

## Editorial

Dear readers,

After a promising start of the year 2020 and a continuation of our joint efforts towards smart city solutions, things have changed from one day to another. Nothing is the same anymore!

Just a few weeks ago, we have successfully started our [SmartEnCity Academy](#) with the first lesson "[The SmartEnCity Way towards Zero Carbon City](#)". 150 registrations are proving that we are on the right track, and therefore, we will continue to support you on your journey towards zero carbon with our 2<sup>nd</sup> lesson "[Mastering Governance & Political Barriers](#)" on 14 April a 2 pm. We continue our work "behind the scenes" and with virtual formats to make sure that, once this crisis has been overcome, we can immediately get back to realising our goals of zero emissions within our cities.

While it is crucial that we stay apart for now, it is all the more important to – virtually and mentally - stick together and to work with joint forces on smart solutions to help people and the environment to carry on and to overcome COVID-19.

This is why we are sending you this newsletter with information on the latest developments in our Lighthouse- and Follower Cities as well as our SmartEnCity Network.

Enjoy reading and take care,

**Francisco Rodríguez Pérez-Curiel and Silvia Urra Uriarte**  
Project Coordinators of SmartEnCity, TECNALIA Research & Innovation

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## Progress in the Lighthouse Cities

### Tartu

Lighthouse City Tartu has established a national city network, the "Estonian Smart Cities Club". During the past six months, they organized two meetings, in Valga and in Elva. Main topics in Valga were the Sustainable Energy and Climate Action Plan "[Tartu Energy 2030+](#)" and how to engage citizens whereas the meeting in [Elva](#) was focusing on cities' needs and obstacles and the respective SmartEnCity tools and methodologies to overcome them.

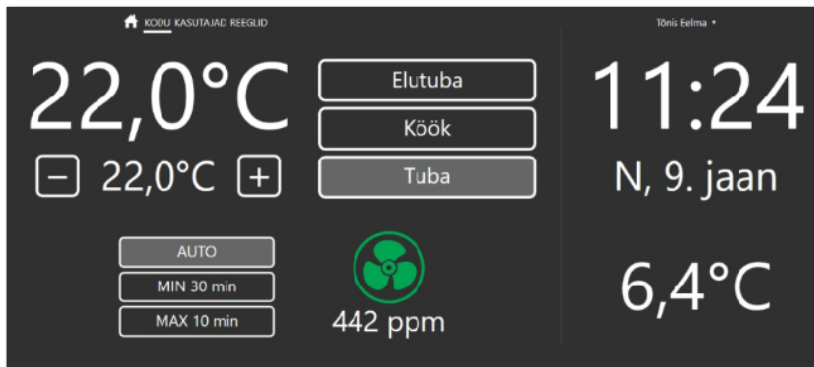
Tartu's [5<sup>th</sup> Planning Conference](#) was an impressive demonstration of Tartu's successful efforts in involving citizens and other stakeholders. More than 360 participants were discussing topics under the headline "Democracy and technology in common spaces".

An innovative idea on how to raise awareness is the new [SmartEnCity Tour](#) in Tartu, guided by an official certificated tour guide who covers during her tour smart solutions in the fields of retrofitting, mobility and arts.

One of the highlights of the past year was the [Christmassy information event](#). Nearly 80 residents of the pilot area were invited to a festive information event with mulled wine and gingerbread, to introduce the new smart home system, which is going to be installed in all renovated apartments of the demo area.

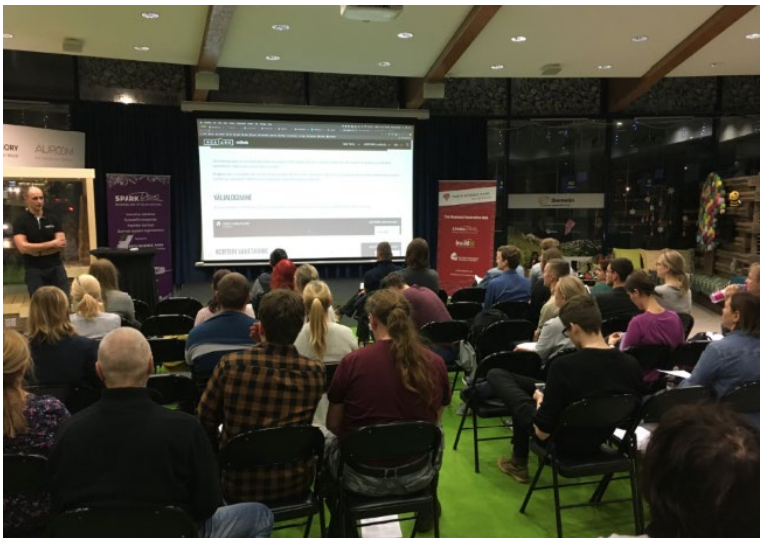
This [Smart Home System](#) allows controlling the internal climate of each room of the apartment as well as monitoring the energy consumption. It turned out that the main challenges for the residents are not only getting familiar with the system and its features but also with the new high energy efficiency

level of the buildings which requires a change in the behaviour of its inhabitants. That's why Tartu organised several [information events](#) for the beginning of 2020.



Screenshot of Tartu's new Smart Home System. Credits@Tartu

Also, the housing association representatives of the Tartu pilot area met for a [technical meeting](#) focusing on heating and ventilation systems, data collection and the smart home system. They discussed not only technical issues but also how to explain the smart technology to the residents.



Smart Home System Training with residents. Credits@Tartu

In general, the SmartEnCity retrofitting works in Tartu's demo district are coming to an end. Three fourth of the buildings are finished, the rest will be completed this year. By then, all of the former old Soviet era apartment buildings will have turned into modern energy efficient dwellings and of course, people are very excited to see the new wall paintings, which have become a real attraction and magnet for residents as well as tourists.

### **Vitoria-Gasteiz**

Lighthouse City Vitoria Gasteiz is bundling efforts and resources: [SmartEnCity and BIM-SPEED](#) projects are sharing two buildings in the demo district as case studies for two complementary approaches combining renovation works from the outside and smart technology inside the buildings. SmartEnCity looks for better living conditions and less CO<sub>2</sub> in the cities, while BIM-SPEED aims to improve the

performance of these two buildings by developing a Building Information Model (BIM), a digital representation of the building.

By the way, [demo district Coronación](#) is now coming along with brand new facades and the retrofitting works for the next ten buildings have already started at the beginning of this year. The tender for the last remaining buildings has been already published in February 2020.



Retrofitted building Aldabe 5 in demo district Coronación. Credits@Vitoria-Gasteiz

Also, the public tender for the [biomass district heating network](#) has finally been awarded. On 7 February, the Municipal Government of Vitoria-Gasteiz awarded GIROA S.A.U. for the operation of the renewable thermal energy distribution system in the Coronación neighbourhood, a remarkable milestone towards the successful completion of SmartEnCity project deployment in the demo district.

In connection with smart mobility, Vitoria-Gasteiz has unveiled its plans for the future [depot and charging unit](#) for the Smart Electric Buses (BEIs). The charging unit causes an investment of 5.6 million € and therefore requires collaboration between several institutions. Apart from the new depot with slow charging unit, the works of the civil infrastructure have already started in the second half of August 2019 after the City of Vitoria-Gasteiz signed the contract with IRIZAR, the company which will be in charge of the deployment of the BEIs (Smart Electric Buses), planned for end of May 2020. If everything goes as expected, the first buses will be hitting the road for test drives already this year in summer.



Vitoria-Gasteiz' future depot and charging unit for the Smart Electric Buses (BEIs). Credits@Vitoria-Gasteiz

### **Sonderborg**

Sonderborg is the first Lighthouse City within SmartEnCity which is about to have all demo-implementations completed. What is yet to be implemented is the solution for battery storage in combination with solar panels on the roof tops of retrofitted buildings in housing associations and the completion of Sonderborg's City Information Open Platform.

In the past six months, the remaining of in total 30 E.ON [EV charging points](#) have been installed and are now in operation.



E.ON EV-Charger in Sonderborg. Credits@Sonderborg

The chargers will provide important energy-infrastructure for current EVs in Sonderborg and for visitors, and help Sonderborg to overcome infrastructural challenges, because the sale of new EVs is expected to grow rapidly in the near future. To visualise the EV charging infrastructure, the chargers and their locations have also been integrated into Sonderborg's City Information Open Platform (CIOP), where a map is indicating the locations and the availability of the EV chargers.



The [battery storage solutions](#) are planned to be implemented and demonstrated in combination with solar PV plants in estimated eight housing departments belonging to the three housing associations in Sonderborg: SAB, SOBO, B42. The demonstration project covers 40 housing blocks with 800 apartments plus 106 townhouses. The total investment for this demonstration project is budgeted to 3.5 million Euro. The estimated electricity saved is 1.3 GWh (1,300 MWh) per year corresponding to a CO<sub>2</sub> reduction of 350 tons per year.



Building with 232 apartments planned for 2,000 m<sup>2</sup> solar cells with 170 kWh battery capacity.  
Credits@Sonderborg

As a part of Sonderborg's digitalisation transformation process, [ProjectZero](#) in collaboration with [Innovation Lab](#) and [the University of Southern Denmark](#) organised a 48 hour hackathon, the "[Sonderborg Smart Zero Hack](#)" from 8-10 November 2019, focusing on five concrete climate challenges. The participants had just 48 hours to deliver smart solutions for Sonderborg on the basis of Sonderborg's new City Information Open Platform.



"Sonderborg Smart Zero Hack" from 8-10 November 2019. Credits@Sonderborg

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## Progress in the Follower Cities

### Lecce

Follower City Lecce is represented in the publication “[Europe towards Positive Energy Districts](#)”. This booklet has been edited by the Programme on Positive Energy Districts and Neighbourhoods (PED Programme) Management of the Joint Programming Initiative (JPI) Urban Europe and offers a compilation of projects striving towards sustainable urbanization and energy transition.

Lecce’s taskforce is working on the Integrated Energy Plan definition and, in particular, having set the baseline, it is now focused on the characterisation of the strategic actions to be implemented. In order to better define the interventions, Lecce has made follow-up initiatives to involve local and national stakeholders of the smart city sectors (energy, environment, mobility, ICT) to support the municipality for the definition of the foresight future scenarios. Moreover, the SEC national network has been enlarged and involved at the first SEC-IT national seminar, organised in December 2019 in Bolzano.

To address the youngest members of the society, Lecce has released an [information brochure](#) on energy efficiency in primary schools suitable for children. The booklet which was distributed to primary school pupils in the city represents a small guide aimed at informing and educating the little ones and helping them to understand how to reduce waste and consume less energy, thus contributing to the protection of the environment.

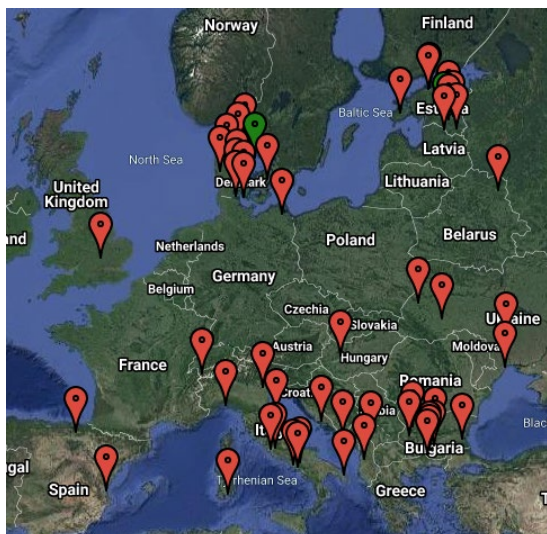
### Asenovgrad

Due to local elections in late 2019, Asenovgrad experiences some delay in their planned activities for the update of their Integrated Plan for Urban Regeneration and Development. The work has been mainly focused on the follow-up of different interventions in SmartEnCity Lighthouse Cities to select the most suitable ones for Asenovgrad’s local context and a selection of measures to be put forward to the attention of the newly elected local administration.

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## News from the SmartEnCity Network

The SmartEnCity Network has reached 52 member cities and is coming closer to its goal of reaching at least 60 members in total. A warm welcome to [Chortkiv](#) (Ukraine); [Gabrovo](#) (Bulgaria) and Saaremaa (Estonia) since the last [SmartEnCity Newsletter nr7!](#)



Currently four national SEC Networks are in operation in Denmark, Estonia, Italy and Bulgaria. The Danish [Energibyerne.dk](#) have consistently continued their frequent meetings with a goal to jointly work on various topics such as energy retrofitting of housing, EV charging infrastructure strategies, etc. The Danish Network is keen on working on these topics as well under the framework of a future joint project. The Estonian [Smart Cities Club](#) is also on track, meeting on a regular basis and using the SEC Network tools such as the newly developed City Check-up Assessment tool which enables cities to see where in the Integrated Energy Planning (IEP) methodology their city is and provides advice to the SECN member cities on how to start or boost their transition using the IEP methodology. The [Italian Network](#) launched its first meeting in December 2019, where 13 municipality

representatives learned more about the SEC project and were presented with the aim of this national cooperation which was a great milestone that will further pave the way towards more Smart Zero Carbon Cities in Italy. The Bulgarian Network has also been established, however, it takes a more personal approach by having face to face meetings with each city which enables the Bulgarian member cities to get a deeper understanding of how to use the methods and approaches that have been developed within the SEC project. It was expected to launch the Spanish national SmartEnCity Network in mid 2020 which had in mind a more regional approach. However, due to the COVID-19 situation in Europe, the development of the Spanish Network is unknown as well as the development of national SmartEnCity Networks in the other four countries.

Unfortunately, due to COVID-19, the intended physical meeting of the SmartEnCity Network city members which was originally planned for the beginning of June in the framework of the [URBIS Smart City Fair](#) is now on hold as well. Stay tuned for updates on this on the [SEC Network page](#).

The SmartEnCity Network is a valuable city network which constantly provides its member cities with updates on new smart city solutions, strategic energy planning methods and tools and organises capacity building workshops on smart energy related topics (citizen engagement, smart government, smart buildings, smart mobility, etc). Find more information about the [SmartEnCity Network](#), feel free to [register for the bi-monthly SEC Network Bulletin](#) and [Join the SEC Network](#) – all free of charge!

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#### Past events

- [Smart City Expo World Congress 2019](#), 19.-21.11.2019, Barcelona, Spain
- [EU Energy Day at COP 25](#), 10.12.2019 in Madrid, Spain
- [Covenant of Mayors Investment Forum](#), 18.02.2020 in Brussels
- [SmartEnCity Academy for Zero Carbon Transition](#), Lesson 1 on 20.02.2020. Find the recording [here](#).

#### Upcoming events

- SmartEnCity Academy, Lesson 2 “[Mastering Governance & Political Barriers](#)” on 14.04.2020.
- [European Sustainable Energy Week](#), 22.-26.06.2020, Brussels, Belgium
- [URBIS Smart City Fair \(postponed from June\)](#), 02.-03.09.2020, Brno, Czech Republic
- [Nordic Edge Expo World Congress](#) on 22.-24.09.2020 in Stavanger, Norway

We closely follow the current COVID-19 developments and will inform you in case this leads to a change of plans regarding any upcoming events.

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#### News from our sister projects

As one of the first SCC1 projects officially having finished its five year project duration, Triangulum has published a set of 29 factsheets that provide all the necessary information for interested cities, engineers, project planners and others to get started with their own smart city implementations! You can find the factsheets from Stavanger, Eindhoven and Manchester [here](#).

SCIS has published two new Solution Booklets: [Heat Pump driven District Heating systems](#) and [From Idea to Implementation](#)

GrowSmarter, the first H2020 Smart City Project ended this year in January and has published [“Recommendations for policy makers and practitioners”](#)

The first newsletter of the new SCC1 project ATELIER will be published soon. ATELIER focuses on the development of more Positive Energy Districts in Europe, starting with implementations in their Lighthouse Cities Amsterdam and Bilbao. Sign up for their newsletter at <https://smartcity-atelier.eu/#newsletter> and stay informed.

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#### About SmartEnCity / Project ID / Contact

SmartEnCity, a project funded under the European Union's Horizon 2020 research and innovation programme, aims to develop a systemic approach for transforming European cities into sustainable, smart and resource-efficient urban environments. We aim to develop strategies that can be replicated throughout Europe in order to reduce energy demand and maximise renewable energy supply in urban environments. Activities include retrofitting in buildings, integration of infrastructures, developing sustainable mobility options, as well as the intelligent deployment and use of Information and Communication Technologies.

The SmartEnCity concept will be defined, planned and implemented in three Lighthouse demonstrators Vitoria-Gasteiz (Spain), Tartu (Estonia) and Sønderborg (Denmark). The process will be replicated in the two Follower cities of Lecce (Italy), and Asenovgrad (Bulgaria). We will encourage a SmartEnCity Network of further cities interested in replicating the approach elsewhere in Europe.

Under the coordination of Fundación TECNALIA Research & Innovation, 35 partners from 6 countries work together to make Smart Zero Carbon Cities a reality in Europe.

#### PROJECT ID

Duration: 66 months (February 2016 – July 2021)

Partners: 35 partners from 6 countries (Bulgaria, Denmark, Estonia, Germany, Italy, Spain), coordinated by Fundación TECNALIA Research & Innovation

Call identifier: H2020-SCC-2015

Topic: SCC-01-2015 Smart Cities and Communities solutions integrating energy, transport, ICT sectors through lighthouse (large scale demonstration – first of the kind) projects

#### Contact

SmartEnCity Project Coordinator:  
Fundación TECNALIA Research & Innovation  
Francisco Rodríguez Pérez-Curiel / Silvia Urra Uriarte (Project Coordinators)  
E-mail: [francisco.rodriguez@tecnalia.com](mailto:francisco.rodriguez@tecnalia.com) / [silvia.urra@tecnalia.com](mailto:silvia.urra@tecnalia.com)  
Phone: +34 946 430 850  
[www.smartencity.eu](http://www.smartencity.eu)

#### Press Contact:

Steinbeis-Europa-Zentrum  
Bettina Remmele  
E-Mail: [remmele@steinbeis-europa.de](mailto:remmele@steinbeis-europa.de)  
Phone: +49 711 123 4048

#### Editorial Contact:

Steinbeis-Europa-Zentrum  
Heike Iffland  
E-Mail: [iffland@steinbeis-europa.de](mailto:iffland@steinbeis-europa.de)  
Phone: +49 711 123 4028



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Steinbeis-Europa-Zentrum der Steinbeis Innovation gGmbH  
Bettina Remmele  
Willi-Bleicher-Str. 19  
70174 Stuttgart  
Deutschland

+49 711 123 4048  
[remmele@steinbeis-europa.de](mailto:remmele@steinbeis-europa.de)