level, and transfering it to the EU BSO at least once a year.



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National Databases for the Energy Performance of Buildings

OBSERVE supports national authorities in 6 countries in transposing and implementing the EPBD requirements.

EU Building Stock Observatory

Develops

Data exchange channels aligned with the EU BSO taking into account national specificities

Proposes

The structure and architecture of the national databases for the energy performance of buildings

Establishes

Standard protocols to collect, aggregate and manage data from various sources

Supports

Synergies with other databases at national level by engaging with the relevant stakeholders

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The OBSERVE consortium and geographical coverage

IEECP INSTITUTE FOR EUROPEAN ENERGY AND CLIMATE POLICY

TEESlab University of Piraeus Research Center

eurac research

EUPHYIA

R2M FRANCE SOLUTION

EPB CENTER Consultancy and Services on the Energy Performance of Buildings

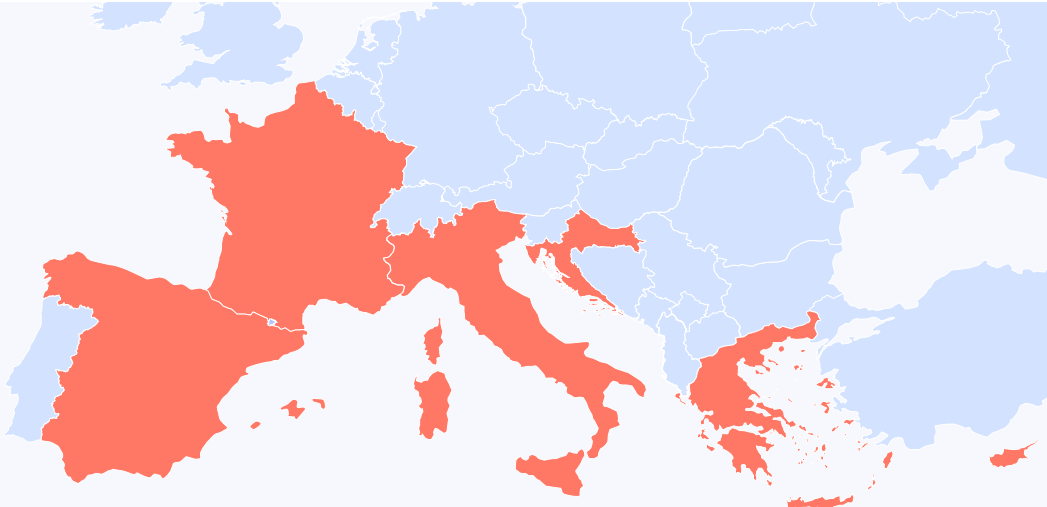
ENEA AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO SOSTENIBILE

EIHP

Ciemat Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas

CSIC Consejo Superior de Investigaciones Científicas

INSTITUTO EDUARDO TORROJA



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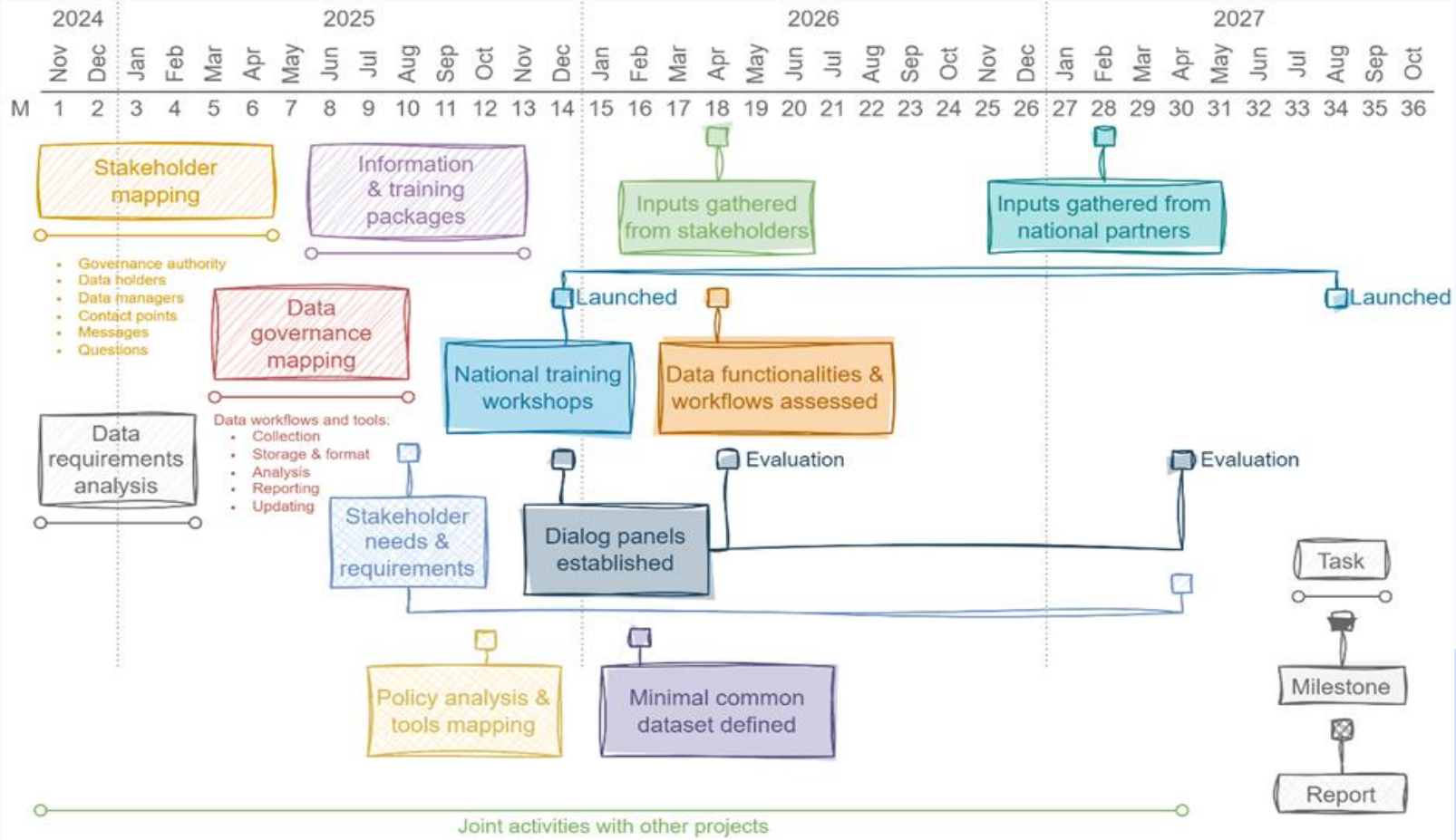
OBSERVE timeline



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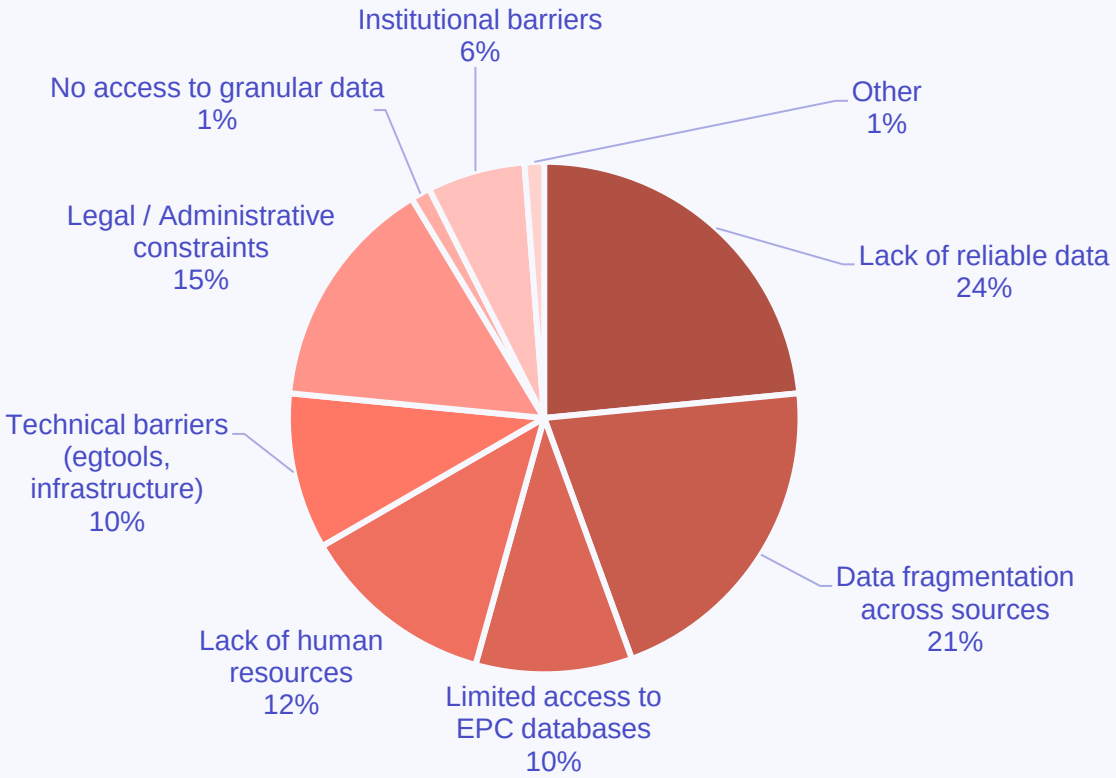
Challenges on the establishment national building stock observatories



Source: OBSERVE survey on stakeholder needs

Respondents: 23 institutional national stakeholders

Countries: 6

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Preliminary policy recommendations

Establish national Building Stock Observatories (nBSOs) as interoperable hubs

- Mandate nBSOs to connect, harmonise, and structure existing datasets (EPCs, cadastre, renovations, energy use)
- Avoid duplication by building on existing national systems

Adopt harmonised indicator frameworks and robust QA mechanisms

- Align national indicators with the EU BSO framework and EPBD requirements
- Embed quality assurance and validation procedures across all data domains

Align national data systems with EPBD implementation needs

- Integrate EPBD, NBRP, and EU BSO reporting into a coherent national workflow
- Ensure secure, standardised, and meaningful data access for relevant stakeholders

Strengthen governance, access, and data-sharing frameworks

- Define clear institutional roles for data provision, management, and validation
- Establish transparent data-access and data-sharing protocols ensuring long-term operability
- Define modular standard exchange formats aligned with the reference data model, so each provider can generate domain-specific files that the nBSO can integrate

Invest in capacity building and user-oriented BSO functionalities

- Support training, technical co-creation, and sustained stakeholder engagement
- Equip BSOs with analytical tools, intuitive interfaces, and data-export / API capabilities

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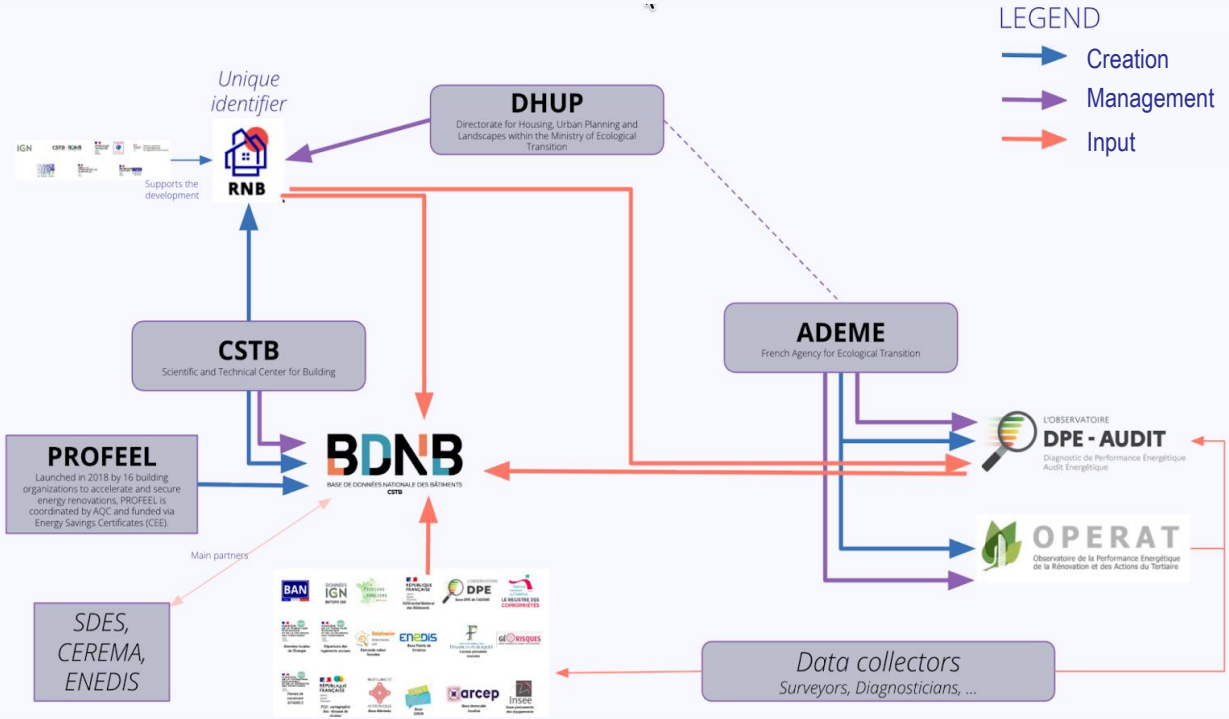
The French case – Building data Ecosystem



Diversity of sources: Coexistence of statistical (INSEE), tax (Fichiers Fonciers/Cerema), technical (ADEME/EPC), and geospatial (IGN/BD TOPO) databases.

The interoperability key – RNB: The National Building Registry (RNB) provides a unique, shared identifier for every building.

The technical integration layer (BDNB): Managed by CSTB, this hub ensures the cross-referencing of over 20 administrative, fiscal, and energy sources to provide a comprehensive "identity card" for every building in France.

Residential performance monitoring (Observatoire DPE-Audit): A dedicated platform for Energy Performance Certificates (EPCs) and audits. These legally binding documents are accessible via open APIs to support renovation policies.

Non-Residential Compliance (OPERAT): A specialized observatory for the tertiary sector, monitoring energy reduction obligations for buildings over 1,000 m² (under the "Tertiary Decree").

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France: Needs, Gaps, and "Blind Spots" in the Data Ecosystem

Challenge 1: Gaps in data centralisation and access

- **HVAC inspections:** A critical lack of centralised data; collection remains non-systematic despite legal requirements.
- **Energy poverty**: A fundamental socio-economic indicator currently absent from existing databases.
- **The SRI challenge:** The need to integrate the Smart Readiness Indicator (currently experimental, but soon to be a mandatory regulatory tool for large non-residential buildings).

Challenge 2: The "Blind Spots" in renovation tracking

- **The "Static snapshot" effect:** A major disconnect between Energy Performance Certificates (EPCs)—which are static snapshots taken during real estate transactions—and the ongoing reality of renovation works.
- **The Invisible private market:** The current system struggles to track non-subsidized renovations effectively.

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OBSERVE approach: Towards Sustainable National BSOs

Block 1: Baseline vs. requirements

- **Baseline (e.g., in France):** A mature but fragmented ecosystem (BDNB, EPC Observatory, and the emerging National Building Registry - RNB)
- **Regulatory needs:** EPBD requirements (Renovation Passports, integration of the SRI, and tracking of energy poverty)

Block 2: Gap analysis

- **Identifying "Blind Spots":** Missing data (e.g., HVAC systems inspections)

Block 3: The European catalyst

- OBSERVE synergies (Benchmarking)
- Capitalizing on the best practices of other consortium countries.
- Drawing inspiration for governance models, stakeholder engagement, and data harmonization (EU standards).

Block 4: The outcome = Deployment of a Sustainable National BSO

- **Governance:** A long-term collaborative framework between public and private stakeholders.
- **Interoperability:** A common language to link national and local databases.
- **Actionable insights:** Transforming data into a powerful decision-making tool to drive the energy transition.

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THANKS!

Questions?

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