

# Bottom-up Model of the Swiss Residential Sector & Database of Energy Efficiency Measures

## Introduction

- In the context of the Swiss Competence Centre for Research in Energy, Society and Transition we are modelling the current status of energy use and energy efficiency improvement measures in buildings.
- Within CREST, our two main objectives are:
  - Develop a database containing a set of energy efficient measures up to 2020, to reduce:
    - Thermal energy demand and
    - Electrical energy demand
  - Develop a bottom-up model that represents the current and potential future energy use of the building sector in Switzerland

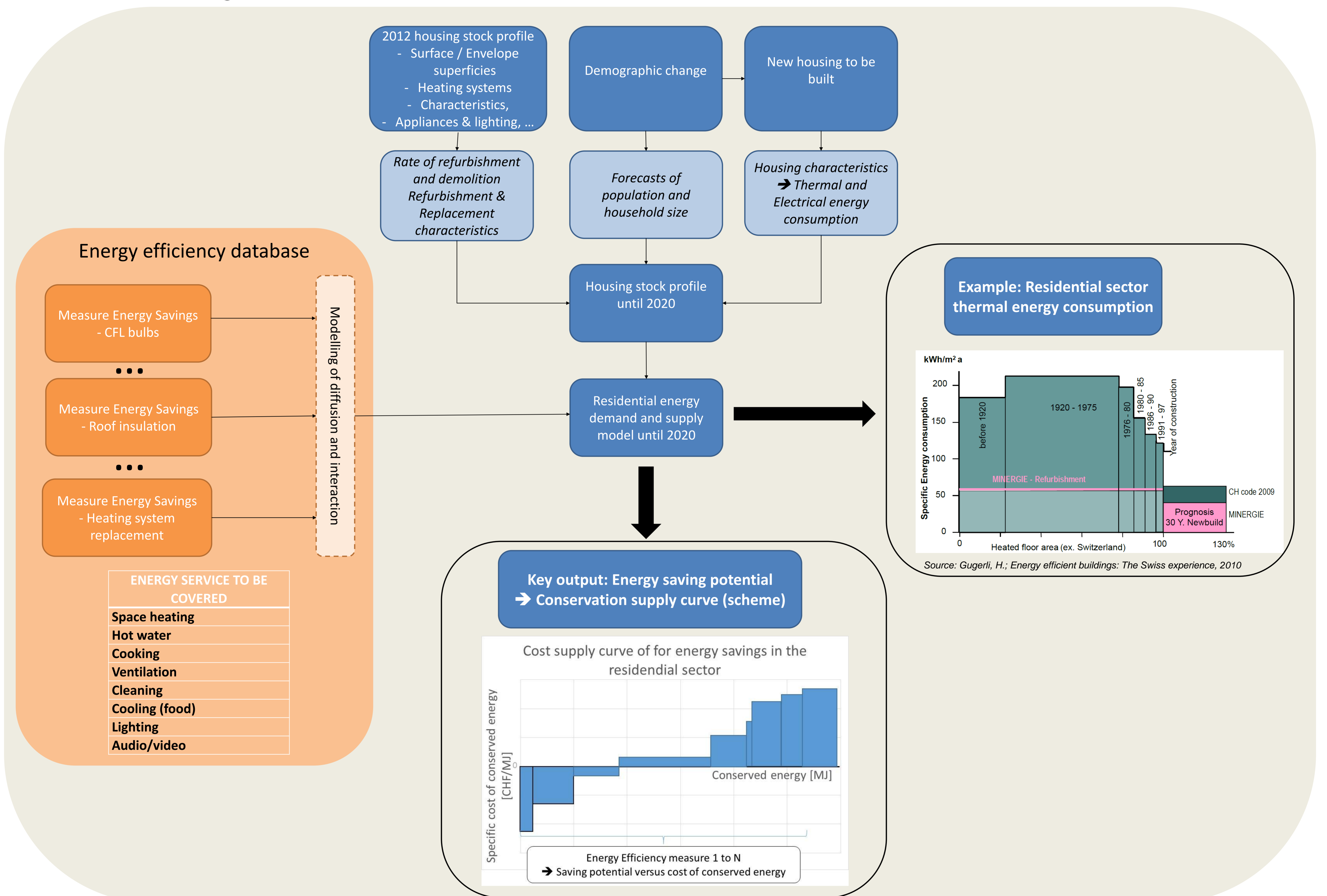


Figure 1: Bottom-up model of the Swiss residential sector and database integration

- The energy efficiency database includes three aspects:
  - Technical → Technology-specific data, i.e. energy efficiency, technical lifetime, scale, etc.
  - Cost → Investment costs, Energy costs, Operation & Maintenance costs, Progress ratio.
  - Market → diffusion at  $t = 0$ , max. technical, max. economic, max. market.
- ✓ So far, only few measures have been studied in the residential sector, i.e.: heat pumps, lighting and insulation

**We are developing an energy efficiency supply curve for the residential building sector. This will serve as basis to assess energy saving potentials in the local context and to design new policies aimed at a cost effective and significant energy consumption reduction.**