

## SMART ENERGY MANAGEMENT MODEL (SEMM)

### Community Engagement

Messaging Apps Civil behaviour public displays dashboard



### Mapping



### Data

standards big data INTEGrated ai



### Networks

5G lora internet wifi sigfox



### Sensors

air temp humidity co2 quality lumination indoor outdoor



**Pilot**  
SMART  
STORAGE

**Pilot**  
public  
buildings

**Pilot**  
DISTRICT  
ENERGY

**Pilot**  
CEntralised  
charging

**Pilot**  
SMART  
GRID

**Pilot**  
public  
transport

**Pilot**  
PUBLIC  
LIGHTING

SMART city models and digital transformation technologies provide the foundation for the SEMM adapted for communities in NPA regions. This model provides a technological framework to monitor & analyse energy usage in these communities.

Advanced ICT tools facilitate an integrated energy communications channel between public authorities & energy consumers. Public authorities will use the SEMM to raise awareness and energy consumers can view energy data outputs relating to their communities.



### FOR MORE INFORMATION

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### PROJECT PARTNERS



Smart energy management in remote  
Northern, Peripheral and Arctic regions



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## ABOUT

Affordable, reliable & efficient energy supply and usage is a major challenge for Northern Periphery and Arctic area communities. The SMARCTIC project is concentrated on supporting the foundations for SMART energy communities through integration of ICT-based tools for energy data harvesting & visualisation.

Energy SMART communities are empowered by SMART technology that improves energy efficiency and use of renewable energy solutions in housing & public infrastructure. The integrated platform will inform and benefit regional stakeholders with increased access to energy-related data and a SMART Energy Advisory Service.



## MAIN OBJECTIVES



1 The SMART Energy Management Model: Provide a technological framework to decrease total energy usage



2 Test the SEMM's impact on energy efficiency and renewable solutions awareness in housing & public infrastructure

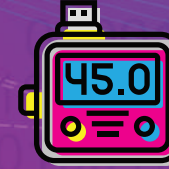


3 Create an ecosystem of collaboration among communities to deliver innovative energy solutions

## PILOTS

- SMART Grid/Intelligent Battery Storage integrated management
- Intelligent energy management of public indoor environments
- SMART solution for indoor air quality in Arctic/Sub-Arctic buildings
- Crowd-sourced energy management in rural communities
- ICT-based energy management for densely populated communities
- Off-grid photovoltaic and SMART Energy Storage management

The SEMM will support development of six innovative energy pilots that integrate digital transformation technologies to trial new solutions, raise awareness & change energy behaviour.



## NPA SMART ENERGY ADVISORY SERVICE

The project facilitates a SMART Energy Advisory Service that provides demonstrations & expertise to support regional stakeholders in implementation of SMART energy solutions. The service will advise on the benefits of the SEMM and SMART technology, and how these can reveal SMART energy management opportunities.

## PARTNER REGIONS



## PARTNERSHIP

The partnership contains a selection of partners from the public sector, university and business in Finland, Ireland, Sweden, UK and Iceland; with associate partners in Norway and Canada.

This will facilitate new innovative energy services to be piloted as they emerge, while the SEMM provides a common platform to facilitate long-term energy cooperation by communities across the NPA.