



Experience of Sant Cugat in transforming city in Smart and Sustainable: what could be applied for Ukrainian cities. Part 1

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About the city

Is a Young city

- Is a city with more than 86,000 inhabitants
- The average age is 36 years old, and 25 % of the population is below 18 years old.

Is a green city

- It has a million square metres of green areas. There're more than one urban tree per inhabitant.
- Sant Cugat is part of Collserola Natural Park

Is a university city

- Sant Cugat has four campuses and more than 17,000 students

An entrepreneurial city

- More than 2,700 businesses providing more than 50,000 jobs, is one of the economic power of the Barcelona Metropolitan Area

About the citizens

Higly educated

- Income and education levels are higher than the Catalan average.
- **34% of the population is highschool degree**

connected

- **91% of them have an internet connection.**The overall percentatge of households with internet acces in Catalonia i 71%
- **74% of them have a smart phone with internet acces**

Mission

- **To create a sustainable, creative and collaborative city in order to guarantee wellbeing citizens through transparency, efficiency and open governement**

- The city participates in the Smart City initiative whose aim is to improve the quality of life through a sustainable economic development.
- In 2009, the cities signed the Covenant of Mayors (20/20/20) in Brussels with the purpose of reducing 20% carbon footprint, 20% decrease in energy consumption and promote renewable energy production until 2020.
- Since 2014, Sant Cugat del Vallès is also a signatory to the Mayors Adapts, the Covenant of Mayors initiative on adaptation to climate change. Within 2 years following the signature, we commit to contributing to the overall aim on the EU Adaptation Strategy by developing a comprehensive local adaptation strategy.





Until 2007
Economic Development

Growth model

SINCE 2007 on
Economic Crisis

Sustainable
management model

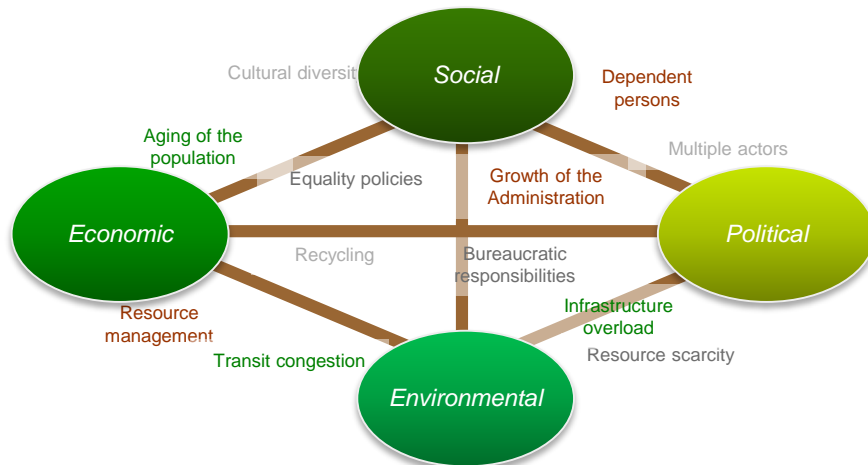
Change in model

- Town Planning was the backbone of the town's activity
- Increase municipal revenues
- Municipal efforts have focused on:
 - Provision of services
 - Laying the foundations for the growth of the city

- Stabilization of the population and of urban development. The city is nearly finished
- **Reduction in municipal revenues**
- **Innovation is the new backbone of all activities**
- Providing better quality services in a more efficient manner: lower costs and sustainable administration.

The new challenges faced by the city spread over several domains and the relations among them, which means that solutions must provide an integrated vision.

Cross-linked impacts



Related actions

- Actions within the city are not always coordinated: information is not shared, all related domains are not taken into account, etc.
- Management has a vertical vision
- Multiplication of resource usage for similar purposes.

Key elements in the integrated vision

- Information, responsibility and decision-making sharing among subsystems
- Managing challenges in a transversal and coordinated fashion
- Locating operational synergies among services and processes

The Sant Cugat Smart City model is based on this integrated vision to address new challenges and pursue quality and efficiency through technology

Key characteristics of a Smart City

Foundations

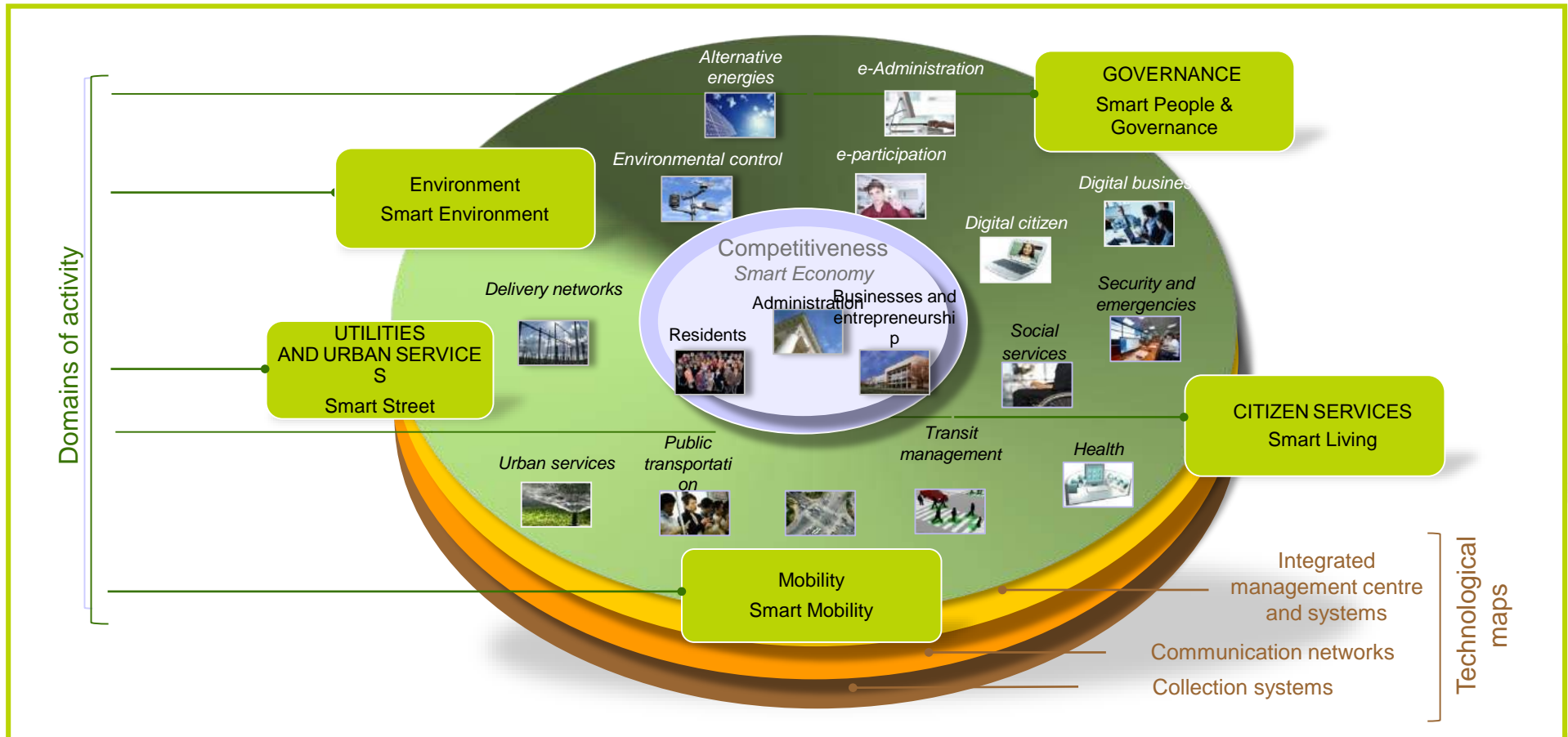
- Technological infrastructure and an integrated vision are its foundation
- Efficiency and quality of service is improved using new technological tools

Also

- Bidirectional, agile and scalable (up/down) access is enabled among city actors -residents, government and businesses
- A dynamic vision is adopted: change is detected and the city adapts to it in a dynamic fashion, reinventing processes
- Technology is at the service of the citizen, and its application is adapted to their technological know-how
- Solutions to new challenges are produced managing knowledge and supporting creative talent
- Solutions enable access to all residents and make the most of existing talent within connected organizations

The Smart City offers solutions based on three technological plans to cover all city domains and establish the conditions necessary for competitiveness

Diagram of a Smart City Domains and links



Additionally, all actions laid out in the Strategic Plan must be geared towards producing savings and returns on investment, as part of the directives of the new management model

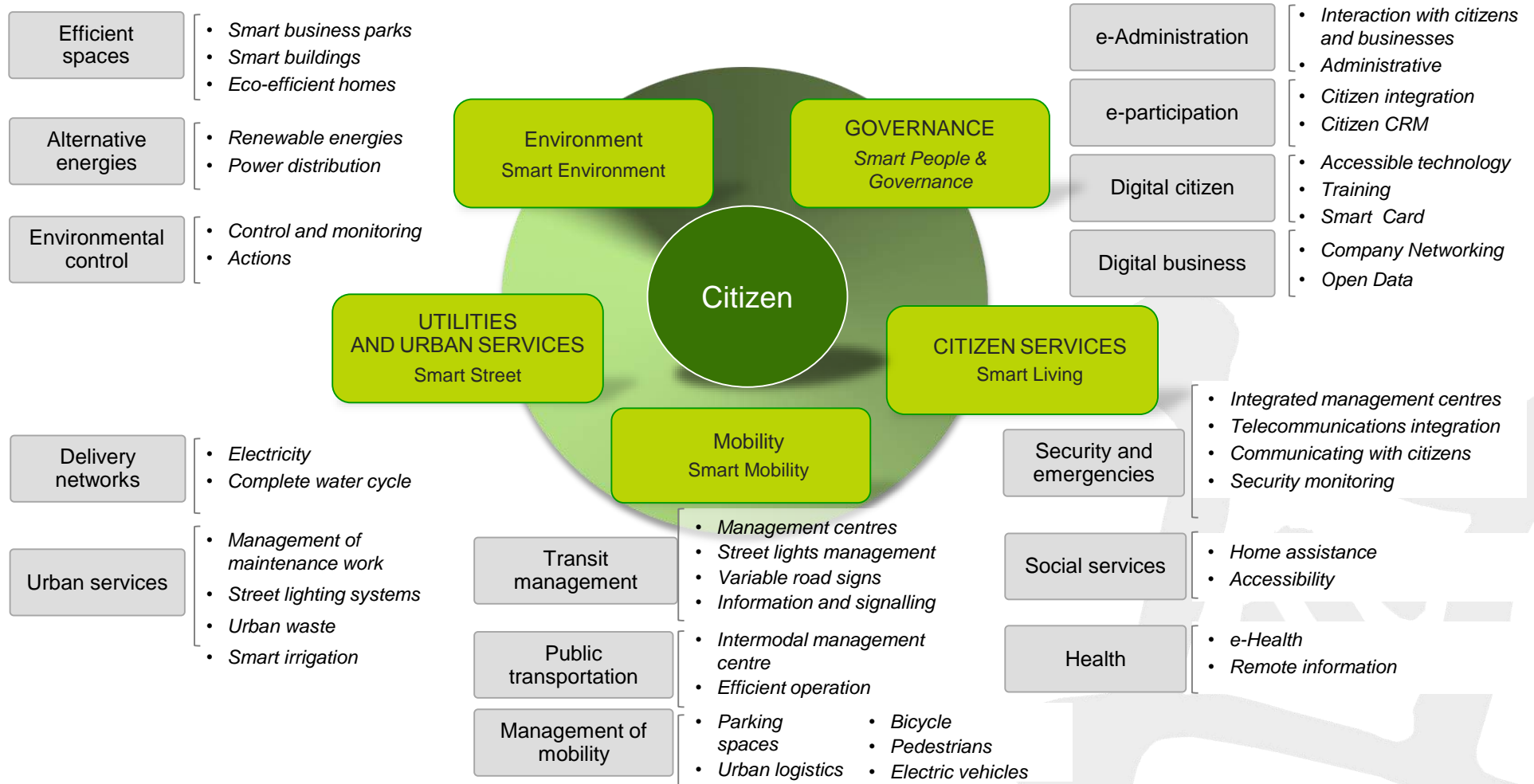
Sant Cugat Smart City Model



- Improvement in the quality of citizen services and offering added value
- Defining a business model for each technology investment, taking into consideration the role of the private sector
 - Engaging providers
 - Prioritization of projects with an economic and social profitability slant
- Integrating resources available to all organs and institutions in order to increase their profitability.



Technology projects will cover basic activities and will be in alignment with the objectives for the city, as laid out in the reference model



Sustainable Energy Action Plan

Our SEAP was approved in 2009 with 43 different actions in several areas and was updated in late 2015

- 43 actions (14 completed, 27 ongoing i 2 not started)
 - 15 actions in municipals buildings
 - 1 action in tertiary buildings
 - 5 actions in residential buildings
 - 4 actions in public lighting
 - 7 actions in transport
 - 2 in public transport
 - 3 in private sector
 - 2 in municipal fleet
 - 2 actions in local electricity production
 - 1 action in local in heat/cold production
 - 8 other actions

Actions

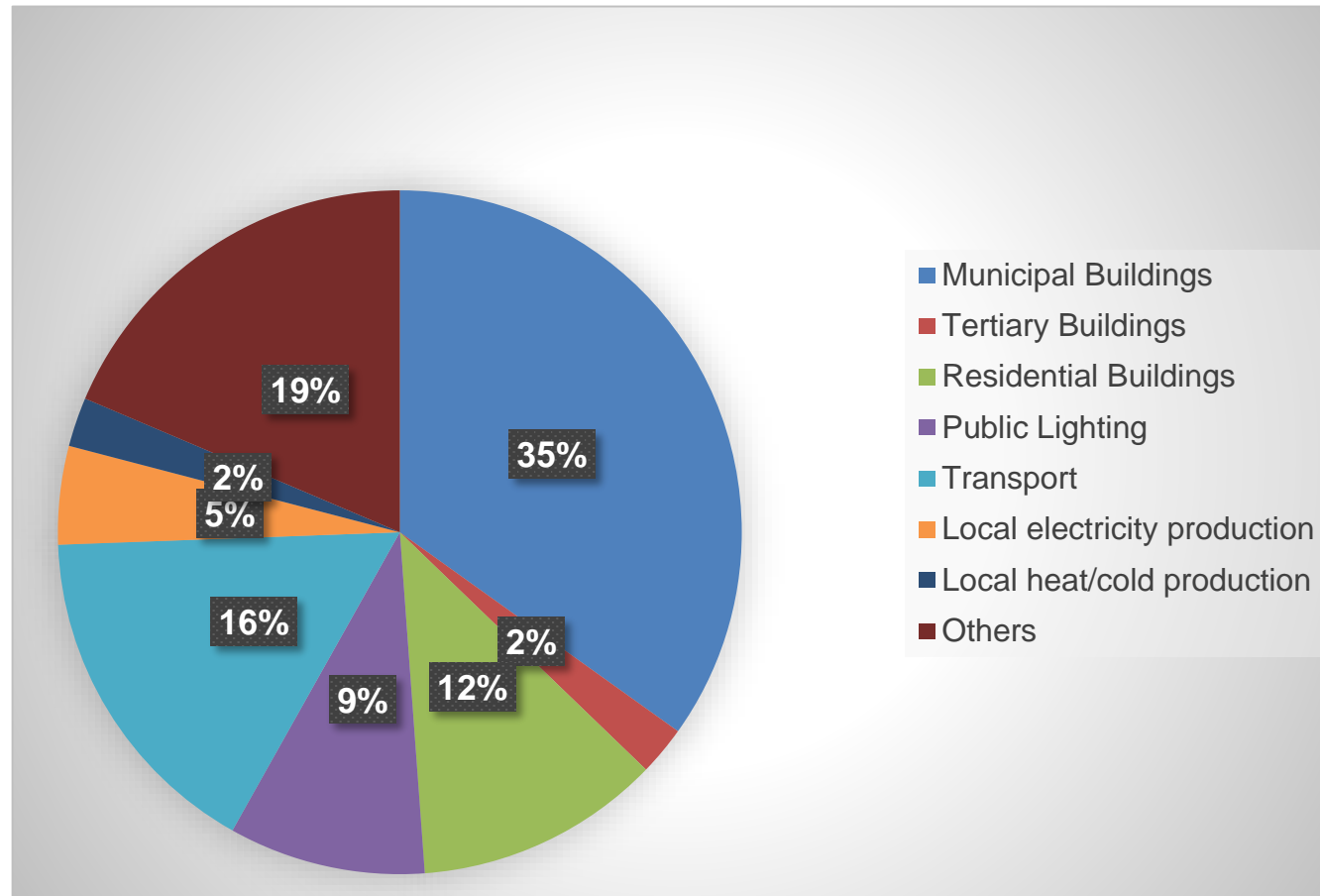


Figure 1: % Actions by sectors (areas)

Source: Own elaboration from SEAP data

City Energy Consumption by sector (MWh)

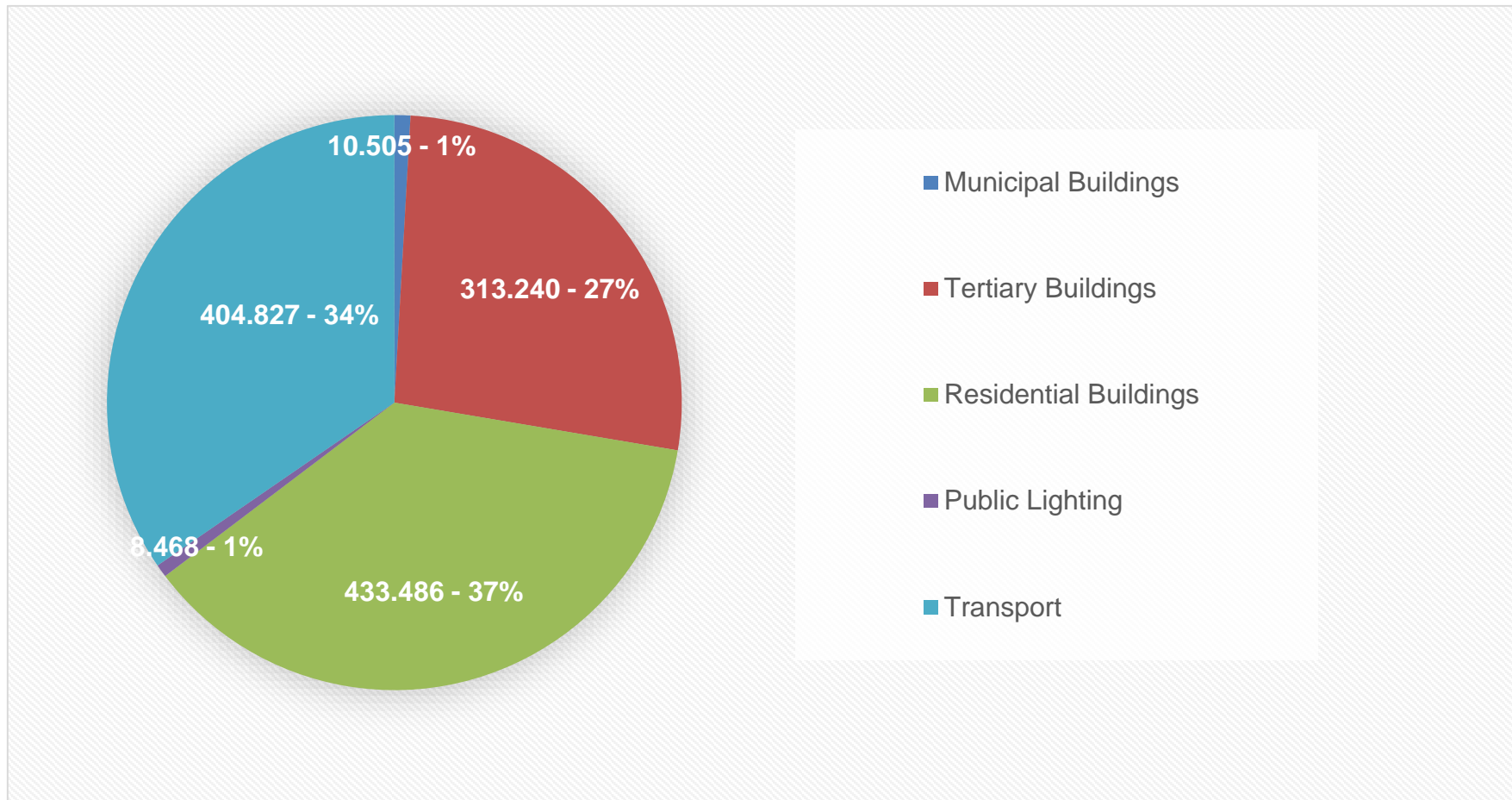
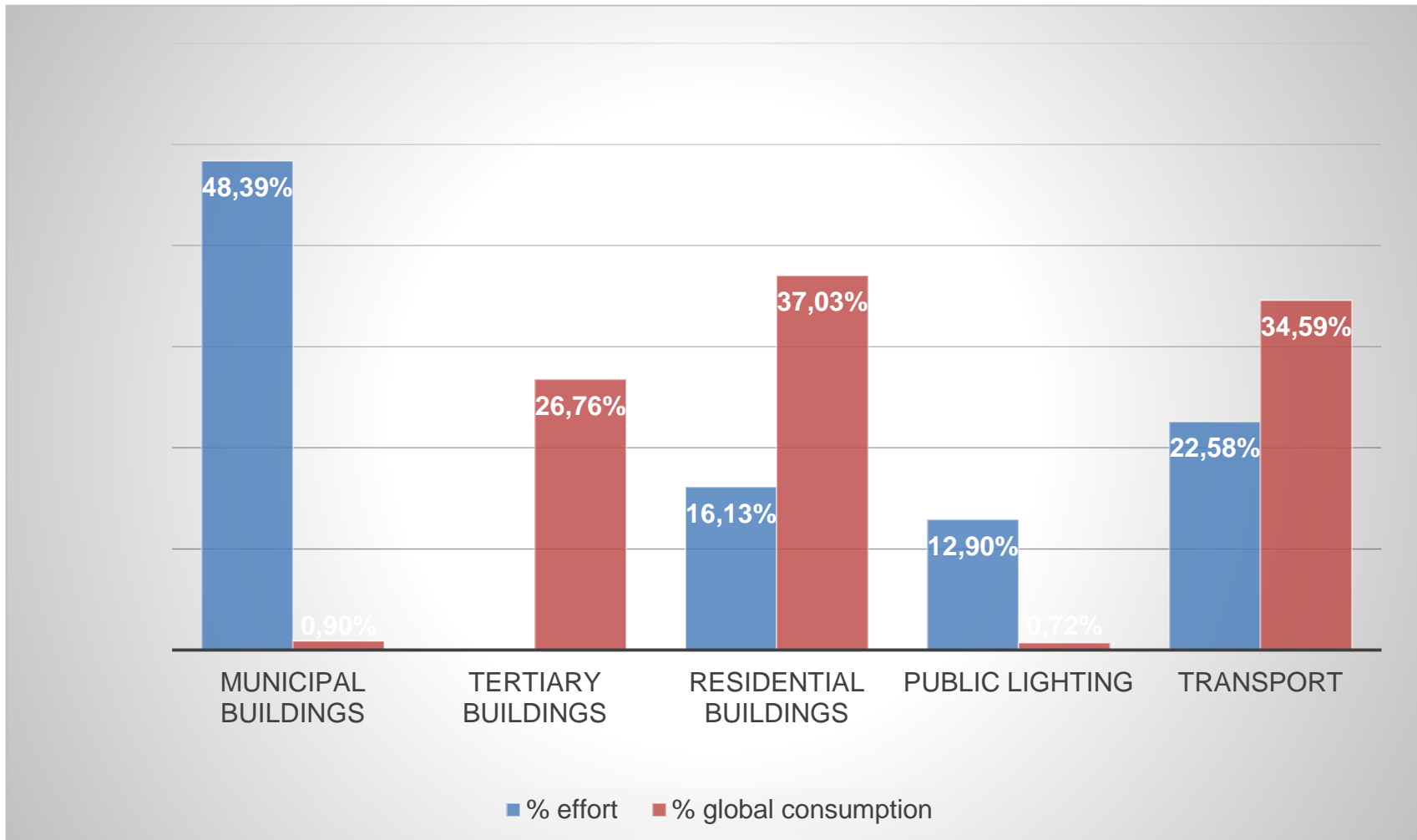
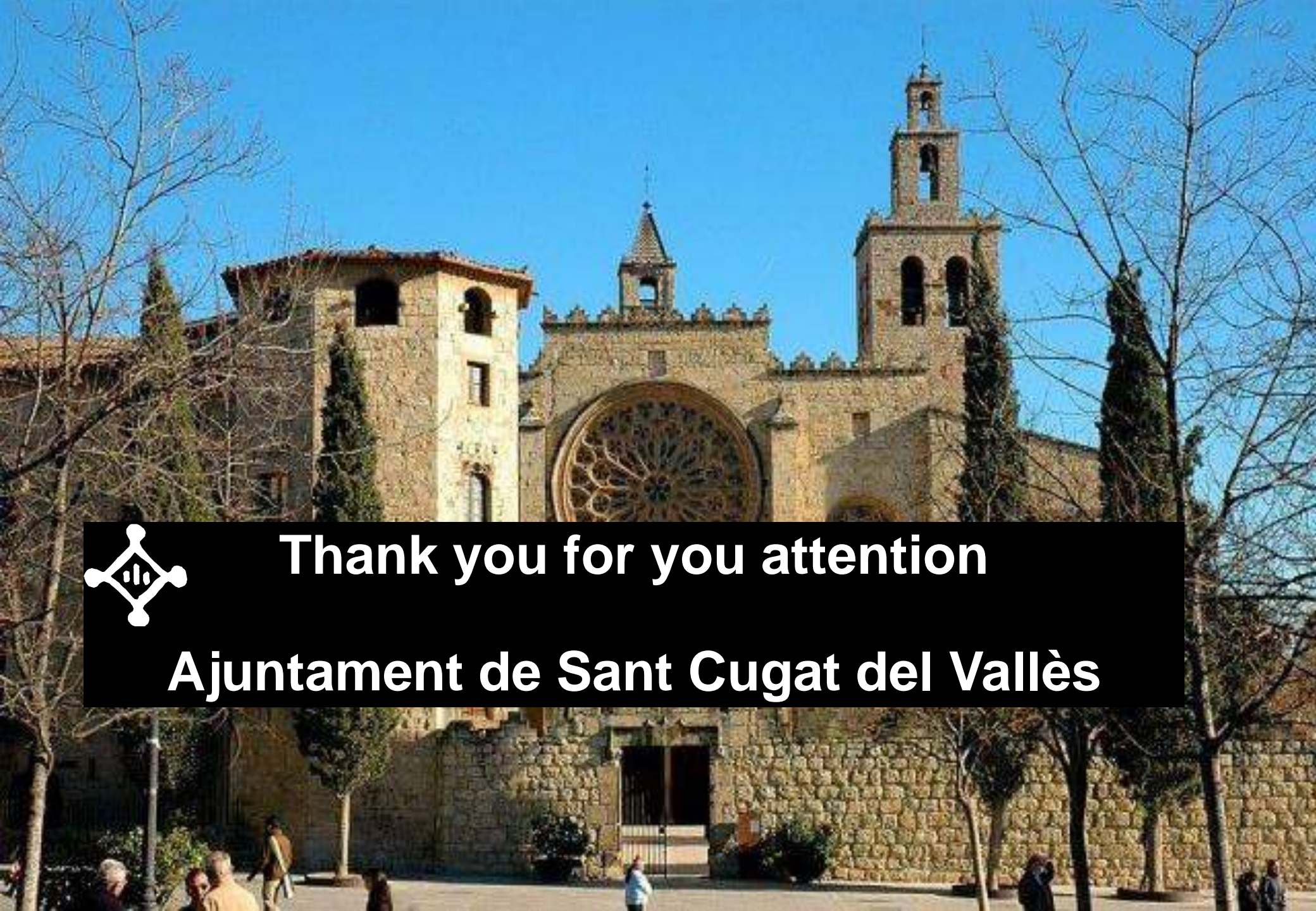


Figure 2: % Final Energy consumption by sectors

Source: Own elaboration from SEAP emission inventory

Effort vs consumption





Thank you for you attention

Ajuntament de Sant Cugat del Vallès