INCLUSION PROCEDURE

Adding partners to your proposal in the Second Stage

Applicants of the 2023 DUT Call had the choice to give the DUT Call Secretariat permission to publish their abstracts on the website, so that they can easily be accessed in the context of this inclusion procedure. These abstracts can be found in the table below. Please be aware that these are only the ones that granted permission to be published and that there are more proposals invited to stage 2 than the ones in the table below.

Anergy-CHIP

(Anergy Heat Planning Instrument for Cities - development of an interdisciplinary planning instrument to identify the optimal mix and positioning of high temperature district heating and angery nets (5th generation district heating) in urban areas)

Call topic: 1.1, 1.3

The Decarbonisation of heating is a crucial aspect, especially to achieve the objective of 100 PED in 2025. To this aim, it is necessary to develop innovative integrated planning tools for city districts that consider both specific local contexts and emerging technologies. The project "Anergy-CHIP" elaborates an inter- and transdisciplinary planning tool for cities to identify the optimal mix of anergy-networks (5th generation district heating) and the "traditional" high temperature district heating system. With this optimal mix, the anergy networks not only cover heating requirements, but also provide energy efficient cooling options for neighbouring areas.

At the same time, houses supplied with high temperature district heating can play a crucial role by feeding waste heat from space cooling back into the anergy net, a cycle that is efficiently stored in the ground and groundwater. This helps cities to provide heating and cooling by local, decentral energy sources and enhances the resilience of urban areas. The holistic integration of anergy grids into the cities heat system reduces the impact of energy price fluctuations on residents and reduces the risk of energy poverty.

The proposed tool will enable cities to identify:
- the ideal mix of anergy networks and high-temperature district heating, ensuring an energy-efficient and sustainable heating and cooling ecosystem.
- the geographical allocation of the two systems (distribution pattern), to reduce both the energy demand for heating and cooling and the investment costs for the network
- the participative governance process to be implemented to achieve a realistic planning by involving all stakeholders

In contrary to traditional planning approaches, the innovative planning tool will integrate decentral anergy net technology into urban heat planning from the beginning. This new approach ensures that anergy networks are given equal consideration in the city's energy landscape and takes technical, economic and social aspects into account.

Therefore, the suitability criteria to select the best heat system for a certain area are elaborated by trans- and interdisciplinary methods.
By applying the Anergy-CHIP planning tool, a reduction of 20% of the primary heat energy demand is expected due to COP of anergy networks compared to "traditional" district heating-focused planning

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approaches. For cooling as reduction potential of 60% primary energy demand is expected, due to the option of free cooling and providing energy efficient cooling sources. This approach also minimises the environmental impact of space cooling and reduces investment costs for air conditioning.

A crucial environmental benefit of the project lies in the stabilisation of urban soil and groundwater temperatures. By doing so, the project contributes to preserving favourable conditions for the use of groundwater as drinking water as well as to increase energy supply security by using local sources on site.

The results of the project Anergy-CHIP are
- a detailed description of the inter- and transdisciplinary planning process
- a handbook "How to design a planning process to find the optimised mix of heating systems in urban areas"
- a free access website, documenting all steps of the planning process, supporting cities which also want to carry out a holistic planning process
- three pilot projects, demonstrating the practical application of the tool

The project consortium consists of partners from Austria, Germany and Hungary, in each country a city administration (St. Pölten, Berlin, Miskolcs) is participating at the project and therefore contributing the view of the user and securing the practicability of the instrument.

aRTes

Active RoofTops South Europe

Call topic: 3.1, 3.3, 2.1

Rooftops constitute a vast surface area of the built infrastructure, practically equivalent to the building coverage, but are currently underused spaces in our cities for various reasons. In southern European medium and large cities, they have a relevant presence due to the mild climate and urban culture, as well as demographic and historical reasons.

Rooftops have significant sustainability and resilience potential as they can serve as building insulation components, and provide green and open space in high-density areas, thus contributing to a reduction in carbon emissions and fuel consumption, and improved thermal comfort, permit clean energy integration, while mitigating the urban heat island and water runoff, as well as supporting social activities.

Our expert southern European consortium will develop several innovations to empower the use of rooftops in the region and revert the current underuse trend in Portugal, Spain, France, Italy, Greece, and Cyprus. Having detected the main barriers to an easy rooftop usage conversion, we have scoped design and engineering solutions for prototyping and testing through distributed developments among the consortium countries and partners.

The main aim of the project is to reduce the cost of rooftop conversion projects, while making rooftops accessible, effective, safe, efficient and integrated as green, functional and social spaces.

The implementation of the project is organized accordingly around 10 themed Work Packages (WP) covering all aspects needed to achieve our aim: 2 focusing on Urbanism, 4 on Construction, 2 on Software and 2 on Logistics.

CO4HUB

Cooperation for Hubs in Urban Logistics

Call topic: 2.1, 2.2, 1.3

A substantial share of car traffic in cities is caused by the transportation of goods. With the 15-minute city concept, this problem even worsens. Therefore, solutions are necessary that safeguard the supply of urban citizens with goods and services while reducing the negative consequences of urban logistics on their quality of living. One solution are urban logistics hubs. They can reduce the negative impact of urban logistics by 1) increasing transport efficiency, 2) enabling sustainable means of transport and 3) providing neighbourhoods with services of daily life. Despite their obvious potential, previous urban logistics hub projects failed to achieve an actual positive impact, because they stressed technical issues in setting up pilots in single regions. However, the major problem that surfaced in these projects is not technical: They failed to create conditions (i.e., organizational setups, business models and public policy) that incentivize actors to participate. These issues can only be tackled in a transnational, transdisciplinary project such as CO4HUB. In this project, we will 1) connect and learn from earlier projects, 2) co-design solutions together with stakeholders, 3) produce state-of the art evidence in a working pilot, 4) provide decision makers with guidance and 5) achieve transnational dissemination and application.

DIGIFOOD

Digitalisation for the Future of Metropolitan Food Systems - Research, Innovation, and Policy Recommendations

Call topic: 3.2

Metropolitan food systems face increasing pressures to address sustainability concerns and manage threats to food security and availability. For this reason, metropolitan regions are searching for alternatives to the large, centralised food systems, towards a system that uses a more decentralised approach to food provisioning. Decentralised food systems being those that aim to produce, process, transport, and consume food within the metropolitan regions and in nearby- rural areas.

The DIGIFOOD project aims to investigate the role of decentralised food systems in contributing to sufficiency by identifying and analysing practices across regions, and to propose best practice scenarios. Participating metropolitan regions are Flevoland (the Netherlands), Turin (Italy), Plovdiv (Bulgaria), and Bern (Switzerland). The project partners will bring their local and regional experience and knowledge to the project through relevant and motivating case studies in different regions across Europe. Covering geographically Eastern, Western, and Southern Europe, the project team will deliver a feasible and well-functioning systemic solution for the involved regions.

This project will be a research oriented project based on qualitative and quantitative research, and will follow a four-step methodology to comprehensively analyse metropolitan food systems and identify opportunities for sustainable and efficient food production and consumption.

We aim to investigate and learn from existing decentralised food systems across the participating metropolitan regions (target 1). A foresight approach will be used to identify potential challenges and opportunities that may arise in developing decentralised metropolitan food systems. Additionally, the foresight will aim to understand the requirements, needs, and standards necessary to contribute to sufficient metropolitan food systems. A second step will be analysing sustainability impacts across the decentralised food systems (target 2). Sustainability assessment methodologies such as life cycle assessment (LCA) and waste stream valorisation will be used to understand the performance of current practices and identify improvement areas for the different regions. Based on the insights obtained, we aim to identify key drivers, gaps and requirements leading towards sufficiency in metropolitan food systems and propose innovative sufficiency scenarios per region (target 3). After establishing best practices, we aim to validate these practices using blockchain technology tailored to support transparency, traceability and consumer trust (target 4). The requirements of stakeholders will be analysed as an initial phase to design a proof-of-concept blockchain platform. The proof-of-concept will be used in case studies to further develop the link between Blockchain, bottom-up standards, needs and requirements, and sufficiency in metropolitan food systems. Also, the proof of concept should support the transparency of LCA and waste stream valorisation outcomes and allow consumers to understand the impact of such food systems. Participatory research methods will be

used to understand the acceptance of such technologies to ensure the usefulness of its deployment. Based on the results obtained during the project, we aim to formulate policy recommendations for the different metropolitan regions to support sufficiency in decentralised food systems (target 5).

Results will be disseminated via a project website, workshops and publications (scientific and popular journals). A stakeholder database will be maintained during the project to make sure our results are communicated to a wide and diverse group of stakeholders.

EDITUA

EDITUA - an innovative interactive incubator of socio-spatial change fostering green urban regeneration, employing AI in gain of the public democracy

Call topic: 3.3

Climate changes and socio-economic crises prompt a search for new solutions to promote just and inclusive city growth in which social power and economic growth are rooted in the green regeneration of vacant areas. The main target of the research is to elaborate a tool helping to EDIT city space – with the creation of an Ecological District of Innovation and Technology (EDIT) within a framework of sustainable innovation zones operating within the worldwide non-profit organization Global Urban Development framework. We aim to elaborate an innovative instrument named "EDITUA" which is composed of three levels of innovations: technological, procedural, and social, to boost green placemaking actions and provide ecologically-oriented development by EDITing vacant areas.
The tool is to serve EDITing Urban Assets – with an intuitive virtual instrument Eco Urban Composer – which is an interactive platform supporting implementation of desirable changes through urban acupuncture of 'Edited Places' in the green philosophy paradigm. The tool is to operate on either an urban or architectural scale. Altogether with this technological novelty, we want to elaborate a procedural innovation helping to EDIT city space – with the creation of an ecological district of innovation and technology and networking with various actors to intensify greening actions. There will be also elaborated a socially innovative model based on ideas of CSR [corporate social responsibility] and ESG theory [environmental, social, and governance] to enable matchmaking potential cooperators and strengthen possibilities to improve practical and operational solutions aiming at dissemination of knowledge and good practices within an open-air laboratory implemented through pilot actions or experimental design within city space. Emphasis is put on the integration and coordination of existing technological and procedural strategies and tools combined in a new way to create added social value. Such instrument will promote inclusive and democratic participation in green regeneration of degraded public spaces - considered as focal points of urban acupuncture (vacant plots) connected by links (streets). The defined above main goals are to be achieved on three levels:

[A] technological:
- creation of an intuitive tool named ECOUrban Composer with a friendly interface helping to boost local economies and ensure transactions within the green philosophy paradigm on a basis of existing AI and VR/AR technology combined in an innovative way,
- demonstration of the ECOUrban Composer application to enable intuitive edition of selected places by different stakeholders (citizens, municipal authorities) to improve their urban metrics and to showcase the possible outcomes to the public before an actual investment takes place.

[B] procedural:
- innovative adaptation of existing models to provide universality in application within various legislative and organizational frameworks in different countries,
- use of the COOP (cooperative) framework to enable collaboration of various stakeholders (local authorities, local communities and businesses) with the combination of bottom-up and top-down modes,
- transfer of knowledge and good practices exchange among different actors with an emphasis focused on less privileged groups to raise social consciousness and civic responsibility in sustainable living,

[C] social:
- adoption of CSR model (corporate social responsibility), ESG theory (environmental, social, and governance investing), and SPV approach (special purpose vehicles)
- integration of various actors of city life operating in top-down and bottom-up modes to disseminate green transformation solutions and promote shared advocacy and partnership of different sectors in enabling nature in cities,
- transforming relations between various stakeholders operating within city space in accordance with greening ideas.

EDUPED

EDUcational campuses as the drivers for Positive Energy Districts

Call topic: 1.2

Transition to Positive Energy Districts (PEDs) needs acceleration to achieve the EU goals. Educational institutions with sizeable built assets in cities should become the driver, knowledge hub, and role model for PED transitions. Therefore, the EDUPED project adopts an urban research-oriented approach to transform educational campuses and surrounding areas into PEDs, and to leverage on the involvement of students and stakeholders for wider PED transformation driven by public buildings.

EDUPED aims to co-create strategies of Urban Regeneration and Refurbishment for 5 districts in the Netherlands, Spain, Austria, Italy, and Romania. Its tangible results are technical solutions, socio-economic frameworks, governance and regulatory considerations for: a) minimizing energy consumption through deep retrofitting, b) maximizing local RES potentials and flexibility through smart multi-commodity grids, and c) mitigating climate-change effects on higher cooling/heating demand.

EDUPED builds on the ongoing campus refurbishment, urban regeneration, and revitalisation of historic urban structures aligned with regional and national programmes as well as the EU Mission 100CNSC and Renovation Wave. The consortium consists of universities, enterprises and NGO that cover all required competencies in urban morphology, energy systems, digitalisation, and social sciences. EDUPED's impact is ensured by the engagement of stakeholders, especially municipalities as key actors and investors.

GARDEN

Grid-Aware Decarbonization of electricity-driven Neighbourhoods

Call topic: 1.3, 1.2

GARDEN responds to the challenges posed by increasing PV penetration, heat pump adoption, and electric vehicle usage in local electricity grids. Positive Energy Districts (PEDs) currently lack district-level energy management systems, hindering collective flexibility utilization for increased grid-awareness. GARDEN aims to address these gaps through a replicable governance process, which supports municipalities to create decarbonised neighbourhoods that foster grid resilience by not overstraining local grid infrastructures and enable access for all citizens to flexible and clean energy assets as well as sustainable e-mobility.

The objectives include mainstreaming flexible PEDs through smart energy management algorithms and a flexibility planning tool. Feasibility studies will assess the flexibility potential to enhance grid reliability in three demos in Austria, Switzerland and Turkey. Co-creation tools will engage stakeholders, demonstrating municipalities and DSOs that PEDs can be implemented in a grid-aware manner. Additionally, GARDEN will formulate community-driven business models and provide procurement templates to accelerate the adoption of district-level energy management.

This project strives to establish a new standard for PEDs, contributing to sustainable urban energy landscapes while addressing the immediate need for grid-aware solutions. The outcomes will guide stakeholders in replicating successful practices, fostering innovation in the broader context of energy transition projects.

HAT

Hyping Agriculture and Transit (HAT) in 15-minute Cities (15mC) – Food-growing public transport-oriented communities driving urban transitions as green Proximity Oriented Developments (PODs)

Call topic: 2.2, 2.3, 3.2

In the concept of sustainable development, the urban challenge includes world cities with global reach that draw resources from distant lands, with enormous aggregate impacts on the ecosystems of those lands. The dependence on imported food and fuel today is an acute urban challenge. Automobility altered the dynamics of urban living in a vicious cycle of producing urban sprawl, causing major environmental damage, and contributing to atomized living and loosening of community ties. Many suburbs were carefully designed carefully in the 20th century as (mono)functional residential neighborhoods that rely on the private car for commuting and driving to supermarkets or shopping centers. More than half of all public space is dedicated to roads and car parking and the private car dominates the modal share. Car-centric planning and suburbanization furthermore inscribe strong individual preferences towards choosing a suburban house and privately owned automobile as desirable mobility culture in cities.

The 15-minute City (15mC) is an alternative to the automobility and suburbanization model that seeks to generate hyper proximity in cities. In the 15mC inhabitants can reach their essential needs by walking and biking, by optimizing the accessibility of services with a help of digital technology and collaborative and sharing models, by increasing the public spaces for meetings and social gathering, and by redesigning the streets to become carbon-free mobility spaces. Much of the ongoing research on the 15mC deals with Proximity Oriented Developments (PODs), accessibility by proximity and accessibility metrics.

This project will Hype Agriculture and Transit (HAT) in the 15mC paradigm exploring the potentials of urban agriculture, placemaking-supporting urban designs and green city visions combined with Transit-Oriented Development (TOD) as leitmotif for driving urban transitions towards green PODs. Urban agriculture is defined as an industry that produces, processes and markets food and fuel applying intensive production methods, using, and reusing natural resources and urban wastes, to yield a diversity of crops and livestock. Hyping means promoting or publicizing intensively urban (and peri-urban) agriculture supported by active and shared mobilities, integrating public transport and TOD in the 15mC portfolio.

The HAT project will link academic research with the business sector (for profit and non-profit organizations) to encourage, drive, and catalyze urban transitions towards with top-bottom green 15mC city planning policy and bottom-up food-related placemaking initiatives. It will generate new empirical evidence and design knowledge on urban agriculture and TODs in a context of 15mC and develop business models for green PODs seeking to decrease the need to import food and fuel, as well as the dependence on the automobile. The 15mC-urban agriculture-TOD innovative mix has an enormous potential for placemaking and creating social impacts. There is an increased interest for urban agriculture. Many startups emerged that invest in urban farming and food growing facilities supported by robotics in controlled-environment agriculture developing various hydroponics, aquaponics and aeroponics solutions. There are many experiments with vertical farms, underground farms, indoor farming and food pods in residences and offices.

Furthermore, food has an incredible inclusinve convening power regardless of local culture. Food brings people together. Food growing, urban agriculture, farmer markets and food festivals in a combination with developing TODs as green PODs can play crucial role for sustainable municipal and

regional planning together with food-producing placemaking activities and street experiments enriching the 15mC portfolio.

MonuPED

MonuPED - Mainstreaming governance, co-investment and technology solutions for Positive Energy Districts in monument protected areas

Call topic: 1.3

MonuPED addresses the pressing challenge of establishing Positive Energy Districts (PEDs) within Monument-Protected Areas (MPA). It recognizes the conflict between urban energy transitions, economic interests of building owners, and the imperative to protect cultural heritage.

Drawing on the experience of the EU-funded SPARCS project, the consortium aims to identify and surmount the multifaceted barriers to PED development in Monument Protected Areas. These encompass an often complex owner structure, regulatory constraints, convoluted planning processes, a dearth of investment frameworks, and also technical complexities. MonuPED targets a diverse audience, including city, state and national authorities, property owners, and citizens.

The methodology combines universal and city-specific research and strategy-development, including challenges mapping, analyses of ongoing PED initiatives, and the creation of practical tools and guidelines for all involved stakeholders. This leads to tangible results within the consortium which will then be replicable in other cities and countries. These include identifying quantifiable criteria for monument protection, streamlined planning processes, online resources for information and planning, and investment schemes. Case studies, such as Thermal Precision Profiling tool in Leipzig's Baumwollspinnerei, will exemplify successful solutions. By harmonizing heritage preservation with sustainable energy practices, this project strives to usher in a more energy-efficient and culturally enriched urban landscape.

NEXITY

Next-generation urban recommenders for the 15-minute city

Call topic: 2.3, 2.2

The NEXITY project presents a groundbreaking approach to understanding and controlling the relationship between the realm of AI-based urban recommenders (URs) and the urban ecosystem. So far, the impact of intelligent algorithms on human behaviour has been given little attention. However, with their increased popularity, the influence they pose on urban spaces can highly affect and alter human mobility in cities, influence pollutant emissions, foster gentrification, limit accessibility to essential services, and lead to segregation.

The objectives of the NEXITY project are twofold. First, we will explore the impact of URs on the urban structure, how they influence the accessibility to Points Of Interest (POIs), and affect the mobility of citizens. Upon gaining these insights, we will develop next-generation URs, offering control of their influence on the "15-minute city" (15mC) concept. The experiments will be based on state-of-the-art and AI-enhanced data-driven simulations of human mobility with a high level of accuracy and realism. To ensure that urban issues are properly addressed within the project, we will leverage the concept of co-design and co-creation implemented through the Urban Living Labs. These labs will be established at test sites, where experiments will be conducted (Barcelona, Spain; Wrocław, Poland).

POTUS

Understanding Potentials of the Urban freight Sector for the 15-minute-city

Call topic: 2.1, 2.2

The 15-minute city concept envisions neighborhoods with all basic services accessible within a 15-minute reach, emphasizing reduced trips and travel distances. As this means the reallocation of basic services into urban neighborhoods, freight traffic is also reallocated towards these areas. But how and where freight traffic will rise, and how user-choices and behavior will be influenced, is currently largely unknown. Thus, urban freight currently lacks sufficient integration within the 15-minute city concept.
Especially the lack of comprehensive data on urban freight hinders potential improvements in lowering its negative impacts, such as congestion, air pollution, compromised accessibility, and usage-pressure on public space. Coherently, this data deficiency hinders the planning and research sector from aligning urban freight management (policies) with city objectives and impairs the development of sustainable policies and solutions.

To address this, POTUS includes relevant stakeholders (urban administrations, academia, operators...) to address data gaps, standardize survey methods and collect and model urban freight data. The learnings are transferred into new models, planning recommendations and an urban freight survey handbook. This joint approach allows for a transferability of urban freight tools and knowledge from small-sized cities to metropolitan European regions, acting as a basis for evidence-based planning of holistic 15-minute neighborhoods.

REgENEraTE

REuse for ENergy Exploitation and storage of existing urban Tunnels in Europe

Call topic: 1.2, 1.1

The vision of REGENERATE is to contribute to the spread of positive energy districts by investigating the feasibility of existing urban tunnels to host renewable energy production and storage systems, and analyzing how they can be integrated in future municipal heating networks, also in terms of acceptance and affordability. This technology would allow to make use of local energy sources and buffer differences between supply/demand at a local level, ensuring energy security and grid stability. In European urban areas numerous underground spaces exist: road/railway tunnels, metro tunnels and stations, sewage tunnels, utility tunnels and abandoned underground air-raid shelters from the second World War. These spaces could benefit from a smart and sustainable approach and be retrofitted for energy purposes having positive impacts on socio-economic activities.

Cooperation between Austria, Germany, Italy and Romania enables different European climates, urban environments, building stock, energy needs and tunnel types to be investigated. The possibility to transform existing underground spaces into geothermal heat exchangers and energy storage systems will be assessed by pilot site monitoring in the four countries and its potential quantified via numerical modelling. Such solution will be optimized to different user needs and socio-economical contexts in a European perspective.

SET-PED

Synergizing Buildings Renovation and Regenerative Urban Furniture to Co-create PED Ecosystem

Call topic: 1.2, 3.1

Resilient urban transformation is increasingly necessary in the midst of emerging challenges of global pandemics, wars, climate change, and financial instability. SET-PED aims to develop feasible strategies to synergize the renovation of neighbourhood buildings, local energy supply and regenerative urban furniture for a co-creation ecosystem in the positive energy district (PED) context. Climate-adapted design solutions to building envelope renovation with circular bio-based systems will be developed, which will further inventory the possible materials for urban furniture. The urban furniture intervention will be equipped with solar photovoltaic (PV) and recycled battery, serving as a

catalyst for local place-based adaptation, through co-creation process at both building and urban scale, to foster a sense of well-being, belonging, education and community cohesion.

This project combines expertise in building renovation, renewable energy, digital & robotic fabrication, design-based research, and urban planning to develop a sustainable and circular co-creation process. SET-PED will test pilots in Sicily (Italy), Eskilstuna (Sweden), and Bucharest (Romania) to enable the development, testing, and communication of circular co-design on an EU level. By creating regenerative strategies, public debates, knowledge-sharing, and stakeholders' engagements, the transformative agency is ultimately handed over to community ecosystem actors, who will transform existing urban structures into net zero/climate-neutral neighbourhoods.

Smart and Sustainable Work Culture (SWC)

Revolution into a Smart and Sustainable Work Culture (SSWC) through connectivity and sharing for a 15-min city

Call topic: 2.1, 2.2, 1.3

Goal: Our goal is to achieve a sustainable and equitable 15-minute city by revolutionising the traditional working environment and proposing a Smart and Sustainable Work Culture (SSWC) through connectivity and sharing.

Objectives: To achieve this goal, we will devise strategies to 1) reduce commuting frequency by hybridising with online work, 2) reduce commuting travel distance by sharing office spaces near homes and arranging demand-response shuttles, and 3) reduce energy consumption and greenhouse gas emissions by controlling the hybrid work schedule, shuttle routing, and shared building energy. Furthermore, we will 4) simulate urban mobility and energy comprehensively to evaluate various policies that facilitate these strategies. The candidate cities to demonstrate our proposed framework are Athens in Greece, Glyfada in Greece, Gerbrunn in Germany, and Sejong in Korea.

Methodology: We propose to develop a policy analysis framework (PAF) for an SSWC, which is an integrated framework of algorithms (for optimal solutions to work hybridisation, shared office siting and operation, demand-response shuttle operation, and building energy use), and the simulations to evaluate the SSWC policies in the urban traffic and energy systems. We will assess policy designs that shape the optimisation goals and constraints of an SSWC and impact the final performance of the 15-minute city.

Expected result: We expect an SSWC will reduce commuting traffic demand, recurrent traffic congestion, total vehicle distance travelled, car ownership, and the gap of commuting burden between various demographic groups. Also, it will reduce energy consumption and greenhouse gas emissions in office buildings.

SmartUrbanity

Advancing 15-Minute Cities through Collaborative and Smart Urban Solutions

Call topic: 2.1

SmartUrbanity is an innovative initiative aimed at revolutionising urban neighbourhoods into 15-minute cities—a concept where essential services are accessible within a short walk or bike ride. SmartUrbanity is a comprehensive digital solution to address urban mobility challenges targeting diverse user communities, including the public sector, private sector, civil society, and research organisations. The primary goal of SmartUrbanity is to develop integrated policies that reduce car dependency, improve accessibility, and support sustainable transportation while fostering inclusive community engagement.

SmartUrbanity comprises three core modules: (i) Citizen Engagement App: A smartphone application for citizen involvement in data collection to emphasise the functionality, accessibility, safety, and security of urban environments and transportation systems. This app integrates gamification to encourage active participation; (ii) Accessibility Platform: A web application providing insights into neighbourhood accessibility for various users, featuring a digital lab and a forum for collaborative urban planning discussions; (iii) Decision Support System (DSS) Platform designed for policymakers: This web application facilitates data-driven scenario simulations and comprehensive intervention assessments. SmartUrbanity adopts an Innovation-Oriented Approach (IOA), leveraging big data, innovative models, and advanced digital technologies. A Research-Oriented Approach (ROA) will complement the IOA to ensure that technological innovations are based on robust and scientifically validated models.

SUSTAIN

Safe Urban Schools for Transportation, Accessibility and Inclusion

Call topic: 2.3

The project aims to understand how it is possible to encourage the usage of sustainable modes of transportation by developing the cross-national participatory based methodology of "School Zones" focusing on supporting the visibility and security of children. The research oriented SUSTAIN project will bring together a consortium representing disciplines of academic research, social design, traffic engineering and traffic psychology. It aims to gain deeper understanding on already existing practices on the cross-section of security and educational urban areas by synthesising literature, analysing the already existing good practices and conducting interviews with international experts of urban planning and urban sociology, environmental, traffic and child psychology, participatory and human centred design, safety and traffic engineering.

The project's goal is to facilitate knowledge sharing by developing a Blueprint, which provides recommendations on how to create safe and inclusive School Zones by participatory collaborations. This blueprint can help potential decision makers to realise new educational urban settings in the long term by encouraging and supporting locals using sustainable modes of transportation. SUSTAIN aims to connect theory to 'everydays' reality and to make urban implementations target human centred challenges, stepping towards more liveable, safer and sustainable cities of empowered citizens in a trans-national context.

The 15-minute Winter City

Call topic: 2.3, 2.2

Traveling on foot is a critical element in the 15 minute city concept as well as having considerable advantages from a health, social and environmental perspective compared to traveling by car. However,there are many challenges and reasons why some refrain from traveling on foot to the extent they wish. Limitations are often linked to the different needs of different groups and a lack of understanding on the part of society, meaning that creating a 15 minute city for all is exceedingly difficult in contexts when walking is not the premier mode of transport. Such challenges are particularly difficult in winter cities, which are often sparsely populated, with aging populations, low population density and have more extreme seasonal climate variations.

This project aims to identify barriers and opportunities for safer and more secure travel on foot in winter cities, thereby increasing the possibility of realising the 15 minute city in more challenging contexts. By using a participatory perspective where the needs and requirements of the end user are in focus, the overall aim is to fill the knowledge gap regarding the needs of walking in winter cities. The goal is also to identify town planning and health guidance solutions and identify commonalities, differences and best practices.

TOGETHERe

Bringing TOGETHER last-mile logistics and personal mobility for functional urban areas and lower-density areas

Call topic: 2.1, 2.2, 3.2

TOGETHERe aims to reduce the need to travel and the detrimental impacts of transport choices by reusing, repurposing, and integrating existing mobility and goods delivery services and infrastructures. By considering contexts with increasing degrees of territorial dispersion and complexity, project partners will explore sustainable transport solutions throughout their lifecycle and analyse long-term impacts and replicability conditions to ensure adaptability across contexts and reduced car dependency. Being a core project deliverable, the "Impact Modelling & Monitoring Suite" (IMMS) is an enabling digital hub to achieve the above project ambition, which will be tested in the Living Lab of Thuringia and validated through a hub-and-spoke validation mechanism in the Living Lab regions of Coimbra, Constanta, Mazovia and Tampere; this collaborative validation program will ensure cross-site fertilisation and results comparability, replicability and ultimately maximisation of project impact.

TOGETHERe will provide robust tools and actionable operational results based on multidimensional performance indicators and the proactive engagement of local stakeholder communities in all project phases, i.e., from conceptualization and design through to implementation and impact monitoring.

WATERdiverCITY

Practicing with Nature – Water- and biodiversity inclusive solutions for resilient cities

Call topic: 3.3

The WATERdiverCITY project addresses the urgent need for water and biodiversity-inclusive urban planning in the Baltic Sea region. Focusing on the challenges posed by the Anthropocene and planetary urbanization, the project aligns with the European Green Deal's Biodiversity Strategy 2030 and Nature Restoration Law. Urbanization poses threats to biodiversity and ecological dynamics, necessitating a paradigm shift where water and biodiversity-inclusive blue-green infrastructure (BGI) becomes integral to city planning, aligning with climate-resilient policies. The project explores the water and biodiversity inclusiveness of nature-based solutions (NbS) to enhance climate resilience, addressing challenges of quick-fix approaches. Socially just design is crucial, ensuring equal access to blue-green areas for all socio-economic groups and mitigating disparities in urban nature experiences. The four case study cities—Helsinki, Tallinn, Riga, and Stockholm—present unique challenges, from transforming biodiversity-inclusive practices in Finland to considering just transition in Estonia, improving connectivity in Latvia, and implementing circular BGI models in Stockholm. WATERdiverCITY tackles these challenges by learning from nature and providing context-based solutions that enhance capacities, develop socially just maintenance approaches, and scale up biodiversity-inclusive practices.