

University of Pavia

Department of Electrical, Computer and Biomedical Engineering



Using the **open local energy cadastre** to model heating demand and home energy retrofitting in **MELiSsa***

- [Modello Energetico della Lombardia per la Sostenibilità](#):
energy model of the Lombardy Region for sustainability

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cadastre of energy performance certificates

made available by *Regione Lombardia*

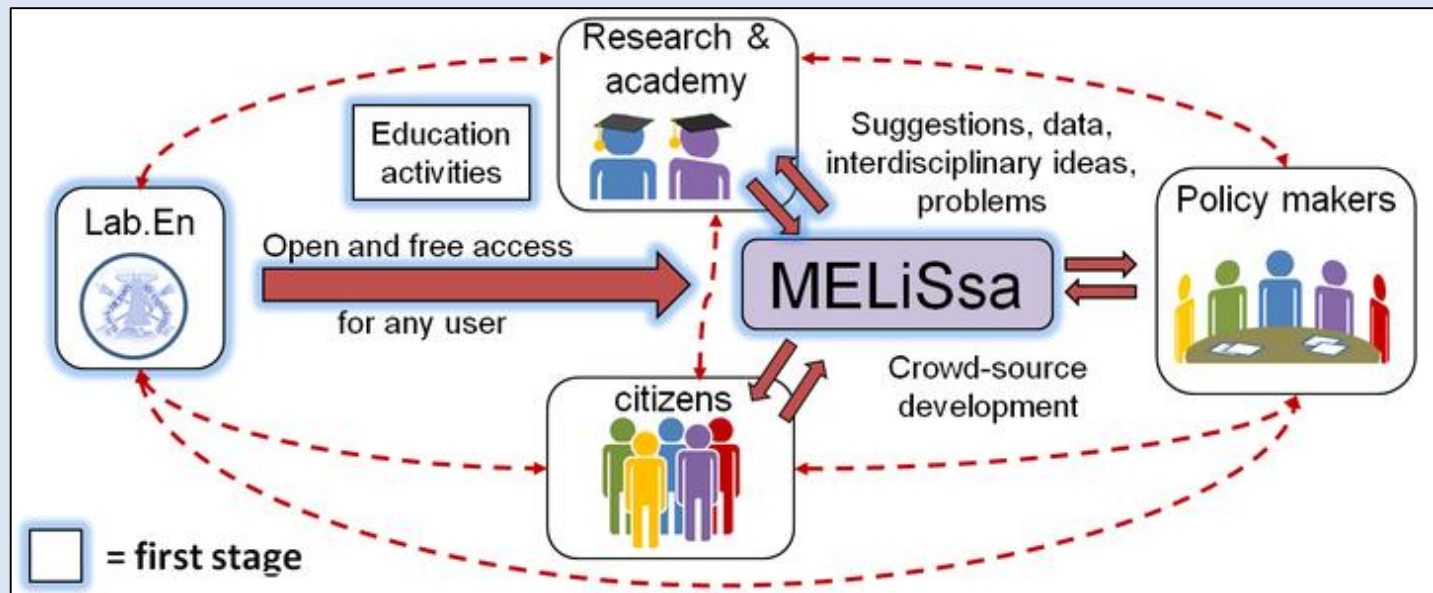
<https://www.dati.lombardia.it/Energia/CENED-Certificazione-ENergetica-degli-EDifici/rsg3-xhvk>



1 680 402 certificates (as of 10/10/2016)

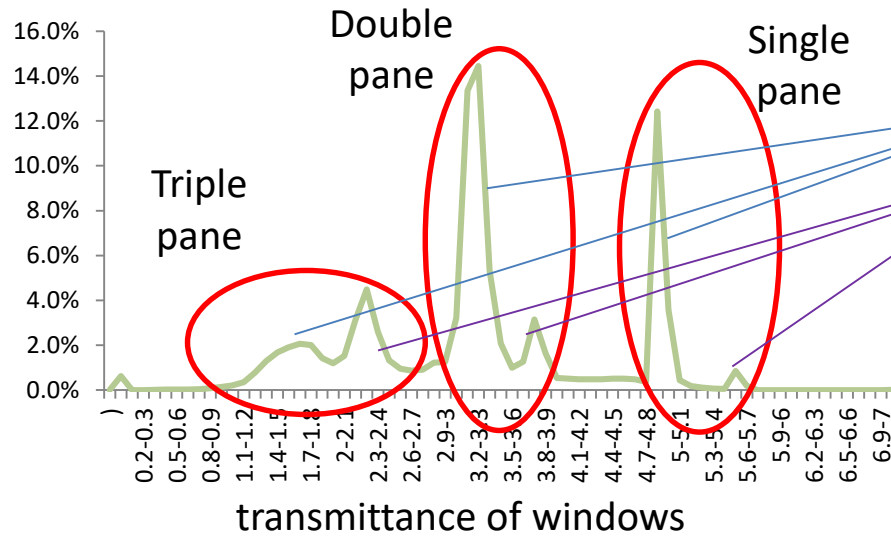
Mandatory for specific cases, they provide:

- rated classes
- thermal transmittances of windows, walls, etc.
- overall annual demand of thermal energy per m^2
- surfaces of floor, windows, etc.
- and much more...



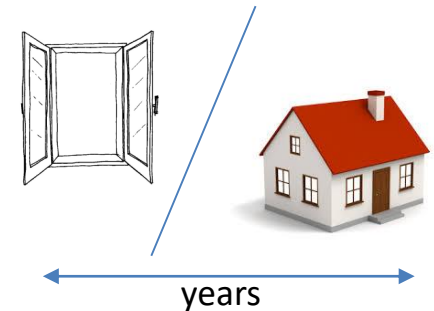
The example of windows

houses



Frames:
Wood, PVC
Metal

Windows/floor ratio

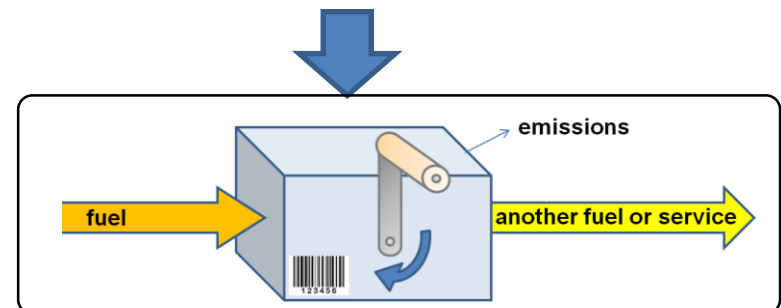


knowledge on:

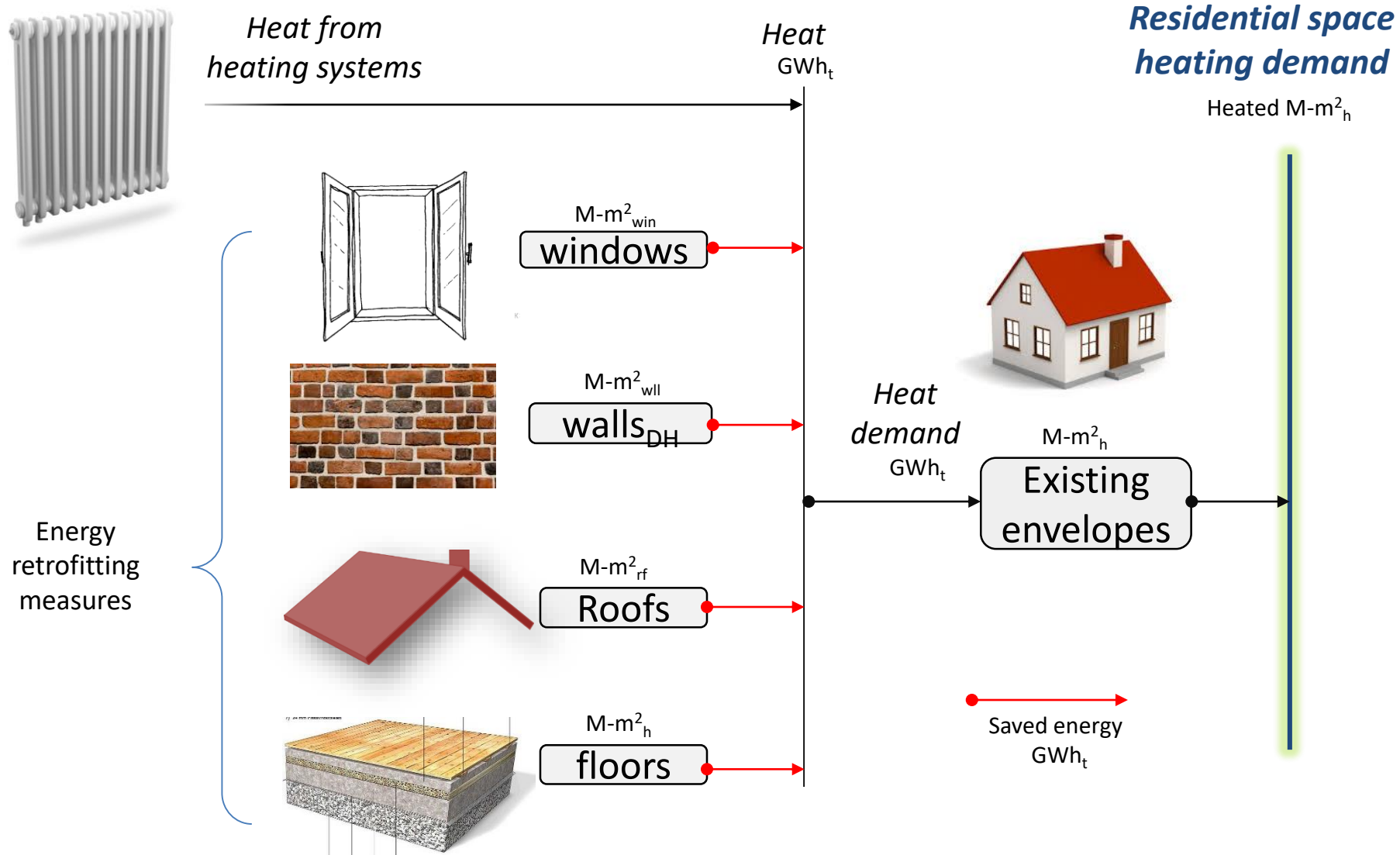
- *the existing windows*
- *the potential n° of windows that can be replaced*
- *the effect of windows retrofitting*

Values from literature/reports/nameplates

TYPE	single	double	triple
wood
PVC
metal



Simplified Reference Energy System



Thank You for the Attention