Annex Call for UIA Experts

Topic: Air Quality

DIAMS

Aix-Marseille Provence Metropole (Métropole Aix-Marseille Provence)

ERDF: € 3,775,181.60

The DIAMS project aims to tackle the Metropole's air quality problems by establishing an alliance to bring together citizens, community leaders as well as private and public stakeholders. By building an open source data-exchange platform focused on service delivery, the project aims to achieve five strictly interrelated objectives. First it aims to improve air quality information and produce high quality, detailed and adaptive data by combining the power of IoT, citizens' science and experienced local actors. It will also enable a fluid territorial air quality data exchange among urban, regional and national authorities to facilitate integrated planning. The wealth of data collected will be designed as a source of inspiration for citizens and private sector creativity to co-design innovative solutions to air pollution. Last but not least the project aims to provide adaptive and personalised information on air quality and related measures to citizens. By shaping citizen-driven air policies and innovative business models the projects will actively contribute to the creation of economic and social value for the Metropole's large population.

The project's main implementation activities will include:

- Establish governance mechanisms in order to elaborate clear policies, define the main standards and provide guidelines for the core areas of the project
- Create an efficient system for the measurement of progress and impact that will be used to continuously improve the project
- Provide an engagement programme by creating a network of contributors (citizen and private organisations) and integrate contribution of contributors to the metropole's air quality plan
- Develop a platform providing digital air quality services
- Support diverse business models for the open and commercial exploitation of air-related data

Partnership: Aix-Marseille Provence Metropole; 1 Air Quality Observatory: AirPACA; 1 Research Company: ARIA Technologies; 1 Non-profit public-private: Cooperative ALab in the Air; 1 Postal Service Company: Mobigreen – La Poste; 1 IT-training company: Matrice; 1 cooperative company: L'Air et Moi; 1 Air Quality measuring company: Groupe Tera; 1 agency of cities and territories: AVITEM

AirQon

Municipality of Breda (Gemeente Breda)

ERDF Budget: € 2,544,876.12

The AirQon project aims at substituting diesel generators with an energy supply system based on Electric Vehicle (EV) batteries to provide off-grid energy for outdoor festivals and events. The solution is based on introducing an innovative technology (V2Box) to control bi-directional energy flow to and from EV batteries.

This is supported by societal innovation: building up and managing a community of EV owners willing to fuel open-air events with clean electricity. Demand and supply will be matched through an online platform and mutually beneficial incentive schemes.

The final ambition is to ensure that around 35% of all events will be utilizing V2Box technology for their off-grid energy demand preventing nearly 80,000 litres of diesel to be burnt in generators yearly in Breda. The project will induce higher awareness of clean energy sources and more conscious behaviour and it will explore how the technology and its business model could be applied in other contexts (generators for hospitals, public buildings, etc.).

The project's main implementation activities will include:

- Testing and implementing a community-based energy supply system via ensuring that the necessary technical innovation is in place and that stakeholders are involved, engaged and their motivations are clearly understood and structured.
- Testing the technological innovation (V2Box) via community involvement, i.e. visitors drive electric vehicles to event locations and power source various outdoor events.
- Conducting an air quality Perception Research of citizens, together with Complex Monitoring and Measurement activities and analysing secondary effects of the AirQon solution on the wider socio-economic context and on the built environment.
- Translating project's findings into improving local sustainability- & air quality-, as well as event management policies. AirQon's impact & place in the national legislative context will be researched; a progressive identification and outroll strategy will be planned into municipal functioning and other industries using diesel PGs in an urban context; an EU-level outreach will be conducted to promote and showcase the AirQon solution, as well as influence higher level policy and decision making.

Partnership: Municipality of Breda; 4 energy transition companies focused on: energy transition technologies (SBPF), software solutions (iHomer), technical and social needs (Faraday Keys) and festival energy layouts (ZAP Concepts); 2 festival organisers: Kairos Events, Breda Barst; an EV fleet provider: Buurauto; a car dealer: Nissan Breda; a research institute: IRAS

CLAIRO

City of Ostrava (Statutární město Ostrava)

ERDF Budget: € 2,073,503.96

Despite restructuring of the industry and numerous measures taken to improve the air quality in Ostrava, the air pollution remains one of the city's biggest environmental problems. The key objective of CLAIRO project is to gradually and systematically decrease air pollution through comprehensive planning and planting of municipal greenery with proved positive impact to air quality. Building on accurate measurement, robust data, new scientific solutions and involvement of experts from different sectors, a new methodology will be tested facilitating the design of city greenery in the most efficient structure and composition taking into account natural conditions e.g. airflow. The project will test new solutions in the field of plants with evidence-based impact to air quality and share these with other cities the cross-border Silesian conurbation. The resistance of plants will be strengthened through new phytohormones and biostimulants to maximize the effect of the vegetation while a new generation of sensors will allow fast, short-term measurements of both organic and inorganic substances.

The project's main implementation activities will include:

- Measuring of air pollutants (PM10, PM2.5, nitrogen oxides, O3, TSP, VOC, PAH) and climate conditions (wind flow-speed and direction, temperature, pressure, humidity, global radiation, rainfall) in the most polluted districts in Ostrava
- Calculating the capture of particular air pollutants by the existing vegetation in the selected urban localities
- Developing models of dispersion, deposition, capture and resuspension of pollutants to allow an accurate surface assessment of the change in concentration and direction of spreading of pollutants
- Designing and planting of the greenery structure and composition in selected districts
- Strengthening resistance of the greenery based on natural plant attributes with new soil and plant treatments and non-destructive monitoring of physiological state of plants
- Setting up and updating a new database to gather information on plants with evidence-based impact to air pollution decrease as well as to summarize examples applied in the project plus existing global examples
- Training of experts on air pollution and urban greenery to transfer knowledge to other cities in the wider area of Ostrava-Karvina Industrial Agglomeration

Partnership: City of Ostrava; 1 regional authority: Moravian-Silesian Region; 4 higher education and research institutes: Silesian University in Opava; Technical University of Ostrava; Palacky University Olomouc; SOBIC Smart & Open Base for Innovations in European Cities and Regions; 1 ministry: Ministry of Regional Development of the Czech Republic; 1 regional organisation: Regional Association of Territorial Cooperation of Teschen Silesia.

Air-Heritage

City of Portici (Comune di Portici)

ERDF Budget: € 3,274,475.68

The AIR-HERITAGE project aims to improve the air quality conditions in Portici by developing an integrated framework that brings together citizens, urban authorities and environmental protection agencies to design and implement science based air quality policies. Core of the project is the development of high resolution pollutant mapping capability. It will be built by fusing data produced by an air quality monitoring network integrating regulatory monitoring stations, fixed stations and citizens' mobile personal exposure analysers. Data will be used to fuel a new Air Quality Policy Decision Support System. Through stakeholder involvement, groups will be trained with specific campaigns and ad-hoc tasking to cooperate as well as monitor actions during their usual mobility pattern. Citizen engagement in air quality policies will be enhanced through availability of personal exposure, feedback and targeted data sharing creating a crowd sensing social network that will become part of the city's policy making process. The project seeks to improve public authorities' capability to design efficient, responsive and participative policies.

The project's main implementation activities will include:

- Design, implementation, deployment and operation of a network of pervasive/mobile air quality monitoring devices and its associated software infrastructure
- Developing a traffic model to assess the traffic congestion within the most critical area of Portici as well as a wind model to simulate the effect of surface roughness and road orientations on air movement, at different height, according to different levels of geostrophic winds
- Production of real-time pollution maps that will be input for the Intelligent Transportation Systems, thus providing traffic control through regulation of vehicle access to the congested and/or polluted areas.
- Integrating of a web-based application called Urban Innovative Air Quality Decision Support System in Geographical Information System of Portici to allow urban city planners and municipality agencies to assess air quality in urban areas and predict short-term response as well as to evaluate impact of potential policies for air quality conditions remediation
- Creating of a smartphone app with ad-hoc air quality index for local and targeted feedback to citizens
- Connecting of citizens' participation and awareness to activities of monitoring, behavioural change, policy involvement and implementation with social analysis of personal choices and behaviours that influence air quality as well as social and educational activities e.g. city walks, demonstrational city ebikes rides, "pedibus", eco-festivals, contact point for citizens, monitoring campaigns to conduce using personal portable analysers to collect data on air pollution

Partnership: City of Portici; 2 higher education and research institutes: Italian National Agency for New Technologies, Energy and Sustainable Economic Development; University of Naples Federico II – Department of Agricultural Sciences; 1 NGO: Legambiente Campania Onlus; 1 regional authority: Campania Regional Agency for Environment Protection; 1 SME: Terraria Srl.

HOPE

City of Helsinki

Helsingin kaupunki

ERDF Budget: € 4,561,260.28

The overall challenge the project addresses is that measuring, analyzing and dissemination of air quality in any one location is very complicated and contaminated with error. Lack of real-time and reliable high resolution data has lead to a situation where finding targeted interventions which also take into account our citizens and their needs while also targeting specific pollution concentrations is missing from all European cities.

The main purpose of HOPE is to empower citizens to develop their own districts and help them plan their lives based on empirical data and science-based information. HOPE develops a participatory budgeting model to involve users co-designing and co-developing, co-choosing air quality (AQ) interventions that is planned to be achieved through comprehensive sensor network and development of air quality index 2.0 which offers more health oriented approach than existing AQ index. The result is planned to be a more user-centric AQ index which is not only innovative but that also provides data for innovative interventions.

Citizen engagement in air quality policies will be enhanced through familiarizing the citizens with ever-changing outdoor air quality by simplifying the causalities, components of air pollution concentrations and levels of exposures to individuals, and showing this information using real-time graphics.

The project's main implementation activities will include:

- Developing of the site planning analysing each of the district targeted in the project and plans will cover the issue of comparable data from the districts.
- Selection and education of the participants in the data gathering - 100 people will be engaged to produce direct measurements to determine the location of highest air pollution concentrations and infer nature of emission source at a personal level.
- Development of the catalogue of interventions that can be both - actual equipment through investments or measures that focus on driving either district or individual change. Interventions are based on expert analysis on the potential air quality harm/euro quantification.
- Development of the Air Quality Index 2.0 - a revised version of the conventional one based on five indicators. The benefit of AQI-2 is to have a more comprehensive input for air quality (AQ) evaluation and health risk assessment.
- Development of the Green Path visualization and integration with existing navigation tools, e.g., transport schedules and road maps for use of the citizens in order to adjust their routes and behaviour to the surrounding air quality
- Implementation of the placement of the sensors and the data collecting, and analysis of the obtained data in the pre-selected districts of the city

Partnership: City of Helsinki; 1 higher education and research institutes: University of Helsinki; 1 regional authority: Helsinki Region Environmental Services Authority; 1 National public Authority:

Finnish Meteorological Institute; 1 public forum: Forum Virium Helsinki (unit of the city of Helsinki); 1 SME: Vaisala Plc; Useless Company Ltd;

Topic: Jobs and Skills in the local economy

Aveiro STEAM City

City of Aveiro (Câmara Municipal de Aveiro)

ERDF: €4,892,732.00

The AVEIRO STEAMCity project will help the urban authority prepare for the new technological revolution associated with 5G and IoT infrastructure as well as provide its work force with the right digital skills. The aim is to retain and attract talent that would otherwise settle in larger cities in Portugal or beyond. It will add the arts and creativity dimension to the STEM approach by supporting companies in rethinking the resources they need to innovate and grow in order to attract new talent including the creative and artistic sectors. To do so, the project will set up a labour observatory looking at the new skills in demand in the local economy and having the capacity to react increasing the educational and qualification system's responsiveness. At the same time the project will take advantage of the 5G testing phase to help the city transition to the next economy. Opening data and creating a business-friendly ecosystem, Aveiro STEAMCity will encourage individuals and SMEs to participate in civic challenges using the city as a dynamic testbed. The final ambition is to create higher added value per employed citizen as well as accelerate its local digital transition.

The project's main implementation activities will include:

- Design and implement a Labour Observatory to inform on the development of relevant education and training activities as well as monitor results aiming to qualify individuals and organisations for the deployment of 'value adding' services for urban digital ecosystems
- Deploy, operate and promote an advanced access infrastructure along with an innovative Urban Platform that will provide jointly a city-scale digital open laboratory
- Help transition the city into a new economy based on knowledge and digital platforms supporting R&D&I, open public data as well as the development of new products and services
- Outline future business models
- Invest in a new Labour Observatory and Aveiro is Open Hub

Partnership: City of Aveiro; 2 R&D Institutes: Instituto de Telecomunicações and Altice Labs; 2 Universities and Research Centres: Universidade de Aveiro and CEDES; 1 association of businesses INOVARIA

Cluj Future of Work

City of Cluj-Napoca (Municipiul Cluj-Napoca)

ERDF: €4,429,450.00

The city of Cluj-Napoca seeks to tackle its high vulnerability to emerging technologies as well as anticipate issues arising from significant emigration and an aging population. With the CLUJ FUTURE WORK project it will build a knowledge-based economy and imagine a socially resilient working ecosystem for current and future jobs. Several pilot cultural and creative industries (CCI) will be connected with the knowledge intensive business services (KIBS) in order to tackle the mismatch between supply and demand and strengthen business models for local promising industries. A strong focus will also be on those professions most susceptible to automation in order to support the transition to Industry 4.0. Last but not least, to foster a thriving but also inclusive local economy, the project will integrate in its activities disadvantaged and marginalized communities. The focal point for all these complementary actions will be the local cultural centre that will be equipped with cutting-edge technology. A robust impact assessment methodology will support the implementation process and inform further policy developments in line with the regional Smart Specialization strategy.

The project's main implementation activities will include:

- Enhancing the capacity for pilot industries in the modern creative sectors (film, design and crafts) to generate economic and societal progress
- Assisting the transition process of professionals most vulnerable to automation to prepare them for the new realities in the modern manufacturing sector and related services
- Creating a social lab for disadvantaged groups (mainly the Roma population) focused on cultural empowerment
- Completing research to provide the broader picture of the labour market of tomorrow for the city and beyond

Partnership: City of Cluj-Napoca; 1 Network of cultural organisations: Centrul Cultural Clujean; 1 Association for Electronic Industry and Software: ARIES; 3 Clusters: Asociația Cluj IT, Cluster Mobilier Transilvan and Transylvania Creative Industries Cluster; 1 Foundation: Fundația AltArt pentru Artă Alternativă; 1 University: Universitatea de Artă și Design din Cluj-Napoca; 1 Architectural Association: Asociația PLAI

UFIL

City of Cuenca (Ayuntamiento de Cuenca)

ERDF: €3,943,741.92

Taking advantage of the City of Cuenca's large forest area of 53.000,00 Hectares, the UFIL project aims to better exploit this reserve and launch an urban forest innovation hub. It will foster an innovative training model combining three main pillars: forest bioeconomy, 21st century skills as well as innovative enterprise models for business creation to exploit the forest in a sustainable way. Sponsors from Forestry sector companies will set business challenges that will be addressed by multidisciplinary groups of participants that will take part in a programme for incubation and acceleration for new businesses. The hub will integrate training, research, coaching, incubation as well as acceleration focused on product prototyping with a rural-urban perspective. Business and job opportunities will be created in forest biomass, sustainable exploitation of wood, packaging, urban furniture, resin, mycology as well as fire prevention. The project will contribute to improve local skills as well as to retain and attract talent in the city.

The project's main implementation activities will include:

- Designing a knowledge and spatial framework
- Providing training on forest bioeconomy, 21st century skills and innovation sustainability business models
- Incubation and acceleration activities for in-depth development of business ideas around the forest in the city
- Establishing business models that will further and integrate the forestry sector in the city and allow the continuity of the project
- Investing in an Urban Forest Innovation Lab

Partnership: City of Cuenca; 2 Universities: Universidad Castilla La Mancha and Universidad Politécnica de Madrid; 1 Regional Government: Junta de Castilla La Mancha; 1 Business Confederation: CEOE CEPYME Cuenca; 1 Design Institute: IED; 1 Wood Council: International Forest Stewardship Council FSC; 2 SMEs: Ayuntamiento de Cuenca Maderas, SA; Khora Urban Tinkers, SL.

P4W

City of Eindhoven (Gemeente Eindhoven)

ERDF Budget: € 4,923,494.84

The P4W project aims to reduce the inefficiencies and shortage on the labour market for the lower educated by creating an intersectoral skills passport with gamified skills assessment and improvement. An innovative element of the project is the use of game design elements in non-game contexts. The passport in form of an online platform will be developed in collaboration with the target group. The skills assessment will be designed as an online game in which jobseekers get to know a project. Their soft skills are assessed in the background through in-game tasks. In addition, the project will restructure the current education program in the way that it can be tailored to employers' wishes to ensure shortened time-to-employment and intersectoral transferability of skills and labour. Educational modules will be designed to improve soft and 21st century skills as well as to improve overall sustainable employability. All modules will be nationally accredited. A user-friendly platform will be developed to match employers and jobseekers using the intersectoral skills passport.

The project's main implementation activities will include:

- Creating a user-friendly, gamified skills passport (online platform) in close collaboration with the target group through user experience design on the one hand to ensure motivation and adoption as well as the employers on the other hand to ensure informational completeness and usability
- Developing an online game in which soft skills, 21st century skills and sector specific skills are assessed
- Integrating the skills assessment with the passport through an activation campaign for the target groups
- Restructuring current curricula in collaboration with employers and educators into function specific and/or personalized curricula with an optimized time-to-employment
- Designing new, accredited, digital education modules improving skills such as soft skills, 21st century skills and intersectoral skills
- Reengineering lifelong learning paths that feature suggested modules to allow for future sustainable employability
- Establishing an intake and guidance protocol to assist jobseekers in their match with an employer and needed personalized education
- Integrating newly developed protocols, products and policies outside of P4W to streamline the overall offering of employment counselling

Partnership: City of Eindhoven; 1 province: Province of North Brabant; 1 interregional cooperation organisation: Service desk Education and Work; 1 employer service point: 04Werkt; 2 foundations: WIJeindhoven; Foundation of professional competencies for the building environment; 3 SMEs: Organiq; Building Changes; Funding Subsidy Management BV; 1 service and consulting company: CINOP- Institute for national accreditation and certification; 2 business support organisations: Transvorm; Interest group for SME's Eindhoven; 2 higher education and research institutes: Tilburg University; University of Technology Eindhoven; 1 sectoral agency: Employer organisation VNO-NCW

GSIP

City of Vantaa (Vantaan kaupunki)

ERDF Budget: € 3,991,600.00

The GSIP project interconnects growth and social responsibility pillars at company level. It aims to promote growth and competitiveness especially of companies in human intensive and routinely operated industrial sectors. It seeks to improve the level of education of the city's workforce by offering better training possibilities for low-skilled workforce, employees with outdated skills and unemployed persons. The project will design, test, pilot and automate a model of "Growth and Social Investment Packs (GSIP)" for local private and public companies. An innovative core is to create a service model with motivating incentives for companies. By contributing to social development e.g. giving a job or training opportunity to an unemployed person a company earns an incentive for growth. The development process starts from the design with partner companies and tests of three GSIPs in authentic cases for genuine needs among the themes need for new skilled workforce, updating skills for employees and technological shift. GSIPs will be piloted in 20 companies and finally automated for permanent use and scaling up with the help of big data as well as intelligent solutions.

The project's main implementation activities will include:

- Design and test of three thematic Growth and Social Investment Packs around the three themes need for new skilled workforce, updating skills for employees and technological shift
- Incentive modelling as an integrated approach with growth and social interests
- Randomized field experimental study
- Trainings for growth targets and for employees with outdated skills, guidance to vocational education, apprenticeships with the aim to improve employees resilience in industry 4.0 as well as seeking for new human work roles for companies
- Developing investments plans for pilot companies
- Creating automated GSIPs based on big data from different sources and with intelligence i.e. to assist and propose in which companies the biggest growth results will be achieved, who are the most potential target groups amongst employees, unemployed or students, which coaching or training or recruitment programs will work the best and how to reach the best value for the public development investments

Partnership: City of Vantaa; 4 higher education and research institutes: Metropolia University of Applied Sciences; Laurea University of Applied Sciences; Etla - The Research Institute of the Finnish Economy; Labour Institute for Economic Research; 1 business network: Helsinki Region Chamber of Commerce; 4 private companies: ISS Services Ltd.; Infocare Ltd.; Solteq Plc.; Finnair Cargo Ltd.; 1 public company: Vantti Ltd.

NextGen Microcities

City of Ventspils (Ventspils pilsētas Dome)

ERDF Budget: € 4,997,124.40

The NextGen Microcities project focuses on job creation and business development activities. It seeks to overcome challenges related to skills shortage and lack of high-level specialists in micro cities by creating new and innovative solutions in education, business and governance. Through a combination of actions it seeks to enhance local technological skills capacity. The project will test an innovative career guidance strategy including the launch of an internet tool and marketing strategy for higher and vocational education institutions to attract and retain talents in micro cities. To reduce skills mismatch the project will implement an experimental Education Technology plan. A smart school concept will be developed to provide 21st century ICT, digital and education skills for employers, education institutions and local authorities. Innovative teaching aids, study programs and a pilot project will be developed to generate new skills, jobs, businesses, private and public services using Educational Technology. These elements are combined with a Ten Type Innovation Framework and a Foreign Direct Investment attraction strategy to provide favourable preconditions for business development and job creation.

The project's main implementation activities will include:

- Creating a career guidance program to assist with career consulting applying Gatsby Foundation good career support principles and piloting a specialists' attraction program to attract highly-skilled ICT and other locally demanded professionals
- Establishing a Future Career Office in form of an internet tool to match skills based on a skills matching algorithm, to explore housing, education and other services as well as to search for employment opportunities for family members
- Developing marketing strategies for higher education institutions in Ventspils and Valmiera with the involvement of local and foreign students
- Establishing an Education Technology Factory (Digital Innovation Hub) to help educational organisations and companies to become more competitive by improving their business processes as well as services and products with means of digital technology
- Developing portable, experimental Education Technology expositions to explain scientific phenomena and to showcase modern technologies e.g. image processing technologies in everyday use
- Establishing digital class solutions, virtual reality classes, active learning classrooms and virtual CAVE systems at education institutions to integrate Education Technology in existing study programs and to develop new study programs as well as a lifelong learning strategy
- Establishing a collaborative work space "makerspace" inside a public facility in Ventspils and Valmiera to generate 21st century skills in the fields of science, technology, engineering and math (STEM)
- Developing and implementing Foreign Direct Investment strategies and a corporate innovation acceleration program

- **Partnership**: Ventspils City Council with Valmiera City Council; 2 business support organisations: Ventspils High Technology Park; Valmiera Development Agency; 2 education/ training centre and schools: Ventspils Vocational School; Valmieras Technical School; 2

higher education and research institutes: Ventspils University of Applied Sciences; Vidzeme University of Applied Sciences; 2 private companies: Aspired Ltd.; IntelliTech Ltd.

Topic : Housing

CALICO

Brussels Capital Region (Région de Bruxelles-Capitale)

ERDF Budget: € 4,999,999.32

The CALICO project will test a new model of housing policy based on the Community Land Trust (CLT) model to provide permanent affordable housing, while combining new forms of community-led housing and care.

In order to bridge the affordability gap between the housing market prices and vulnerable groups financial capacities, the CLT will acquire and maintain permanent ownership on a land and collective spaces of a building, so that 33 homes could be bought or rented by low income households without being charged for the value of the land, and will remain permanently affordable thanks to specific resale criteria. The mechanism will be innovatively mixed with a community care approach in a cohousing context, combining 3 different forms of co-living in 3 community-led housing clusters. Intergenerational, intercultural and gender dimensions will be taken into account, focusing on the entire life cycle including facilities for birth and end-of-life in a home-like environment. Attention will be given to empower residents, encouraging them to organize informal mutual aid and solidarity, and training them to co-create a new governance model to manage their cluster.

The project's main implementation activities will include:

- Delivering 33 homes for families and individuals with low and moderate incomes and 3 collective and community spaces. The homes will be affordable and prices will be related to the income of the residents. The homes will be organised in three co-housing clusters. Some of those homes will be owner-occupied and some will be rented out.
- Developing a new model of community-led care, integrated in a co-housing context and in the wider community, taking into account intercultural and gender dimensions. Through the process of co-creation, the project will look for ways of organising informal care through mutual aid and solidarity. It focuses on moments of life where the need for care & support is of greater importance (old age, difficult parenting) and key moments such as birth and end of life. Thus, an accommodation for birth and end-of-life will be integrated in the project as one of the pivotal points.
- Enabling community-led housing: training, community building activities and the co-creation of an innovative governance model. The project will provide adapted training courses on decision making, interculturalism, nonviolent communication, as well as group-forming and community building activities. Specific attention will be paid to the gender perspective.

Partnership: Brussels Capital Region and 2 Local Public Authorities: Municipality of Forest; Public Center for Social Welfare of the Municipality of Forest; 1 Regional public Authority: Perspective.brussels (Brussels Planning Agency); 1 Community Land Trust and its sister organisation: Community Land Trust Brussels; Public Utility Foundation Community Land Trust Brussels; 4 Interest Groups: Logement pour Tous; AngelaD; Pass-ages; EVA; 1 Higher Education and Research Institute: Vrije Universiteit Brussel.

ICCArus

City of Ghent (Stad Gent)

ERDF Budget: € 4,799,547.36

The ICCARus project has the aim to renovate 100 houses of captive residents (people who live in poor quality houses and who do not have the means and social skills to renovate them). To do so, the project will create, shape and test a revolving fund based on the principle of subsidy retention to make the renovations possible for this low income target group. The financial contribution to target households will return to the fund when the building is alienated. At that point, the fund will gain not only the net amount that was let but also part of the real estate value increase after the intervention. This way, the public finance is not only spent for a limited number of people, but can be used over and over again, triggering future "waves" of renovation.

Before, during and after the renovation process, captive residents will be supported technically, financially, administratively and socially while the works will be taken care of in an integrated way. After the project period, there will be an operating recurring fund to tackle the bad housing conditions of captive residents in Ghent.

The project's main implementation activities will include:

- Investigating how subsidy retention can be optimised for different target groups & at all levels.
- Setting up a 'recurring fund' by assigning a repayable contribution per dwelling to be renovated.
- Delivering complete renovation process (RP) to the participants. Based on individual renovation plans an overall renovation program will be compiled. Before the actual renovations can start, there will also be an extensive preparatory phase, ensuring an efficient execution of the renovation works. During the entire RP participants will be extensively guided, both at a technical and a social level. A technical expert will ensure the quality of the construction work, within the proposed budget, a clear communication between participants and contractors and the necessary support in subsidy applications. He will work in close relation to a social counsellor who supports participants in all other domains, necessary to complete the renovation successfully (financially, health, stress, etc.).
- Conducting regular participant gatherings. These will allow to efficiently inform all participants on the ongoing process while also providing a platform for participants to give their valuable feedback.

Partnership: City of Ghent; 1 social services provider: OCMW Gent; 3 higher education and research institutes: KU Leuven, UGent and AP Hogeschool Antwerpen; 3 NGO partners: SLOG, Domus Mundi and REGent.

Yes We Rent!

Mataró City Council (Ajuntament de Mataró)

ERDF Budget: € 2,500,638.16

Yes We Rent! tackles the lack of affordable rental housing by bringing back into the local market properties that have been left empty. The project will incentivise owners to rent their dwellings at below market prices by offering them a guaranteed rent and financial/organisational support to renovate their properties.

Through its scale, Yes We Rent! aims to 'change the rules' of the whole rental market in Mataró, to put pressure on rents and to contribute to desegregation. In addition, the project tests an original organisational model of a multi-stakeholder cooperative, which allows public control and absorption of public investments while supporting the empowerment and self-management potential of cooperatives members. Tenants will be trained and incentivised to engage in self-help, empowerment, joint development of housing related services and recruitment of new flats.

Both the impact and the organisational approach will be assessed through a solid research and evaluation framework and together form a model of a transferrable policy instrument for affordable housing.

The project's main implementation activities will include:

- Identifying owners of private properties and convincing them (a) to cede their flat to the affordable housing scheme; (b) to renovate their dwellings where necessary; and (c) to match the housing units with tenants.
- Conducting individual housing renovations, which are undertaken to bring a privately owned vacant flat up to a necessary quality standard to become part of the accessible housing scheme. The renovation works will be implemented via a professional reintegration training for unemployed people.
- Setting up of a multi-stakeholder cooperative and building a sound organisational and economic model of the cooperative, which can function and grow, after the pilot phase, based on the contributions of members.
- Verifying the hypotheses on impact of the scheme on market prices, owners and tenants and analysing the suitability of the chosen organisational and economic model.

Partnership: Mataró City Council; 2 NGO partners: Fundació Unió de Cooperadors and Fundació Jovent; a provincial authority: Diputació de Barcelona; 2 research partners: IGOP and TecnoCampus.

Home Silk Road

Metropole of Lyon

ERDF Budget: € 4,999,318.6

The Home Silk Road project will renovate an emblematic building of the silk industry heritage with a central location in a flagship new urban development in the Metropole of Lyon. It aims to provide diverse affordable housing solutions and services for vulnerable groups, while placing them at the heart of the city. As intermediary objective pending the delivery of this renovated building, the construction site will be optimized as a driver for fostering social and economic insertion. Immediate and temporary modular housing for 30 vulnerable families will be set up on the construction site. The site will be a catalyst for a set of social and economic integration activities, such as employment opportunities generated from the worksite, or circular economy activities using the material resources from on-site construction wastes to develop economic and cultural activities. Strong attention will be given to foster onsite cultural activation and bring together residents, neighbors and metropolitan citizens in order to remove the barriers between the various social groups by developing a shared culture and ownership of the new infrastructure.

The project's main implementation activities will include:

- Installation and opening of 30 temporary housing units for socially excluded households on the worksite during the construction work phase
- Orientation and support provided to vulnerable groups housed on-site to integrate their housings and environment, to stimulate empowerment, and to take full advantage of the activities and opportunities generated by the worksite: consultations, employment opportunities, participation to cultural activities
- Promotion of employment opportunities in the building and housing sector for worksite local residents as well as young dropouts or long-term unemployed, through collaboration with local inclusion players and reinforcement of social insertion clauses in building contracts promoting employability of vulnerable groups
- Implementation of an innovative integration system based on community restaurant where residents who are not part of traditional social inclusion groups can work under technical supervision
- Circular economy activities reusing material from torn down or cleaned buildings of the construction site for the construction of housing, outdoor development, artworks production, and educational projects
- Implementation of a program of cultural and economic activities bringing together modular units residents, neighbors and metropolitan citizen, including educational and participatory processes to prepare for the integration of the definitive housing solution on the site
- Physical investments with the installation of 30 prefabricated modules and the refurbishment works of a flagship building of the local industrial heritage into a residence adapted to vulnerable groups with economic, associative and cultural activities

Partnership: Metropole of Lyon and 1 urban authority; City of Villeurbanne; 1 Public Infrastructure and services provider: East Metropole Housing; 2 Interest Groups: Ecumenical Cultural Centre; Alynea

E-Co-Housing

City of Budapest, District 14 Zugló Municipality

Budapest Főváros XIV. kerület Zugló Önkormányzata

ERDF Budget: € 4,508,055.00

The main objective of E-Co-Housing project is a regenerative collaborative social housing community, co-created by residents to house approx. 100 residents in a social community. Co-creation of space and community is the main ideology of E-Co-Housing. Trying to motivate future resident to cohabitate in a collaborative way, E-Co-Housing is including them already in the design project phase, to foster co-design process of local environment and the dwellings. The building itself will be a multi-story prefabricated modular construction with 35 units of different sizes to house different families (single-parent, double-income large families, disabled and elderly couples). The project aims to support the formation of a self-sustainable, functional community of tenants, becoming an integrative part of the neighbourhood and contributing to the social dimension of sustainability. The economic aspects of regenerative system will be developed through establishment of social cooperation ensuring long term financial prospects of the dwellers.

The project's main implementation activities will include:

- An innovative monitoring and maintenance system with Building Information Modelling (BIM) will be established
- Analysis to establish the optimum parameters for energy efficiency, IT solutions and the development and management of Central Nervous System platform for the building to support a smart, informative, consumer oriented IT system. Electric vehicle management module, energy management platform, security platform, platform for the digitization of building communication, and module for information and education of residents will be part of the system. responsible for functioning
- Preparation of the technical, design and tender documentation and implementation of the tender for the selection of the construction company to build and equip respective housing
- Implementing the investment that consists of several elements – preparation of the construction site and infrastructure works; construction of a prefabricated multi-story building on the prepared site made entirely of recyclable materials, implementing a second plumbing system for recycled water; upgrading the building with energy elements and IT elements; and equipping the facilities with necessary elements to support the collaborative economy model
- Developing the methodologies for the tenant selection, the mentoring program of community development, economic empowerment, and regenerative living
- Implementing the tenant selection, setup and formation of the social housing community that will become an integrative part of the neighbourhood. The Community development aims at ensuring social sustainability of the social housing project by creating the rules of co-living, co-working on common projects and cooperating with neighbourhood stakeholders.

Partnership: City of Budapest, District 14 Zugló Municipalityt; 1 public services provider: Zugló City Management and Public Services Company; 1 higher education and research institute: Budapest University of Technology and Economics; 2 non-profit associations: Hungary Green Building Council ; HABITAT for Humanity Hungary; 4 SME: HBH Strategy and Development Ltd; Energy and environment Ltd; ABUD Advanced Building & Urban Design Ltd; GreenDependent Institute Nonprofit Ltd.

Topic: Adaptation to Climate Change

GBG_AS2C

Barcelona City Council

Ajuntament de Barcelona

ERDF Budget: € 3,997,969.76

The GBG_AS2C project will address the heat island effects in the City of Barcelona and prepare the city to face predicted increasingly high temperatures in summer, by transforming 10 pilot schools into climatic shelters.

Considering their low degree of adaptation to heat, but also their spatial distribution throughout the city as well as their great level of penetration within communities, schools are relevant spaces for adapting the city to climate change for the benefit of all. The project will implement a package of measures designed through a participatory process, introducing blue (aquatics playgrounds), green (greening playgrounds) and grey (traditional) components in schools in order to convert them into climatic shelters - not only for students, but also for summer school camps and all citizens outside of school time, as a refreshing and shaded leisure facility. In parallel, a climate change educational project will be adopted to contribute to climate change awareness, including the involvement of children and school professionals in the health assessment process.

The project's main implementation activities will include:

- Detection and identification of pilot schools on the basis of a prioritization algorithm
- Prior studies regarding the blue, green and grey adaptation measures to the climate change for school equipment, especially to ensure technical and economic sustainability and potential adaptation of the regulatory framework.
- Participatory process involving each pilot school community with the support of technicians and facilitators, in order to define the measures for the climate adaptation to be included in the final design of executive projects
- Physical investments : implementation of the blue, green, grey measures in the 10 pilot schools
- Pedagogical and awareness project for each school, including didactic material to teach the "Educational Project Schools Adapted to Climate Change", training courses on "Awareness of Climate Change" to the educational community, and multisensors-based measurements of the blue, green, grey actions carried out by students
- Opening of schools to a wider public through an "Open Courtyards" program

- Evaluation of the impact of blue, green and grey measures to adapt schools to the heat on qualitative and quantitative health and wellbeing

Partnership: Barcelona City Council; 2 Sectoral Agencies: Public Health Agency of Barcelona; Barcelona Consortium of Education; 1 Public Service Provider: Barcelona Cycle of Water; 2 Higher Education and Research Institutes: Barcelona Institute for Global Health; Institute for Environmental Science and Technology UAB; 1 School: Vila Olimpica School

RESILIO

City of Amsterdam

Gemeente Amsterdam

ERDF Budget: € 4,814,248.00

Amsterdam has done small proof-of-concept tests on single green roofs with enhanced rainwater storage. Plant evaporation and water retention capacity of blue green roofs are several times higher than simple green roofs. It is expected they are better equipped to help cities adapt to climate impacts by reducing urban heat island effect, impacts of heavy rain and drought while improving building insulation, air quality & biodiversity. A smart control allows the roofs to anticipate extreme weather, i.e. emptying water pre-emptively to buffer more during a storm. By linking roofs into a smart grid, the key innovation is an adaptive type and scale of micro water management for locally optimized climate adaptation.

RESILIO uses an interdisciplinary approach with public and private stakeholders to realise 10.000 m2 of blue green roofs and engage 1500 citizens in 4 pilot areas. These areas supply information on technical, governance, hydro-meteorological aspects and data is gathered to estimate costs and benefits for a business model to stimulate upscaling. Finally, potential impacts of city wide implementation of a blue green roof smart grid will be explored. RESILIO will enable building owners and EU city planners to decide how blue green roofs can become a feasible adaptation measure for their specific climate risks.

The project's main implementation activities will include:

- Implementation of the Innovation Lab for testing and experimenting around the blue green roof system upgrades that will also serve as a demonstration centre - the main focus of testing will be the energy performance, the smart flow control and customisation to existing roofs of the blue green roof system
- Implementation of the water management platform (ICT Tool), which will gather data from various sources and will function as an intelligent system to facilitate citizens and other stakeholders in the water management of their roofs
- Development of the governance models that distribute roles and responsibilities regarding the development and (water)management of blue green roofs including the key element of citizen involvement
- Implementation of a grant scheme to facilitate the realisation of blue green roofs by roof owners and other stakeholders.

- Physical investments : implementation of the blue green roofs in 4 pre-selected areas of Amsterdam
- Impact assessment of blue green roofs at building level, district and city level as well as social cost-benefit analysis & business modelling in order to create a complete business case

Partnership: City of Amsterdam; 4 Public Service Providers: Waternet; Stadgenoot; Ymere; De Key; 2 Higher Education and Research Institutes: Amsterdam University of Applied Sciences; Institute for Environmental Studies; 1 private foundation: Rooftop Revolution; 2 private companies: Polderdak; Consolidated;

CartujaQanat

Seville City Council

Ayuntamiento de Sevilla

ERDF Budget: € 3,999,107.96

The city council of Seville leads a strategy of systemic approach to urban adaptation to climate change, combining experience, knowledge and capabilities of public entities, universities and research centers and companies. Together they will develop the urban ecosystem in two phases, a pilot where the same structure of the street will be modified to facilitate a demonstration environment in the combination of different technological approaches and a new Governance and public-private collaboration system for the promotion and expansion of the new ecosystem throughout the fabric of the city. The combination allows the systems to be modular, adaptable and versatile for their duplication.

The project's main implementation activities will include:

- The conceptual design of CartujaQanat will be elaborated including the elements of consist of a water and air cooling system, taking benefits of traditional designs of Persian architecture; design of public spaces (indoor and outdoor) and the use of porous pavements and coatings with evaporating functions in various locations
- Special education and training will be developed to educate the stakeholders and define the CartujaQanat business model by assessing the economic viability of the initiative
- Development of the Citizen Lab, a hybrid lab - a mixture of social innovation, environmental and cultural lab- in charge of carrying out city innovative activities ensuring citizens' and stakeholders' participation, acting as an entrepreneurship incubator and looking to solve city and citizens' challenges.
- Development of the Governance and public-private collaboration system that will be based on democratization, transparency controls, empowerment of the citizens, collaboration between public-private parties and flexibility on individual participation
- Physical investments : implementation of the pilot where the same structure of the street will be modified to facilitate a demonstration environment in the combination of different technological approaches
- Implementation of the societal impact and innovation analysis with specific methodology to measure the eco-innovative and social impact generated

- Development of the city transformation plan that will contribute to an effectively construction of initiatives for climate change, through an analysis of the city and citizens ecosystem that will clearly identify gaps and areas of collaboration.

Partnership: Seville City Council; 1 Local public authority: Seville Town Planning Department; 1 National public authority: Spanish National Research Council; 2 Higher Education and Research Institutes: University Of Seville; PCT Cartuja; 1 private foundation: Innovarcilla;

IGNITION

Greater Manchester Combined Authority (GMCA)

ERDF: € 4,559,842.20

Cities face growing challenges due to a changing climate, particularly through increased flood risk and heat waves. The IGNITION project will aim to establish funding and deliver mechanisms for nature-based solutions (NBS) such as green roofs for water and flood management or green walls, to combat urban overheating. It will identify a longer term pipeline of projects, which will enable a 10% increase in Greater Manchester's urban green infrastructure coverage by 2038 in order to manage the impacts due to a more extreme climate. The project will develop the innovative funding and delivery models and processes to deliver this pipeline in both a phased way and at large scale; by doing this, it will persuade businesses and organisations to invest in these NBS climate change adaption features to a value of at least €10m.

The project's main implementation activities will include:

- Developing a pipeline of fundable NBS projects based on forecast climate change risks, citizens' and local stakeholders' needs and opportunities through planned development and regeneration in two Phases: Phase 1 up to 2022, Phase 2+ for delivery after 2022.
- Undertaking technical and financial feasibility assessments of projects of Phase 1 of the project pipeline.
- Developing business models and funding mechanisms for attracting investment on NBS projects for >€10m, setting out all related financial and non-financial benefits.
- Securing funding from investors for delivering of Phase 1 of the project pipeline.
- Designing and establishing a Climate Adaptation Services Company (CASCO) for delivering and maintaining Phase 1 of the project pipeline, and the respective governance, policy and financial frameworks within which CASCO will operate.
- Drafting and developing set of contracts for funding, delivery and long-term maintenance of Phase 1 of the project pipeline between involved stakeholders.

Partnership: Greater Manchester Combined Authority and 2 municipalities: Manchester City Council and Salford City Council; 1 environmental agency: Environment Agency; 3 business community representatives: Business in the Community, United Utilities and UK Green Building Council; 3 NGOs: City of Trees, Groundwork and Royal Horticultural Society; 2 higher education and research institutes: Manchester and Salford universities.

OASIS

City of Paris

ERDF Budget: € 4,995,793.16

The OASIS project aims to create a new solution to design and transform urban spaces to adapt to climate change effects. 10 pilot school playgrounds across the city of Paris will be converted into cool islands using a combination of innovative technical and nature-based solutions. Each playground will be transformed following a comprehensive co-design approach with pupils and educational communities. The project ambition is to contribute to address health risks associated with heatwaves while fostering social cohesion at neighbourhood level. By developing a methodology of co-design with the schools' pupils and educational communities, adapting urban authority working methods to the transformation of these spaces and applying a protocol of contributory democracy, OASIS aims to raise awareness, educate and engage citizens of all ages in the improvement of their living environment. The transformation of the playground will also be an opportunity to involve local residents in a collective reflection in the possible uses as well as collective management of this new cool spaces through the establishment of 'oasis collectives'.

The project's main implementation activities will include:

- Co-designing and co-developing transformation scenarios of school playgrounds with the educational community and school pupils, based on current and future use, needs and requirements.
- Designing an educational toolkit for educational communities on issues related to urban transformation and teachers' training on climate change, water management and shared spaces.
- Collection and analysis of data on each pilot site (measurements, ground surveys, infrastructure diagnosis) for defining a set of standard specifications for the adaptation of urban spaces (in the form of a free software).
- Implementation of transformation works on school playgrounds
- Development of a transformation methodology (including identification of solutions for adaptation to climate change, standard specifications, implementation recommendations based on evidence) for ensuring transferability and scalability of OASIS
- Development and delivery of climate-change and resilience awareness courses for the involved schools, including workshops and visual material.
- Defining the future governance of OASIS playgrounds based on a democracy protocol consisting of citizen assemblies
- Assessment of social and climate-related impacts of the OASIS interventions, using fixed and mobile micro-climatic measurement, sensors, 3D climate simulations for temperature, humidity, wind speed, thermal stress, etc.

Partnership: City of Paris; 2 higher education and research institutes:
ESIEE and LIEPP; 1 Architecture, Urban Planning and Environment public service provider: CAUE de Paris; 1 education association: Ligue de l'enseignement - Federation of Paris (LIGUE); 1 meteorological and climatological institute: Meteo France.

GUARDIAN

Riba-roja de Turia

ERDF Budget: € 4,395,803.80

The GUARDIAN project addresses the increasing risk of peri-urban fire as a result of climate change, particularly prominent in the Mediterranean basin. The project aim is to improve the resilience of the affected peri-urban areas by reducing risk fire and limit its expansion to inhabited areas. To do so it will test an integrated set of actions combining preventive, pre-defensive and defensive irrigation with vegetation transformation, automated monitoring and self-defense training for the population in the affected areas. In the wildland area of La Vallesa, located in the two neighbour cities of Riba-Roja de Turia and Paterna, the partnership will develop a prevention and protection system covering all the cycle of fire risk management through the creation of transitional 'green belts' reusing treated waters. Based on a network of sensors, a monitoring and command system will be developed to calculate the amount and spatial distribution of irrigation to compensate soil moisture deficit, and will automatically deliver it to prevent and protect fires.

The project's main implementation activities will include:

- Conducting studies on fire risk analysis, availability of water, future climate scenarios.
- Statistical analysis of forest fire patterns, severity and frequency and development of forest fire scenarios in the area, their possible evolution and intensity.
- Design of risk mitigation measures focusing on vegetation structures and treatments (controlling fuel load, protecting soil structure, ensuring water availability).
- Design of a water re-use infrastructure (networks and devices) including piping, pumping, flow control and irrigation systems.
- Transformation of vegetation complex and soil structure, implementation of water distribution and treatment infrastructure, development and implementation of specific fire risk indexes.
- Implementation of the GUARDIAN Self-protection system – a mechanism for processing data collection, calculating risk indexes, providing decision support and delivery of irrigation patterns for the prevention, pre-suppression and fire extinction in the area based on a sensing and monitoring approach.
- Self-defence training of the population potentially affected by forest fires in the area.

Partnership: Cities of Riba-Roja de Turia and Paterna; 1 public water management company: Hidraqua;1 SME: Medi XXI; 3 higher education and research institutes: Cetaqua, IIAMA and University of Valencia; 1 natural park: Túria Natural Park