

**SmartEnCity PROJECT PARTNERS**

- FUNDACIÓN TECNALIA RESEARCH & INNOVATION, Spain
- Vivienda y Suelo de Euskadi (VISESA), Spain
- Ayuntamiento de Vitoria-Gasteiz, Spain
- Centro de Estudios Ambientales, Spain
- Corporación MONDRAGON, Spain
- Fagor Ederlan Taldea, Spain
- ACEDE HOME CLUSTER / H-ENEA living lab, Spain
- ETIC-Embedded Technologies Innovation Center, Spain
- MCCTELECOM S.Coop., Spain
- ACCIONA Ingeniería, Spain
- GIROA S.A.U, Spain
- CARTIF, Spain
- Estudios GIS, Spain
- Sonderborg Forsyning, Denmark
- ProjectZero, Denmark
- Sonderborg Andelsboligforening, Denmark
- Boligforeningen Søbo, Denmark
- Boligforeningen B42, Denmark
- Vikingegaarden A/S, Denmark
- PlanEnergi, Denmark
- Aalborg Universitet, Denmark
- Tartu Linnavalitsus, Estonia
- Smart City Lab, Estonia
- Tartu Regiooni Energiaagentuur, Estonia
- Tartu Ülikool, Estonia
- Balti Uuringute Instituut, Estonia
- AS Fortum Tartu, Estonia
- TAKSO OÜ, Estonia
- Telia Eesti AS, Estonia
- Cityntel OÜ, Estonia
- Comune di Lecce, Italy
- RINA Consulting, Italy
- Obshtina Asenovgrad, Bulgaria
- Sofia Energy Centre, Bulgaria
- Steinbeis-Europa-Zentrum, Germany
- ONDOAN S.Coop., Spain
- LKS INFRAESTRUCTURAS IT, S.L., Spain

FOLLOWER CITY LECCE

The Italian city Lecce is located in the southern part of the Apulia region and with 95,200 inhabitants a medium sized city. Being famous for its historic centre, Lecce is also home to a university. It is thus a city cherishing the past as well as investing into the future by being open to smart ideas.



Lecce, Villa Comunale

MAIN OBJECTIVES

- Enhanced energy performance of existing building stock
- Increased use of renewable energy sources
- Improved quality of air

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FOLLOWER CITY ASENOVGRAD

With its 68,000 inhabitants, the Bulgarian municipality of Asenovgrad is the second largest in the province of Plovdiv. Asenovgrad is aiming at energy efficient solutions, renewable energy use and environmentally aware citizens.



City life in Asenovgrad

MAIN OBJECTIVES

- Energy savings in buildings through building refurbishment
- Street lighting refurbishment
- Use of local renewable energy (biomass, wind, solar)

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The climate change is a real problem challenging cities and societies all over the world. Europe has therefore set ambitious transition goals regarding energy efficiency and renewable energy supply. By being proactive, cities can turn climate change into an opportunity, creating more livable cities and foster economic growth.

smart+
en
ci+y network

Many small and medium-sized cities across Europe have already developed Sustainable Energy Action Plans (SEAPs). The SmartEnCity Network inspires and supports these cities to take additional coordinated and integrated actions to successful implementation and to align efforts with integrated urban plans.

The SmartEnCity Network enables committed cities to become smarter and more energy efficient based on an integrated approach for planning, housing, mobility, energy and ICT infrastructures.

We share our efforts, tools, knowledge and best practices and believe in open innovation and co-creation.

JOIN THE SMARTENCITY NETWORK AND BECOME A SMART ZERO CARBON CITY FRONT RUNNER.

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**TOWARDS SMART ZERO CO₂
CITIES ACROSS EUROPE**

VITORIA-GASTEIZ +
TARTU +
SONDERBORG +





SmartEnCity KEY FACTS

- 3 Lighthouse Cities: Vitoria-Gasteiz (Spain), Tartu (Estonia) and Sonderborg (Denmark)
- 2 Follower Cities: Lecce (Italy) and Asenovgrad (Bulgaria)
- 37 Project Partners from 6 Countries
- Coordinator: TECNALIA Research & Innovation
- Duration: 66 Months (February 2016 – July 2021)
- 28 Mio. € EU-Funding



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LIGHTHOUSE CITY VITORIA-GASTEIZ

Vitoria-Gasteiz is the capital of the Basque Country and with 240,000 inhabitants a Europe-leading municipality investing in green economy. The city has a clear strategy to become greener and to promote energy efficiency, renewable energy, low carbon mobility and smart infrastructures. Vitoria-Gasteiz is committed to becoming smarter, using modern technologies to improve the quality of life of its citizens. Therefore, the definition of strategies covering ICTs, mobility, energy and urban environment, working together with public bodies, the private sector and research agents, is playing a key role.



First retrofitting works starting at demo district Coronación

SMART SOLUTIONS FOR VITORIA-GASTEIZ

- **Vitoria-Gasteiz retrofitting package**
The energy retrofitting of 750 dwellings (60,000 m²) in the demo district including facades, insulation, windows and doors.
- **Urban management system**
This city platform integrates all existing ICT systems and enables to monitor the use of energy in retrofitted buildings.
- **Biomass district heating system**
The new biomass heating network in Vitoria-Gasteiz leads to better energy prices, lower maintenance and operation costs and improved safety.
- **Citizen engagement strategy for retrofitting package**
A citizen engagement strategy ensures the communication with the citizens within the demo district.
- **Smart Electric Buses**
13 new full electric vehicles will replace the service on the current Line 2 on a route of 10 kilometers with 24 new stops, equipped with innovative technology in the fields of user experience, information, safety systems and driving assistance.



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LIGHTHOUSE CITY TARTU

Tartu is a town of scientists, creative minds and students, making it a hotbed for an innovative and forward-looking culture. The University of Tartu hosts nearly 14,000 students, which constitutes about 15 % of its entire population.



Fortum district cooling station in Tartu

Tartu is already well-known as a smart city because of pioneering e-services and paperless administration practices, which includes being one of the first in the world to implement smart solutions like m-parking (park and pay via mobile app), free public Wi-Fi, e-elections, e-health records, city mobile phone applications, digital signature, fully electric taxi service, etc.

SMART SOLUTIONS FOR TARTU:

- **Tartu retrofitting package**
Turning Tartu Soviet era apartment buildings "khrushchyovkas" into zero energy "smartovkas" that offer a modern, energy-efficient and high-quality living environment equipped with smart home solutions.
- **District cooling system that uses residual heat**
This new district cooling system involves a pump that produces heat for the district heating system by using residual heat from cooling.
- **Public bike sharing system**
Installation of a public bike sharing system with both regular and e-bikes that also includes 65 parking stations, the locations of which were selected through participatory planning.
- **Gas buses in public transport**
Old fossil fuel city buses will be replaced with 62 brand new gas buses by 2019 in order to make the public transport system more sustainable and environmentally friendly.



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LIGHTHOUSE CITY SONDERBORG

Sonderborg is a Danish municipality close to the Danish-German border. It aims at reducing its carbon emissions to zero by 2029 based on close collaboration with citizens and stakeholders, supported by the strong public-private partnership "ProjectZero". The Sonderborg roadmaps are based on energy efficiency improvement, conversion to renewable energy sources, green transportation, integrated smart solutions and education. The "ProjectZero" enables citizens, businesses, organisations and the city council to plan, create, implement, measure and correct the municipal journey towards its zero-carbon target. The city council targets the creation of new green jobs in the fields of crafts, industry, tourism and education. Creating a new shared mindset is essential for achieving Sonderborg's ambitious goals!

Refuelling of new biogas buses in Sonderborg



SMART SOLUTIONS FOR SONDERBORG:

- **New biogas buses and biogas filling stations**
Implementation of 44 new energy-efficient biogas-fueled buses, able to carry bikes on board.
- **Citizen engagement program**
A citizen engagement program will involve local housing associations in retrofitting activities.
- **Sonderborg retrofitting package**
The retrofitting of 45 apartments of the participating 3 housing associations will reduce energy consumption, improve indoor climate through the installation of roof mounted Photovoltaic systems.



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