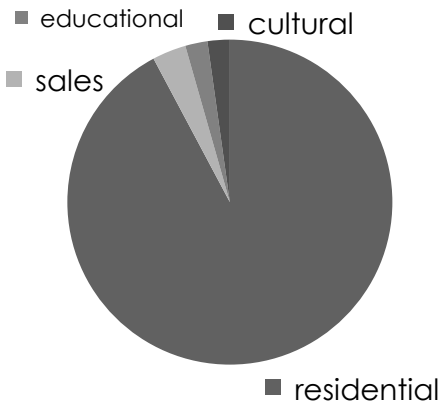
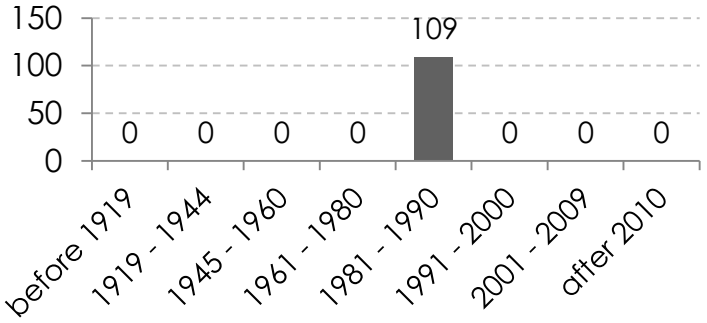
Success Story - Vila D'Este Housing, VN Gaia

- no. of buildings: 109 (renovated)
- total heated floor area: 126.000 m²

- building typology:



- years of construction:



- renovation measures already carried out: yes
- implementation period: 2009 - 2015

Success Story - Vila D'Este Housing, VN Gaia

Overall aim and objective

The main strategic objectives of the energy renovation of Vila D'Este neighbourhood were mainly related to the elimination of the existing physical anomalies. The intervention also allowed to achieve current energy and indoor air quality requirements , as well as to rehabilitate the entire neighbourhood from an architectural and aesthetics perspective.

Involved stakeholders

Vila Nova de Gaia Municipality;

Gaiurb - Urbanism and Housing - Municipal company responsible for urbanism, social housing and urban rehabilitation of the municipality of Vila Nova de Gaia;

Owners Association;

Residents Association;

Vilar de Andorinho Curch.

Success Story - Vila D'Este Housing, VN Gaia

- **What kind of renovation measures were/are being carried out?**
  - ✖ renovation of the thermal envelope
  - □ renovation of the existing heating systems (decentralized in buildings)
  - □ new central district heating
  - □ modification of the existing district heating
- **heating demand before renovation: 10983,42 MWh/a**
- **heating demand after renovation: ----- MWh/a**
- **cooling demand existing: yes (no information regarding cooling demand)**

- **energy supply system(s) before the renovation:**
  - □ heat pump
  - □ natural gas
  - □ oil
  - □ biomass
  - □ district heating
    - □ renewables
    - □ fossil
    - □ mix
  - ✖ others: electric heater
- **renewable energy generation before the renovation:**
  - ✖ none
  - □ PV
  - □ solar thermal

- **energy supply system(s) after the renovation:**
  - □ heat pump
  - □ natural gas
  - □ oil
  - □ biomass
  - □ district heating
    - □ renewables
    - □ fossil
    - □ mix
  - ✖ others: electric heater
- **renewable energy generation after the renovation:**
  - □ none
  - □ PV
  - ✖ solar thermal

Success Story - Vila D'Este Housing, VN Gaia

Why is this intervention worth studying? / Why should it be part of the Success Stories?

The Vila D´Este Housing renovation project led to the improvement of the energy performance of the buildings, allowing a potential annual saving of 3.800 ton CO_{2eq} and an estimated annual saving of 837.433,92 €/year, according to Interreg Europe website.

The intervention consists of an extensive renovation on all the residential buildings , as well as implementation of solar energy in the common swimming pools complex. Being so, understanding the impact of this integrated intervention on thermal comfort of buildings users and on energy and CO2 reduction, can be significant to the knowledge about renovated districts.

further information:

https://www.interregeurope.eu/policylearning/good-practices/item/677/vila-d-este-housing-refurbishment/

https://www.gaiurb-habitacao.pt/viladeste

http://www.cm-gaia.pt/fotos/editor2/a-nova-vila-deste.pdf