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Green Transition in Small Cities along Transport Corridors

TUUSULA

Sustainability Concept and Solutions for the Tuusula Focus Area

INTEGRATED ACTION PLAN
3.10.2025

Made proudly by Sweco's team, Tuusula's professionals and sustainability experts from over 20 organizations

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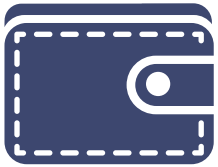


Identifying the most suitable financial instruments

Supporting in the creation of an IAP action plan

Background and Objectives: Focus area

Focus area

Excellent location as part of the airport area

Area approx. 5,5 km²

Targeted building right 1 M. km²

- The main focus is on large-sized plots

Jobs approx. 7 000-10 000

Kiilan Kiertola

Area over 5 km²

Regional circular economy cluster

Program area

Background and Objectives: Phases of implementation

SWOT & Hackathon

- SWOT and vision with project lead expert and stakeholders
- "Hackathon" into sustainable logistics ideas with LIMOWA and stakeholders

Profiling

- FCG recognized most attractive sectors for Focus area
- 2 workshops with key stakeholders
- Benchmark areas: Mo Industrial Park, Norway and Schiphol Trade Park
- Interviews with industry experts and regional stakeholders
- Economical impact analysis

Preplanning

- Desktop study
- Insighful expert work
- Meetings with client

Collaboration

- 2 workshops with key stakeholders
- Interaction with Tuusula's key experts
- Sparring with Sweco's expert panel
- Sparring with IAP's consultant

Finalization

- Expert work
- Presentation of results

Future Proof Sustainable Industries, Ecosystems and Networks

Production

Growing industries	Growth potential
Research centers for new technologies	Research centers for new technologies **drive innovation, attract talent and investment**, and **support high-value job creation**. They foster collaboration with academia and industry, boost regional competitiveness, and fuel sustainable economic growth through emerging fields like AI and green technology.
Robotics	Robotics, **especially when combined with AI**, is a key growth sector as businesses aim to **boost efficiency and innovation through automation**. Rising demand across industries positions robotics at the forefront of transforming work, enhancing productivity, and driving future industrial development.
Industrial and consumer biotech	Biotechnology **offer strong growth potential by enabling sustainable alternatives to traditional processes and products**. From bio-based materials to personalized health solutions, biotech drives innovation, reduces environmental impact, and opens new markets in sectors ranging from manufacturing to wellness.
Semiconductors	Semiconductors are **foundational to modern technology** and critical for innovation in sectors like AI, automotive, and communications. As global demand for advanced electronics grows, the semiconductor industry presents major growth opportunities and **strategic importance for technological sovereignty and economic resilience**.
Space and defence industry	Over the past 10 years, the space industry's commercial side has been growing rapidly. Powered by private sector investment, increasing commercial innovations, as well as the **diverse uses of space technology in addressing contemporary global challenges** have given the industry strong growth potential. Defense and intelligence act as a state-sponsored subsegment of the industry, also offering immense potential for growth as nations increase spending on national security and autonomy.

Research and development has enabled immense growth e.g. in the obesity drug industry (e.g. Novo Nordisk with a market capitalization larger than $490 billion) and food innovation.

The robotics industry is seeing a significant surge in investment funding. Venture capital investments increased from **$1.6 billion to $13.1 billion in from 2018 to 2022**.

Industrial and consumer biotech start-ups raised $2.1 billion in 2023 and $4.9 billion in 2022. In the lower range of scenarios, the industry is **estimated to grow from $140 billion in 2022 to $340 billion in 2040**.

The industry's revenue in 2022 was $630 billion. There has been heavy investments on R&D and manufacturing, with capital spending growing at ana average rate of 16 % per year in 2015-2022-

The industry received over $70 billion in investments from the private sector in 2021–2022.. In addition, EU member states spent €326 billion on defense in 2024, and **investments on the industry reached €102 billion**.

Sources: McKinsey, European council

Energy

Growing industries	Growth potential
Electric charging infrastructure	Among medium- and heavy-duty trucks, the share of BEVs and FCEVs sold is **estimated to grow between 60 to nearly 90 percent** in high-adoption regions (i.e., Europe), where regulations advance the use of EVs.
Batteries	Over the past decade, venture capital and private equity funds have **invested around $42 billion in battery technology**, with 75% of that funding happening in just 2020 and 2021.
Hydrogen	Global demand for hydrogen is **projected to grow by 20–40 percent by 2030**. As of summer 2023, the total announced capacity of green hydrogen investment plans in Finland amounted to approximately 7.5 GW.
Cloud services	Vast majority of enterprises use cloud services. Hence the industry has **grown massively: from $32 billion in 2017 to $270 billion in 2023.**

Electric charging infrastructure for trucks is a rapidly growing sector, **essential for enabling the transition to zero-emission freight transport**. As regulations tighten and demand for sustainable logistics rises, investing in charging networks presents significant opportunities for innovation, job creation, and decarbonizing heavy transport.

The battery industry is a **key driver of the green transition**, with strong growth fueled by the rise of **electric vehicles, renewable energy storage, and mobile technologies**. Advancements in battery production and recycling create opportunities for sustainable innovation, energy independence, and high-value job creation across the value chain, and gives the industry significant growth potential.

The battery industry is a **key driver of the green transition**, with strong growth fueled by the rise of **electric vehicles, renewable energy storage, and mobile technologies**. Advancements in battery production and recycling create opportunities for sustainable innovation, energy independence, and high-value job creation across the value chain, and gives the industry significant growth potential.

Cloud services and data centers are **vital for the digital economy**, offering strong growth potential as demand for computing power and storage increases. They attract tech investment and support a wide range of industries, from AI to e-commerce. However, locating a data center near an airport may raise concerns due to land use restrictions, security, or infrastructure conflicts, potentially limiting feasibility. Additionally, as data centers produce a lot of heat, they **offer the possibility for waste heat utilization** in the location where they operate.

Sources: McKinsey, Finnish Government (Valtioneuvosto), Sweco Finland (vähähiilisyyden tiekartta), Fimpec

Key Takeaways

1. Synergies with the airport

Growth areas include, for example, the semiconductor industry (part of Smart Manufacturing) and products with a higher degree of added value, which have **strong synergies with the airport**. On the circular economy side, synergies with the Kiila area would be created by further processing recycled materials.

2. Data centers and energy ecosystem

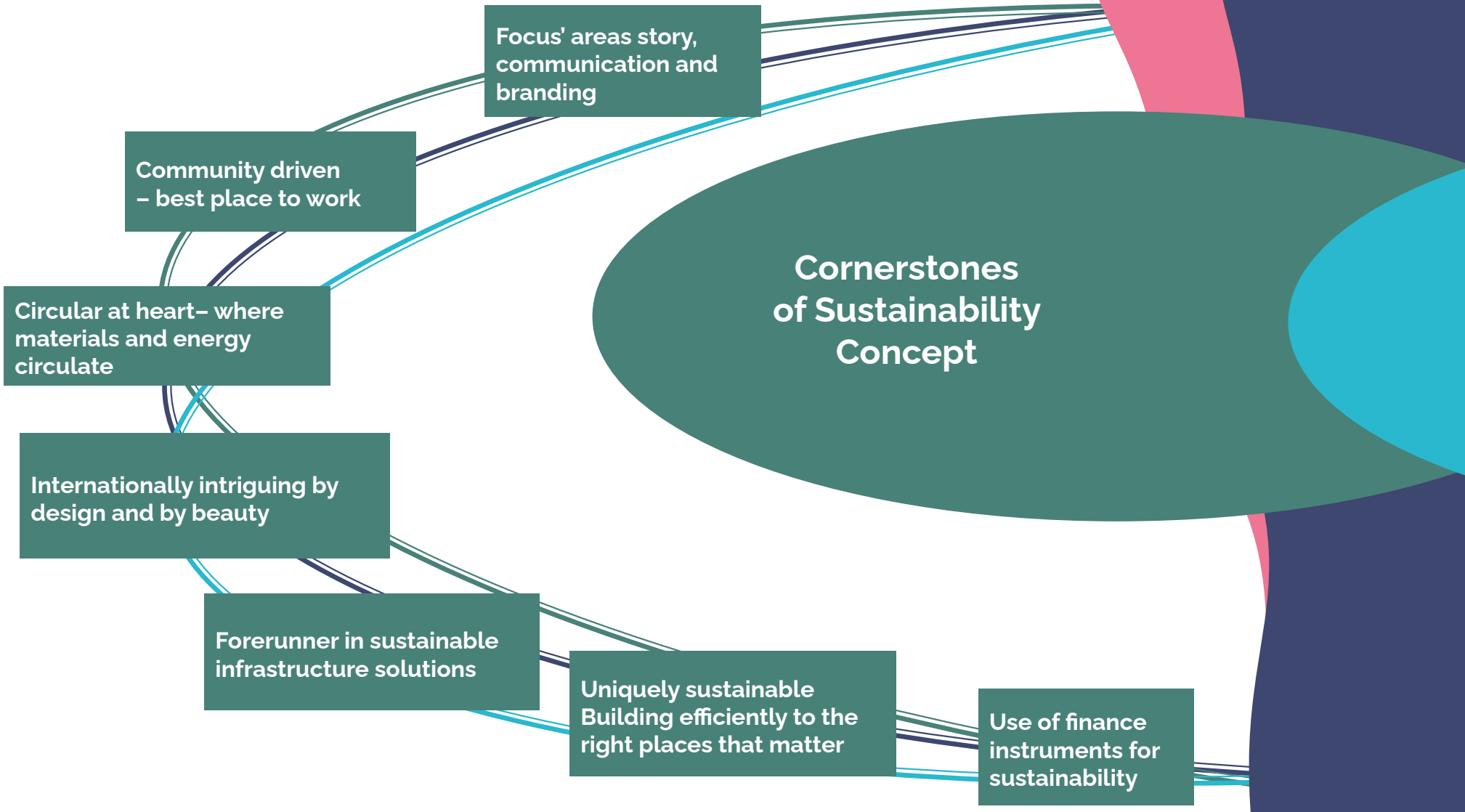
Regarding energy solutions, especially with data centers, **the proximity of the airport** and **potential excessive load on the regional electricity grid must be considered**. However, data centers offer the opportunity to utilize waste heat within the area.

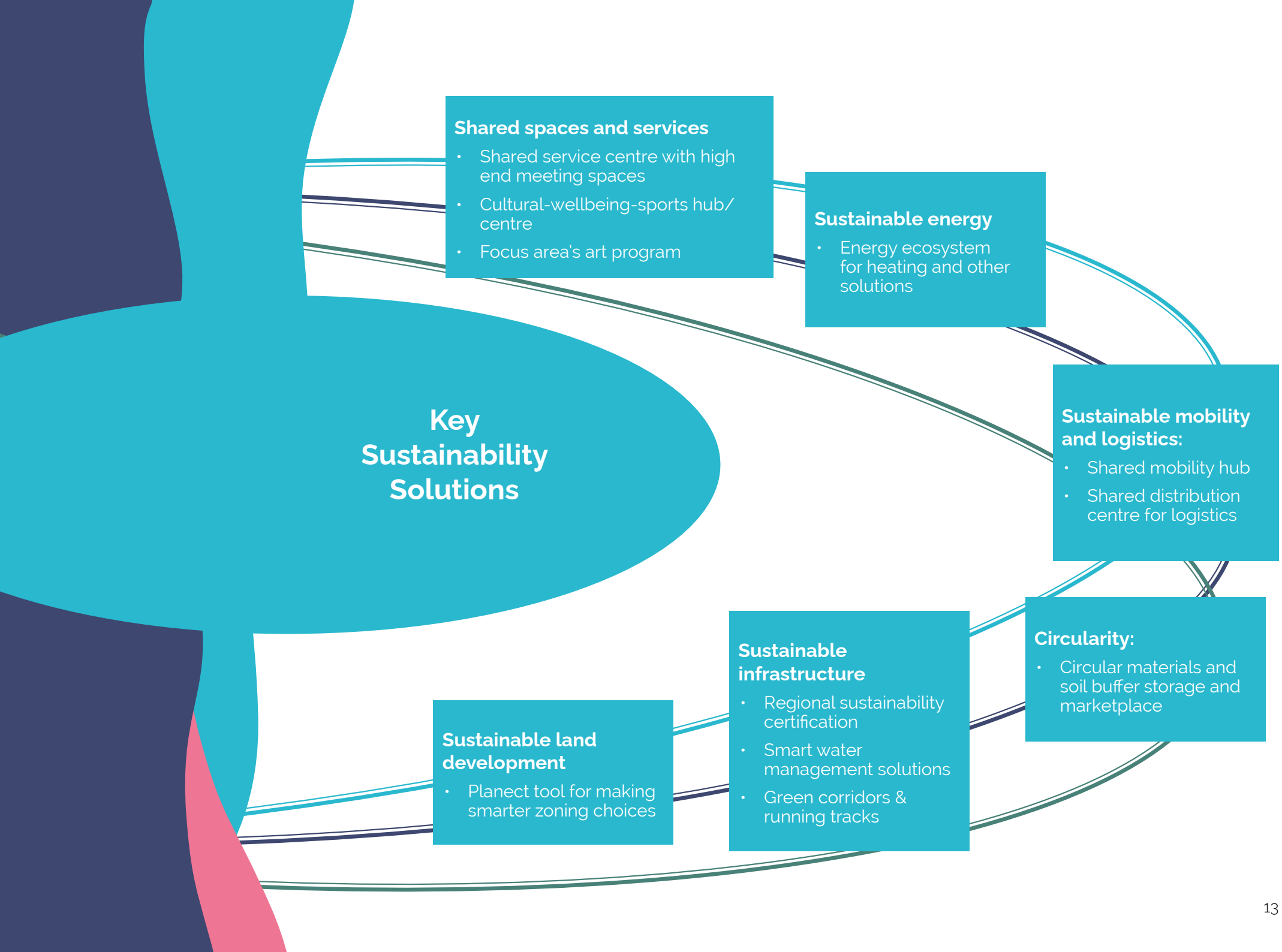
3. Logistics support

In addition to the growth areas, Focus area could be equipped with **warehousing services for logistics**. Focus enables the development of the logistics network. The area will create new cross connections that will enable, among other things, driving around the airport and opening new service connections to the airport. In addition, Kehä 4 will also open up more region-level connections between motorways.

Sustainability Aspiration and Cornerstones

Tuusula's Focus area's Sustainability Concept and Solutions




Key Sustainability Solutions
Shared spaces and services
• Shared service centre with high end meeting spaces
• Cultural-wellbeing-sports hub/ centre
• Focus area's art program
Sustainable energy
• Energy ecosystem for heating and other solutions
Sustainable mobility and logistics:
• Shared mobility hub
• Shared distribution centre for logistics
Circularity:
• Circular materials and soil buffer storage and marketplace
Sustainable infrastructure
• Regional sustainability certification
• Smart water management solutions
• Green corridors & running tracks
Sustainable land development
• Planect tool for making smarter zoning choices

Aspiration and Cornerstones for Sustainability and Objectives

1. Internationally intriguing

Focus is a distinctive and high-quality industrial area that attracts interest abroad. It joins the ranks of regions recognised as pioneers of sustainable and innovative industrial areas.

Recognized as one of the most beautiful industry parks in the world. Targeting one of the first regional sustainability certifications in the world.

2. From energy self-sufficiency to positivity

Enable the path towards self sufficiency and energy positivity.

Creating a system in which energy is used efficiently and sensibly and is not wasted and is integrated into functioning electrical system. Implementing a circularity-based energy ecosystem, synergistic energy solutions that enable energy self-sufficiency in heating and that can enable a transition towards energy positivity in the long run.

3. Uniquely sustainable (Low-carbon area)

Cause minimal harm to the local ecosystem.

Building efficiently to the right places that matter
- Focus area is centrally located within the regional level.

4. Where materials and energy circulate

Selected materials and energy circulate and are utilized within the area and between surrounding areas.

Circulating selected materials within a close proximity, e.g. metals, trees, concrete, gravel & stones, soil masses, products and services.

5. Community driven

Promote a good and healthy life for people, highlighting social sustainability, bringing comfort, and strengthening community.

Focus attracts and retains workforce by creating an industrial area where people are at the center. Focus aims to introduce a service center for area's employees.

6. Sustainable infrastructure

Promote and push for innovative sustainable infrastructure practices.

Focus drives the development of innovative and sustainable infrastructure practices via own actions and pushes for developers to adopt greener practices.

Sustainability Concept

Boldly beautiful: Designing and constructing aesthetically pleasing buildings. Conserving as much nature as possible within the limits of the industrial area. Integrating local art elements around the industrial area, e.g. along key routes and close to significant buildings. Scandinavian, unified "look and feel" across the area.

Where materials and energy circulate: Circulating materials and waste from e.g. construction work. Creating a self sufficient energy ecosystem that allows room for energy positivity; waste heat recovery and regional heat production.

Uniquely sustainable: designing Integrated solutions such as internal low carbon transportation systems. Using a digital tool to evaluate the carbon footprint and handprint impacts of different zoning choices.

Bringing a sense of community: Building communal spaces and possibilities for leisure activities, e.g. sports. Involving local community in art creation and a service center for area's employees and a show room for sustainable innovations.

Sustainable infrastructure: designing infrastructure by using sustainable practices and solutions. Providing instructions and recommendations for developers, Walking the talk with Tuusula's city's own choices and procurement policies (including e.g. technical building, roads and pavement design).

The X-Factor: An industrial area with people at the heart of its design and operations. An environment that enables different experiences and activities. Introducing Uusimaa's first large sized buffer storage for reusable building materials.

Sustainability Concept

Picture: Timo Nurmi

Boldly Beautiful

Resilient environment

The elements of a resilient built environment should be applied in the area (which are not commonly used in industrial areas):

- Use of small scale and sequencing of long facades into natural parts.
- Use of locally sourced stone and materials traditionally perceived as pleasant (e.g. brick, plastering and use of natural warm color tones.
- A well-groomed and well-thought-out overall look with interesting details, such as art and green corridors/nature paths.

Look & feel

Industrial areas are notorious for having an overall sense of bleakness and restlessness due to inconsistent design and generous use of concrete as a material.

Focus will be designed to be a coherent entity. The look and feel of the area is designed and built considering its users. Scandinavian design and natural materials are utilized, integrating an aesthetic appeal without compromising functionality or longevity of buildings.

Art, artists and art program

The Focus area comes to life through local art. Its mission is to offer meaningful experiences and memorable meeting points that are accessible to everyone. The art reflects the community and its surroundings – telling a story of Tuusula's past, present, and future.

Art creates a unique identity that sets the Focus area apart from conventional industrial zones, making it internationally distinctive and compelling.

Establishment of an art program for the Focus area.

Preserving nature and longevity of buildings

The area aims to preserve as much as existing nature as possible within the limits of an industrial area.

Focus introduces nature and biodiversity driven design.

Manifestation of beauty includes extending the lifecycle of buildings via adaptability and versatility of use.

Picture: Kari Kohvakka

Where Materials and Energy Circulate

Uusimaa region's first industrial sized buffer storage for reusable circular materials

Focus area, in synergy with KIILA, would create Uusimaa's first buffer strorage to support material circularity.

The storage would temporarily hold selected materials, that originate from Focus area and other nearby construction sites.

Potential to build an industrial ecosystem which focuses on manufacturing high-value recycled products at Focus and Kiertola.

Closed loop system and synergies with Kiertola-area*

Focus and Kiertola area create a synergic area where materials, products and services circulate.

An example of a service to support circularity:

- Temporary soil material bank: circulating materials and waste from Focus's ongoing construction work. Utilizing landmass and quarry from the area.

An energy ecosystem that recovers and recycles heat within the area.

Circularity driven design

Applying circularity design principles to the planning, construction, upkeep, and end-of-life phases of a built environment involves:

- Ensuring hassle-free maintenance.
- Identifying reuse opportunities for selected materials at the end of their life cycle.

To avoid new construction in the future, there will be modular or convertible buildings in the area when possible.

Shared services

Promoting space efficiency can be achieved by offering shared facilities and resources, such as:

- High-end meeting centers
- Storage facilities and loading docks
- Training spaces and equipment
- Vehicles and machinery, including electric forklifts
- Distribution terminal/terminals.

*"Kiertola refers to the joint circular economy area of Vantaa and Tuusula, namely Kiilan Kiertola

Uniquely Sustainable

Accessibility and mobility within and around Focus area

The area is supported by a robust and interconnected transportation network featuring frequent bus and tram services, advanced cycling infrastructure, and convenient on-demand shuttle services.

Strategic positioning near key areas promotes seamless travel and enhances overall accessibility.

Efficient energy ecosystem and integrated sustainability solutions

Focus has e.,g, an energy ecosystem for heating that may enable the path towards energy positivity. The area utilizes waste heat recovery and regional heat production, energy storage, and district cooling from snow, among other things.

Considering the surrounding environment and compensating the climate and nature impacts.

Shared mobility hub and – distribution center

Focus introduces a shared sustainable Mobility Hub for commuting within the area (and nearby. These shared mobility services may include shuttle bus, cargo bikes, robot bus, city bikes, e-scooters, covered bikes (for winter commuting) and public transportation (bus and a potential railway connection in the future).

Shared distribution Center for tenants' inbound and outbound logistics.

Charging stations for heavy duty vehicles, work machinery and other greener infrastructure solutions for propulsion systems.

Sustainable areal certification and digital tools

Focus could become one of the first large sized industrial areas to promote sustainable certification. A certificate may guarantee an agile permitting process for those willing to locate to Focus area.

Using digital tools as data-driven enablers for sustainability management.

Picture: Kaapo Kamu

Bringing a Sense of Community

Living lab encompassing a visitor center, showroom and pilot platform

To attract more visitors, namely school groups and business travelers, Focus area has a living lab and/or visitor center with, for example, virtual showroom, a pilot platform and a physical showroom to showcase latest sustainable innovations.

Dedicated outdoor and indoor spaces for organizing community and client events ("a public market square").

Social acceptance

Proactive and ongoing engagement of Tuusula's residents and other stakeholders to guarantee local acceptance to construction and development of the area.

Collaborative spaces for professional and social engagement

Shared services, co-working spaces, and shared meeting areas within the Focus community foster networking and socializing opportunities. Focus offers free, non-commercial spaces for individuals, ensuring convenient access to nearby commercial services that cater to users' needs.

Outdoor observation pier for plane spotting, combined with exercise possibilities and lounging.

Offering reasonable rental options (for non commercial organizations) to ensure long term renting of a facility and introducing a "volunteering for local credits"-program which can mean e.g. an annual clean up of the area – credits can be used to decrease the amount of annual/monthly rent).

Initiatives enhancing community appeal

Establishing a service center for area's employees: e.g., daycare and/or preschool* in the area will provide working parents the convenience of childcare close to their workplace. Other services could include e.g., office hotel, wellbeing services and occupational health services.

Various community events, such as fairs and art exhibitions (e.g. "creative art from recycled materials"), will be organized both indoors and outdoors to foster community engagement.

The introduction of a second-hand shop (Recycling Center and Vintage/second hand store for quality apparel) for consumers facilitates the recycling and purchase of used clothing and equipment.

Servicing the needs of a diverse workforce (and securing availability of diverse workforce).

Wellbeing, sports and leisure

Focus will feature spaces designed to encourage physical activity. Facilities could include specific sports amenities such as a climbing gym, padel, and tennis courts. Outdoor areas will support sports like cycling routes and offer outdoor stairs.

The area will also host restaurants that emphasise local food andsupport entrepreneurship in the area, with the possibility of including e.g.a local brewery.

* Might be challeging to implement due to close proximity of airport (aircraft noise area)

Sustainable Infrastructure

Biophilic design

Biophilic design, i.e., vegetation and the habitats of organisms could play a planned and visible role in the general appearance of the area.

Vegetation can also be used to preserve and improve biodiversity in the area and to manage local damage caused by industry and transport.

Rain- and stormwater infrastructure can be utilized as visible (and covered) water areas. This can include open channels, wetlands, and filtration systems.

Main road design

The main roads could be boulevard-like and interesting. If leisure services are available in the area, they should be situated along these main roads to ensure human activity is prominently visible. The road should not cut off green corridor(s).

Embedded carbon and water sequestration solutions

Laying only asphalt in the area could result in an enormous amount of rain- and stormwater. Therefore, investments are needed for solutions such as water circulation and stormwater management systems. Water absorption can be enhanced through green roofs, vegetation, and small-scale wetlands.

Water collection system and cooling water utilization within the area, water storage solutions.

Embedding carbon sequestration solutions into the area's infrastructure.

Instructions for developers

The terms and conditions for developers regarding plot transfer must include provisions for a designated space dedicated to natural meadows and wetlands, which aid in storm and rainwater recovery. Additionally, meadow plants should be incorporated to store carbon and support the natural ecosystem.

Tuusula's city demonstrates its commitment through its own choices and procurement policies, including the use of circular materials for the construction of technical buildings, road designs, and pavements in the area.

Reserving a construction free area or areas for rain & storm water management.

Sustainable infrastructure solutions can reduce flood risks and improve the resilience of the area.

Picture: Kari Kohvakka

The X-Factor

Airport 2.0

The sustainable Focus area is build around the Helsinki-Vantaa airport and supports the airport via established services and facilities as a way to support Airport functionality, such as charging stations for heavy duty equipment and trucks.

New experiences to locals and for planespotters –introducing an airplane watching platform/terrace in the Focus area.

Creating the most beautiful industrial park

Creating a coherent, aesthetically pleasing entity utilizing design, materials and local art. The area distinguishes itself from other industrial parks with its unique appearance.

Launch a local art programme, connecting the local community and artists and higlighting reused materials stemming from the construction of the area.

Circularity

Uusimaa region's first industrial sized buffer storage for reusable circular materials and soil bank.

Snow how: introduce one of the first storage and recycling of snow for cooling buildings or industrial processes in an industrial scale. Collection of snow from the Airport and Focus area.

Focus area energy ecosystem as a way to create a system in which energy is used efficiently and sensibly and is not wasted.

Best place to work – Focus area as a connector across the community

Introducing accessible places to collaborate, meet and work.

Ensuring non-commercial meeting places, such as running tracks, sponsored outdoor gyms, green corridors, walking and running paths.

Shared high end meeting center and a service center.

Shared mobility hub (and – logistic center)

Provide a sustainable way of moving for local workers by introducing a shared mobility hub.

Potential to introduce one of the first shared logistics centers in Europe.

*"Kiila" refers to the joint circular economy area of Vantaa and Tuusula, namely Kiilan Kiertola

Sustainability Solutions

Picture: Kari Kohvakka

Boldly Beautiful: Solutions

RESILIENT BUILT ENVRIONMENT

LOOK AND FEEL

PRESERVING NATURE

LOCAL ART

SOLUTIONS FOR BOLDLY BEAUTIFUL INDUSTRIAL AREA

ELEMENTS OF A RESILIENT BUILT ENVIRONMENT

- Use of small scale and sequencing of long facades into natural parts
- Use of materials traditionally perceived as pleasant (e.g. brick, plastering and use of natural, warm colors and tones)
- A well-groomed and well-thought-out overall look with interesting details, such as art installations and green corridors/nature paths.

ART PROGRAM FOR LOCAL ART

- Establishment of Art program for Focus area
- Art placed along the main pathways, roads & sidewalks of the area, e.g., sculptures and murals
- Highlighting street art: free painting walls in designated areas
- Collaboration with Tuusula's art community and upcoming artists
- Tenant sponsored art installations (& benches, outdoor gyms etc), that increase the attractiveness of the area.

PRESERVING NATURE

- Preserving as much of the area's nature as possible (e.g. trees, moving flora/trees)
- Avoiding excess cutting of trees and other vegetation
- Green corridors/nature paths which also serve as a running/walking trails and connect to to the surrounding (green) networks
- Hassle free ecological compensation practices and pre-mapping of potential targets.

DESIGN

- The plots are large and the distances are long. The building can be very far away, for example from the edge of the street, so this should be taken into account when thinking about aesthetics.

LOOK AND FEEL

- Nature preservation increases the aesthetic value of the area
- Green roofs and walls add visually appealing greenery to otherwise stark buildings, creating a more pleasant and inviting environment
- Natural elements added to the built environment, break up the monotony of concrete and asphalt
- Trees in the area add balance to the harsh lines of industrial buildings
- Visual solutions for technical implementations (e.g. mobility hub.

SYNERGIES

- Connecting circularity with the Focus art program: designing art by utlizing industrial materials which are demolished in the area: e.g. concrete plant silos, gasometers, steel truss poles for power lines, unused concrete elements, use of old asphalt machines. rock material obtained on site, rock cuts, boulders etc. Collaboration with developers, YIT, Tuusula city and KIILA-area's representatives.
- "Keep FOCUS area attractive commitment" for companies locating in the area: an unsanctioned commitment or other network to ensure the long term commitment of advancing the attractiveness and beauty of an industrial area.

Where Materials and Energy Circulate 1/2: Sustainable energy solutions

SUSTAINABLE ENERGY SOLUTIONS ECOSYSTEM

LOCAL ENERGY PRODUCTION

- Centralized and distributed heat pumps
- Solar energy on site: rooftops & facades
- District level energy production solutions.

ENERGY STORAGE

- Centralized and distributed battery energy solutions
- Heat storage enabling waste heat utilization
- Novel energy storage technologies and intermediaries
- Vehicle-to-Grid charging.

RECYCLING OF ENERGY

- Utilization of waste heat from e.g. data centers, hydrogen production, or other production facilities
- Waste heat integration with potential heat demand e.g. food production
- Excess heat utilization in district heating
- Small scale waste heat utilization i.e. real estate level.

ENERGY EFFICIENCY

- Ambitious energy efficiency targets for construction
- Guidance to developers to adopt energy efficiency actions
- Local energy efficiency competitions for consumers.

DEMAND SIDE MANAGEMENT

- Energy communities
- Smart energy load management e.g. for electric vehicle charging.

SMART ENERGY MARKET INTEGRATION

- Utilization of connecting energy infrastructure e.g. district heating
- Power demand optimization against power market and distribution network requirements.

OTHER SOLUTIONS

- Digital energy management software
- Local energy market platforms.

LOCAL ENERGY PRODUCTION

RECYCLING OF ENERGY

SMART ENERGY MARKET INTEGRATION

ENERGY EFFICIENCY

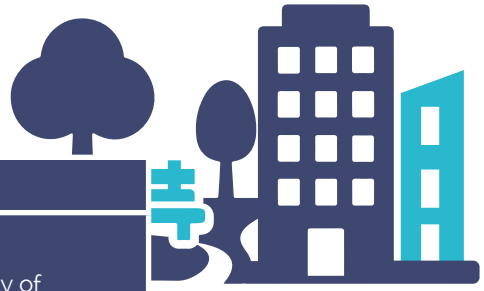
ENERGY STORAGE

DEMAND SIDE MANAGEMENT

SYNERGIES

- Sustainable infrastructure & mobility and logistics: engage transportation & logictics companies and e-charging operators in the energy ecosystem work.
- Secure collaboration and seek synergies with existing (nearby) energy infrastructure providers (i.e. electricity, heat and gas transmission and storage).

Where Materials and Energy Circulate 2/2: Circular solutions



CIRCULARITY SOLUTIONS

BUFFER STORAGE FOR CIRCULAR MATERIALS

- Temporary storage of selected materials, e.g., glass doors, interior doors), CE-labelled construction products, Components such as (standard sized) beams, pillars and bricks
- Materials originate from Focus area and other nearby construction sites
- Potential to build an industrial ecosystem which focuses on manufacturing high-value recycled products at Focus and KIILA
- Fast circulation of selected materials (e.g. interior materials such as glass walls, partition doors and suspended ceilings
- Note: may be hard to recycle non standardized concrete columns and beams. One needs to take into account standard dimensions and load-bearing capacity
- B2C secondhand/outlet for DYI-projects (surplus materials from other construction sites).

SOIL MATERIAL BANK

- A soil material bank functions as a centralized system for the management and distribution of soil and related materials within Focus and KIILA
- For temporary use during construction phase
- Minimizing logistical distances.

UPCYCLED INNOVATIONS

- Processing of higher value end product:s at Focus: e.g. A producer community build around textiles
- Repair service center.

SHARED SERVICES AND - SPACES

- Space efficiency via shared "high end" meeting center
- shared storage facilities and -loading docks
- Shared vehicles and –machinery, sharing electric forklifts
- Shared parking facility/-ies
- Shared distribution terminal
- For temporary use during construction phase: shared service center including rental of site equipment and machinery, shared social facilities and offices on site. Shared buffer storage facility for materials and soil types.

DESIGN PRINCIPLES

- Maximizing the life cycle of steel, glass, wood and other structures and building components with modular design.
- Ensuring easiness to disassemble: e.g: use of mechanical and easily accessible.

CIRCULAR DESIGN

- Increasing the recyclability of building materials throughout the life cycle of buildings, e.g. through a demolition plan for structures and elements and advance planning of the reusability of concrete AND other materials
- Utilization of ash waste from the power plants-> replacing sand with ash.

LAND TRANSFER CONDITIONS

- Dgitalized material management data bank and digital material passport: storage of information on the construction products and materials used (+ raw materials
- Mandatory requirement for all developers to carry out a material survey (describing the change in the properties of materials over time)
- Obligatory plan for the utilization and interim storage of (selected).

SHARED SERVICES AND -SPACES

BUFFER STORAGE FOR CIRCULAR MATERIALS

SOIL MATERIAL BANK

CIRCULAR DESIGN AND LAND TRANSFER CONDITIONS

UPCYCLED NEW PRODUCTS AND INNOVATIONS

SYNERGIES

- Sustainable infrastructure & mobility and logistics: engage transportation & logictics companies and e-charging operators in the energy ecosystem work.
- Secure collaboration and seek synergies with existing (nearby) energy infrastructure providers (i.e. electricity, heat and gas transmission and storage).

Uniquely Sustainable 1/2: Solutions

SOLUTIONS FOR A UNIQUELY SUSTAINABLE INDUSTRIAL AREA

PROTECTION AND PRODUCTION OF NATURE VALUES

Follow the mitigation hierarchy: 1) avoid 2) minimize 3) remediate 4) offset

1. To the best ability avoid impacts on nature and biodiversity. Construction is primarily directed to areas where it does not cause additional harm to nature.
2. Minimize impacts with by, for example, avoiding unnecessary clearing of trees, ensuring ecological corridors and retaining natural ground vegetation, use of green asphalt (asphalt material that is well permeable to rainwater).
3. Remediate by using plant species naturally occuring in the area, including shading trees in the design, introducing a rain garden with diverse vegetation and avoiding monocultures.
4. As a last stop, offset and compensate: municipality or a city can compensate for the deterioration caused by its operations to a habitat type or the habitat of a species. The compensation is made by producing similar natural values elsewhere, outside the construction/deforestation area. Compensation can be generated by restoring or restoring nature sites or by granting conservation credits.

SUSTAINABILITY CERTIFICATES

- Sustainable area certification, BREEAM Communities or LEED Campus Model with a LEED Master Site certification for the entire area, and site / building specific LEED Building Design and Construction certifications for all or most buildings/factories
- Giving a guarantee for efficient permit processes for companies interested in locating to Focus.

DIGITAL TOOLS FOR SUSTAINABLITY

- Planect-tool to evaluate the carbon footprint and handprint impacts of different zoning choices within the area (i.e. reconstruction, infrastructure and public areas, soil and vegetation carbon storages, buildings and yards, traffic, and energy)
- Carbon footprint calculation of the area.

INSTRUCTIONS FOR DEVELOPERS

- Introducing Practices for maintenances of green areas and lawns.

PROTECTION OF NATURE VALUES

SUSTAINABILITY AREAL CERTIFICATE

DIGITAL TOOLS

SYNERGIES

- Use of Planect tool when also desiging area's infrastructure and its sustainability solutions.
- Potential to combine resouces with Vantaa's Kiila area representative while investigating the potential to implement a sustainable areal cerfification for Focus area.

Uniquely sustainable 2/2: Solutions for mobility and logistics

ACCESSIBILITY

LOGISTICS

SHARED SUSTAINABLE MOBILITY HUB

MOBILITY AND LOGISTICS SOLUTIONS

ACCESSIBILITY

- Frequent bus connection (close) to the area (the development of the area may spur new connections e.g. from Kivistö to Korso and Focus area. The reservation of the Ruskeasanta station on the Ring Rail Line is also a possibility for the future, but requires cooperation with Vantaa.
- Railway for a tram or bus route around the airport area would provide fast access to the airport.
- Facilities that encourage walking and cycling.
- Infrastructure for bicycles, such as bicycle lanes and parking with bike racks.
- Cycling maintenance services, repair shops.
- Safe and comfortable cycling routes, e.g., melting routes with excess heat in the winter.

LOGISTICS

- Charging stations for heavy duty vehicles.
- Two-way hydrogen refueling station : trucks and planes.

Shared distribution Center for tenants' inbound and outbound logistics:

- On-demand operations: a neutral operator harnesses consolidated volumes and connects the in- and outbound logistic needs of different companies at Focus area.
- Targeted synergies include e.g. financial saving, sustainability and operational redundancy.
- Centralized in-bound hub enables a shared logistics staff, premises and equipment -> resulting in optimized, redundant, cost- and carbon smart solution compared to detached tenant driven "on-site logistics solutions".
- Space-efficiency at tenants' own facility -> smaller investment, less carbon.
- Demand based staff, premises and equipment -> from fixed cost to transaction driven variable costs.
- Centralized volumes enables better logistics operations development.
- Neutral logistics operator can also hold stock for tenants' suppliers.
- Centralized outbound hub enables all of the above potential benefits.
- Consolidated outbound transportation: financial savings and CO_2-reductions.

SHARED SUSTAINABLE MOBILITY HUB

- Mobility hub for commuting within the area and from Vantaa to Focus area.
- Driverless, on demand shuttle service within the area (and e.g., from bus stop to workplace),
- On demand (driveless) robot bus in between Vantaa Aviapolis and Tuusula.
- City bikes and e-scooters.
- Covered bikes for wintertime commuting.

SYNERGIES

- Securing interoperability of bike systems in between Vantaa and Tuusula.
- On demand transportation from Aviapolis train station/area to Focus area.
- Potential for a"Ring" Rail Line for moving goods and employees in between airport , Vantaa Aviapolis (&Kiila) and Tuusula's Focus area.

Bringing a Sense of community: Solutions

SOLUTIONS FOR SUSTAINABLE COMMUNITY

COLLABORATIVE SPACES

- Social engagement and network building via a co-working space with meeting spaces for public use.
- Other non-commercial spaces, e.g., parks and other outdoor leisure areas.
- Urban farming: community cultivation boxes located in roofs of the buildings.

FOCUS AS A LIVING LAB

- Open access visitor center
- Virtual and physical showroom and a pilot platform for showcasing innovations.
- Outdoor spaces close to the center, giving access to community and/or client events.

COMMUNITY INITIATIVES

- Service center for Focus employees, including daycare and/or preschool, office hotel and medical center.
- Second-hand shops: A Recycling Center and a vintage/secondhand on site and online store encouraging the donation, sale, and purchase of pre-owned items. Possibly combined with a large central warehouse store?
- Art exhibitions in public outdoor areas, e.g. *Creative art from recycled materials.*
- Collaborating with users of the area in the planning of events:, demolition art collective events (for future sites to be demolished).

CULTURE

- Art exhibitions in public outdoor areas, e.g. *Creative art from recycled materials*.
- Allowing the community a possibility of renting spaces for culture events.

WELLBEING, SPORTS AND LEISURE

- Focus sports hall for indoor sports: gym, padel, tennis and/or badminton courts, climbing gym and outdoor rock climbing and outdoor gyms.
- Reserved areas for outdoor sports: outdoor stairs, climbing wall, cycling and running routes and a running track for areas' employees and locals.
- Connecting Focus areas walking/running paths with nearby forest areas with a tracks and nature trails.
- Designated areas for restaurants, focusing on lunch options for the area's employees.
- Locating a local brewery in the area.

COLLABORATIVE SPACES

COMMUNITY INITIATIVES

COMMUNITY INITIATIVES

WELLBEING, SPORTS AND LEISURE

CULTURE

SYNERGIES

- During construction phase: utilizing crushed rock to construct a climbing wall and a running track.
- Building an outdoor trail using circular economy materials (recycled plastics, reclaimed wood etc.).

Sustainable Infrastructure: Solutions

SOLUTIONS FOR SUSTAINABLE INFRASTRUCTURE			
BIOPHILIC DESIGN • Visible role of vegetations and the habitats of organisms. • Building green roofs and walls. • Stormwater infrastructure as visible water areas. • Avoiding bright lightning (Minimizing light pollution).	**INSTRUCTIONS FOR DEVELOPERS** • Requirements in the terms and conditions for developers in terms of plot transfer. • Requirements include dedicated spaces for natural meadows/ wetlands. • Aligning operations with the choices and procurement policies of the city including circular material use for construction of technical buildings, roads and pavements. • Reserving construction free areas for storm water management. • Regional green factor, which guides the planning and ensures the green structure of the area.	**CARBON SEQUESTRATION SOLUTIONS** • Embedding carbon sequestration solutions into the area's infrastructure. • Low carbon building materials that also act as carbon sinks (e.g. green concrete, low carbon bricks and recycled metals). • Plants of dedicated meadows and wetlands store carbon. • Community garden/ Cultivation boxes (roof).	**WATER SYSTEMS SUPPORTING SUSTAINABILITY** • Natural solutions to collect and filter stormwater and rainwater. • Water absorbtion via green roofs, vegetation and (small scale) wetlands. • Urban rain- and stormwater collection and utilization e.g. to irrigate public green spaces and parks. • Water system based on closed water circulation. • Implement water-efficient solutions (e.g., an irrigation system based on sensors).
ROAD DESIGN • Boulevard-like main roads. • Leisure services located along main roads to bring human activity to the most visible places. • Using various aggregates for the paving of cycle/walk paths.			

BIOPHILIC DESIGN

ROAD DESIGN

CARBON SEQUESTRATION SOLUTIONS

WATER SYSTEMS SUPPORTING SUSTAINABILITY

SYNERGIES

- Circularity: Use of recycled materials from the buffer storage for paving of cycle /& walking paths, tenant (company) sponsored benches and outdoor gyms made partly of fully from recycled materials.
- Biophillic design and key biodiversity principles should be included in in the terms and conditions of plot transfers.

APPENDIX: An energy ecosystem that supports the development of the region and enables invest-in activities

1. **Restrictions in energy use and production in the area**	• Which energy production solutions are suitable for the area, taking into account e.g. the size of the area and land use restrictions? • How will the region integrate with the rest of the energy system in terms of electricity, heat and gas? • Do the above-mentioned factors create restrictions on energy use?
2. **Potential lead energy investments and their energy balances**	• How much do the lead energy functions planned for the area (e.g. data center or hydrogen production) consume different forms of energy? • How much waste energy do the operations produce? • What is the profile of energy use and waste energy from the functions?
3. **Energy balances of synergistic investments**	• Which functions could benefit from the waste energy generated by the lead functions? • Which functions could produce benefits for the energy balances of the lead functions? • Which functions would form an optimal energy balance for the region, where energy is produced and consumed efficiently?
4. **Optimal energy solutions for the area**	• What energy solutions can be used to achieve the optimal energy balance in the region? • How does the solution integrate with the wider electricity, heat and gas infrastructure?
5. **Selling points and value propositions**	• What are the benefits of an optimal energy balance and the corresponding energy solutions for an individual operator in the region? • How much quantitative benefit can be achieved with the solutions? • What is the significance of the benefits for the location of the investment in the area?

Appendix: Financial Instruments for Sustainability

DRAFT:
IAP Action PlanAction Tables

IAP Action Table – introduction

1. Sustainable energy ecosystems

This theme aims to generate a sustainable energy ecosystem by engaging wide range of actors in an ecosystem development and ensuring the most suitable energy solutions for the focus area.

2. Sustainable infrastructure

This theme introduces a synergetic combination of measures, to ensure the infrastructure is designed in a sustainable manner. These include i.a. area wide certification scheme, use of natural water management solutions and integrating climate adaptation into the planning.

3. Sustainable mobility and logistics

This theme aims to ensure that the area provides sustainable mobility and logistics services to the companies and the people moving within, or in and out from the area, including a shared mobility hub and a shared distribution centre.

4. Shared spaces and services

The aim of the shared spaces and services is to attract and cater for the local community, and beyond, be it the staff working in the area, or visitors from further away. This theme includes i.a. a fitness facility and community space as well as an art programme to inspire and motivate their users.

5. Circular materials and soil marketplace

The main objective of the theme is to establish a circular material and soil material buffer storage in the area. These services would ensure that other construction initiatives in the area, or neighbouring area, could benefit from surplus materials left over from the modification and construction of the area

6. Sustainable land development

Actions in sustainable land development theme improve the municipality's understanding of impact of land development to carbon sinks and storages. The actions gives the municipality tools to calculate carbon emissions of zoning plans and enable making changes based on those calculations.

1. Sustainable Energy Ecosystem

IDEA	SUSTAINABLE ENERGY ECOSYSTEMS
MAIN OBJECTIVE	• The goal of the energy ecosystem is to maximize efficiency in the production, distribution, and use of electricity, heating, cooling, and gas by leveraging the strengths of the existing infrastructure and local characteristics. It aims to operate as an integrated and flexible system that connects all actors in the area into a technically and economically coherent ecosystem. By fostering collaboration and adaptability, the ecosystem ensures reliable, sustainable, and cost-effective energy solutions under all market conditions.
VISION/ASPIRATION	• The vision of the region is to create a self-sufficient, energy-positive area where heating and cooling needs are met through efficient local heat production and waste energy utilization, and bi-directional and flexible energy use, ensuring long-term efficiency, sustainability and resilience. In terms of electricity, the region is effectively integrated into the broader Nordic and Finnish power market, taking advantage of, e.g., price volatility through flexibility and electricity storage.
BACKGROUND	• Emissions from energy use (electricity and heat) have decreased significantly in Finland in the 2000s as a result of the shift from fossil fuels to renewable and/or emission-free alternatives. The next step is to transition to a more decentralized and thus resilient system that utilizes waste energy more efficiently, takes biodiversity into account by reducing, e.g., biomass incineration, and enables consumers to participate more effectively in the market.
LEAD ORGANIZATION	• City of Tuusula
KEY PARTNERS	• District heating service providers (e.g. Vantaan Energia, electricity/gas transmission/distribution companies (Fingrid, Gasgrid Finland, Caruna?), distributed heating system providers, upcoming tenants (e.g. data center and green H2 project developers), infrastructure companies, e-charging operators, city planners, land owners, legal organizations
MEASURABLE GOALS	• Long-term vision and roadmap for proactive development of the region's energy system • Costs (e.g. LCOE) and emissions (tCO2e/MWh) of energy consumed for the end customer • Establishment of an energy ecosystem in the Focus area that includes all essential actors
RISKS AND RISK MANAGEMENT	• Unsynchronized development of energy production and consumption, which makes it difficult, for example, to fully utilize waste energy • Lack of overall vision/plan, leading to fragmented solutions with no opportunities for synergy
TIMESCALE	• 2026-2027
INSPIRATION	• Bi-directional district heating: Ensimmäisenä Suomessa! Kaksisuuntainen matalalämpöverkko lämmittää taloja Skanssissa | Turku Energia • Self-sufficient energy community: LEMENE energy community

SUSTAINABLE ENERGY ECOSYSTEM				
ACTION	RESPONSIBLE PERSON/ ORGANIZATION	KEY PARTNERS	TIME-SCALE	RESOURCES
1. Create a concrete plan for the activities/companies to be located in the area and analyze their energy needs • Identify potential lead energy investors (e.g. data centers and hydrogen producers) in the area and analyze their energy needs (amount of energy consumed and waste energy produced)	Tuusula's Business services unit	City planners, energy and heating experts, Vantaa city, Vantaan Energia,	2026: Months 1-3	Business Services budget
2. Assemble an energy ecosystem that includes all essential actors to develop the region's energy system • Identify and attract partners. • Jointly co-design an operating model, point out operator requirements, set up rules, investigate opportunities to match offerings, resources and competencies. • Finally, clarify roles of partners and investigate potential legal barriers to operating an energy ecosystem	Tuusula's Business services unit	District heating companies, electricity/gas Transmission System Operators (TSOs) and Distribution System operators (DSOs), other heating system providers, upcoming tenants, infrastructure companies, e-charging operators, city planners, land owners. Vantaa city	2026: Months 1-6	The European Energy Communities Facility (lump sum grant of EUR 45 000) Business Finland Energy Aid LIFE Clean Energy Transition subprogramme Ecosystem facilitation: 100 K € Modelliing work: 40-50k€
3. Select the most suitable energy solutions for the region, which meet the strategic objectives of the region and its actors, and prepare a plan for the region's energy system development over time • Decide on preliminary energy solutions (e.g. bi-directional district heating, local heat production, storage and recycling of snow for cooling, bi-directional e-charging, electricity storage, green hydrogen transmission and utilization, utilization of a transformer's excess heat, etc.), on the basis of which the guidelines for the region's energy system can be modelled. Investigate the potential and technical & commercial feasibility of two-way/bidirectional DH-heating network: 1) arrange early dialogue with Tuusula and Vantaa cities, companies and potential users to study the feasibility and 2) plan the phasing of the potential implementation (incl. locations), 3) Investigate data centers potential to act as a potential waste heat producer (from an investment perspective).	Tuusula's Business services unit	District heating companies, electricity/gas TSOs and DSOs, other heating system providers, upcoming tenants, e-charging operators, electricity storage providers, data center operators (e.g. Hetzner) , Vantaa city	2026: Months 7-12	

4. Prepare a value proposition and selling points of the region's energy system, and based on these, begin a more detailed energy system planning with the region's lead energy investors (e.g. data center and green hydrogen investors) • How can the actors in the area benefit from each other and how does it benefit the potential investor and tenant? • Prepare a more detailed plan for the locations, volumes, etc. of key energy infrastructure (electricity, heat and gas transmission and storage).	Tuusula's Business services unit	District heating companies, electricity/gas TSOs and DSOs, other heating system providers, upcoming tenants, infrastructure companies, e-charging operators, city planners, Vantaa city	2026: Months 13-36	
5. Continuously develop the ecosystem's energy master plan to meet the requirements of evolving business environment • Develop the plan according to, for example, the market situation and technological developments • Take into account guidelines resulting from actions 1-4 when designing terms and conditions of plot assignments	Tuusula's Business services unit	District heating companies, electricity/gas TSOs and DSOs, other heating system providers, upcoming tenants, infrastructure companies, e-charging operators, city planners, Vantaa city	2026: Months 37-	
6. Prepare the procurement and carry out a study with Vantaa Energy on how to **plan for the storage and recycling of snow for cooling buildings or industrial processes: investigate the potential ways** to collect snow from the Helsinki-Vantaa airport and Focus area. Benchmark Levi's Ski resorts experiences in collecting and storing snow. 2) Analyze potential utilizers interests to use snow for cooling buildings or (e.g. data centers). 3) Collaborate with Finavia's (airport) to test their willingness to collaborate. 4). Point out potential location(s) for storage, 5) identify a parallel system which could be used as a back up system (if there is little to no snow available). 6) design a business case including cost of logistics, storage and operations.	Tuusula's Business services unit	Finavia (airport), snow storage experts, upcoming tenants, data center operators, city planners, land owner(s), Levi Ski Resort, Vantaa city, consultant, university student project	Q4/2026-Q1/2027	Cost sharing with other partner(s), to be defined

2. Sustainable Infrastructure

IDEA	SUSTAINABLE INFRASTRUCTURE
MAIN OBJECTIVE	• Promote and push for innovative sustainable infrastructure practices in a large sized industrial park.
VISION/ASPIRATION	• Focus drives the development of innovative and sustainable infrastructure practices via own actions and pushes for developers to adopt greener practices.
BACKGROUND	• Infrastructure systems are increasingly exposed to climate hazards, from extreme weather to chronic risks such as sea-level rise. Increasing investment to sustainable infrastructure allows cities, investors and developers to safeguard assets against systemic climate risks and build resilience. • A regional level green factor is currently being developed by Aalto University's team and could potentially be applied at Focus area
LEAD ORGANIZATION	• City of Tuusula
KEY PARTNERS	• City planners, infrastructure solution providers, construction companies, biodiversity solution providers and - designers, developers and land owners, Vantaa city
MEASURABLE GOALS	• Concrete playbook/guidelines for developers to build nature driven, sustainable infrastructure (# of developers applying directions per annum) • Identified viable options for potentially offsetting co2-emissions originating from construction • Implementation plan and identifed key solutions for natural water management and low carbon building materials that also act as carbon sinks • Piloting/launching one of the first sustainability certification scheme applicable at an industrial scale • Piloting regional green factor at Focus area/ testing the regional green factor's applicability to the Focus area
RISKS AND RISK MANAGEMENT	• Developers ignore guidelines for sustainable practices • Lack of a viable sustainability certification scheme for a large sized industrial area
TIMESCALE	• 2026-2027
INSPIRATION	• Biodiversity bank; eg. UK's Thames Estuary Offset: Focuses on preserving habitats affected by development in the Thames Estuary.

SUSTAINABLE INFRASTRUCTURE				
ACTION	RESPONSIBLE PERSON/ ORGANIZATION	KEY PARTNERS	TIME-SCALE	RESOURCES
1. Investigate and prioritize, based in mitigation hierarchy, alternatives to avoid, minimize, remediate and offset climate impacts originating from construction in the area and make an offset plan (landowner´s responsibility) for the generation of nature values based on provisions in the Nature Conservation Act. • Identify, how maximum biodiversity can be preserved in the area, including exact locations and species. • Define the principles for compensation and identify most potential (nearby) target • Assess the possibility to launch a biodiversity bank (i.e. a site where natural habitats and ecosystems are preserved and restored to offset the environmental impact of development elsewhere. Developers who affect habitats can purchase credits from these banks to compensate for the damage and help ensure overall environmental sustainability). Make sure your plan follows the provisions for voluntary ecological offsetting and generation of nature values according to the Nature Conservation Act	Tuusula Focus Project Manager and Climate action co-ordinator	Aalto University (areal green factor), city planners and ecologists, zoning, Ympäristökeskus	Q1/2026	Tuusula's climate program
2. Identify sustainable certification schemes applicable for an industrial area • Set up a meeting with a certifying body. • Benchmark leading solutions from other industrial areas in Europe/globally.	Tuusula Focus Project Manager and Climate action co-ordinator	Certification organizations, Tuusula city's planners and ecologists, consultant	Q2/2026	Tuusula's climate program Prestudy: 30k-40 € for expert services
3. Include climate adaptation in the planning of the Focus area: • Carry out assessment for climate risks and make plan for their mitigation and resilience building. • Align with international standards on climate adaptation and risk assessment.	Tuusula Focus Project Manager and Climate action co-ordinator	City planners, Tuusula city's planners and ecologists	Q4/2025-Q1/2026	Tuusula's climate program

4. Define general principles for the master zoning plan of the area, including 1) natural water management solutions to collect and filter stormwater and rain-water (e.g. permeable pavements, green roofs, vegetation and wetlands), 2) **low carbon building materials that also act as carbon sinks** (e.g. green concrete, low carbon bricks): • Identify key solutions and contact service providers to assess key benefits, challenges & costs • Analyze technical-commercial feasibility of selected solutions and analyze their potential co2-impacts, costs, benefits and potential risks. Combine the most promising solutions or develop separately. • Summarize key principles to guide the overall planning of the area	Tuusula Focus Project Manager and Climate action co-ordinator	City planners, Vantaa city, solution providers, consultants, Tuusula city's planners and ecologists	Q1/2026	Tuusula's climate program
5. By utilizing key insight stemming from Actions 1-4, **develop a playbook/ guidelines for developers and insert biodiversity and sustainable infrastructure design guidelines into the terms and conditions of plot assignments**. • Co design the playbook by collaborating with real estate investors, land owners, potential tenants, construction companies and city planners and ecologists	Tuusula Focus Project Manager and Climate action co-ordinator	Tuusula city's planners and ecologists, Helsinki Region Environmental Services Authority, investors. land owners, construction companies and potetial tenants , Vantaa city	Q2/2027	Tuusula's climate program 15-20k € for expert services
6. Secure airplane watching platform, green walking and running paths / corridors across the Focus area and with nearby forest areas with tracks and nature trails. Appoint ideal locations and make plan connecting existing trails with the new ones at Focus area. **Design and point out location for an airplane watching platform/terrace** (which is made of recycled wood and rock material to be demolished in the area).	Tuusula Focus Project Manager and Business Services unit	Finavia, Vantaa city, city planners, airplane watching community members	Q1/2026	Business Services budget

3. Sustainable Mobility and Logistics

IDEA	SUSTAINABLE MOBILITY AND LOGISTICS
MAIN OBJECTIVE	• Introduce a shared distribution Center services for tenants' inbound and outbound logistics • Design an implementation plan for a shared mobility hub • Investigate the options of installing 1) electric/hydrogen charging stations for heavy duty vehicles and 2) two-way hydrogen refueling station servicing Helsinki-Vantaa airport and Focus area's tenants
VISION/ASPIRATION	• Inspire area's employees and visitors to commute without own car • Inspire area's tenants to share inbound and outbound logistics (and to save in costs)
BACKGROUND	• There is a lack of public transportation routes to the Focus area, thus there is a major need to reduce commuting to the area by own car
LEAD ORGANIZATION	• City of Tuusula
KEY PARTNERS	• Tuusula city, Vantaa city (Kiila area), Helsinki Regional Transport Authority, multimodal mobility service providers, infrastructure developers , charging service providers
MEASURABLE GOALS	• Number of new public transportation route (s) to the area • Share of car free commuting to the area (% share per year, tracked over the years) • Achieved annual cost benefit (EUR) from shared logistic operation in comparison to handling one's own logistics inhouse. • Comparison of potential reductions in co2-emissions (shared solution vs. handling one's own logistics) • Launch of a shared distribution center or centers in the area • Number of shared mobility hub or hubs in the area (and nearby Focus area)
RISKS AND RISK MANAGEMENT	• Need to secure interoperability in between Vantaa and Tuusula cities multi modal mobility services and systems (e.g. city bikes, scooters etc,) -> joint planning with Vantaa, Tuusula cities and HSL
TIMESCALE	• 2026-2029
INSPIRATION	• Shared distribution logistics center: Vaasa • Shared mobility hub: Hamburger Tor mobility Hub, includes e.g. public transportation, carsharing, electrical charging point, bikesharing, Bike+Ride: Hamburg hvv switch - Station Berliner Tor – SmartHubs • SmartHubs: list of shared mobility hubs in Europe

SUSTAINABLE MOBILITY AND LOGISTICS				
ACTION	RESPONSIBLE PERSON/ ORGANIZATION	KEY PARTNERS	TIME-SCALE	RESOURCES
1. Generate a concept and implementation plan for sustainable and shared mobility hub including e.g. driveless robot bus, e-bikes,bikes, on demand shuttle rides in between Aviapolis train station to Focus, • Identify potential location(s) for the hub, identify partners and co-develop concept & an implementation plan. • Invest in creating visual solutions (incl. art) to technical mobility solutions • Connect the shared mobility hub entity with the Living lab concept (See Theme4. Shared spaces & services).	Tuusula city, Tuusula's traffic planning department	Vantaa city, mobility service providers, city planners, HSL	2028/ 2029	ERDF funding
2. Investigate technical-commercial feasibility and available solutions of a) installing LNG/ electric/hydrogen charging stations for heavy duty vehicles, b) installing a two-way hydrogen refueling station for fueling trucks, machinery and planes: • Investigate potential location(s), and space requirements (approx. max: 10,000 square meter space), location need to be next to key manucturing/logistics facilities, ensure easy road access, secure access to nearby power station(s). Assess potential to locate next to a battery storage facility.. • Connect e-charging operators and other actors to the energy ecosystem work (refer to Theme 1. Sustainable energy ecosystem). Invest in implementing visual solutions to technical solutions.	Tuusula city, Tuusula's traffic planning department	Vantaa city, Tuusula, Finavia, transportation & logictics companies, e-charging operators, city planners	2027-2028	Shared mobility hub: For expert services
3. Make a plan for launch of a shared distribution center • First, analyze potential location(s) for the center and take into account the scalability/ expandability of the premises. Benchmark comparative solution from Finland or Europe. Make a planning reservation for the plot. • Second, contact several potential tenants (focus on SME's) and validate their interest, needs, requirements and potential risks. Then, contact potential operator companies and real estate investors and point out their interest, requirements and willingness to share profits and ways to tackle potential risks. • Together, co-design the concept, business case, profit sharing model and identify company structure options (involve operator(s) investors, cities, potential tenants). • Based on all of the above, make adjustments to the ideal location(s) and take action to tackle key requirements and needs originating from operators and potential tenants (in traffic planning and other infrastructure investments).	Tuusula city, Tuusula's traffic planning department Operations: Privately owned market operator	Vantaa city, transportation & logictics companies, distribution center operators, city planners, external project/ program developers specialized in logistics, consultants	2028-2029	External finance, e.g. ERDF funding
4. Investigate alternative routes and secure frequent bus and biking connections to the area: • Point out most potential routes, e.g. from Kivistö-Korso- Focus and from Ruskeasanta station to the Focus area (including bicycle route connections).	Tuusula city, Tuusula's traffic planning department	Helsinki Regional Transport Authority and cities, Vantaa city, bus operators, bicycle service providers, city planners	Ongoing activity	Traffic planning department budget

4. Shared Spaces and Services

IDEA	Shared spaces and services
MAIN OBJECTIVE	• Focus attracts and retains workforce by creating an industrial area where people are at the center. • Focus aims to introduce pioneering shared spaces and services including a service center, a living lab, a showroom and multi-function sports & culture hall
VISION/ASPIRATION	• Focus promotes a good and healthy life for area's residents and employees highlighting social sustainability, bringing comfort, and strengthening community by offering shared spaces and services and outdoor running tracks and gyms.
BACKGROUND	• Typically the only shared space in a large sized industrial park tends to be a shared parking space • Potential tenants can save space in their own facilities by tapping into shared services (such as high end meeting center)
LEAD ORGANIZATION	• City of Tuusula
KEY PARTNERS	• Local artists from Tuusula area, community service providers, service industry companies, service center operators,
MEASURABLE GOALS	• Launch of Focus' art program with all relevant local artists • Space lots reserved for shared service center &meeting center, living lab/show room and multi-function sports & culture hall • Plan for biking/running/walking routes within Focus area and connections to nearby routes and dedicated space reservations for routes
RISKS AND RISK MANAGEMENT	• Lack of commercial interest to operate various shared spaces such as theshowroom, service center and sports hall:
TIMESCALE	• 2026-2029
INSPIRATION	• Tempory use of Espoo city's Keran Hallit-space, Kera area – Keran Hallit: a former large sized logistics center was converted into a cultural and a sports hub, which offered various services including sustainable living, wellbeing, local (street) arts, food, breweries and sports

SHARED SPACES AND SERVICES				
ACTION	RESPONSIBLE PERSON/ ORGANIZATION	KEY PARTNERS	TIME-SCALE	RESOURCES
1. Draw up a concept and assess the feasibility of implementing a fitness facility and community space together with a physical and a virtual showroom and a living lab • Explore the feasibility to establish a fitness facility and community space to provide opportunities for wellbeing, sports and culture. • Identify operators and assess needed features, including dedicated platform for exhibiting innovations for visitors and adjoined and an outdoor space accessible to the wider community. • Identify location and contact potential operators to co design the concept and to point out space requirements. • Make an implementation plan with relevant partners including the addition of a physical and virtual showroom and a living lab concept for piloting sustainability innovations in the area.	Operations: Privately owned operator(s) Initiator:Tuusula Business Services Tuusula Business Services and Tuusula's Physical Exercise Services Roll out: privately owned operator(s)	Tuusula city, RDI-driven companies, research institutions., Living lab operators, potential tenants, city planners, Educational institutions,, sport services providers	Fitness facility and community space: Q4/ 2027/ 2028 Living lab and showroom: 2029/2030	The New European Bauhaus -funding
2. Design and launch an art program for Focus area • Conceptualize, and identify partners and funding opportunities for a local art programme for the area, including a concept for a trash to art –project and placement of art pieces and a mural in the area. • Identify local artists and main coordinator for the art programme. • Invite artists to co-design the key content of the program.: focus on the creative use of materials originating while constructing the whole area • Dedicate (small scale) indoor and outdoor spaces for art installations. • Secure support from the city council for the launch of the program.	Tuusula city's Focus area Project Manager	Local Tuusula artists, city planners, co-ordinator of the program (to be defined). Tuusla's City Council	H1 /2026	
3. Study the feasibility of a establishing a shared service center to serve all tenants in the area including a medical center and an office hotel, functioning as a shared high end meeting center for partners and clients. • Appoint potential location, test the validity of the idea with potential tenants and contact potential private sector operators.	Tuusula city, Tuusula's traffic planning departmen Operations: Privately owned market operator	Potential service center operators, potential tenants	Plan: 2026 Roll out: 2028/2029	

4. Design and implement a shared talent pool to serve tenants' temporary employment needs • Investigate the possibility to implement a shared talent pool that could offer talent for temporary/ seasonal jobs: discuss with potential tenants to identify needs and requirements and co develop concept with (market based) operators and/or research institutions. Within the concept, plan for including a possibility to work in different companies during a selected period of time.	Initiator: Tuusula's Business services unit Operation: talent pool operator(s)	Potential tenants, employment service operators, Focus area's potential community operator	2029	Initiation: Business Services budget
5. Plan for setting up a Focus area's community manager/operator role servicing all tenants in the area • Point out valid option(s) of a dedicated resource or a community specialized company who would act as an areal operator e.g. for setting up events, education, matching employment needs of tenants etc. • Specify the needed roles and competencies of a potential operator(s) • Community manager could also potentially handle showroom and living lab pilot activities	Initiator: Tuusula's Business services unit	Potential tenants, community engagement specialists	2026-2027	Business Services budget

5. Circular Materials and Soil Marketplace

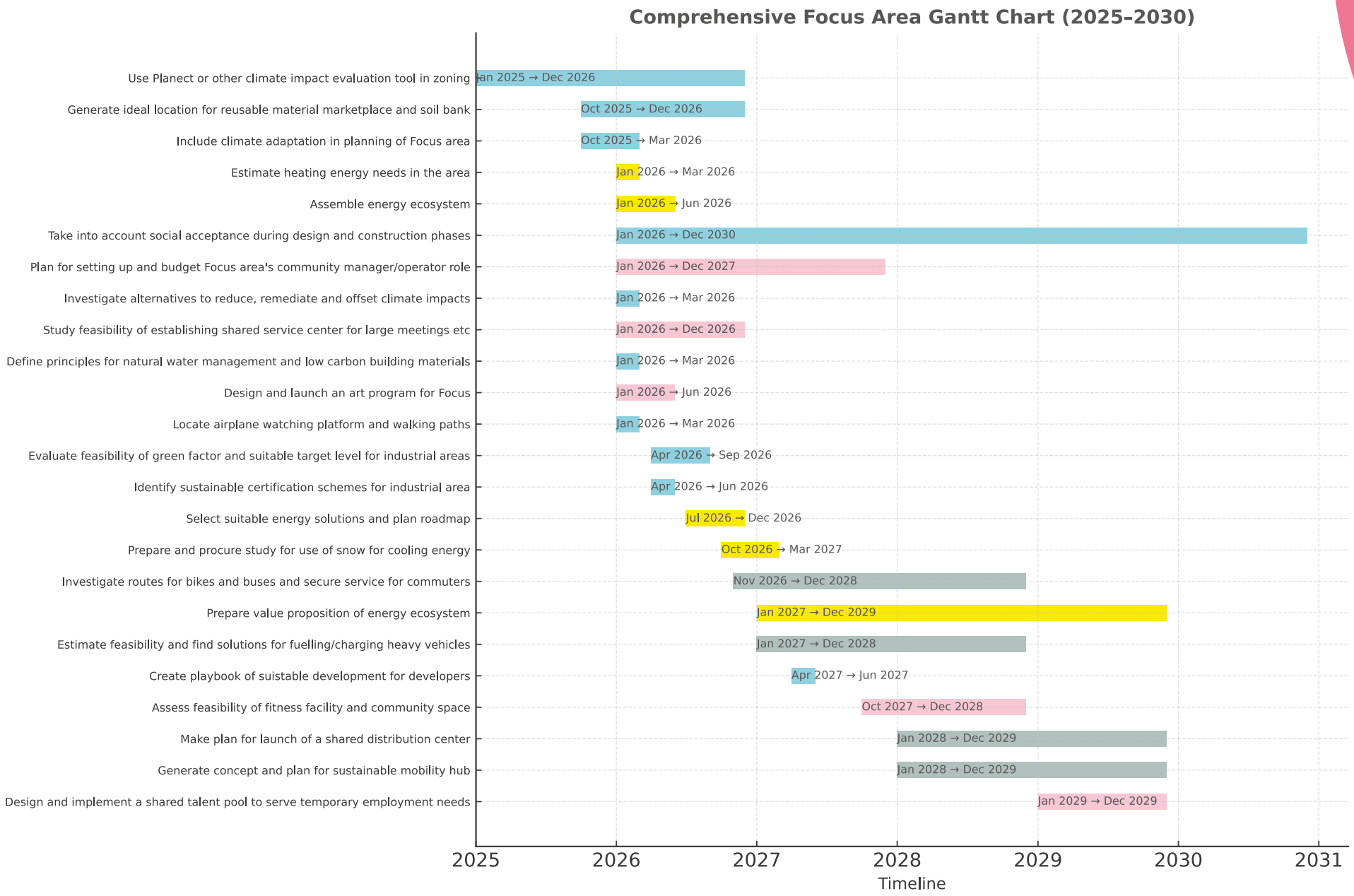
IDEA	CIRCULARITY
MAIN OBJECTIVE	• Design and launch a circular material and soil material bank buffer storage and marketplace
VISION/ASPIRATION	• Drive the material and soil reuse revolution in an industrial scale
BACKGROUND	• There is a lack of an industrial scale material and soil reuse marketplace and temporary storage facility in greater Helsinki metropolitan area and the Tuusula region.
LEAD ORGANIZATION	• Design phase: Tuusula city. Implementation phase: Marketplace operator(s), to be defined
KEY PARTNERS	• Tuusula city, Helsinki city, Vantaa city (Kiila area), Espoo city and construction and infrastructure companies (e.g. YIT, NCC, Skanska), Helsinki-Uusimaa Regional Council, Espoo city
MEASURABLE GOALS	• Launch of a buffer storage and soil bank marketplace at Focus area • Number of recycled materials and soil types temporarily processed/stored and resold (per annum) • Number of recycled materials and soil types reused within Focus area (during construction period (per annum) • Amount of waste/land fill costs avoided for selected materials (per annum)
RISKS AND RISK MANAGEMENT	• Lack of an operator(s) willing to take commercial risk of operation->include potential operator(s) in the design phase • High costs of inbound and outbound logistics for transporting soil types and materials->investigate the validity of business case • Lack of market demand for selected materials or soil types->ensure certification readiness for reusable products &materials • Legal obstacles block the resales of selected (reused) materials->> • High costs of logistics> feasibility analysis of the business case and ensure collabaration with nearby buyers
TIMESCALE	• 2025-2026
INSPIRATION	• Rebygg in Sweden, storage and fast resale of e.g. glass walls, suspended ceilings, partition doors and facades: REbygg – REBYGG • Höje's recycling of demolition waste and soil material: Circular Cities Declaration | Høje-Taastrup • Roskilde's material bank and Recycling of soil materials: Sustainable construction - Roskilde Municipality Circular Cities Declaration | Roskilde

CIRCULARITY				
ACTION/MILESTONE	RESPONSIBLE PERSON/ ORGANIZATION	KEY PARTNERS	TIME-SCALE	RESOURCES
1. Identify ideal location for the materials marketplace and soil bank and make a space/lot reservation(s). • **Identify optimal location**(s) for the construction period within Focus area and after the construction period (Kiila area in Vantaa). • **Conduct a detailed benchmarking analys**is of similar (commercialized) concepts, including Rebygg from Sweden: Point out key learnings, materials recycled, operating and business logic/-case, operator requirements and handling of logistics and how to managing material and soil related data. Identify success factors on how to build the ecosystem • **Initiate an ecosystem for the materials marketplace and soil bank and co- design the commercialization of the concept:** First, identify and contact potential operators to validate their interest and learn from their prior experiences. Contact infrastructure and construction companies to point out the most relevant materials and soil types which could be reused. These could include e.g. standard sized glass walls, suspended ceilings, partition doors and facades. Co-design the concept and business case with the key partners. Ensure certification readiness for reusable products and materials. Identify key synergies in between Kiila and Focus areas. • Take into account and plan for connections between the Focus and Kiila areas during construction (while transporting various materials and soil types)	Tuusula city, Focus area project manager and Tuusula's Business services unit	Helsinki-Uusimaa Regional Council, Vantaa city, Tuusula city's planners, leading recycled material marketplace operators, consultants, construction compa-nies, infrastructure companies, potential operators, building product owners, city planners, Tuusula's traffic planning department	Q4/2025-Q4/2026	The New European Bauhaus –funding Benchmark-ing analysis: expert services 5-15 K € Ecosystem initiation and concept: expert services 30-50K €

6. Sustainable Land Development

IDEA	SUSTAINABLE LAND DEVELOPMENT
MAIN OBJECTIVE	• Create and use tools and instructions for sustanable land development in Focus and other industrial areas in Tuusula
VISION/ASPIRATION	• Increase carbon storage and sinks • Improve storm- and rainwater management and water quality
BACKGROUND	• As a small scale action in EcoCore URBACT project, Tuusula piloted the use of Planect software, which is a tool for zoning to calculate carbon hand- and footprint of plans
LEAD ORGANIZATION	• Tuusula municipality, zoning
KEY PARTNERS	• N/A
MEASURABLE GOALS	• Carbon emissions of industrial land decelopment is calculated during drafting phase of detailed zoning (yes/no) • Reduce 70 % of scope 3 emissions by 2035 compared to base year (2021), following municipality climate program
RISKS AND RISK MANAGEMENT	• Failing to balance economic efficiency and sustainability of land development by creating too ambitious targets • Developing right competences within the municipality
TIMESCALE	• 2025-2027
INSPIRATION	• City of Turku, siniviherkerroin

SUSTAINABLE LAND DEVELOPMENT				
ACTION/MILESTONE	RESPONSIBLE PERSON/ ORGANIZATION	KEY PARTNERS	TIME-SCALE	RESOURCES
1. Take into account **the (local) social acceptance when designing and constructing the Focus area** • Make a plan to utilize excess materials and soil types in constructing a running track/loop around Focus area and connecting Focus's route with the nearby running track and forest areas as well as the airplane watching terrace. • Identify and contact companies and potential tenants to sponsor the construction of a outdoor gym(s) to be used by residents and employees. In addition, design a longer cross-country running track/loop initiating from the jogging track and looping around forest areas. • Make a plan to proactively engage local stakeholders when making major land development decisions • Make a plan to reduce noise and dust originating from land development activities (and while constructing the area)	Tuusula city, Focus area project manager and Tuusula's Business services unit	Mainly internal process + engaging selected external stakeholders (such as local residents)	Ongoing from 2026-2030 and beyond	Internal budget
2. Use Planect tool when making zoning decisions within Focus area	Tuusula's zoning department, Focus area Project Manager	Internal process	Q1/2025-Q1/2026	10 000 € / yearly license fee
3. Use Planect tool or other climate impact calculation tool when zoning Senkkerinmäki's circular economy area	Tuusula's zoning department,, Focus area Project Manager	Internal process	Q2/2006-Q4/2026	10 000 € / yearly license fee
4. Evaluating the feasibility of green factor and suitable target level for industrial blocks. Scope the option to demand a sustainability action plan in the construction phase.	Tuusula's zoning department	Construction control services, other cities, which have experience	Q2-Q3/2026	5000 € for expert services


Comprehensive Focus Area Gantt Chart (2025–2030)
Use Planect or other climate impact evaluation tool in zoning
Jan 2025 → Dec 2026
Generate ideal location for reusable material marketplace and soil bank
Oct 2025 → Dec 2026
Include climate adaptation in planning of Focus area
Oct 2025 → Mar 2026
Estimate heating energy needs in the area
Jan 2026 → Mar 2026
Assemble energy ecosystem
Jan 2026 → Jun 2026
Take into account social acceptance during design and construction phases
Jan 2026 → Dec 2030
Plan for setting up and budget Focus area's community manager/operator role
Jan 2026 → Dec 2027
Investigate alternatives to reduce, remediate and offset climate impacts
Jan 2026 → Mar 2026
Study feasibility of establishing shared service center for large meetings etc
Jan 2026 → Dec 2026
Define principles for natural water management and low carbon building materials
Jan 2026 → Mar 2026
Design and launch an art program for Focus
Jan 2026 → Jun 2026
Locate airplane watching platform and walking paths
Jan 2026 → Mar 2026
Evaluate feasibility of green factor and suitable target level for industrial areas
Apr 2026 → Sep 2026
Identify sustainable certification schemes for industrial area
Apr 2026 → Jun 2026
Select suitable energy solutions and plan roadmap
Jul 2026 → Dec 2026
Prepare and procure study for use of snow for cooling energy
Oct 2026 → Mar 2027
Investigate routes for bikes and buses and secure service for commuters
Nov 2026 → Dec 2028
Prepare value proposition of energy ecosystem
Jan 2027 → Dec 2029
Estimate feasibility and find solutions for fuelling/charging heavy vehicles
Jan 2027 → Dec 2028
Create playbook of suistable development for developers
Apr 2027 → Jun 2027
Assess feasibility of fitness facility and community space
Oct 2027 → Dec 2028
Make plan for launch of a shared distribution center
Jan 2028 → Dec 2029
Generate concept and plan for sustainable mobility hub
Jan 2028 → Dec 2029
Design and implement a shared talent pool to serve temporary employment needs
Jan 2029 → Dec 2029
2025
2026
2027
2028
2029
2030
2031
Timeline

Picture: Kapina Oy

1. Sustainable Energy Ecosystem

The European Energy Communities Facility

What is it: Provides EUR 45000 grants for sustainable energy transition initiatives, and can cover groundwork to prepare a business plan for the energy community and potentially, preparatory work for structuring the business plan.

The call helps financing new energy communities to emerge and develop. Existing energy communities aiming to explore new services can also apply.

Who can apply: Emerging energy communities. Registered legal entity.

Application cycle: Until 30th September 2025

Fit with IAP action: Theme, Sustainable energy ecosystem. Action points 2-5.

For more information: Apply for a €45,000 grant to develop a business plan for your community energy project | EUCF

Business Finland Energy Aid

What is it: The Energy aid grants may be provided for new technology and its commercial utilization, and regulation capacity for the power system. The grant can also be used for energy efficiency projects.

Who can apply: The aid can be granted for businesses and organizations for their investment and energy audit, that advance energy savings or efficient production or utilization of energy.

Application cycle: Ongoing. Projects launched (e.g. ordered) prior to a granting decision will not be given aid.

Fit with IAP action: Theme, Sustainable energy ecosystem.

For more information: Energy aid - Business Finland.

2. Sustainable Energy Ecosystem

LIFE Clean Energy Transition sub –programme

What is it: The programme has an EUR 1 billion budget for 2021-2027. The projects can seek for co-financing in the following areas of intervention: Building a policy framework supporting the clean energy transition; accelerating technology roll-out, digitalization, new services and business models and enhancement of the related professional skills on the market; attracting private finance for sustainable energy, supporting the development of local and regional investment projects; involving and empowering citizens in the clean energy transition.

Who can apply: Multiple calls.

Application cycle: Multiple calls.

Fit with IAP action: Potential to fit with IAP action theme Sustainable energy ecosystems, action point 1-2.

For more information: Clean Energy Transition - European Commission.

Picture: Antti Kallio

3. Sustainable Mobility and Logistics

ERDF (Innovation and Skills in Finland 2021–2027 – EU regional and structural policy programme)

What is it: Funding from the national programme "Innovation and skills in Finland ". The programme has seven priority areas: innovative, carbon neutral and more accessible Finland, competent and inclusive Finland that provides work, Finland of social innovations, Finland that prevents material deprivation and Finland of just transition.

The regions' own regional programmes and priorities in smart specialization play a key role in the policy programme's implementation. The regional programme of Uusimaa 2022-2025 has e.g. target 1.1 (4) Advancing sustainable mobility.

Who can apply: A call 25.8.–29.9.2025 targets projects advancing energy transition and reduction of greenhouse gas emissions, projects that advance R&I capabilities and improve the uptake of mature technologies. The call also targets supporting the growth and competitiveness of the SMEs.

Application cycle: See all the calls in EURA 2021: Hakija. Ongoing call until 29.9.2025.

Fit with IAP action: Theme, Sustainable Mobility and logicsics, action points 1-3. This instrument might also be suitable for Sustainable energy ecosystem. Potential for action point 3.

For more information: Uudenmaan liitto myöntää kehittämishankkeille EAKR- ja JTF-rahoitusta - Uudenmaan liitto

Nordic Investment Bank

(NIB) also provides investment funding for mobility related investment projects. This instrument might be suitable for future investments related to Kehä 4 construction.

For more information: Nordic Investment Bank - NIB - Financing The Future.

4. Shared Spaces and Services &
5. Circular Materials and Soil Market Place

The New European Bauhaus

What is it: A funding initiative targetting sustainable, community oriented and attractive built environment initiatives.

R&I component (developing novel NEB solutions) funds basic research, testing, and demonstration projects. Through the component, the NEB Facility focuses on: Connecting the green transformation, social inclusion, and local democracy; Circular and regenerative approaches for the built environment; Innovative funding and new business models for the transformation of neighbourhoods. Funding approx. EUR 120 million/ year from 2025 to 2027 through Horizon Europe funding.

The roll-out component (implementing and scaling NEB solutions) draws EU, private and national funds to scale and implement innovative solutions for the built environment and beyond. To match the budget ambition of the R&I component. Funding ambition: EUR 120 million/ year, over the next 3 years.

National Contact Point: Information Centre for Architecture, Archinfo Finland

Who can apply: A legal entity. For more information about eligibility, see Horizon Europe, General Annex B.

Application cycle: Various funding calls.

E.g. Destination 3: "Reverse local construction supply chains for the beautiful re-assembly of reclaimed construction products, DL 12.11.2025. "

Find out more about the calls: Currently open and forthcoming calls - European Union

Fit with IAP action: Theme, Shared spaces and services. Potential for action points 1-3.
Circular material and soil market place. Potential for action points 1-2.

For more information: New European Bauhaus: beautiful, sustainable, together. - European Union.

Summary of Potential Instruments and their Fit for IAP Themes

Examples of Linkages Between the Themes

1. Sustainable energy ecosystem

1. Create a plan for the activities/ companies to be located in the area
2. Assemble an energy ecosystem
3. Selection of suitable energy solutions
4. Preparation of value proposition and selling points of the region´s energy system
5. Continuous energy master plan development
6. Procurement preparation and a study to plan the storage and recycling of snow for cooling buildings or industrial processes

2. Sustainable infrastructure

1. Identify alternatives to avoid, minimize, remediate and offset climate impacts and make an offset plan for the generation of nature values
2. Identify sustainable certification schemes
3. Include climate adaptation in the planning
4. Define principles for the master zoning plan
5. Develop a playbook for developers
6. Secure airplane watching platform and green walking and running paths

3. Sustainable mobility and logistics

1. Generate a concept and implementation plan for shared mobility hub
2. Investigate feasibility and available solutions for charging stations for a)heavy duty vehicles b) refuelling station for fuelling trucks, machinery and planes
3. Make a plan for launch of a shared distribution center
4. Investigate alternative routes and secure frequent bus and biking connections

4.
Shared spaces and services

1. Concept and feasibility of implementing a fitness facility and community space, a showroom and a living lab
2. Design and launch an art programme for the area
3. Feasibility of a shared service center
4. Design and implement a shared talent pool
5. Plan for setting up a community manager/ operator role servicing tenants

5.
Circular materials and soil marketplace

1. Identify ideal location for the materials marketplace and soil bank and make a space/ lot reservation(s)
2. Identify optimal location
3. Conduct a benchmarking analysis of similar concepts
4. Initiate an ecosystem for the materials marketplace and soil bank and co-design the commercialization

6.
Sustainable land development

1. Take into account the social acceptance when designing and constructing the area
2. Use Planect tool when zoning within Focus area
3. Use Planect tool or other tool when zoning Senkkerinmäki circular economy area
4. Evaluate the feasibility of green factor and suitable target level for industrial blocks
5. Take into account noise reduction and avoiding dust in implementing action points in 1-5 themes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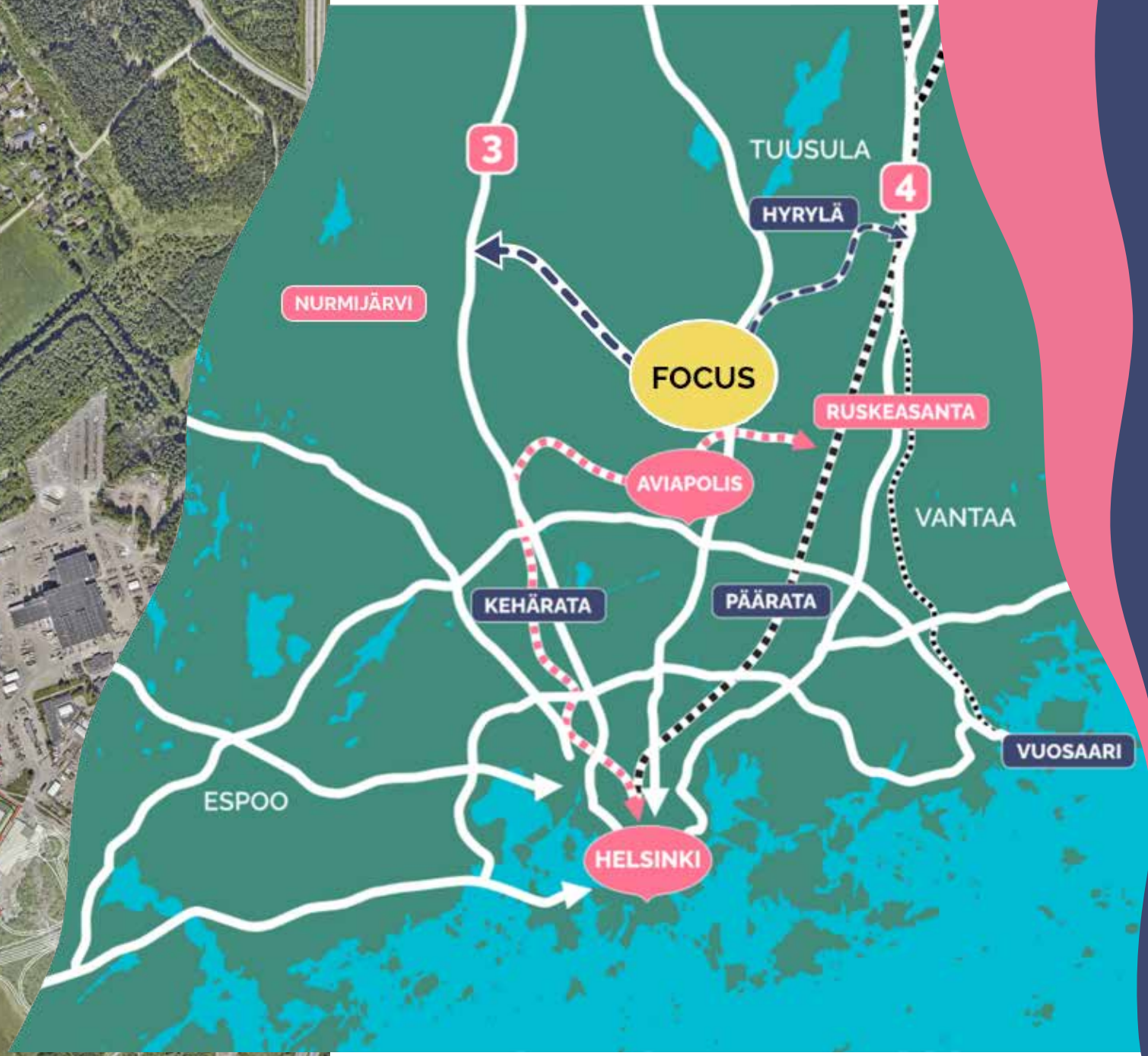
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Business as Tuusula

The EcoCore Project

Green Transition in Small Cities along Transport Corridors

URBACT

Co-funded by the European Union
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