





## SUSTAINABLE DEVELOPMENT in Lappeenranta

- Greenreality Lappeenranta is part of the city's strategy. It brings together the city, educational institutions, businesses and residents to head towards a more sustainable future
- EUROPE'S GREENEST CITY finalist twice (EGLA – European Green Leaf Award)
- The WWF has twice appointed Lappeenranta the Climate capital of Finland
- The first ecoenergy city in the world in 2017
- Carbon neutral city in 2030
- 100% of waste recycled

- Greenhouse gas emissions have been halved during 1990–2017
- Lappeenranta and its neighboring municipalities already produce a massive 90% of their energy from renewable sources
- Over 100 wetlands for Saimaa
- With Kaukaan Voima's biomass power plant, more than 70% of district heat is produced carbon dioxide-free
- LUT University is Finland's largest university in the energy sector and Lappeenranta has the greenest campus in Finland: www.greencampus.fi





#### EUROPEAN GREEN LEAF AWARD 2021

- Lappeenranta seeks the title of ONE OF THE EUROPE'S GREENEST CITIES in the EU Commission's initiative
- The purpose of the competition is to share Lappeenranta's know-how and gain visibility in the world

#### **SUBJECT MATTER OF THE APPLICATION:**

- Climate and energy
- Waste and the circular economy
- Sustainable transport
- Nature and biodiversity
- Water
- Air quality and noise

#### GREEN LEAF WINNING IS AN INVESTMENT IN THE FUTURE

- Raise interest in the city
- Increase internationality
- Attract young people
- Bring vitality and new jobs



**GREENREALITY.FI** 

**CITY OF LAPPEENRANTA** 

#### WHY LAPPEENRANTA is a Green Leaf winner?

THE FIRST ECOENERGY CITY 100%

OF ELECTRICITY
USED BY CITY
IS CARBON
DIOXIDE-FREE

70%
OF DISTRICT
HEATING
PROCUDED
CARBON DIOXIDE -FREE

TEACHING TO

3000
CHILDREN AND YOUTH
IN LAPPEENRANTA
JUNIOR UNIVERSITY
ANNUALLY

2000 ENERGY AND ENVIRONMENTAL JOBS

OVER 100 WETLANDS
FOR SAIMAA

2009-2017
CARBON DIOXIDE EMISSIONS
REDUCED BY
466%

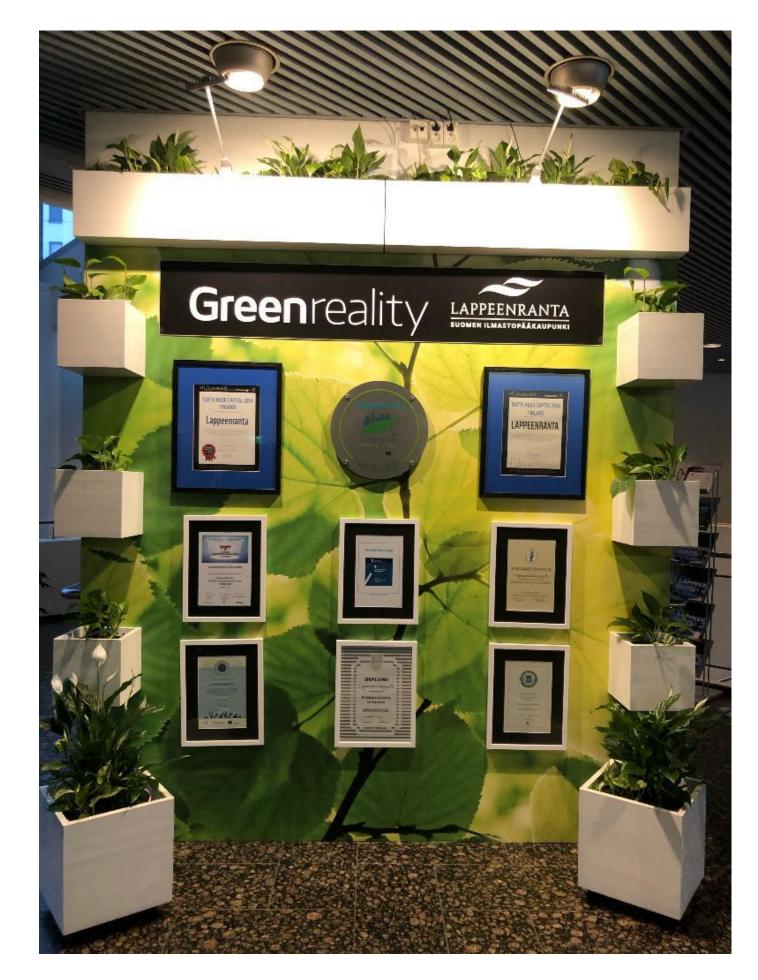
SOLELY
BIOGAS OR
ELECTRIC CARS
FROM 2017
ONWARD

100%
OF WASTE
RECYCLED

**CITY OF LAPPEENRANTA** 

#### What is the Target of the year 2021?

- The City Stategy has been achieved
- The best practises will be used all over Europe
  - Junior University concept
  - Greenreality Homes and companies responsibility actions are known
  - The City of Lappeenranta best practises (car sharing, virtual power plant and others)
- Lappeenranta is known as a Green City in Europe
- The business solutions developed at Lappeenranta are used globally
  - Increasing employment at energy- and environment sector
- Cooperation with the Green Capital Lahti has increased
- New Green investments
- Greenhouse Gas emissions are decreased
- An Excellent and Positive Year for citizens and stakeholders



The Green Wall at City Hall

#### Where to find our actions and events? Internet & Social media

#### **Green Leaf events**



Maailman Vesipäivä ja webinaari

Begins 22.3.2021 17:30 Virtual event

22.3.2021 klo 17.30

LAPPEENRANTA

Ilmastokahvila 25.3.2021

Begins 25.3.2021 17:00

© Greenreality, Villimiehenkatu 1, 53100 Lappeenranta



Earth Hour 2021

Begins 27.3.2021 20:30

♥ Virtual event

www.greenreality.fi/en www.lappeenranta.fi



#### Follow us for more information





#EUGreenLeaf #Greenreality #Lappeenranta



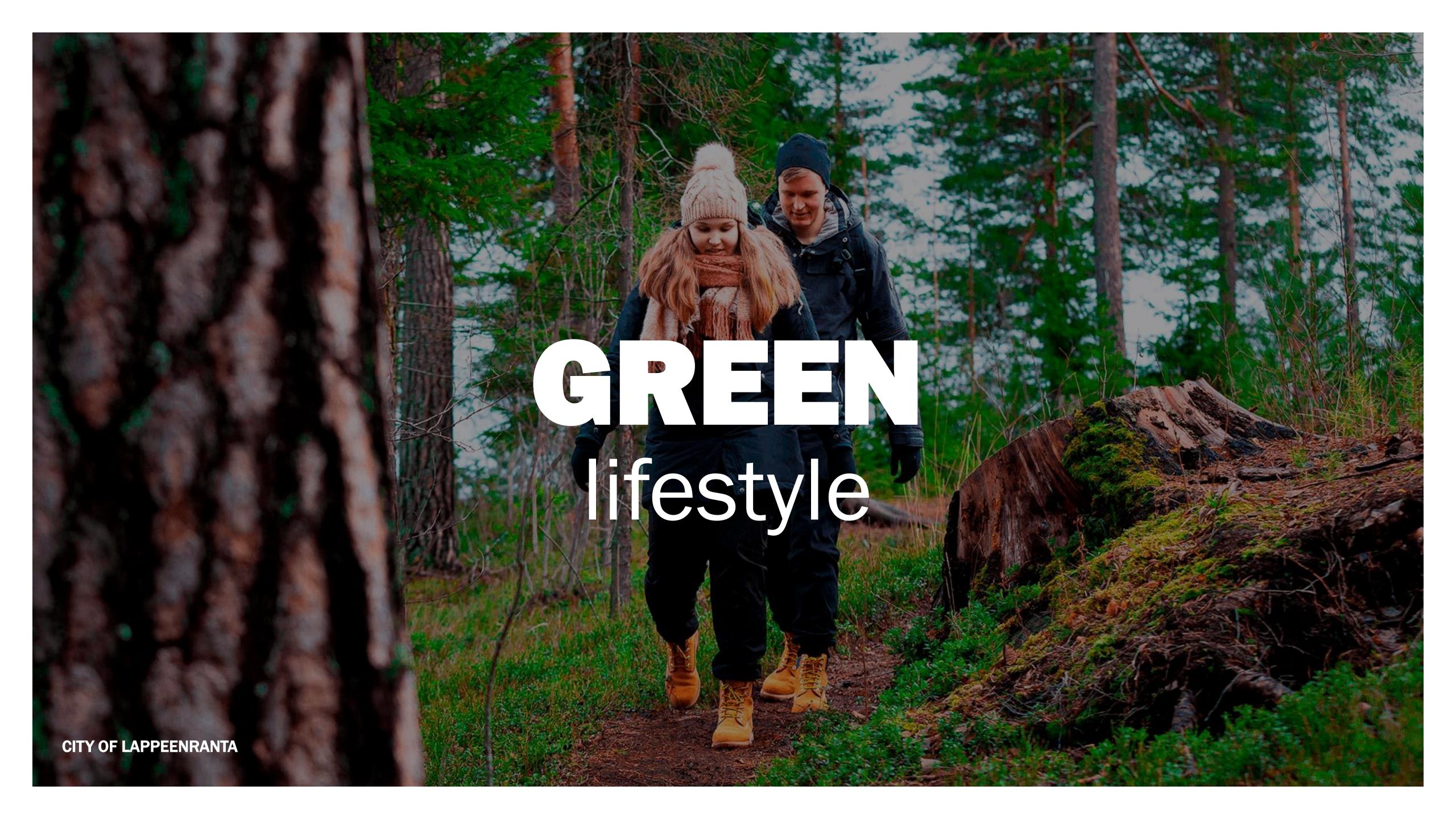
LAPPEENRANNAN KAUPUNKI

## GREEN AND URBAN living environment

- In Lappeenranta, residents, entrepreneurs and decisionmakers work in close interaction
- Thematic Green Horizon master plan approaches the city from the perspectives of clean technology, green infrastructure and sustainable mobility
- Due to the functional and cosy city structure, you can combine an urban lifestyle with living close to beautiful Lake Saimaa and nature
- St. Mary's Church, the Kasino restaurant, Lappeenranta Spa, the city bay and the centre of town form a unique historic experience
- Urban Infra Revolution (UIR) 3D printed building elements replace cement

# 10.000 LINDENS IN THE CENTRE AND SHORELINE OF THE CITY





### **Greenreality Homes and Companies**concept

- The concept that helps families and companies to work towards sustainable life, production and services
- The concept is being taken to schools, with pupils taking it home to their families and to local companies
- The concept is connected to the LUT Junior University concept

We build the sustainable tomorrow together with citizens, communities and companies.



## **Greenreality Homes activities**8<sup>th</sup> graders

- All the 8th graders have a Clean energy and sustainable living multidisciplinary learning course in Junior University studies
- The course includes a Greenreality Home project in which pupils calculate the carbon footprint of their own household and consider together with their families how to reduce it
  - The learning course has been included as part of the schools' curriculum in Lappeenranta
  - Greenreality Homes concept reaches every 8th grader and their families every year

Uniori.fi

**Junior University** 



#### Greenreality Homes activate volunteer homes

- 1) We encourage citizens to move towards sustainable living
  - Newsletter
  - Facebook group
  - Website (www.greenreality.fi/asukkaat/greenreality-kodit)
    - Guidelines for calculating carbon footprint
    - Tips for sustainable living
    - Families sharing their solutions to other citizens
    - In 2019 a test period in sustainable living (46 homes)
- 2) Now in rural areas also
  - Range: whole South Karelia region



#### Sustainable living test period

- 46 homes, 1 month test period, 2019
  - Carbon footprints for the houdeholds were calculated



- A starting workshop where households set roadmaps towards lower footprint and picked the actions for the test period and action for a longer period of time
- > During the test period, households tried out actions they had chosen
- In addition, households experimented with goods and services that support sustainable living provided by 12 company partners
- ➤ Workshop → results and the follow-up



#### Results of the test period

- Households managed to reduce the average carbon footprint -12 %, from 6,7 to 5,9 tons CO2e/year (the reduction ranged from 0,5 % to 25 %)
- The actions planned until the year 2030 would decrease annual emissions of the participants by 46 % to 3,45 tons

-12%
Carbon footprint

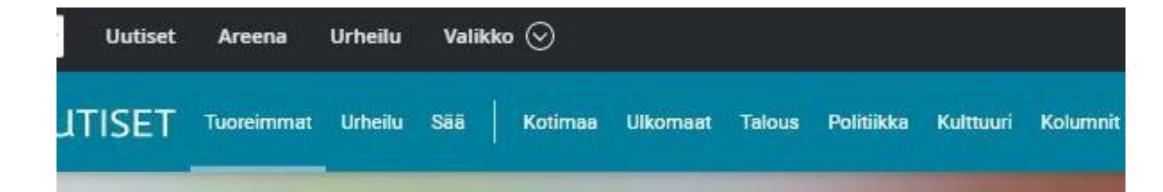


#### Results of the test period

- The most popular things selected to test period were related to sustainable eating and reducing unnecessary consumption
- In addition, many wanted to pay attention to water consumption, room temperature at home and to every-day mobility
- Five of the households got an air source heat pump and one household solar panels installed on their house during the test period

## Eating Consumption Mobility Heating



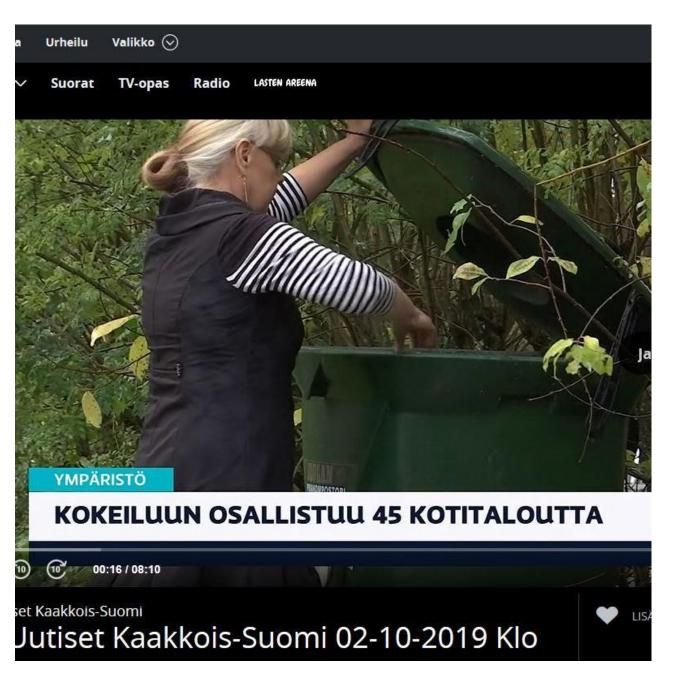


#### Kaikki eivät ajattele vain ilmastonmuutosta - kestävä arki voi syntyä halusta säästää rahaa: "Näkyy hinnoissa, jos ihmiset saadaan tukemaan asioita"

Kestävillä arjen valinnoilla voi ohjata sitä, mitä oman lähikaupan hyllystä löytyy ja kuinka paljon rahaa säästyy.

Hiilijalanjälki 6.10.2019 klo 16.52





Lauantai 21. syyskuuta 2019 ETEL

#### Ilmastotalkoot alkavat Hakalissa



ottaa vastaan. tapoja, sekä kauppakassi- ja mui- toystävällistä ruokavaliota voidaan jäämäruokien hyväksikäytöllä. Ko- Pekkasen ja uu mahdolli- ta kotiinkuljetuspalveluita. Ilmas- puolestaan edistää esimerkiksi yli- din energiatehokkuuteen ja kestä- kokeilukuuk

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kulapsiperhe

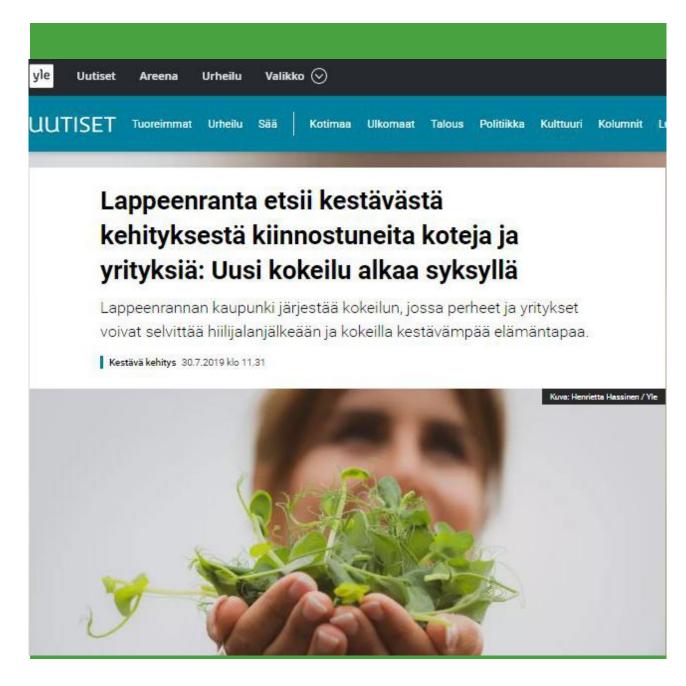
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#### Greenreality-partner companies

- Mainly small and medium sized companies in city center of Lappeenranta, but also other suitable companies and organizations, for example associations.
- Personal environmental objectives are planned to all partner companies, and companies try to implement objetives within approximately one year.
- Monitoring how the implementation is proceeding is organized with interim interview and final interview.
- Also this concept is linked with Junior University
- Students from High school are doing the interviews and help companies to determine objectives as part of optional Sustainable business course

#### Personal goals

#### Greenreality













An eco-friendly café by the market square

through material efficiency

A more ecological lunch café More efficient waste sorting and communication with customers

Aleksanteri Oy / Konditoria Aleksandra

Teerenpel

#### Benefits for partner company

- Counseling and guidance for companies to formation of objectives and implementation.
- Companies will get framed environmental commitment as acknowledgment of partnership. Objectives are written in the commitment.
- Visibility in Greenreality website and social media channels.
- Possibility to make **economical savings** when implementing objectives (for example savings in use of water or energy).
- · Possibilities to network with other partner companies.
- And what's most important: company reduces harmful climate effects!

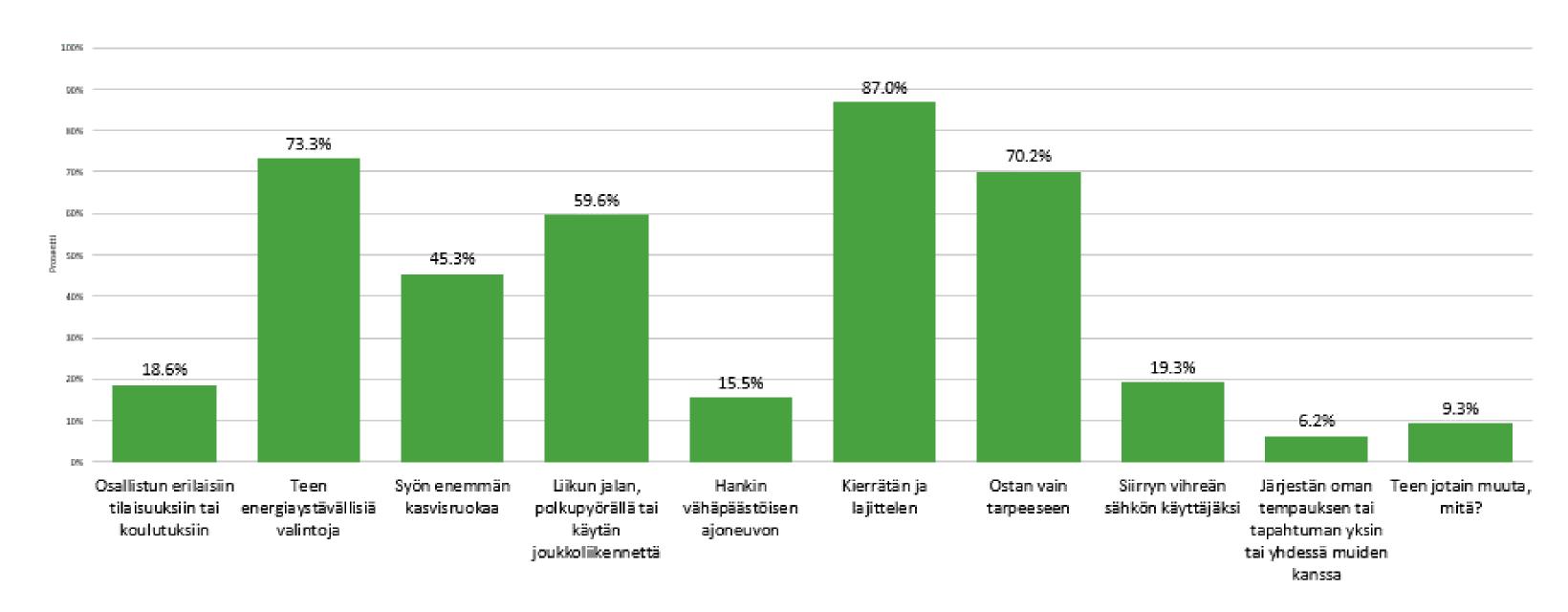
32 companies 12.5.2021



#### Questionnaire for citizens

#### Miten sinä haluaisit osallistua ympäristötavoitteiden toteutukseen?

N = 161



How would you like to participate in reaching environmental goals?

- 1. Recycle
- 2. Energy friendly choices
- 3. Buy for the need
- 4. Walk, cycle, use public transport
- 5. Eat more vegetables







SOUTH KARELIA





## APPEENRANIA

THANK YOU for your attention! linkedin.com/in/korhonenkati/

lappeenranta.fi greenreality.fi



