

# City of Oulu's Environmental Programme 2026

A Higher Degree of Environmentally Friendly 26.6.2023

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## What is being done and Why

The environmental programme is one of Oulu's city strategy 2035's action plans. The aim of the programme is the preservation of the environment's good condition and ensuring the city's vitality. The basis of the programme are the city strategy's points of emphasis and their policies as well as the city's agreements and commitments to promote environmental issues.

Behind the commitments are national and international agreements and policies, the aims and actions of which are connected to the city's operations. The environmental programme ensures the accomplishment of policies and aims set by the city strategy.

The primary policy guiding the environmental programme is the carbon neutral Oulu 2035. The environmental programme lays the groundwork for the environmental objectives and development of action of branches of administration, public companies, and city-owned companies. The programme spans over the entire city organization, enforces the development of economic life, and guides the city's decision-makers, staff, citizens, companies, and communities towards environmentally friendly action.

## Introduction



### Context for the update

When the city of Oulu's Environmental Programme 2026 was being written, it was decided that its implementation would be evaluated by an external evaluator in 2022.

Gaia Consulting was chosen by competition as the realizer of the midterm evaluation and programme updating. The mid-term evaluation was realized in June-August 2022, and the programme was updated in August-December 2022.

The evaluation addressed the progression of the programme's implementation and the accomplishment of set objectives relative to implemented actions and their effects. The results of the mid-term evaluation were used in the updating of the environmental programme.

### Goal of the update

Based on the mid-term evaluation, the programme update adjusted the programme framework (points of emphasis, aims, action plans, indicators), the programme contents were updated in full and by points of emphasis, relevant experts and decision-makers were involved, a simple, clear, and impressive entirety was prepared, and the continued utilization of the programme was ensured.

The goal of the programme update was not to make an entirely new programme but to update its content within the framework of the points of emphasis lined by the new city strategy and with the results of the mid-term evaluation to re-direct the programme for the remaining term.

The programme update included a total of five city expert workshops and one for elected officials. Additionally, the mid-term evaluation was presented to the Community Board and the environmental programme's observatory and the programme update to the environmental programme's observatory, the city's executive team, the Community Board, and the City Board.

Both the mid-term evaluation and the programme update involved a wide range of experts and elected officials. A total of 80 city experts and 20 decision-makers were involved in the mid-term evaluation and the update.

The updated environmental programme was accepted by Oulu's City Board 26.6.2023.

## City Strategy's Emphasis to the Programme's Points of Emphasis



Oulu2026 reinforces attraction and retaining
Oulu will be carbon neutral by 2035
Oulu has impressive services, sustainable
economy and healthy personnel

Finland's most business friendly international centre of growth

Oulu will be carbon neutral by 2035

Oulu has impressive services, sustainable economy and healthy personnel

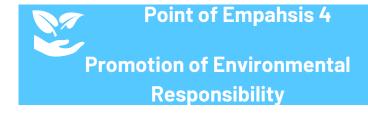
Oulu 2026 reinforces attraction and retaining
Oulu Will be carbon neutral by 2035
Everyone can live a healthy and safe life in
Oulu

Education builds a suistainable and international Oulu









**Point of Emphasis 1** 

Our City Develops Suistainably

Sustainable city planning

**Environmentally friendly transportation** 

**Carbon neutral construction** 



**Point of Emphasis 3** 

Nature is our Resource

Nature accessible to everyone

Adapting for climate change

Safe, healthy, and comfortable

living environment Varied nature and good ecological condition of waterways



























Resource **Preservative Action** 

**Efficient energy consumption** 

**Carbon neutral energy production** 

Functional circular economy



**Point of Emphasis 4** 

**Promotion of Environmental** Responsibility

**Environmentally responsible** citizens of Oulu Sustainable methods in city administration Sustainable procurement





# **Environmental Programme Updated Content**

The Environmental Programme consists of four points of emphasis.

Each point of emphasis includes 3-4 objectives

The programme especially carries out the following aims of UN's Agenda 2030



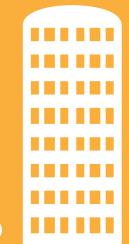




# Point of Emphasis 1

# Our City Develops Sustainably













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## **Sustainable City Planning**



Oulu's city planning considers the principles of sustainable development and the city's long-term development. The city offers housing possibilities in urban environments and in rural areas by ensuring the vitality of central areas.

City planning emphasizes the most efficient sustainable actions aiming for a city environment that is entirely sustainable by its buildings, infrastructure, and condition.



#### **Courses of Action**

Regions are planned and realized sustainably by considering plot supply, types of housing, purpose, and diverse services.

Infill development is increased considering the cultural environment values and development of greenspaces.

Construction of housing outside grid plan areas is guided to the best suitable areas with land use planning.

Infill development, new grid plan areas, and workplace areas are planned to support public transportation, pedestrian traffic, and cycling by considering density and location.

The *Viherkerroin* tool is utilized in construction. Green efficiency is considered in urban area planning.

The need for personal car transporation is reduced by centering services in centres that are accessible with public transportation and other forms of transportation.

Centres are developed based on their characteristics to be diverse.

- The portion of apartments constructed in grid plan areas (%)

  Portion of population in the development plan's central areas (%)
- Portion of infill development in grid plan area housing production (%) goal 70 %
- Portion of population living in dense areas (%)
- Portion of population in central dense areas (%)
- Portion of city planned hectares that utilize Viherkerroin during one year (%)
- Accessibility of services: daycare centres, schools, grocery stores, libraries (portion of residents living within 300m and 700m of such services)(%)

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## **Environmentally Friendly Transportation**



Oulu is an environmentally friendly city where sustainable transportation is attractive and accessible. Diverse supply of services near and linked trips that rely on sustainable modes of transportation ensure smooth transport from door to door all year-round.

The transportation system is developed to reduce the negative effects of traffic and to encourage the use of public transportation.



#### **Courses of Action**

Public transportation offering and service level is developed especially in areas of the largest user potential.

Pedestrian and cycling networks and services are developed to increase vear-round use.

A review of efficient public transportation is compiled.

Promotion of land use that supports sustainable traffic.

Making the use of pedestrian traffic, cycling, driving, public transportation, and linked trips possible as well as development of rail transportation.

Enhancing the maintenance and upkeep of pedestrian and cycling infrastructure

Implementation of the sustainable urban mobility plan.

Implementation of the city of Oulu's parking programme 2040.

- Number of trips with public transportation per resident per year (regional)
  - Accessibility of bus stops (300m and 700m)
- Portion of pedestrian and cycling investments of the Community
  Board's community development investments (%) and (€ per resident)
  - Population in range of efficient public transportation development (Linnanmaa-city centre-Kontinkangas, 400m)
  - Population in range of public transportation's bus lines and express routes (400m)
- Access to the Oulu city centre in 15 to 30 minutes with different modes of transportation on weekdays, portion of population (%)
- Enhancing the condition of pedestrian and cycle traffic: kilometers that have been enhanced.
  - Implementation of Oulu's sustainable urban mobility plan. Qualitative evaluation.
- Amounts of motor traffic, cycle, and pedestrian traffic in different points

  Mode of travel distribution according to national passenger traffic study in Oulu's city centre and regionally (%)
  - Implementation of Oulu's parking programme 2040. Qualitative evaluation

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## Carbon Neutral Construction



In Oulu, all maintenance, construction, and demolition will strive for carbon neutrality and material preservation without compromising on quality.

Additionally, repairs are primarily recommended instead of new construction.

Public buildings act as examples of carbon neutral and sustainable construction solutions.



#### **Courses of Action**

Existing buildings are primarily repaired, enhanced, and maintained to prolong durability

Carbon neutrality of construction is promoted in all city planning and plot division.

New guidelines are developed for reconstruction and housing that aims for a higher quality than current regulation.

#### **Indicators**



Reconstruction permits per year / permitted square meters



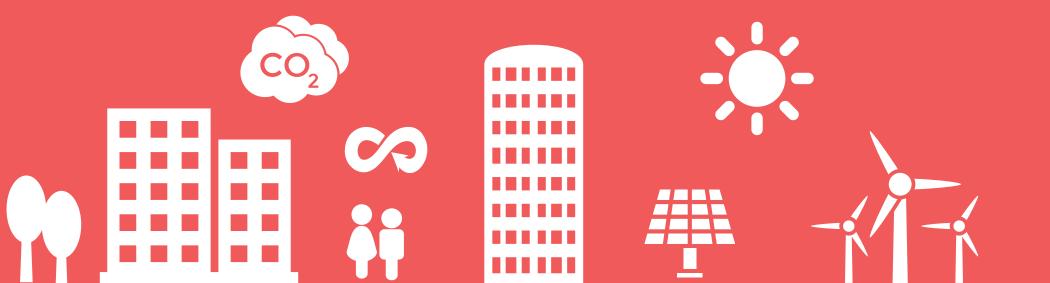






## Point of Emphasis 2

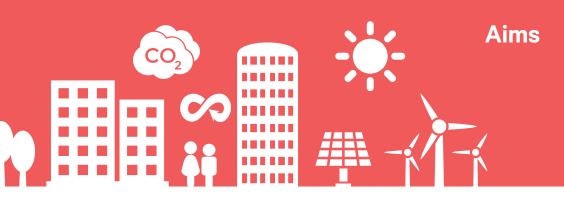
# Resource Preservative Action







## **Efficient Energy Consumption**



Oulu will use energy efficiently regardless of circumstances. The city will lead the way and will make efficient energy consumption possible for citizens and companies.

Public buildings will act as pioneers in energy solutions systematically and on a long-term basis.



#### **Courses of Action**

The city's own energy consumption is reduced at least 10.5% by 2025 from the 2014 rate according to the efficient energy agreement. Preparations are made to join a new agreement.

The specific consumption of the city's properties is reduced and the implementation of efficient energy investments is ensured.

Guidance and instruction is offered to citizens and companies on energy efficiency and life cycle durability concentring construction, building use, and maintenance.

Digital solutions are used in reduction and observation of property and rental housing energy consumption (including: elasticity of demand)

Use of waste energy is increased and its utilization possibilties are considered in regional planning.

The life cycle cost of projects are considered in the city's investment decisions.

#### **Indicators**

Energy savings achieved with energy efficiency actions (GWh)

Energy consumption of the city's own activities (kWh per resident)

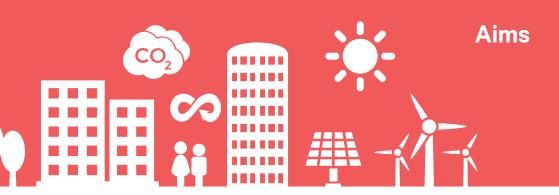
Specific consumption of the city's properties: heating (kWh/r-m3), electricity (kWh/r-m3), water (l/r-m3)

Water consumption of housing (I/resident/day)

Efficiency ratings in reconstruction and the calculated energy consumption of buildings



## Carbon Neutral Energy Production



The greenhouse gas emissions of energy production are reduced versatilely and systematically. Renewable energy is produced and used widely in different hybrid systems.

Oulu will be carbon neutral by 2035. Therefore, energy production will no longer produce carbon emissions that cause climate warming or the emissions will be compensated with carbon sinking or recovery.



#### **Courses of Action**

Greenhouse gas emissions are reduced by increasing the portion of renewable energy sources and new forms of production.

Possibilities of decentralized energy production are increased. Low energy production is encouraged and two-way production is promoted.

Biogas business is increased and expanded. Individual electricity and heating production, biofuel production, and liquefied biogas distribution are increased.

Portion of renewable energy sources in the city's own properties is increased and the portion of fossil fuels is decreased considering security of supply

Oulun Energia's path to carbon neutrality is implemented.

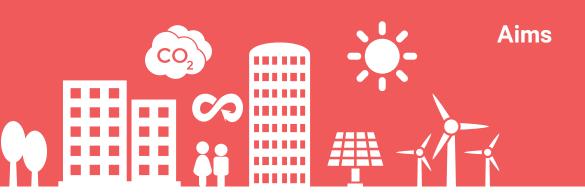
Peat is abandoned as an energy source in a controlled manner.



- Portions of different energy sources in total energy procurement and district heating production
- Amount of heating and electricity produced with biogas instead of fossil fuels (million liters)
  - Amount of transport fuel produced with biogas compared to gas (liters)
- Amount of renewable energy used in the city's own properties (MWh) and the amount of forms of energy production with fossil fuels (MWh)
- The amount of carbon emissions caused by fossil fuels used in Oulun Energia's energy production



## Functional Circular Economy



Oulu acts according to the princples of circular economy, bringing about new businesses and cooperation. In circular economy, materials are used efficiently and sustainably and they are in circulation safely and long-term. Products are shared, rented, fixed, and recycled. Servitization is a part of circular economy.

Objectives and courses of action defined by Oulu's circular economy roadmap have been adopted widely and the courses of action are already a part of daily life.



#### **Courses of Action**

Circular economy roadmap courses of action are implemented as planned.

City planning creates the conditions to the use of surplus waste and recycled material. The basis of the planning is alternative comparison that is based on mass economy observation and emission calculation.

Material flows and mass flows emerging from city activities are investigated and a control and utilization plan for the largest components is composed (MASSA project)

Sharing economy and joint use are promoted by developing libraries, community spaces etc. as centres of sharing economy and encouraging for communality.

Positive attidutes toward circular economy is promoted with positive, exciting, and open communication.

#### Indicators

Implementation of the circular economy roaodmap courses of action.

Qualitative evaluation.

Amount and utilization factors of of waste components (burnable waste + separately recycled biowaste)







Point of Emphasis 3

# Nature is our Resource













## Nature Accessible to Everyone

Aims



Oulu is an environmentally friendly city that considers recreational values and ecological network quality, accessibility, quantity, and connections in land use.

All neighborhoods in Oulu include nature.\*



#### **Courses of Action**

The recreational possibilities in local greenspaces, recrational areas and waterways are developed.

The accessibility of outdoor exercise routes are enhanced with sustainable modes of mobility and the sufficiency of accessible routes is ensured.

The coverage of natural networks are reinforced and the preservation of main green links is secured.

Connection to nature is secured in the planning of developed environments.

#### Indicators

City of Oulu's allocated and used funds for the upkeep of greenspaces and camping sites (€ per resident). The aim is 2€ per resident.

Portion of population nearby lit outdoor exercise routes (300m and 700m)

Portion of population within 300m from an actual greenspace of 1,5 ha

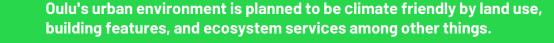


\*What is considered nature in practice needs more accurate definition from the city. For now: Nature means a living environment, including surface of the earth and waterways and atmosphere with their flora and fauna, that has been altered only slightly or not at all by humans. Kielitoimiston sanakirja. 2022 Kotimaisten kielten keskus ja

Kielikone Oy. Accessed 15.11.2022: https://www.kielitoimistonsanakirja.fi/luonto

## **Adapting for Climate Change**

### Aims



Environmental solutions slow down climate change and at the same time we adapt to the effects of climate change.





#### **Courses of Action**

Risk analysis and precautionary plans for extreme weather will be kept up to date. Systematic courses of adaptive action based on the plans and analyses will be implemented.

Drainage water programme will be implemented emphasizing natural solutions.

A climate road map is written that specifies the courses of action in adapting for climate change.

Implementation of forest upkeep and use programme. Thinning of forests is taken care of in time and trees are kept fertile.

Promotion of environmentally friendly cultivation methods.



- Implementation and up-to-dateness of precautionary plans
- Implementation of the drainage water programme.

  Qualitative evaluation.
  - The city's climate road map will be compiled in 2023
- Implementation of upkeep and use programmes of forests. Qualitative evaluation.



## A Safe, Healthy, and Comfortable Living Environment

### **Aims**



The quality of Oulu's living environment is improved and maintained to advance the well-being and health of people and nature.

Planning and implementation consider matters such as noise, air quality, and the condition of land areas and waterways.

#### **Courses of Action**

Quality control of reconstruction and maintenance is used to promote healthy and safe construction.

The health and safety of developed living environments is maintained with anticipatory, well-timed, and targeted maintenance.

Noise and ground vibration disturbance prevention with land use and traffic planning. Implementation of the noise control plan.

Good quality of indoor air in city properties is maintained by utilizing real-time measurements.

Contaminated land areas are purified favoring sustainable restoration methods.

- Number of targets of indoor air task forces
- Dirt contamination content of outdoor air
  - Implementation of the noise control plan

    Number of residents exposed to noise





## Varied Nature and Good Ecological Condition of Waterways

### Aims



In Oulu, the preservation or improvement of biodiversity, sufficient greenspaces, and good condition of waterways is considered in all land use planning.

Biodiversity means the spectrum of nature, species, and genes that are essential to the city, its citizens, and sustainable business activities.



### **Courses of Action** Indicators Implementation of the LUMO report and observation of courses of action Implementation of courses of action outlined by the LUMO report Portion of old forests (%) Portion of nature reserves of the land area (%) Nature is restored according to EU and other national agreements. Implementation of waterway upkeep and use programme courses of action. Implementation of upkeep and use plan of waterways. Qualitative evaluation. Sewer network is expanded and renovation is intensified. Percentage of bilge water in the sewer network The diffuse pollution of waterways is reduced and the condition of waters is Ecological condition of waterways enhanced by considering the waterways in land use and restoration projects. Nutrient load of agriculture is reduced by encouraging environmentally friendly methods. Total load of waste water, BOD and phosphorus (g/resident/day) Efficient sewage treatment secures quality improvement of water





Point of Emphasis 4

# Promotion of Environmental Responsibility









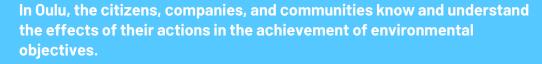






## Environmentally Responsible Citizens of Oulu

### **Aims**



The city encourages and guides the residents and enables sustainability in all aspects in its range of influence.



## Courses of Action

Evaluation of environmental impact and life cycle costs is adopted in the planning and decision-making of all significant projects.

Residents, companies, and communities are encouraged to environmental responsibility with guidance and publication; the city leads by example.

Promotion of network cooperation between the city and other operators.

Early childhood education and care and education institutions are modeled into learning environments of sustainable future.

Sustainable future education in Oulu guides children, young people and people working with them towards a sustainable life style.

#### Indicators

- Number of significant projects that implemented the evaluation of environmental impact and life cycle costs in their planning and decision-making
- Implementation of a resident survey (yes/no) and the results of awareness of the programme and success of courses of action Number of communication campaigns (number/year)

Vihreä lippu schools and daycare centres

Number of participants in environmental education offered by

Timosenkoski Nature School, Alakööki, and Heikinharju Nature Shelter



## Sustainable Methods in City Administration

### Aims

Consideration of sustainable methods and environments is a part of daily life in Oulu.





#### **Courses of Action**

Eco support activities are continued and the contents are developed by industry

Service and freight transport is intensified and connected.

Sustainable food supply is promoted by, for example, increasing the portion of local ingredients in meals produced and ordered by city administration. Food waste is reduced.

Portion of zero-emission and low emission driving power in the city's transportation is increased.

Possibilities for remote work and negotiations are utilized. Travel uses environmentally friendly modes of transport.

Work spaces are planned for multiple uses and the use rates are intensified. Unnecessary spaces are given up.

Environmental competence of managers, staff, and employee representatives and understanding of their own work's effects on the objectives of sustainable development is increased.

City staff are encouraged to commute by cycling, walking, or by public transportation.

We will act and share lessons in local, national, and international networks.

- Number and positions of eco support persons
- Costs of service and freight transport
- Portion of zero-emission fuels in the city's equipment fuel use (%) Zero-emission kilometers driven by public transport and percentage of all driven kilometers
- Number of staff / number of city spaces (person/m2)
- Number of environmental training courses arranged for managers, staff, and employee representatives
- Number of persons who utilized the employee bicycle benefit

## Sustainable Procurement

### **Aims**

Oulu is a capable provider that makes their procurement with environmental responsibility.

Criteria for procurement are defined, followed, and measured.



#### Courses of Action

Procurement supports Oulu's environmental programme and the achievement of carbon neutrality

Procurement considers need, environmental impact, and life cycle costs

Environmental criteria and requirement to follow them is added to offer requests and contracts. The criteria must be a minimum requirement or a standard of comparison with significant weight.

The environmental criteria are attempted to be fulfilled in procurement. The dismissal of the criteria must be justified.

#### **Indicators**

Procurement agreements that promote energy efficiency, amount and portion

Procurement agreements that promote environmental solutions, amount and portion



## Utilization and Leadership of the Environmental Programme



The following policies are based on the decisions made in workshops for the environmental programme's updating process:

- 1) 19.9.2022 branch of industry leadership workshop
- 2) 9.11.2022 decision-maker workshop

To support decision-making, an effect evaluation is prepared on how the decision promotes or delays the achievement of the objectives lined in the environmental programme.

Decisions that are in conflict or delay the objectives of the programme must be justified and substitute or compensatory actions must be pursued.

The life cycle effects of the investments will be considered in budgeting and decision-making regarding the objectives of the environmental programme. The progression of the programme and the overall effectiveness should be evaluated regularly. The indicators are directed to the most significant actions.

Decision-making should also focus on courses of action that are visible in the daily life of Oulu's citizens tangibly and promotes daily life's environmental friendliness.

# Roles of different operatives in the implementation of the Environmental Programme



#### **Implementation**

Branches of industry, businesses, and cityowned corporations are responsible for the implementation of the environmental programme and reporting on the board and committee level.

#### **Observation and development**

Environmental programme's observation team is responsible for observing the programme's implementation and development.

#### Members of the observation team:

Marko Kilpeläinen, Urban and Environmental Services, chairman Anna-Maria Levy, Urban and Environmental Services Ari Heikkinen, corporate administration Sari Matinheikki, corporate administration Tero Aho, Education and Culture Services Pekka Seppälä, Building Control Johan Alatalo, Public Utility Jouni Lähdemäki, Oulu Waterworks Sami Hirvonen, Kiertokaari Oy Tarja Väyrynen, Oulun Energia Oy Päivi Vähänikkilä-Kuronen, Oulun Satama Oy Raimo Hätälä, Sivakka Oy Janne Hietaniemi, BusinessOulu Leena Tuuri, Oulu Regional Environmental Office Jonna Hakala, Oulu Regional Environmental Office Vesa Miettunen, Oulu Regional Environmental Office, secretary

#### Coordination and reporting

Implementation of the programme is communicated about regularly. A report of the programme is made annually to the City Board. Environmental economy identification numbers are reported together with the city's year-end financial statements.

The annual report is complied by Oulu Regional Environmental Office which is also responsible for the programme's coordination and observation's development.

#### Team in charge of updating the programme:

Anna-Maria Levy, Urban and Environmental Services
Sari Matinheikki, coporate administration
Jonna Hakala, Oulu Regional Environmental Office
Maarit Talvitie, Oulu Regional Environmental Office
Vesa Miettunen, Oulu Regional Environmental Office
Leena Tuuri, Oulu Regional Environmental Office
Suvi Korpinen, Community and Environmental Services
Mika Uolamo, Community and Environmental Services

## Concepts 1/2



Baana cycle network: The main network of cycle paths.

**BOD:** Biological oxygen demand (BOD) indicates the amount of oxygen microbes consume as they dissolve organic matter in aerobic conditions.

**C02-eq:** C02-eq, or carbon dioxide equivalent is a quantity that is used to measure different greenhouse gas emissions. To calculate carbon dioxide equivalent the greenhouse gas emissions are multiplied with their GWP factors (global warming potential) which portrays their effect in global warming in specific time frames.

**Efficiency Rating (e-number):** Calculated total energy consumption of a building that is emphasized with factors of different forms of energy. [kWh/m2 per year]

**Ecosystem Services:** Ecosystem services mean direct and indirect benefits to people and other ecosystems caused by natural ecosystems. For example, formation of groundwater, maintaining of biological water balance, forest resources, carbon sink, recreation, and camping.

**Eco efficiency:** Eco efficiency means activity that pursues the production of more services and well-being with less consumption of natural resources. Production and consumption is eco efficient when the least amount of material and energy consumption produces the largest amount of output; resource consumption is minimized per production unit.

**Energy efficiency:** Energy efficiency is promoting the efficiency of energy consumption so that consumption is reduced.

Climate sustainable planning: focuses on controlling and adapting to climate change. Planning considers the development of population density, regional growth, land use, and building features and examines the immaterial and material benefits offered by ecosystem services to control weather and climate risks among other things.<sup>1</sup>

**Sharing economy:** Forms of joint usage that utilizes sharing platforms in temporary use of items and services. Sharing economy promotes borrowing, exchanging, renting, recycling, and joint use of items and immaterial services instead of production, sale, and ownership.<sup>2</sup>

**Circular economy:** Oulu follows the principle of circular economy, creating new business operation and cooperation. In circular economy, material is utilized efficiently and sustainably and they remain in circulation long-term and safely. Products are shared, rented, repaired, and recycled. Servitization is a part of circular economy.<sup>2</sup>

**Central dense area:** Areas with population of at least 50 per hectare. Supports intensive public transportation. Measurement range is 250m grid of urban structure monitoring system (YKR).

**Restoration of nature:** EU's restoration regulation carries out the biodiversity strategy agreed on by the member states. According to the restoration regulation, the member states must implement treatment actions in nature on bogs, forests, agricultural environments, fells, beaches, seas, and inland waters. Such actions can range from obstructing bog drainage, restoration of grazing in traditional grazing areas, restoration of river beds and creeks toward their natural state, and removal of spruce trees from groves.<sup>3</sup>

**Diversity of nature:** Range of species and genes in ecosystems (natural capital) which is a vital part of wellbeing, economy, and society of humans. Diversity is crucial to ecosystem services, such as pollination, climate regulation, flood protection, fertility of soil, and the production of food, fuel, fiber, and medicine.<sup>4</sup>

## Concepts 2/2



**Material efficiency:** Material efficiency means producing more with less while preserving nature. The aim is to use the least amount of material, ingredients, and energy. All the while attempting to reduce the environmental impact of the product or service throughout its life cycle.

**Contaminated land areas:** Contaminated areas are areas where, as a result of human activity, there is a harmful amount of harmful substances and it causes significant risk for the environment or health, reduction of comfort, or any other form of harm.<sup>5</sup>

**Resource efficiency:** Resource efficiency spans more efficient production of material and energy, recycling and reusing products or waste among other things. Resource efficiency in its wide definition includes the use of air, water, earth, and soil on top of material and energy.

**Resource wisdom:** Resource wisdom is the skill to utilize different resources (natural resources, raw material, energy, products and services, spaces, and time) with consideration and by promoting well-being and sustainable development.

**Efficient public transportation:** High capacity form public transportation on rapid intervals (quicker than 10min/h), such as a superbus or tramway that travels mostly on its own lane or in its own space removed from other traffic.<sup>6</sup>

**Densely populated area:** Areas with a population of at least 20 per hectare. A rough estimate for viable public transportation. Measurement range is 250m grid of urban structure monitoring system (YKR).

**Infill development:** Consolidation of city structure on already developed plots with extensions.

**Viherkerroin:** a tool that presents a plot or block's green efficiency, i. e. how much of the plot's area is different vegetation surfaces (such as trees, bushes, vines, green roofs) and solutions of delaying rainwater.<sup>7</sup>

**Green links:** Greenspace that connects larger greenspaces into a totality that serves people and recreation (recreational links) and/or the movement and spread of animals and plants (ecological links).8

**Vihreä lippu:** Environmental education programme directed to daycare centres, schools, vocational schools, and free time activity providers.

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