



# HEAT4COOL

Final event - 17th March 2021



www.heat4cool.eu  
@Heat4Cool\_H2020



The Project has received funding from the European Union's Horizon 2020 programme for energy efficiency and innovation action under agreement No. 723925



## WHAT IS HEAT 4 COOL?

**4,5** (2016 - 2021) YEARS  
**5,4** MILLIONS EURO EU FUNDING  
**13** PARTNERS

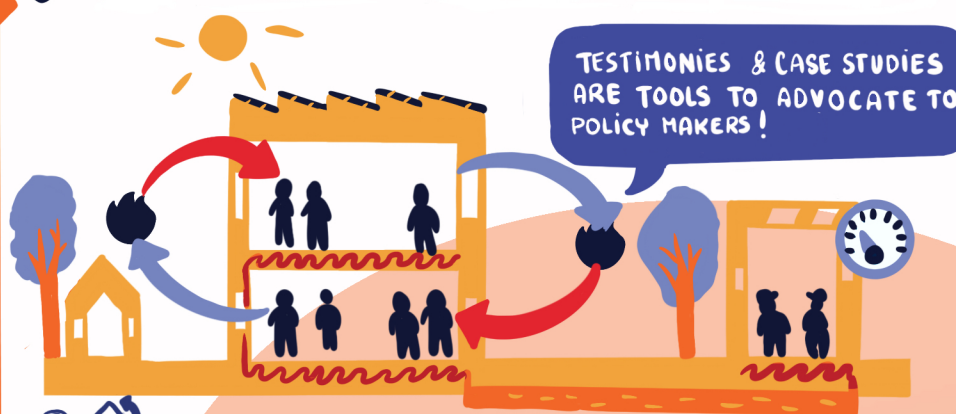
DEMONSTRATION OF ENERGY EFFICIENT INTEGRATED TECHNOLOGIES FOR BUILDING RETROFITTING

### HEAT 4 COOL WORK SYNERGY

**6** ENGINEERING SMEs  
**3** MANUFACTURING SMEs  
**3** ACADENIA  
**1** PROFESSIONAL ASSOCIATION

DEMONSTRATED

## 5 INTEGRATED SYSTEMS & TOOLS DEVELOPED



- BUILDING RETROFITTING DESIGN PLANNER**
- 3 MAIN HEATING & COOLING SOLUTIONS DEVELOPED**
  - ADSORPTION HEAT PUMP INTEGRATED WITH SOLAR THERMAL SYSTEM
  - PHOTO-VOLTAIC ASSISTED ELECTRIC HEAT PUMP WITH PCM STORAGE BATTERIES
  - ENERGY RECOVERY FROM SEWAGE WATER WITH INNOVATIVE HEAT EXCHANGER
- SCI-BEMs

IMPLEMENTING & TESTING

COVID-19 CHANGED THE WAYS WE USE AND LIVE IN BUILDINGS

MONITORING & ADAPTING

## 4 DEMO SITES

### VALENCIA

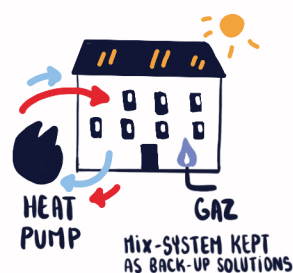
ADSORPTION HEAT PUMP INTEGRATED WITH SOLAR HEATING & COOLING SYSTEM



### CHORZOW & SOFIA

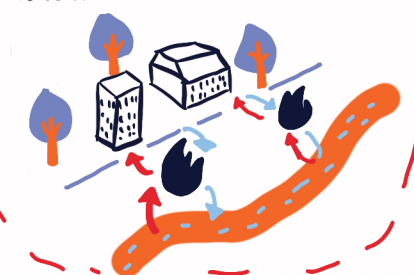
RETROFIT OF A RESIDENTIAL BUILDING KEEPING EXISTING INSTALLATIONS

- PHOTOVOLTAIC SYSTEM
- ELECTRIC HEAT PUMP
- PHASE CHANGE MATERIAL HEAT BATTERY



### BUDAPEST

PROVING THAT SEWAGE WATER IS AN IMPORTANT RENEWABLE ENERGY DISTRICT HEATING AND COOLING SYSTEM



## NEW POLICY FRAMEWORK IN THE EU

Advantages of heat pumps are recognised as essential to achieve energy and climate targets

HEAT PUMPS MAY BE A BIG INITIAL INVESTMENT BUT WITH LONG-TERM BENEFITS!

THE NEW EUROPEAN GREEN DEAL & CLIMATE LAW  
-55% CO<sup>2</sup> BY 2030

If the Clean Energy for all Europeans Package is implemented at a national level, it will encourage the uptake of heat pumps

### HORIZON 2020 = 85% EU CITIZENS

The mission on climate neutral and smart cities will support 100 European Cities in their systematic transformation towards climate neutrality by 2050

### RENOVATION WAVE = 35 MILLIONS BY 2030

The Renovation Wave will at least double renovation rates in the next ten year, creating jobs and addressing energy poverty

### NEW EUROPEAN BAUHAUS

The New European Bauhaus will connect people, support lead markets in sustainability and help achieve the goals of the Green Deal

TOWARDS A REVISION OF ENERGY TAXATION IN THE EU

2050 EU CARBON-FREE

CLIMATE-NEUTRAL & SMART CITIES

FUNCTIONAL & HUMAN CENTERED DESIGN

## HEAT4COOL EXPLOITATION STRATEGY

### 5 KEY EXPLOITABLE RESULTS

