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The Urban Lab of Europe !

The CartujaQanat project Journal N° 1

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**CLIMATE
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The CartujaQanat project

CartujaQanat project aims to experiment new urban design techniques and tools at street level to improve environmental comfort while promoting social exchange and positioning the city of Sevilla as a frontrunner for urban adaptation to climate change.

As part of a wider urban regeneration operation, the project will test a set of actions that will bring together traditional architectural knowledge, new technologies and a new governance model.

A street in the Cartuja island will be the testbed to deploy and test in a real urban scale a combination of different technological solutions such as refreshing facilities (qanat), underground galleries, bioclimatic amphitheater, fixed and mobile solar covers. The testing phase will be supported by the design of a new governance for public-private collaboration to promote and expand a new ecosystem throughout the fabric of the city allowing the duplication of the project's developments.

Partnership:

- Seville City Council (and its Planning Department)
- EMASESA - public service provider for the Integral Water Cycle in Seville
- 1 higher education and research institute: University of Seville (USE)
- Spanish National Research Council (CSIC)
- PCT Cartuja - managing company of the Science and Technology Park Cartuja
- Innovarcill - non-profit foundation specialised in R&D&I for ceramic industries

Table of Contents

1. EXECUTIVE SUMMARY	4
2. CURRENT PROGRAM ADVANCEMENTS: YEAR 1 SUMMARY	6
2.1 Programme advancements at a glance	6
3. CARTUJAQANAT IN ITS FIRST YEAR – 7+1 GOVERNANCE CHALLENGES AND HOW THEY ARE ADDRESSED	9
3.1 The overarching implementation challenges at the initiative level	9
4. HOW THE PROJECT FITS IN THE POLICY CONTEXT AT THE EU, NATIONAL AND REGIONAL LEVELS	14
5. CONCLUSION	17

1. EXECUTIVE SUMMARY

The CARTUJA QANAT program is about urban transformation and adaptive governance under changing climatic conditions through the recovery of an underutilized public space in Sevilla. Through a process of cocreation and participative design the program is exploring site- transform through the principles of placemaking into a place of coexistence and an ecosystem of social, economic and environmental relations and development (adaptive-participatory-tactical urbanism).

Bringing together three key areas of the European Urban Agenda: Climate change, Social Innovation and Public Space revitalisation through a systems-approach and using water management as an entry point, the Sevilla CartujaQanat program is by design, an ambitious and particularly relevant program for the European South and the entire Mediterranean region at large.

Sevilla, located in Andalucía in the South of the Spain is a beautiful midsize city, representing a typical example of a European Mediterranean city with an exciting past and an innovative outlook as a modern urban European centre adapting in the 21st Century challenges. With a long urban history spanning from Pre-Roman times, Sevilla acquired its present name around the 8th Century AD and today culminates in an original and unique amalgam of antique, roman, Arabic, Imperial Spain and modern heritage. Notwithstanding, it also represents a characteristic case for a modern city around the Mediterranean, with a vibrant outdoor culture, longer and warmer days and an accompanying set of problems which demand adaptability and innovation in problem-solving. Namely, a predicted sharp rise in summer temperatures expected to be reaching

50 degrees Celsius for more consecutive days, more intense weather phenomena in terms of droughts and intense waterfall and flash-flooding cycles and, lastly, an expected augmentation in energy demands to help deal with the urban heat island effect. Ultimately the combination of these natural phenomena are due to disrupt the typical outdoors living patterns and undermine social cohesion and city-life by increasing health-related challenges and disproportionately affecting those citizens who are more poor and vulnerable.

La Cartuja, is an area centrally located in the city of Sevilla. Formerly an island on the river, Cartuja hosted the 1992 global expo and today it is home to over 100 country pavilions, a 15th-century monastery functioning as a contemporary art centre, several public parks and open spaces as well as university departments. Despite, however, its proximity to the centre of the city, Cartuja remains a large underused area, and with the exception of occasional open-air musical concerts it is largely unoccupied especially at night time. In an era when urban open space is limited, and in a geographical region with a vibrant open-air living and expected rising summer temperatures, the revival of the space is a key priority for the city.

These challenges lay at the heart of the CartujaQanat Program, awarded to the City of Sevilla in late 2018 running through the end of 2021, as part of the competitive pan-European Urban Innovative Actions (UIA) program funded by ERDF. The city joined Paris, Barcelona, Amsterdam and others in their aim to identify long-term implementable and scalable solutions for the diverse challenges climate-change

presents. CartujaQanat is a horizontal program led by the Municipality of Sevilla and EMASESA, Sevilla’s metropolitan water management company and is covering central key strategic priorities for the future outlook of the city centred around three pillars: Maintaining and enhancing the Mediterranean way of living by ensuring liveable outdoor spaces; identifying new technical and energy efficient ways to reduce the effects of the urban heat island in the city using water as an entry point; and revitalising public spaces introducing long-term governance changes exploring new social participatory management and entrepreneurship models to tackle economic and development inequalities.

More specifically, the program entails

- a governance & policy experimentation dimension that aims to the identification of multiple means of citizens-involvement in public-space management based on the ‘Urban Care Rights’ principles.¹
- A technical experimentation dimension that aims to answer how to maintain public spaces cool while reducing energy-consumption

through the use of water and air as cooling agents.

- Lastly, the project seeks to address the socio-economical goals of increasing and diversifying job-prospects and skills around the green economy. Through organised participatory outreach mechanisms targeting local and global stakeholders the program is due to develop innovative business solutions building on the natural and technical innovations the project is expected to produce.

The area of Cartuja itself has been chosen as the most appropriate experimentation ground due to the availability of a diversity of public spaces and its strategic location in the city looking to place Seville as a specialized territory in climate change, urban adaptation and bio-climate in order to recover street life. Ultimately, the Seville CartujaQanat program is due to offer an adaptable and expandable model for climate change adaptation and citizens’ equity offering a new and innovative governance system at the urban-scale for the Mediterranean and beyond thus delivering a combination of SDGs and overall integral sustainability for prosperity.



¹ The Urban Care Rights principles are pertinent to the field of environmental justice and the intersection of human rights and Urban Care (See sections 3 and 4 in this document for further analysis).

2. CURRENT PROGRAM ADVANCEMENTS: YEAR 1 SUMMARY

Each European city participating in the UIA program has accepted that there is a need to radically change the way policies and services are delivered in order to adapt to 21st Century urban challenges and as such they test new approaches on the real urban scale. The city of Sevilla is undertaking such steps as a central mayoral priority and together with EMASESA, Sevilla's metropolitan water management company, they are adopting a long-term systems approach to problem-solving through water-management, placing citizens' quality of life and equitable development as central goals in their planning and delivery approach, implemented by a consortium of local **partners with an international standing.**

These partners are

- the **Seville City Council (SCC)**
- **EMASESA** (the metropolitan water company covering 12 municipalities) which is the key managing partner.
- **PCTCartuja** which is the management company of the Science and Technology Park

Cartuja and will carry out amongst others all communication and business development stakeholder engagement activities

- the **University of Sevilla** who acts as the key technical partner alongside
- the **Spanish National Research Council (CSIC)** and **Innovarcilla** foundation both of which will be involved in the design of new materials and solution development at scale;
- the **Seville Town Planning Department (DGUrbanism)** which will be key to governance integration and scaling

Having formally kicked off in January 2019, the UIA CartujaQanat program has now completed its first year of implementation and all key preparatory stages relative to collaboration with local stakeholders, detailing roles and responsibilities and building the appropriate knowledge basis for forthcoming technical, business and governance experimentation. This first implementation year included:

2.1 Programme advancements at a glance

2.1.1 Largely completing the main preparatory administrative steps which cover horizontally the program in its entity including detailing and agreeing upon the activities of each local partner, completing the contractual agreements within the City Administration, political

leadership and the UIA secretariat; fixing and approving procurement guidelines for materials and services required and planning and coordinating the first public outreach events to announce the project while building a stakeholders' basis.

2.1.2 Advancing under the guidance of the University of Sevilla the technical experimentation side in the area of Cartuja for onsite nature-based cooling agents and the development and standardisation of new materials such as water absorbing concrete. The partners are re-visiting the time-old technique of water as a cooling agent brought in the region during the Arab period, while in parallel marrying the ‘canat’ or aqueduct to solar energy to bring a 21st Century approach to the use of water and air as

cooling agents. The idea that is being tested is relatively simple. Building an appropriate sized long underground aqueduct, stored underground water will act during daytime as a natural cooling agent for hot air that will be circulated downwards through appropriate over ground pipes (or similar). Cold air will then be ‘pumped’ through solar-energy upwards and distributed in the open public space delivering a natural cooling effect creating localised ‘wind streams’ through the natural cold/hot air properties.



At night time, the underground water will be pumped on the surface, creating a visually pleasant atmosphere through fountains or similar techniques and will naturally be cooling down given the sharp drop in temperature at night time. Such techniques will be used as appropriate in synthesis with existing nature-based

solutions to test the formation of new public spaces such as underground galleries or conditioning solution of open areas of high occupation. As there are multitude techniques that can allow for the successful cooling cycles of water and air, several tests are currently ongoing to control for technical viability,

energy consumption requirements, space requirements as well as material requirements which include penetrable concrete and other materials for water management. The additional foreseen benefits are addressing the problem of flash-flooding and water absorption and will allow for the production of a set of combined business packages for green urban development that can be accelerated in the market. Ultimately,

if the technique is successful it can be applied to any type of public space from a bus-stop to a square or an open-air amphitheatre and deliver a diversity of new business models related to climate change and inclusive growth bringing together the use of traditional materials such as ceramics and thus helping maintain and transform century old artisanal businesses.



2.1.3 Undertaking and completing a detailed desk-research providing an extensive literature review on the diversity of participatory governance systems and social entrepreneurship based on international, European and Spanish established practices and accounting for existing legal frameworks. The goal for the specific work, however, is to provide a recommendation on what is the appropriate means of governance for a public space that will allow for the delivery of the ‘Urban Care rights’ principles ensuring equitable and democratic urban development. The recommendation calls for the adoption of a pioneer approach for Europe, that of a cooperative of business-boosting public services.



3. CARTUJAQANAT IN ITS FIRST YEAR – 7+1 GOVERNANCE CHALLENGES AND HOW THEY ARE ADDRESSED

Despite progress, there were however significant barriers in delivering the initially foreseen steps for the first year. **What are the key factors that may constitute expected (or least expected) barriers when it comes to a large-scale urban transformation and adaptive governance program such as CartujaQanat?**

Some of these are:

- The time factor; in other words when it comes to developing a complicated governance innovation program with multiple partners, time-management and partner alignment is critical and may play a role in hindering progress especially when it comes to adapting and aligning planning and organisation among all consortium members and additional external entities and completing all necessary administrative steps which are necessary for successful implementation.
- Identifying and designing for the most appropriate communication channels to ensure citizens' engagement especially in a multidimensional program such as

CartujaQanat. The program calls for multi-layered stakeholder engagement both with targeted stakeholder-groups in order to identify climate-adaptation solutions for business scale-up and target participants who will co-create a new governance PPP based model. In parallel it also calls for broader communication strategies for the wider public in order to achieve the revitalisation of Cartuja area itself on the basis of the initially delivered governance and business innovations.

- Developing the appropriate technical methodology and incorporating new technical requirements in established procurement processes is equally time-consuming and may affect timely delivery of the program but is central to the long-term success of such a program. It is directly linked to the process of applying research and data in city governance or adapting the model for scalability all equally critical for success and foreseen in the implementation of an experimental program such as CartujaQanat.

3.1 The overarching implementation challenges at the initiative level

3.1.1 Leadership for implementation:

Adaptive governance is a principal dimension of the CartujaQanat program, which aims to

explore and propose a new system of planning and organising geared to the 21st Century

challenges the city is facing. Building leadership across the political, technical and administrative sectors is in turn, a component of success when considering the process of institutionalising innovation and transforming governance to allow for flexible problem-solving and crisis management in cities in the upcoming years. In this spirit, CartujaQanat program will lead to the development of the first permanent Citizen Lab which is due to function as an innovative hybrid

3.1.2 (Smart) Public procurement:

The CartujaQanat program is presenting a set of procurement-related challenges that require from the city administrators tangible innovative problem-solving. A key puzzle is relative to the question of how to incorporate new procurement guidelines for materials that are currently in the experimentation stage. Such materials, include permeable and absorbable concrete, different types of ceramics that may act as cooling agents and other related specifications relevant to the product development and technical experimentation stage where the program is

lab between social innovation, environmental and cultural lab. It will be 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. Leadership is defined in this sense as the extent of direct stakeholder involvement and citizen-ownership of activities at city-level outside the strict framework of the partnership itself.

currently at. At the current stage of the program, technical requirements are in fact being drafted in order to facilitate the partner to partner collaboration (between the City, EMASESA and the University of Sevilla for example) to facilitate the pilot delivery of the project as well as to allow for the procurement of the appropriate materials at the pilot stage. Nevertheless, this is a crucial step as these guidelines will then inform a broader internal guidelines guide that will be produced in order to allow for the transfer and scaling of the program in other areas of the city.

3.1.3 Organizational arrangements within the urban authority (cross-department working):

This is fundamentally a change-management process that can be in other words described as the introduction of principles of horizontal management and collaboration in city-administration. It is achieved by re-directing organisation and planning towards goals delivery and holistic problem-solving, as opposed to process oriented project management and it is directly linked to building leadership for implementation. It can be particularly challenging to ensure the involvement and coordination of colleagues from different departments within the urban authorities. In the case of CartujaQanat, as

in other EU-funded programs the city is directly collaborating with EMASESA who is the leading managing partner for the entire consortium. This approach is in fact building on an additional legacy that the city has established related to utilities coordination for service delivery at the metropolitan scale as all key urban utilities form part of a single coordinating agency. This model of operation provides not only for the improved vertical coordination between any project implementing partners but equally for the improved service delivery, ecosystem management and knowledge transfer between

utility companies in the city. Of course, broader ecosystem management and cutting through barriers is not guaranteed without effective coordination mechanisms which are incorporated within city-administrations. Significant capacity-building and adaptive resilience approaches

are still required and it can be adhered that the UIA CartujaQanat program will provide for an important framework for such processes to be further developed and transferred within local administrations in the region starting from the metropolitan area of Sevilla.

3.1.4 Participative approach for co-implementation:

Similarly to other cities in Europe, the Sevilla City Council has developed over the last years a multi-dimensional approach to facilitate partnership and coalition building for improved service delivery as well as management of external funds and incorporation of lessons learned in city-government. As water management is the key entry point to approach urban transformation in the case of this program, it functions as the key management authority responsible for budget distribution and partner coordination as well as the delivery of key aspects of the program. Program partners are organised horizontally in three planning and management committees touching upon the overall management of the

program (Steering), the technical committee and communications component. While standard, the functionality of this arrangement beyond the directly involved program-management team remains to be seen especially as the program is due to enter in 2020 the critical stage of engagement with external stakeholders in the city. More so it can be added, that committee involvement often remains at a very high-level and can therefore only be successful if specific asks are made each time from participating members. Following the organisational planning of such meetings will be an interesting component as the program evolves.

3.1.5 Monitoring and evaluation (measurability):

As this is a significantly varied program there will be several different ways and KPIs to identify what success looks like and understand the impact of the intervention both in the short but equally importantly in the mid and longer run. In the CartujaQanat case, therefore, success will be understood in terms of a key set of qualitative and quantitative factors divided in two distinct categories. The first category is directly related to the program dimensions and delivery goals. Under this category, measurability factors will include but will not be limited to: the proportional increase of visitors in the CartujaArea; the number of new green economy business ventures that will emerge from the research and outreach work; the Number of

craftsmen interested in researching innovative products for professional and traditional sectors; the degree of ambient feel in terms of cooling the selected pilot space and the actual temperature drop; the amount of energy-savings and in the mid-term the reduction in non-renewable energy consumption; the number of new techniques that will emerge for water management in conditions of drought or flush-flooding. The second category is related to governance and scalability and will include: the number of public spaces where the new cooling techniques will be scaled, the number of cooperatives that will be co-created for management and revitalisation of spaces and the types of activities that will take place; the degree of long-term incorporation of

new procurement and emerging technical and social requirements in the space-management and maintenance regulations and finally the number of individuals profiting with new job skill-sets, increasing prosperity in other areas of the city presenting similar challenges and lasting outdoor living in Sevilla.

3.1.6 Communication with target beneficiaries (end users):

The program's success is heavily dependent on successful engagement of stakeholders as well as of the broad public definitely at the local level when it comes to public-space activation but also nationally or even internationally when it comes to developing and upscaling new business models and products related to the green economy, as these will emerge from the CartujaQanat technical experimentation. CartujaQanat, should in fact be understood as a multi-dimensional participatory engagement program. However, as the first year has been preparatory and initially focused on building an appropriate technical and policy baseline, there hasn't been to this moment a heavy participatory process which is expected to run in the second year of implementation. This was due primarily to delays on closing all necessary administrative

Ultimately, each implementing partner will be responsible for proposing and developing a distinct set of variables to be defined as the program develops on the basis of an existing starting baseline that is grounded on the key challenges the program is aiming to solve for.

and contractual agreements which are necessary for any type of legitimate outreach to take place. Key audiences have nevertheless been informed through the public announcements and press events that took place earlier in 2019. A participatory co-design process will be put in place from January to April 2020 focused on a set of target offline meetings to start engaging the Sevilla local businesses while discussions have been taking place in order to determine the extent of successful outreach when it comes to procuring 'green-business' development ideas. As the entire program is fundamentally targeting co-creation as a key agent of success, it is going beyond one-way communication and arguably is one of the most challenging dimensions of the entire program given the diversity of actors and variability of success factors.

3.1.7 Upscaling:

Even if its early days in the program, there are significant steps in place to ensure upscaling of results as the program matures in the second year. The program itself already forms part of a set of three in total complimentary EU funded programs, which all explore the same challenges when it comes to public space revitalisation in extreme heat circumstances. The three programs are all run by EMASESA on behalf of the City of Sevilla, provide critical data for technical and social improvements for delivery which together will be incorporated in a new services-delivery modus operandi potentially across the entire

metropolitan area of Sevilla. For the CartujaQanat partners the program is a means to successfully introducing a new approach in urban planning using water management and more generally using utility services as integral sustainable development vehicles. Additionally, to ensure upscaling as the project matures, next steps will include testing successful and cheap technical solutions for replicating the Canat water cycle for cooling and detailing and testing new guidelines to incorporate the necessary requirements for procuring new material and delivery-targeted public tenders.



3.1.8 Regulatory framework and policies for social innovation and citizen co-management and urban development projects co-implementation:

This policy challenge is central to the project and together with the technical upscaling goals probably constitutes the most significant barrier for successful implementation over time. This dimension brings together all key pillars of the CartujaQanat program as it is about creating an appropriate new framework that will allow for a collaborative, profitable and equitable management of a space such as the Cartuja area, in line with its existing management authority but introducing new principles for collaborative management and impact creations. Andalusia, is amongst the pioneer regions in Europe promoting social innovation and entrepreneurship, yet and despite the positive background, new rules and regulations will be likely needed to be adopted at the regional and city level to ensure

all requirements are met. Having developed a detailed and extensive review of regulatory practices and securing leadership support with the direct involvement of the Sevilla Deputy Mayor for Social Innovation, the next period will require an intensive information and partnership building process at all government levels to drive forward the necessary policies required for the operation of an integrated cooperative of business-boosting public services delivery model with citizens, private and public sector entities combined in one authority offering a new model of public-private governance which is deemed necessary to allow for rapid adaptability and problem-solving in conditions of increased volatility and unpredicted risk.

4. HOW THE PROJECT FITS IN THE POLICY CONTEXT AT THE EU, NATIONAL AND REGIONAL LEVELS

CartujaQanat is part of a cluster of UIA programs which all explore solutions to deal with the challenges of Climate Change in the urban context. Sevilla CratujaQanat also places an equal emphasis on integral sustainability and Urban Care Rights, which is equally reflected in the combination of relevant SDGs and the human centred development goals of the new European Commission.

It can therefore be understood as a climate and social innovation program targeting the future of jobs and public space equity through the lenses of climate adaptation and water as an entry point.

Climate change and equitable adaptation is a top-priority area for the new European Commission, which has taken office at the end of 2019. The European Green Deal, published at the end of December 2019, calls for the collective ability towards fast transformation of the European

economy and society to put it on a more sustainable and inclusive growth path with the EU at the driving sit of international efforts externally, and fast implementation internally living no one behind. In other words, it offers a horizontal holistic resilience approach to climate adaptation, firmly set on the delivery of the 2030 UN SDGs and the European Pillar of Social Rights.

*“Strengthening the efforts on climate-proofing, resilience building, prevention and preparedness is crucial. Work on climate adaptation should continue to influence public and private investments, including on nature-based solutions. It will be important to ensure that across the EU, investors, insurers, businesses, cities and citizens are able to access data and to develop instruments to integrate climate change into their risk management practices”.*²

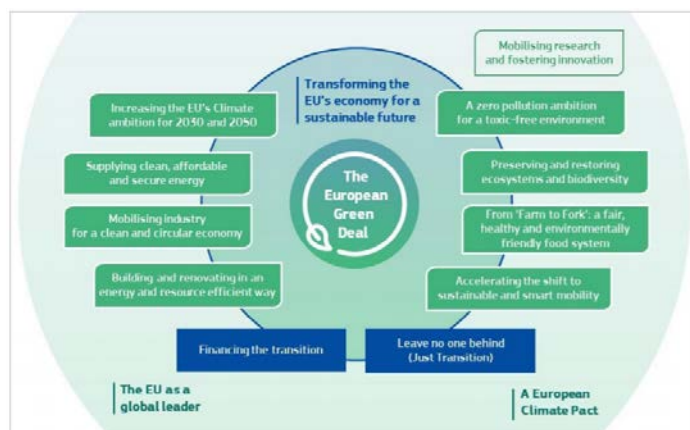


Figure 1: The European Green Deal

² European Green Deal Communication, p.5, https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf, accessed on 13/01/2020

The European Green Deal calls for a set of policies in direct relevance to cities and is complemented through the goals of the European Urban Agenda now culminating in the European Urban Initiative (EUI) for the next programmatic period. Breaking down the relevant points, the policies identified are:

- Rendering transport in cities significantly less polluting by pushing forward a set of transformative measures to address emissions, urban congestion and improve public transport.
- Increase biodiversity also in urban environments and include this issue in the formation of a pan-European nature restoration plan, which will be considered for drafting.
- Accounting for diversity in social and geographic circumstances among citizens and between cities and regions in the EU a Just Transition Mechanism, including a Just Transition Fund will be part of the Sustainable Europe Investment Plan.
- Achieving breakthrough Green Deal innovations including promoting the formation of four major-scale Green-Deal missions to help deliver large scale changes horizontally in cities and other major 'areas' including oceans and soils. Innovation and Research will be key to achieving these goals and as such Horizon and ERDF funding will continue to be complimentary in this direction.
- Forging Green alliances internationally with a special focus on using diplomatic and financial tools as part of the EU's relations with Africa and other partner countries

and regions, particularly in Latin America, the Caribbean, Asia and the Pacific. Cities can be instrumental in this sense as Mayors and senior urban and regional actors have increasingly over the past decade played central roles in advancing the agenda in the social and environmental sectors.

- The European Climate Pact to be proposed in March 2020 will provide a three-pillar approach to strengthening the bottom-up initiatives and citizens' action relating Climate Change to the debate on the Future of Europe. Stakeholders' engagement and broader citizens' participation is placed centrally therefore in the agenda.
- The European Urban Initiative (EUI) *"aims to strengthen integrated and participatory approaches to sustainable urban development and provide a stronger link to relevant EU policies, and in particular, cohesion policy investments. It will do so by facilitating and supporting cooperation and capacity building of urban actors, innovative actions, knowledge, policy development and communication in the area of sustainable urban development."* –60% of the foreseen budget in support of Innovative Actions with the additional 40% to be invested for capacity-building, knowledge sharing and policy development and communication.³

Regionally, Sevilla is part of the cluster of Northern Mediterranean which constitutes a specialised region for the EU when it comes to holistic climate adaptation policies and initiatives. There is a wealth of key policies adopted over the current programmatic period (2014-2020) including but not limited to The INTERREG V B **MED Programme** 2014-2020 which aims to promote

³ Explanatory Memo: European Urban Initiative - Post2020, https://ec.europa.eu/regional_policy/sources/docgener/brochure/explanatory_memo_eui_post_2020_en.pdf last accessed on 13/01/2020

sustainable growth in the Mediterranean area by fostering innovative concepts and practices (technologies, governance, innovative services) will encouraging the sustainable use of natural and cultural resources and supporting social integration, through an integrated and territorially based cooperation approach.

Notwithstanding, the city of Sevilla, as signatory of the Covenant of Mayors amongst others, is approaching climate-adaptation systemically, targeting the successful long-term address of climate-change challenges through the lenses

of social transformation. In other words, the Mayoral team and key city actors are looking to solve for the new predicted challenges by adopting a series of measures that are meant to support the welfare and economic potential of the citizens. This approach, directly reflected in the CartujaQanat program, is in line to regional Andalusia Smart Specialization Strategy(RIS3), aligning the local economic and environmental development policies, the local MasterPlan for Innovation and the HealthyCity plan prioritising nature-based solutions and environmental criteria over grey surfaces and classical urbanism.

5. CONCLUSION

CartujaQanat is directly serving the renewed Urban Agenda call for fewer, but more result oriented and high quality projects⁴ by placing a key emphasis on the need identification of a broad target group consisting the Sevilla short and long-term residents. In parallel, it foresees a measured scalability model based on the principles of flexibility and adaptability of space and needs when it comes to rendering public spaces cooler, more viable in heat circumstances and vibrant testing the hypothesis that the nature-based technological innovations can be applied at low cost to a range of spaces within a city notwithstanding their size. The program is proposing new ways of citizens' direct involvement in public space usage on the basis of the cooperative principles to ensure a horizontal spillover of all benefits and connecting artisanal tradition to 21st Century innovations for the future of work. Last but not least, CartujaQanat is a governance innovation program aiming to identify the most appropriate models of adaptive city-governance, which are essential for urban prosperity in the 21st Century.

Exploring the achievements of the first year across eight selected governance challenges (Building leadership for implementation; addressing procurement needs for innovation; cross-departmental working; ecosystem management; measurability; communication with target beneficiaries, upscaling and regulatory change) it is understood that many of the completed tasks pertinent to administration requirements in

particular, are in reality far more complicated and crucial for success than is usually assumed. They often present significant delays and challenges, especially when it comes to introducing novelties in the public sector.

To ensure rapid and radical change when serving the goal of problem-solving at scale and institutionalising innovation in government, a combination of ambition, method and patience are essential because contrary to the private sector, government is mandated to deliver without failure and at the long-term and therefore any innovations must be able to become systemic and go beyond the 'pilot stage'. Crucially, the UIA framework is built in such a way as to allow experimentation and trial and error aiming nevertheless to ensuring that success will be clearly understood and will be implemented internally in the administrations in the long-run while scaled-up across Europe. Sevilla is committed in this direction and CartujaQanat serves these goals setting itself as a pioneer city for integral sustainability and human-centred urban development. Bringing together three key areas of the European Urban Agenda: Climate change, Social Innovation and Public Space revitalisation through a systems-approach and using water management as an entry point, the Sevilla CartujaQanat program is by design, an ambitious and particularly relevant program for the European South and the entire Mediterranean region at large.

⁴ <https://interreg-med.eu/about-us/what-is-interreg-med/>, last accessed on 22/01/2020



Urban Innovative Actions (UIA) is an Initiative of the European Union that provides urban areas throughout Europe with resources to test new and unproven solutions to address urban challenges. Based on article 8 of ERDF, the Initiative has a total ERDF budget of EUR 372 million for 2014-2020.

UIA projects will produce a wealth of knowledge stemming from the implementation of the innovative solutions for sustainable urban development that are of interest for city practitioners and stakeholders across the EU. This journal is a paper written by a UIA Expert that captures and disseminates the lessons learnt from the project implementation and the good practices identified. The journals will be structured around the main challenges of implementation identified and faced at local level by UIA projects. They will be published on a regular basis on the UIA website.



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