cmapER

Innovative learning platform for knowledge integration in Energy Retrofit

MILESTONE 1.1

1. GENERAL INFORMATION

PROJECT: RESIDENTIAL NEIGHBOURHOOD JUAN XXIII

CONTEXT: ALICANTE, SPAIN

ORIGINAL USE:HOUSING 1967

USE: HOUSING

DESIGNER(S): ND

COMPLETION DATE: 2011

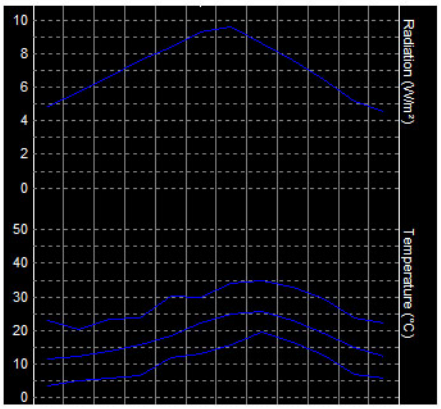
KEYWORDS: Economically Feasible Projects, Real Estate Market, Job Creation, Representative groups, Energy services companies, Low-income families, Energy services companies, Profile of energy poverty, Risk of Exclusion, Geographic Concentration of Obsolete Buildings

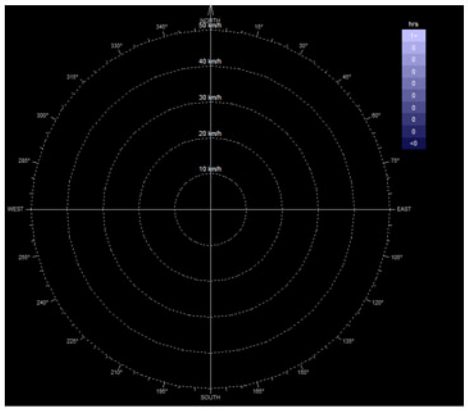
H2020 MSCA IF2016
c-mapER Grant Agreement 751376

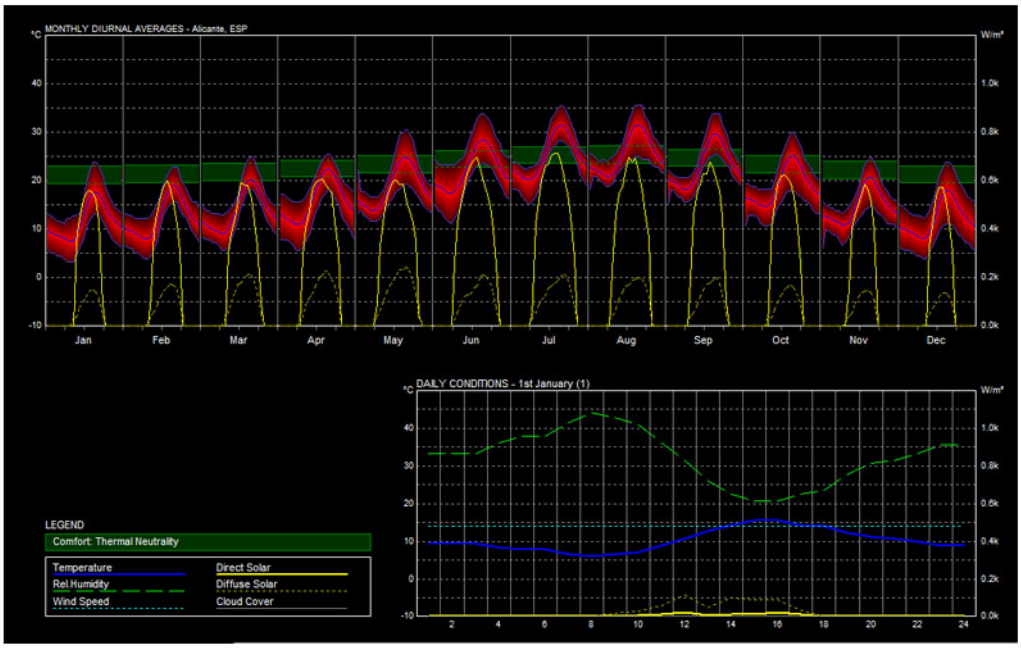
2. CLIMATIC FEATURES

CLIMATE SUMMARY:

- MONTHLY DATA: RADIATION (W/mq); MAX, MID, MIN TEMPERATURE ˚C
- PREVALLING WIND (WIND FREQUENCY – Hrs)
- HOURLY DATA – MONTLY DIURNAL AVERAGES
- DAILY CONDITION (1ST JAN

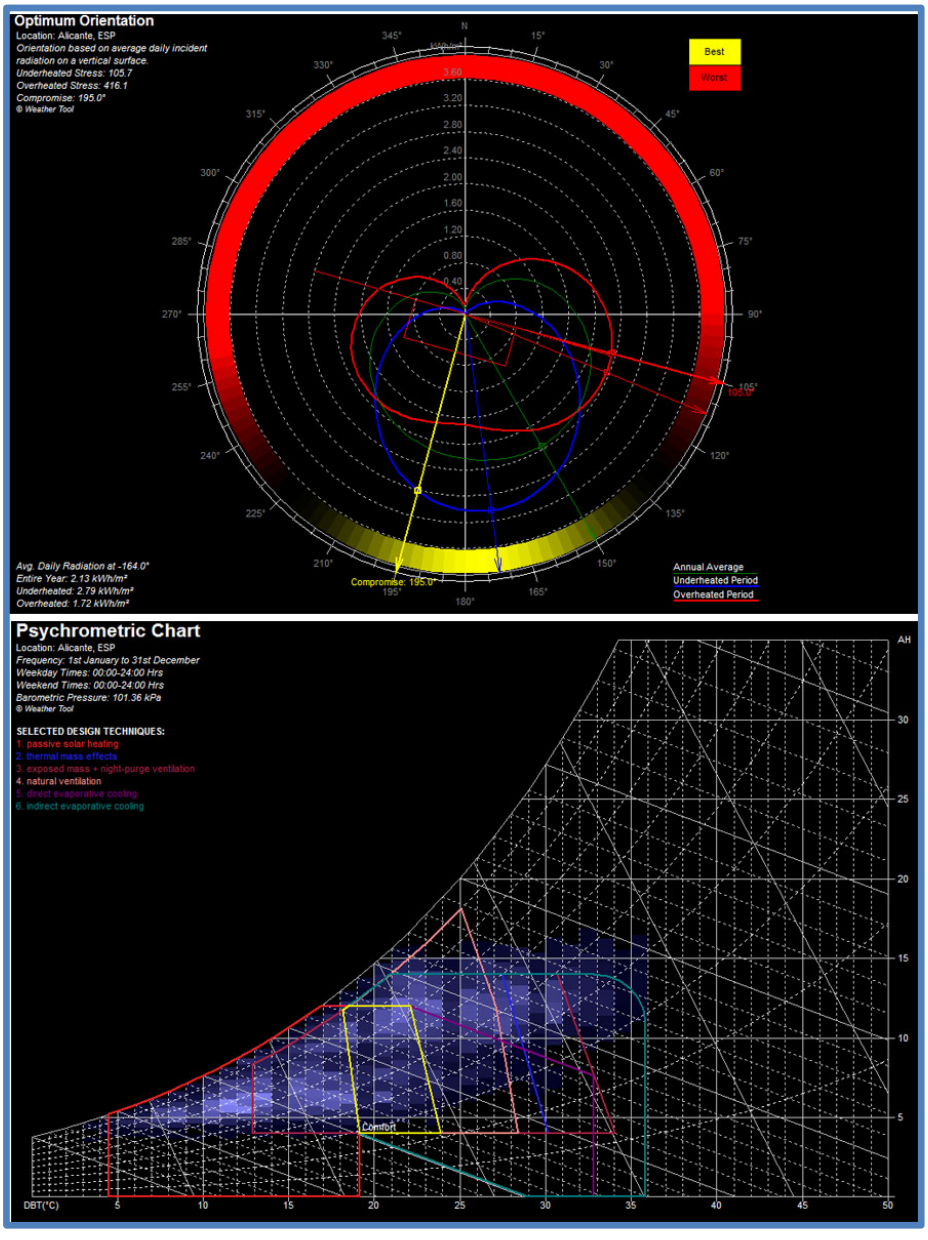






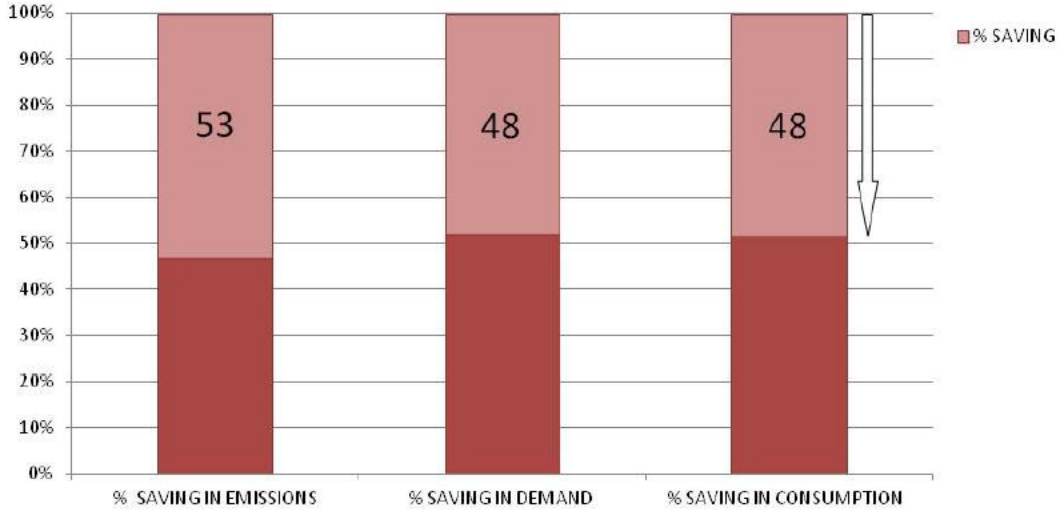
3.BIOCLIMATIC FEATURES

- OPTIMUM ORIENTATION
- COMBINATION OF PASSIVE ENERGY STRATEGIES

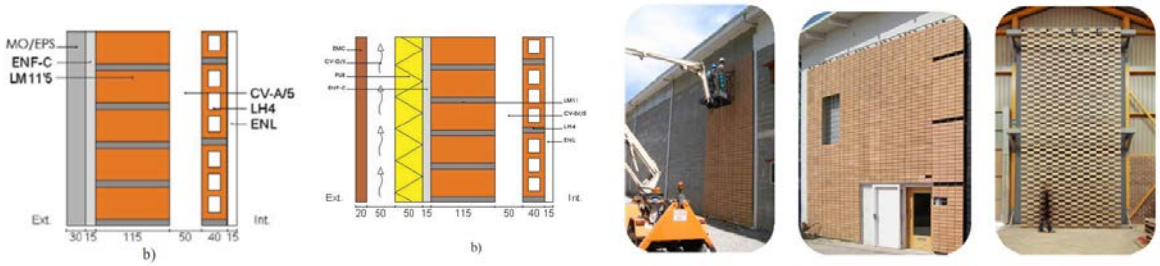


4. URBAN AND/OR BUILDING FEATURES

The main goal was to carry out an analysis of the energy efficiency of the renovation of the buildings in Juan XXIII neighbourhood previously mentioned. This implied to: Set a record of the initial energy demand and energy consumption before the retrofitting works, and then after the works have been concluded; Evaluate the proposed measures to improve the energy efficiency of the thermal envelope, in order to decrease the CO2 emissions. Compare the improvements of different strategies on energy savings and reduction of CO2 emissions, including those proposed in the initial project, in order to optimize and capitalize to a maximum level the resources to spend in similar future actions.

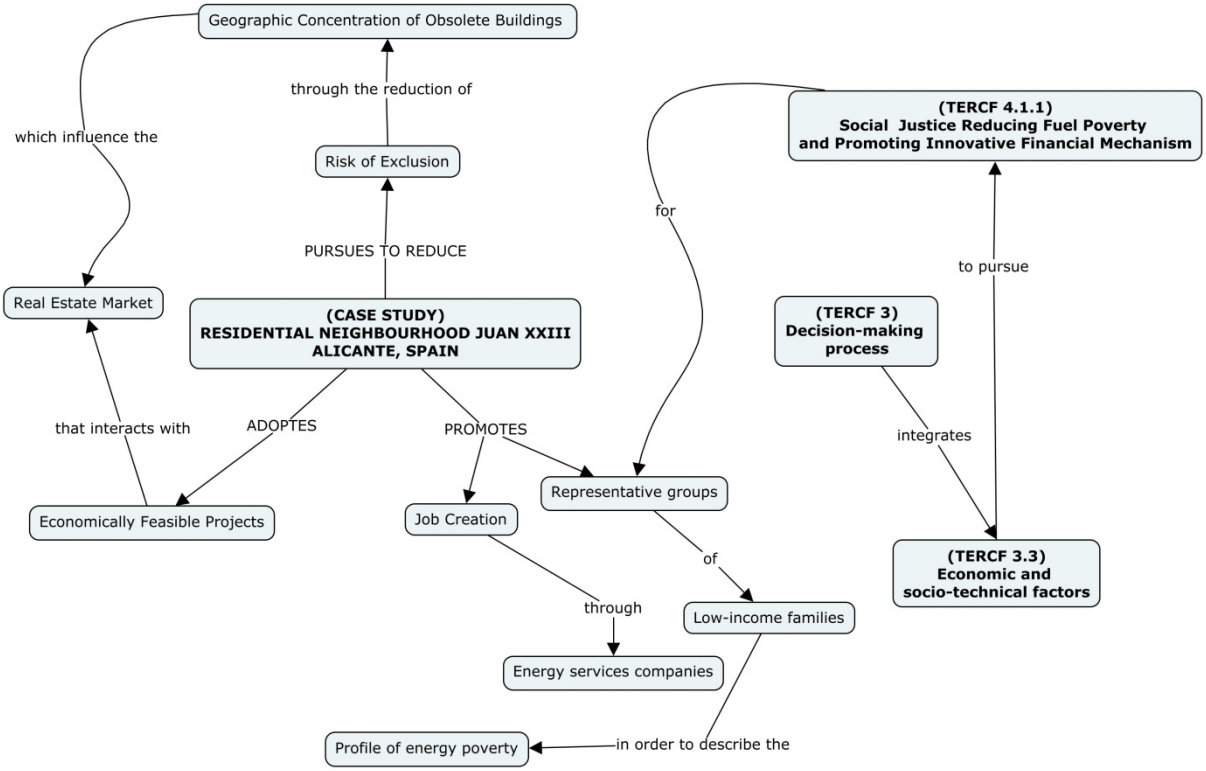


Reduction global percentages achieved in CO2 emission, demand and consumption (Begoña Serrano-Lanzarote et al, 2017)



5. FOCUS QUESTION AND MAP

What strategies to reduce energy poverty?



6. REFERENCES

Begoña Serrano-Lanzarote, Laura Soto Francés, Leticia Ortega Madrigal and Alejandra García- Prieto Ruiz, Analysis of the Environmental Impact of the Energy Retrofitting Carried Out in a Low-income Residential Neighbourhood. The Case of Juan XXIII in Alicante, Spain, *The Open Construction and Building Technology Journal*, 2017, *11*, (Suppl-1, M3) 65-82