Factsheet

Building Energy Epidemiology:
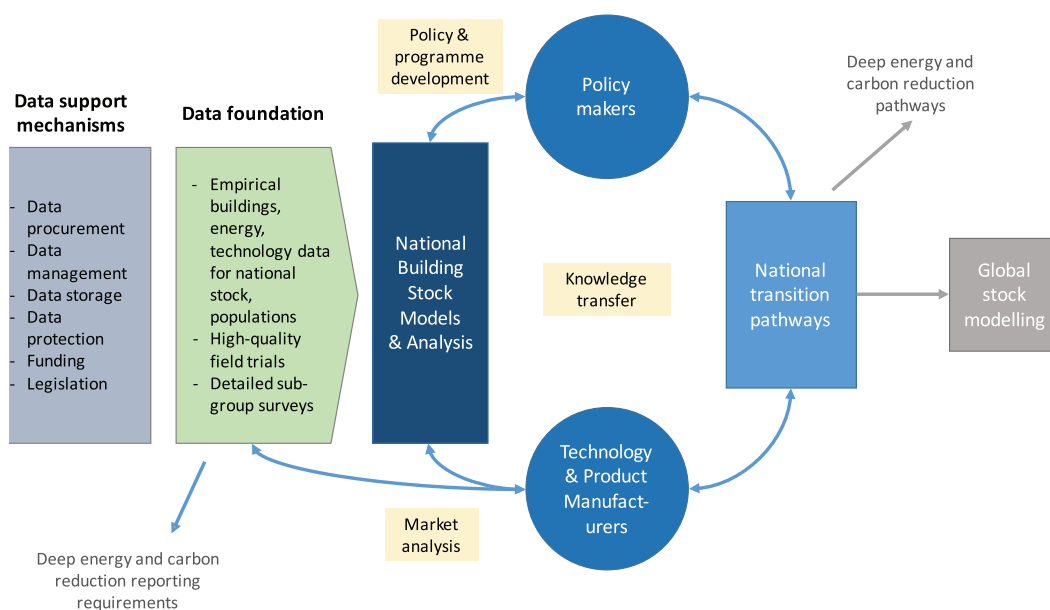# Analysis of Real Building Energy Use at Scale

EBC ANNEX 70

In response to concerns about climate change, energy security and social equity, governments around the world are developing plans to dramatically reduce energy demand and carbon dioxide emissions, or in the case of emerging economies to develop in less energy intensive ways. This transformation will require a raft of technology and policy interventions that, to be truly effective, will require comprehensive empirical evaluation.

This project specifically seeked to support decision-makers and investors in their efforts to transform to a low carbon and energy efficient building stock by focusing on developing best practice methods for collecting, accessing, analyzing and developing models with empirical data of energy demand in buildings and communities.

PROJECT OBJECTIVES

1 evaluating the scope for using real building energy use data at scale to inform policy making and to support industry in the development of low energy and low carbon solutions,

2 establishing best practice in the methods used to collect and analyze data related to real building energy use, including building and occupant data, and

3 comparing across the national approaches to developing building stock data sets, building stock models, and to addressing the energy performance gap in order to identify lessons that can be learned and shared.

Idealised operation of a national building data and stock model.

Source: EBC Annex 70

ACHIEVEMENTS

Building energy epidemiology is the study of energy demand to improve the understanding of variations and causes of differences within an energy-consuming population. It considers the complex interactions between the physical and engineered systems, socio-economic conditions, and individual interactions and practices of occupants.

The results facilitated the use of empirical data in undertaking international energy performance comparisons, policy review exercises, national stock modelling and technology and product market assessments and impact analyses. The deliverables promoted the importance and best practices for collecting and reporting energy and building stock data

The following reports have been published as the official project deliverables:
– User Engagement
– Data Access and Methods Deliverables
– Building Stock Modelling and Analysis Deliverables
– Final report

Project duration
Completed (2016 - 2023)

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Further information
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