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Inclusion in Energy Communities

Introduction of the PROMOTER project and presentation on the situation of energy communities in Portugal

Professional Online Roundtable on Socialisation and Good Governance of Energy Communities in the Danube Region

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IrRADIARE, Science for Evolution® (P)

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- PROMOTER project promotes territorial strategies for sustainable mobility through green energy prosumer hubs.
- PROMOTER is funded by Interreg Europe, a program that supports regional and local governments in improving policies through innovative and sustainable solutions. The project aligns with Policy Objective 2: A Greener Europe.
- It aims at fostering decarbonized mobility and local energy communities through energy production hubs in public spaces.

Main Objectives

- **Promote Decarbonized Mobility**: Support sustainable transport by integrating renewable energy hubs.
- **Energy Hubs**: Install renewable energy systems in public and private spaces to support sustainable mobility. Renewable Energy: Promote local self-consumption of renewable energy.
- **Support Local Energy Communities:** Develop energy hubs in key locations (schools, hospitals, shopping centers).
- **Accelerate the Energy Transition:** Leverage renewable energy to reduce dependence on fossil fuels and maximize self-consumption.

Expected Benefits of PROMOTER

- **Energy Transition**:
  Accelerate the use of renewable energies, reducing reliance on fossil fuels and promoting self-consumption.

- **Local Development**:
  Create environmental, economic, and social benefits for local communities, aligning with EU Directive 2018/2001.

- **Community Engagement**:
  Strengthen local energy communities by involving stakeholders and promoting sustainability.

Methodology and Approach of PROMOTER

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- **Green Energy Focus**:
  Enhance renewable energy production and policy solutions to foster sustainable mobility.

- **Capacity Building**:
  Strengthen institutions through knowledge sharing and interregional cooperation.

- **Sustainability and Stakeholder Engagement**:
  Ensure long-term sustainability by involving local stakeholders and reducing energy dependency.

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PROMOTER Project Partners

	Partner	Location	Country
1	**Livorno Province**	Livorno	Italy
2	**Rezekne City Council**	Rezekne	Latvia
3	**AG MOBIL-O**	Oostende	Belgium
4	**Regional Council of Central Finland**	Jyväskylä	Finland
5	**DEX Innovation Centre**	Liberec	Czech Republic
6	**Federation of Municipalities of the Region of Murcia**	Murcia	Spain
7	**Sintra Municipality**	Sintra	Portugal
8	**South Transdanubian Regional Innovation Agency**	Pécs	Hungary
9	**City of Bystřice**	Bystřice	Czech Republic
10	**Brasov Agency for Sustainable Development (BASD)**	Braşov	Romania

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Expected Results and Conclusions

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- **Improved Policy Tools:**
  9 policy tools improved through the collaboration of regional and local governments.

- **Increased Competence in Renewable Energy:**
  Increased competence of staff and stakeholders in managing renewable energy and sustainable mobility.

- **Cooperation with EU Projects:**
  Strengthened cooperation with other EU projects to promote sustainability and energy communities.

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Expected Results and Conclusions

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- **Innovation and Long-Term Impact**:
  PROMOTER introduces innovative management of energy hubs, with a long-term impact on decarbonization and social inclusivity, aligning with EU climate and energy goals.

- **Next Steps**:
  Future actions will focus on monitoring policy change actions, sharing knowledge across partners, and ensuring the sustainability of the energy hubs created.

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Energy Communities in Portugal

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Framework

2009

The Renewable Energy Directive (RED) is **European Union (EU) legislation that establishes goals and objectives for the use of renewable energy in member states**. RED's main objective is to promote the use of renewable energy sources to reduce the EU's dependence on fossil fuels and reduce greenhouse gas emissions.

RED I: The first version of the Renewable Energy Directive (RED I) was adopted in 2009. This directive **set the target that 20% of total energy consumption in the EU should come from renewable sources by 2020**. It also set specific targets for each member state, varying according to the circumstances and capabilities of each country.

2018

RED II: The second version of the Renewable Energy Directive (RED II) was adopted in 2018 and came into force in 2021. RED II **updates and strengthens the targets set by RED I**. It sets a **new target that at least 32% of EU gross final energy consumption is expected to come from renewable sources by 2030**. Furthermore, it introduces measures to promote the use of renewable electricity in transport, heating and cooling, as well as the sustainability of bioenergy.

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Framework

2019

DL 162/2019 – establishes the legal regime applicable to the production of electricity intended for self-consumption in the installation of use associated with the respective production unit, with or without connection to the public electricity grid, based on renewable or non-renewable production technologies, known as Power Units Production for Self-Consumption.
Collective self-consumption approach and Renewable Energy communities

2021

Regulation 373/2021 ERSE – specifically regulates the commercial relationship between agents participating in self-consumption, defining a specific model of network use contract. The use of networks for energy sharing presupposes the payment of Network Access tariffs to be applied to self-consumption through RESP.

2022

DL 15/2022 – Repeals DL 162/2019. Establishes the organization and operation of the SEN (National Electrical System). Defines activities of: Production, storage, commercialization, energy aggregation. Establishes the legal regime applicable to the production of electricity intended for self-consumption in the installation of use associated with the respective production unit, with or without connection to the public electricity grid, based on renewable production technologies, known as Production Units for Self-Consumption (UPAC).

It aims to promote and facilitate energy self-consumption and Renewable Energy Communities, eliminating unjustified legal obstacles and creating conditions for the establishment of innovative solutions, both from an economic and social point of view, based on taking advantage of new technological opportunities.

- Definition of EGAC, CER, ACC and Citizen Communities for Energy
- Defining proximity for surplus
- Sharing Energy sharing – definition of fixed and proportional coefficients for consumption
- Rights and duties of the producer and consumer;
- Applicable tariffs – network usage charges;

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Community decarbonization

Energy Community:

- Producers and consumers collaborate for environmental, economic and social benefits.
- Sharing surplus energy at beneficial costs.
- Reduced carbon emissions and energy bills.
- Intelligent use of energy
- Less energy waste with more community members.
- Importance of sharing for mutual benefits.

Transition to a Sustainable Model

- Changing the use of non-renewable resources.
- A model based on renewable and low-carbon resources.
- Conscious use of resources.

Increased Energy Efficiency

- Energy Efficiency and Carbon Neutral
- Encouraging collective self-consumption and renewable energy communities.
- Energy Efficiency in Buildings" program.
- Reducing energy consumption and carbon footprint.

Energy communities can play a significant role in applying these sustainable practices. Community energy production is essential for reducing external energy dependency, because the more members there are in the community, the greater the collective savings in energy costs.

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Sintra Motion & Innovation for Low Emissions


Economia Circular e Ambiente


Energia e Edifícios


Mobilidade urbana sustentável


Comunidade, Arte e Cultura

Operador do programa: REPÚBLICA PORTUGUESA

Promotor: FUNDAÇÃO AGA KHAN Portugal

Parceiros: SINTRA, IrRADIARE, CARD4B SYSTEMS, innovationpoint, dstsolar, watt iS, Ciências ULisboa, IDN

“Working together for a green Europe”

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Programe Operator

REPÚBLICA PORTUGUESA
AMBIENTE E TRANSIÇÃO ENERGÉTICA

Programe Promotor

FUNDAÇÃO AGA KHAN
Portugal

Authority Partner

SINTRA
CÂMARA MUNICIPAL

Programe Partner of the Donor country

Innovation Norway

Implementation partners

IrRADIARE
Science for Evolution

CARDAB
SYSTEMS

innovationpoint

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watt.is
Intelligent Solutions

Ciências ULisboa
Faculdade de Ciências da Universidade de Lisboa

IDN

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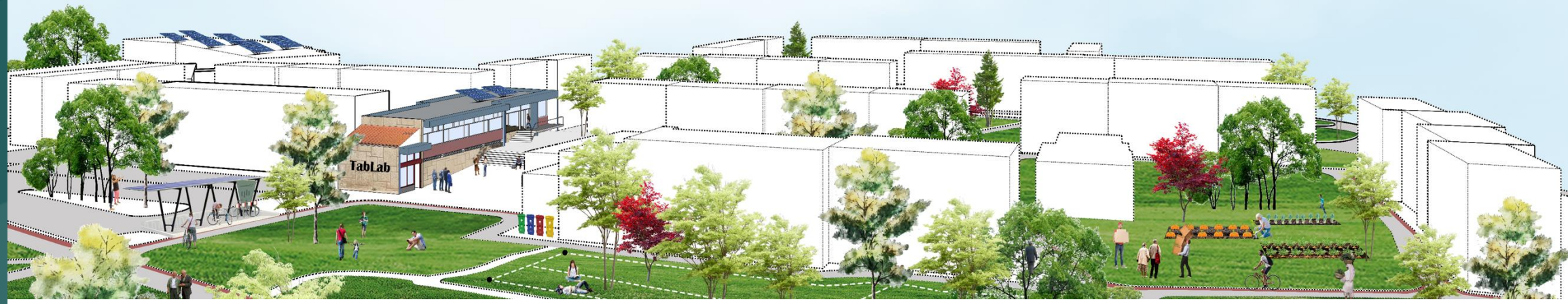
May 2021 — April 2024

SMILE: Sintra Motion & Innovation for Low Emissions

BAIRRO DA TABAQUEIRA



A community-led model of a living lab for decarbonization!

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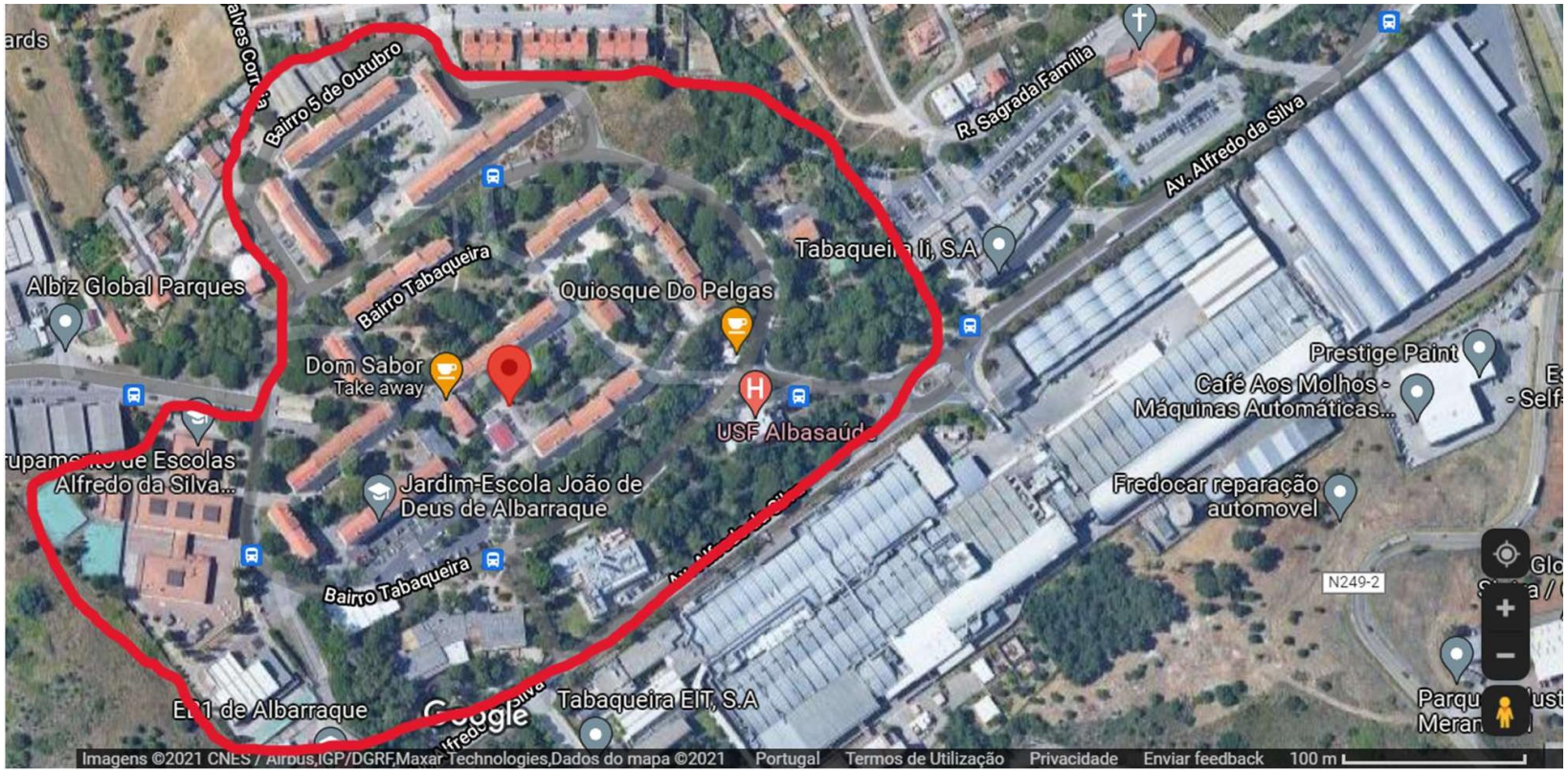
Tabaqueira Neighborhood

- Bounded space
- Distinctive features
- Meeting spaces
- Local identity



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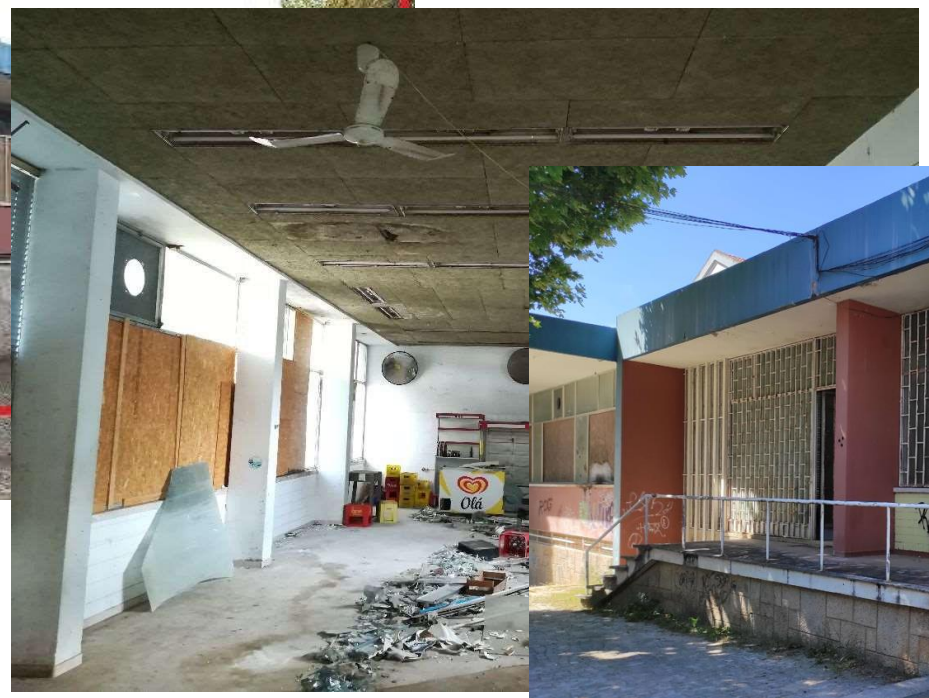
TABLAB - The building



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TABLAB - The building

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Main Activities

Circular economy and the environment

- Community Urban Garden
- Collection system for rainwater
- Composting goes to school
- Repair Café and Bike workshop
- Intelligent Automatic Irrigation System
- Waste management system

Composting goes to school

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Repair Café

Bike Workshop

Main Activities

Sustainable urban mobility

- **Transport** on a flexible/"on-demand" basis for people, goods and small goods – **Cycling without age**
- **Bicycle sharing** and electric charging station
- **Secure parking** for bicycles

Sustainable Mobility for People

PEDALAR SEM IDADE
PORTUGAL

CYCLING WITHOUT AGE

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Sustainable Mobility for Goods

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Main Activities

Energy and Buildings

- Installation and maintenance of a **renewable energy community**
- Monitoring
- Application based on artificial intelligence and community involvement to fight **energy poverty**
- Promoting a group of **citizen-scientists** for energy efficiency
- **Energy Literacy** Programme

Main Activities

Transversal activities

- **MySMILE**
- Steering Committee
- Community Assemblies
- Urban Art
- Living Lab management platform

Art Residencies

Goals

The SMILE project is aligned with EU climate goals and seeks to create a sustainable energy model that can be replicated in other urban areas.

- **Promote Local Renewable Energy Production:** Foster the generation of renewable energy within the community through solar panels and other technologies.
- **Reduce CO_2 Emissions:** SMILE aims to contribute to the reduction of greenhouse gases by encouraging energy-efficient practices.
- **Support Sustainable Mobility:** Develop a sustainable transportation infrastructure, including bicycle sharing, to reduce reliance on fossil-fuel-based transport.

Energy Communities and Self-Sufficiency

SMILE project established a Renewable Energy Community (REC) in Tabaqueira, where surplus energy from the Alfredo da Silva School is shared with 45 residential households. The prosumer model ensures that the community benefits from locally produced, clean energy, leading to a reduction in both energy costs and carbon emissions.

This setup allows for greater energy autonomy, reducing the neighborhood's reliance on external energy sources. The project is a step towards creating self-sustaining communities that actively manage their own energy needs.

92 solar modules
50 kWp of power

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Energy Communities and Self-Sufficiency

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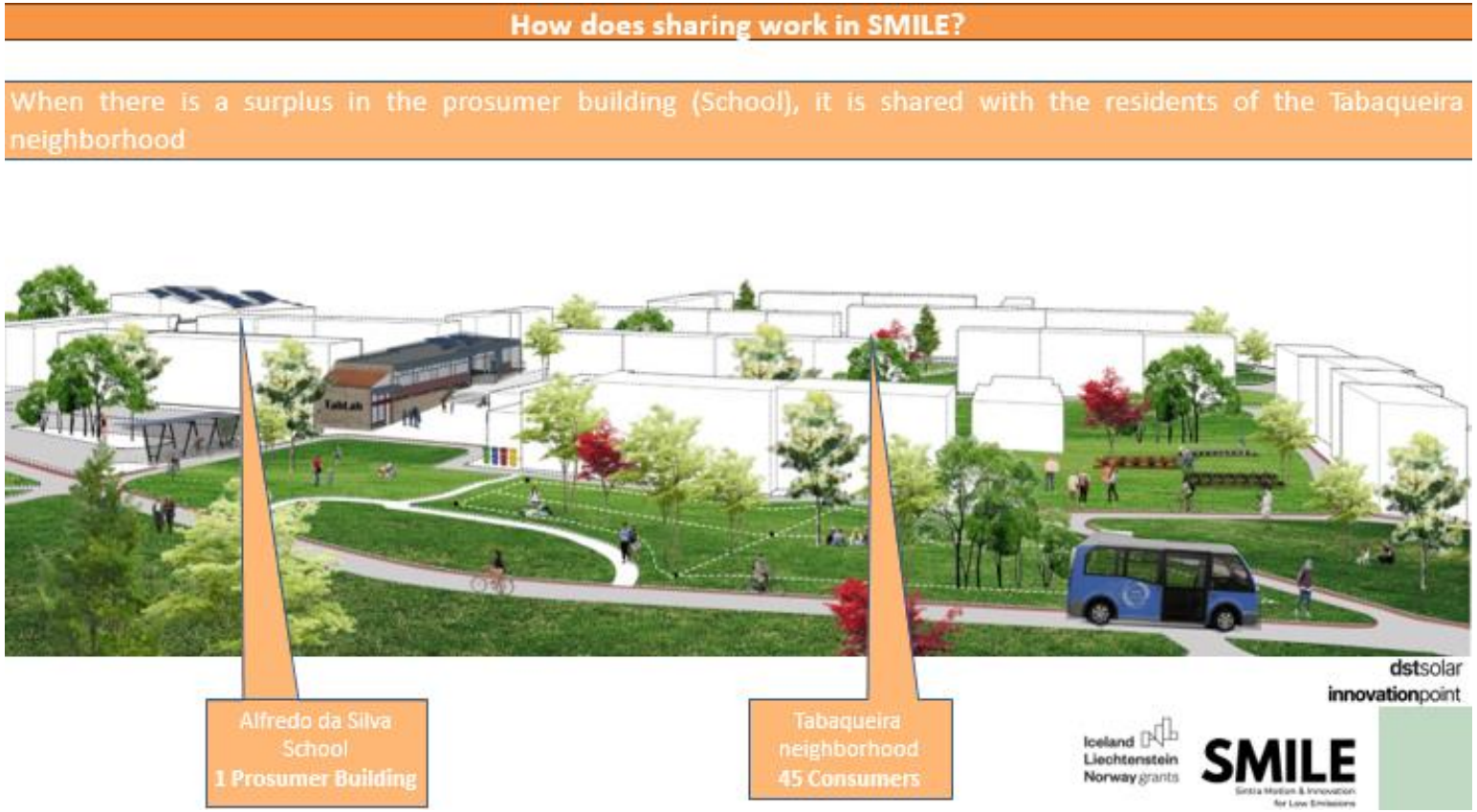

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EC - Residents' Assembly

A TRUE COMMUNITY FOR CITIZENS

Objectives:

- **Presenting the EC being developed to all the residents of Tabaqueira neighborhood**
- **Raising participants for the ACC**

- **30 to 40 residents present at the assembly**

→ **45 consumer members of the EC**

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Expected Impact

SMILE project allowed to reduce carbon emissions in the Tabaqueira neighborhood. Over time, the community is expected to achieve notable reductions in both energy costs and CO2 emissions.

Key projected impacts include:

- Annual energy savings through the use of solar power.
- A measurable reduction in CO2 emissions across the community.
- Increased energy self-sufficiency and reduced reliance on external energy sources.

Thank you!

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www.interregeurope.eu/promoter

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