Citizen personas: Each team is provided with one persona outlined and one empty caricature to develop during Phase 1

Team 1

Persona 1A: Kate - The Single Mother

Age/Gender: 32, Female

- **Occupation**: Part-time retail worker
- **Family Structure**: Single mother of two young children, ages 5 and 7
- **Socioeconomic Status**: Low income, lives in rental social housing
- **Energy Vulnerability**: Struggles to pay energy bills, especially in winter, leading to energy rationing which affects the children's comfort and ability to do homework after dark.
- **Other Challenges**: Balancing part-time work and caregiving responsibilities may leave Kate with little time to engage in EC meetings, educational workshops or volunteer opportunities. Lacks time and resources to participate in community activities. Kate might struggle to access or understand information about EC initiatives due to time constraints or a lack of targeted outreach efforts.

Persona 1B: Name: _____Come up with your own persona for a vulnerable citizen. Please ensure that this persona tackles a different set of vulnerabilities than your first persona.

- **Age/Gender:** _____
- **Occupation:** _____

_____

- **Family Structure:** _____

_____

- **Socioeconomic Status:** _____

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- **Energy Vulnerability:** _____

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- **Other Challenges:** _____

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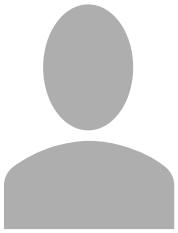

Team 2

Persona 2A: Jan - The Pensioner

- **Age/Gender: 76, Male**
- **Occupation:** Retired factory worker
- **Family Structure:** Widower, lives alone
- **Socioeconomic Status:** Relies on a modest pension, owns his home but it is old and poorly insulated.
- **Energy Vulnerability:** High heating costs in winter due to inefficient home heating; reluctant to modernise due to mindset of low willingness for change, financial concerns and lack of understanding of available subsidies or programs.
- **Other Challenges:** Mobility issues limit his ability to participate in community meetings; not tech-savvy, which limits access to online resources. Jan may face difficulties in engaging with digital platforms for EC participation due to limited digital literacy. Living alone and potential social isolation might reduce Jan's awareness of or engagement in community energy initiatives.

Persona 2B: Name: _____Come up with your own persona for a vulnerable citizen. Please ensure that this persona tackles a different set of vulnerabilities than your first persona.

- **Age/Gender:** _____
- **Occupation:** _____
- **Family Structure:** _____
- **Socioeconomic Status:** _____
- **Energy Vulnerability:** _____
- **Other Challenges:** _____

Team 3

Persona 3A: Fatima - The Refugee

- **Age/Gender**: 48, Female
- **Occupation**: Unemployed, occasionally volunteers
- **Family Structure**: Lives with her brother's family in a compact rental apartment
- **Socioeconomic Status**: Dependent on government assistance and her brother's income
- **Energy Vulnerability**: Limited understanding of the local energy market and rights, leading to overpaying for energy. The language barrier exacerbates her difficulties in accessing energy support services.
- **Other Challenges:** Cultural and social isolation; lacks a support network and knowledge about how to navigate local systems, including energy conservation and EC participation. Language differences and unfamiliarity with local customs and systems can make it challenging for Fatima to access information or feel comfortable participating in EC projects. Uncertainty about legal status or lack of familiarity with administrative processes could deter Fatima from engaging in EC initiatives.

Persona 3B: Name: _____Come up with your own persona for a vulnerable citizen. Please ensure that this persona tackles a different set of vulnerabilities than your first persona.

- **Age/Gender:** _____
- **Occupation:** _____
  _____
- **Family Structure:** _____
  _____
- **Socioeconomic Status:** _____
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- **Energy Vulnerability:** _____
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- **Other Challenges:** _____
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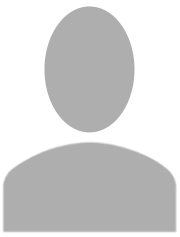

Team 4

Persona 4A: Lukas - The Young Adult with Disabilities

- **Age/Gender:** 24, Male
- **Occupation:** Unable to work, receives disability benefits
- **Family Structure:** Lives in a shared accessible apartment with two roommates
- **Socioeconomic Status:** Moderate, primarily dependent on benefits
- **Energy Vulnerability:** Increased energy needs due to medical equipment and heating requirements; faces difficulties in securing a stable and affordable energy supply.
- **Other Challenges:** Physical barriers to attending in-person EC meetings or energy-saving workshops; requires more accessible information and communication methods**.** There might be a lack of representation or advocacy within EC initiatives to address and accommodate the specific needs of people with disabilities.

Persona 4B: Name: _____Come up with your own persona for a vulnerable citizen. Please ensure that this persona tackles a different set of vulnerabilities than your first persona.

- **Age/Gender:** _____
- **Occupation:** _____

  _____
- **Family Structure:** _____

  _____
- **Socioeconomic Status:**

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  _____
- **Energy Vulnerability:** _____

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- **Other Challenges:** _____

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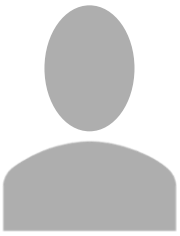


Team 5

Persona 5A: Alex - The Transgender Activist and Artist

- **Age/Gender:** 28, Transgender
- **Occupation:** Artist and Activist
- **Family Structure:** Lives alone
- **Socioeconomic Status:** Lower-middle income often fluctuates due to the precarious nature of art commissions and activist work.
- **Energy Vulnerability:** Struggles with high energy bills due to poor insulation in their studio apartment, which doubles as their living and workspace. Their commitment to using recycled materials limits their options for energy-efficient appliances.
- **Other Challenges:** As a transgender person, Alex sometimes feels isolated from mainstream and even LGBTQ+ communities, complicating their ability to engage in collective initiatives, and resulting in fear of public events. The unpredictable income make it hard to invest in better, more energy-efficient housing or appliances. Navigating information on available energy subsidies or community energy projects that are inclusive of transgender people can be challenging.

Persona 5B: Name: _____Come up with your own persona for a vulnerable citizen. Please ensure that this persona tackles a different set of vulnerabilities than your first persona.

- **Age/Gender:** _____
- **Occupation:** _____
- **Family Structure:** _____
- **Socioeconomic Status:** _____
- **Energy Vulnerability:** _____
- **Other Challenges:** _____

Energy Community Scenarios

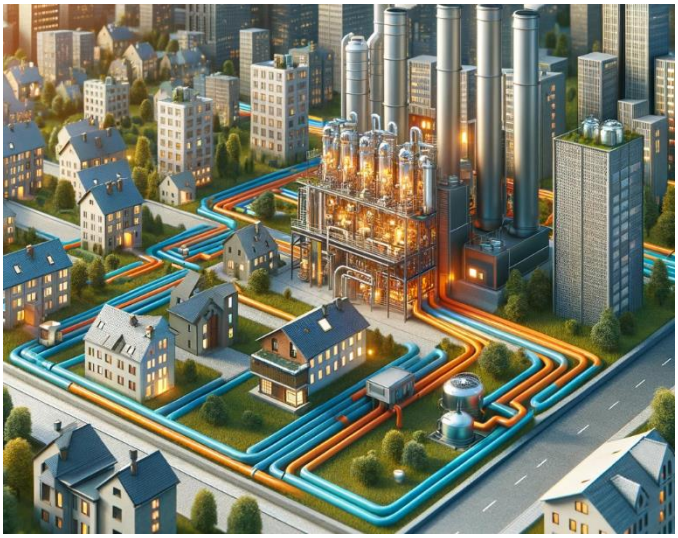
Following are five neighbourhood-level scenarios with detailed participation requirements that set the stage for identifying and addressing inclusivity barriers, ensuring that community energy projects are accessible and beneficial to all residents. Participants are asked to use their respective energy scenario in Phase 2 to develop an action plan of inclusivity within their EC, aiming for empowering and transformative inclusivity. This action plan should cover both the setup phase (how to include all types of stakeholders in the design) as well as the operational phase (how to get vulnerable actors to join the initiative).

Scenario 1: Neighbourhood Heat Network

Project Overview:

Which system and technologies?

A neighbourhood heating network powered by a large heat pump will be installed by the municipality, providing warmth for both heating and tap water to connected buildings. The heating costs for users are lower than with their current systems.



Citizen participation?

All new buildings are obliged to connect to the new heat network; for existing ones it is possible but not compulsory. The municipality transfers parts of its shares in the project to participants, giving them a voice in decisions on management, operationality and price-setting, as well as partial ownership.

Potential Citizen Participation Requirements

- **Time Commitment**: Residents will be invited to participate in planning meetings, workshops for understanding geothermal technology, and training sessions on system maintenance. Estimated monthly commitment: 2-4 hours.
- **Resources**: A one-time financial contribution or subscription fee is required for connection to the system, as well as investment in the modification of the house's internal heating system to be compatible.
- **Effort**: Residents need to facilitate access to their properties for initial assessments, installations, or maintenance activities. Effort includes preparing the space and coordinating with technicians.
- **Knowledge and Skills**: Basic understanding of the geothermal system's benefits and operation is beneficial.
- **Engagement**: Active participation in decision-making processes, feedback sessions, and community advocacy for the project.

Scenario 2: Community-Owned Wind Turbine Cooperative

Project Overview:

Which system and technologies?

This initiative focuses on erecting one or more wind turbines to generate lower-price electricity for local use.

Citizen participation?

The wind turbines are community-owned by neighbourhood residents within a cooperative structure. Profits from surplus energy sales are reinvested into the community or distributed among cooperative members.

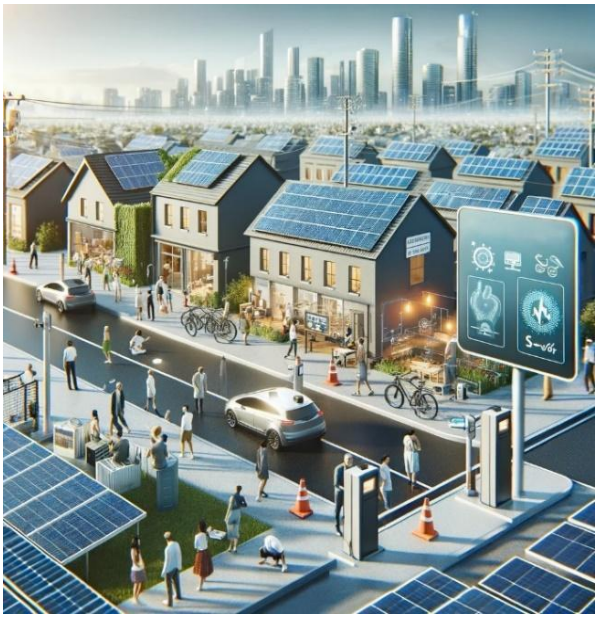
Potential Citizen Participation Requirements

- **Time Commitment:** Involvement in cooperative governance, attendance at annual meetings, and participation in community energy education events. Estimated monthly commitment: 1-3 hours.
- **Resources:** Purchase of shares in the cooperative, with the amount varying by the desired investment. Financial contributions are used for turbine construction, maintenance, and operational costs.
- **Effort:** Engagement as ‘ambassador’ in community campaigns to raise awareness among other neighbourhood residents (e.g., distributing flyers, hosting informational booths, and utilizing social media.) and to acquire funds.
- **Knowledge and Skills:** No specific technical knowledge required for general membership, but an understanding of cooperative principles and renewable energy benefits is encouraged. Specific knowledge is needed for members are interested in taking on roles such as financial management, technical oversight, or educational programming.
- **Engagement:** Voting in cooperative decisions, offering feedback on project development, and potentially participating in renewable energy advocacy at a broader level.

Scenario 3: Solar-Powered Energy Sharing for Collective Self-Consumption

Project Overview

Which system and technologies?



A PV system will be developed to provide sustainable electricity to the neighbourhood, supporting local energy generation and sharing to stimulate maximal collective self-consumption within the community. Solar panels installed on rooftops as well as on vacant land are connected to form the network.

Citizen participation?

All residents are offered the opportunity to connect to the network, to buy cheaper locally-sourced renewable electricity, in exchange for participation in the electricity production. This can be done through co-investment in community-owned production installations on public grounds, or through investment in private PV (with sale of excess electricity through the network).

Potential Citizen Participation Requirements

- **Time Commitment:** Attendance at design and planning workshops, and regular system check-ins. Estimated monthly commitment: 3-5 hours.
- **Resources:** Investment in solar panel installation and a digital meter for individual homes or investment in community electricity production installations
- **Effort:** Participation in community initiatives to promote renewable energy adoption and recruit new members to the initiative.
- **Knowledge and Skills:** Basic knowledge of solar energy and grid operation is helpful.
- **Engagement:** Sharing feedback on energy usage patterns and contributing to the development of community-based energy sharing policies.

Scenario 4: Shared Renewable Energy Generation and Storage Facility

Project Overview

Which system and technologies?

This project involves creating a shared facility on public grounds for renewable energy generation, including large-scale solar arrays, wind turbines, and battery storage systems.

Citizen participation?

All citizens can co-invest in the facility, and receive lower-priced electricity in return as well as an equal voice in decision-making on what potential profits that are made by the facility will be reinvested in. Also, the management of the system is partly community-led.

Potential Citizen Participation Requirements

- **Time Commitment:** Engagement in the planning and development phases, regular meetings to discuss operation and maintenance, and training sessions for system monitoring. Estimated monthly commitment: 2-4 hours.
- **Resources:** Financial contributions for the construction and upkeep of the facility.
- **Effort:** Participation in community initiatives to promote renewable energy adoption and the shared facility's benefits.
- **Knowledge and Skills:** General awareness of renewable energy advantages and the functionality of shared energy systems. More specialised knowledge is necessary for members interested in taking on more technical or leadership roles.
- **Engagement:** Active involvement in decision-making regarding facility operations, energy pricing models, and reinvestment of profits.

Scenario 5: Collective energy Sharing within a building

Project Overview

Which system and technologies?

PV panels are being installed on the rooftop of an apartment building, to provide electricity for the communal areas as well as for the 10 individual households residing in the building.

Citizen participation?

Participation is voluntary. Participants can share their excess electricity with other participants and/or take excess electricity from other participants in the energy-sharing group. The energy generated is distributed among the investing residents proportionally to their contribution to the investment in the installations.

Potential Citizen Participation Requirements

- **Time Commitment:** Attendance at shareholder meetings that coincide with co-owners association meetings (only for homeowners). Estimated monthly commitment: 1 hour.
- **Resources:** Investment in solar panel installation and a digital meter.
- **Effort:** None.
- **Knowledge and Skills:** Basic knowledge of electricity -sharing regulations is helpful.
- **Engagement:** Sharing feedback on energy usage patterns, and active involvement in decision-making regarding energy pricing.

Crises Cards: To replicate real-life scenarios, teams will be handed out the following cards during Phase 1

Kate - The Single Mother

Crisis Card: **Unexpected Job Loss**

Constraint: Kate has lost her part-time job and now faces the immediate threat of being unable to pay her monthly energy bill.

Consequences: Potential loss of heating during winter months, inability to participate financially in the EC.

Jan - The Elderly Retiree

Crisis Card: **Changed political situation**

Constraint: The local elections result in a new municipal council, comprised of delegates whom Jan neither supports nor trusts, making him reluctant towards all initiatives that are spearheaded by the local government.

Consequences: Decreased willingness to participate in (educational) trainings, empowerment initiatives, etc. set up by the municipality.

Fatima - The Refugee

Crisis Card: **Legal Complications**

Constraint: A delay in processing her work permit has led to a sudden loss of income for Fatima, jeopardizing her ability to pay for basic utilities.

Consequences: Difficulty in maintaining energy access for her and her brother's family, hindering her ability to engage with the EC.

Lukas - The Young Adult with Disabilities

Crisis Card: **Equipment Failure**

Constraint: A vital piece of medical equipment has broken down, and Lukas must cover the unexpected high cost of repair or replacement

Consequences: Increased electricity usage from new equipment, financial strain limits his ability to contribute to the EC

Alex - The Transgender Activist and Artist

Crisis Card: **Art Project Controversy**

Constraint: Alex's art project aimed at highlighting energy poverty within the transgender community sparks controversy due to misunderstandings and misrepresentations by local media.

Consequences: Increased feelings of social isolation and reluctance to participate in community energy initiatives and public engagements.

Joules of Fortune Cards: To add a touch of humour and positive energy, teams will be handed out the following cards during Phase 2

Geothermal Guesswork

Card Scenario: The city's geothermal heat map has gone haywire during a routine update, showing hotspots all over!

Dice Roll: **Odd roll:** It's a false alarm, but you use the moment to give a fun fact on how geothermal energy works.

Even roll: The hotspots are real due to a tech startup's underground server farm. Fold a new solar-powered airplane.

Wind Turbine Mix-Up

Card Scenario: A mix-up at the wind turbine factory has sent a batch of miniature turbines instead of the ordered size.

Dice Roll: **Odd roll:** The mini-turbines become a hit educational tool in local schools. Name three benefits of wind energy and get a thumbs up!

Even roll: Create your own mini-turbine out of paper.

Thermal Misadventure:

Card Scenario: Your attempt to bake cookies with your new solar oven attracts curious neighbours.

Dice Roll: **Odd roll:** Cookies for everyone!

Even roll: You've made the world's first solar-charred biscuits. Draw the left-over biscuits with your non-dominant hand.

Eco-Festival Buzz:

Card Scenario: The community decides to hold an annual Eco-Festival to promote sustainability.

Dice Roll: **Odd roll**: Draw an original PV panel to showcase in front of the public library.

Even roll: The recycled art sculpture topples over – fold a new one out of a sheet of paper.

Community Garden Energy:

Card Scenario: Your community garden plants are rumoured to grow faster thanks to the local clean energy vibe.

Dice Roll: **Odd roll**: Harvest time! Draw some of the plants that you are keen to grow.

Even roll: A plant protest! Draw a potted flower plant protesting with a placard.

Green Commute Challenge:

Card Scenario: The neighbourhood launches a green commute week with prizes for the most creative transport.

Dice Roll: **Odd roll**: Unicycle victory! Draw an electric bus with your non-dominant hand.

Even roll: List the benefits of public transport in 30 seconds.

Gridlock Gaffe:

Card Scenario: The local grid has a hiccup during a major sports event, causing a blackout.

Dice Roll: **Odd roll**: our team helps to organize a spontaneous neighbourhood star-gazing night- list three solar appliances that you could take with you.

Even roll: List three things that you would do during the blackout.

Municipal Solar Sprint:

Card Scenario: The municipality announces a grant for the fastest neighbourhood to go solar.

Dice Roll: **Odd roll**: Your team wins! Draw the trophy in 30 seconds.

Even roll: Hustle! Everyone must quickly trade seats to symbolise the solar sprint.

Energy Efficiency Expo:

Card Scenario: Your community hosts an energy efficiency expo, but all the flyers have the wrong date.

Dice Roll: **Odd roll**: You catch the mistake in time. Draw a quick light bulb to show your light bulb moment!

Even roll: Time to improvise a public announcement – announce three efficiency measures in your most authoritative voice.

Blackout Block Party:

Card Scenario: A surprise blackout turns into an impromptu block party powered by bike generators.

Dice Roll: **Odd roll**: The party's pumping! Draw a windmill with your eyes closed as a party favour.

Even roll: Draw an upside-down bike.