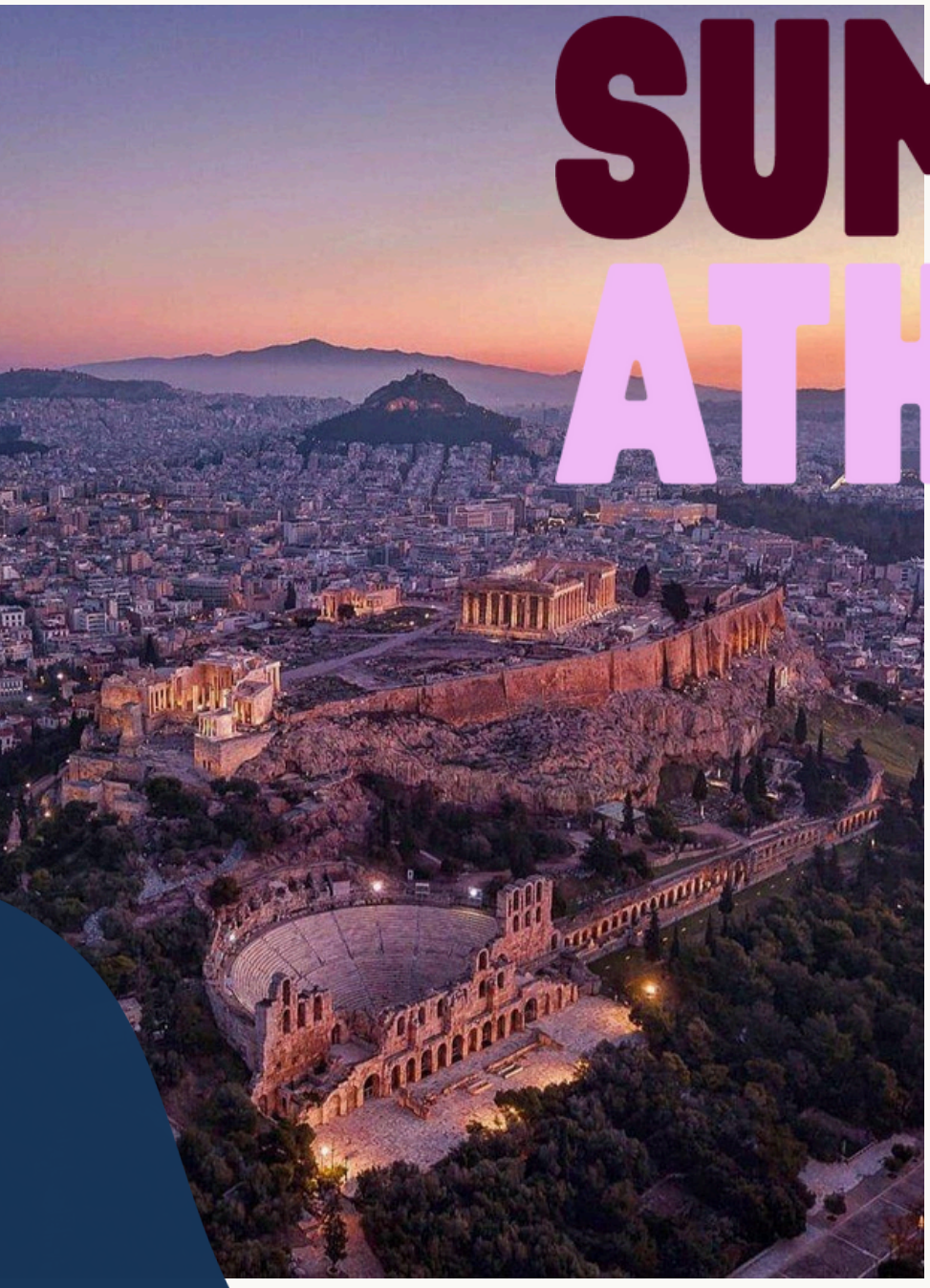
HEARTH SUMMIT ATHENS



Our Habitat
Wellbeing Cities

Pioneering
Sustainable
Urban Living

Oct. 31st -Nov. 1st, 2024

IMPACT HUB Athens

The Wellbeing Project

The Hearth Summit in Athens

Impact Hub Athens has been at the forefront of systemic change in Greece for the past 12 years, fostering social and environmental innovation and entrepreneurship through impactful programs and activities.

As a cornerstone of the Athenian ecosystem and a driving force of the innovation and startup communities across Greece, directly connected with 126 Impact Hubs around the world, we are dedicated to **driving sustainable transitions** and **catalyzing meaningful change** both locally and globally.

In partnership with The Wellbeing Project, we organises the **Hearth Summit in Athens, on October 31st & November 1st, 2024**. This two-day immersive experience delved into **sustainable urban living**, featuring **a curated arts and conference programme.**

The event attracted 120 participants from across Europe, with a primary focus on Greece, and it is being held for the first time in South and East part of the continent. A similar event took place in Brussels in 2023 and is part of **a series of 25 similar initiatives worldwide in 2024 and 2025**.

Our main goal was to explore the challenges and **co-design practical solutions** for how **large and small cities** in Greece can become sustainable and offer a quality of life for all social groups and economic activities they "host." The common denominator for dialogue and exploration was the prism of **ecology and environmental consciousness**.

We envision the Hearth Summit as an annual event, with plans to rotate locations between Athens and various cities in the Greek periphery, beginning next year.

IMPACT HUB Athens

Our scope

Habitat

/ˈhabɪtat/
the natural home or environment of an animal, plant or other organism

We envision living in cities and urban environments in harmony with our natural world, in comfort, safety, and happiness.

We seek to facilitate alliances that imagine, design, and create an economy where the rules, norms, and incentives are inherently set up to deliver quality of life and flourishing for all people, in harmony with our environment.

This vision prioritizes the wellbeing of both people and the planet, embodied through Environmental Sustainability, Social Wellbeing, and Economic Equity.

These principles are expressed across different “environments”, aka habitats:

- **The natural habitat**, connected with climate action, regeneration practices and resilience against natural disasters and climate change; what are the teachings that nature offers to us as a compass for harmonious living with ourselves and our surroundings? How can nature grow inside an urban area?

- **The living habitat**, what are the criteria for a wellbeing city? What does it offer to its residents? How do we move? How are the buildings constructed? How do we weave communities and cultivate the uniqueness of each place? How can we repopulate and regenerate urban areas in the periphery?

- **The economic habitat**, what does growth mean? What are the criteria for a harmonic and inclusive form? How do we ensure equity in mega- cities? How do we fight energy poverty? How do we promote green and qualitative jobs for all?

Core themes

Through an **open survey**, conversations and a series of 20 multi stakeholder co- creation workshops all around Greece, we have collected the key pillars that more than **450 people** in Greece see as vital for a Wellbeing City and the sustainable urban living:

- **Impact Economy vs Wellbeing Economy**: Exploring the shift from the impact-driven economy to one that prioritizes holistically the wellbeing and societal health.

- **Ecological Integration & Nature-Based Learning**: Incorporating nature-based practices into urban environments to foster sustainability and deepen our connection to the natural world.

- **Climate & Mental Health**: Examining the relationship between climate change and anxiety, and the rejuvenating effects of nature on our mental health.

- **Cultivating Vibrant Communities**: Discussing ways to encourage citizen participation in the development and maintenance of green spaces, enhancing social cohesion and revitalizing urban architecture.

- **Climate Resilience & Extreme Weather**: Implementing strategies to mitigate extreme weather conditions and keep urban temperatures moderate through sustainable urban planning and design.

- **Equity in Cities**: Addressing issues of poverty, employment, and housing to ensure equal access to the necessary resources for their life.

- **Sustainable Consumption**: Promoting conscious consumerism and responsible consumption practices from food to mobility to entertainment.

- **Climate Justice:** Advocating for fair and equitable policies that address the disproportionate impacts of climate change on vulnerable communities.

- **Decentralization & Repopulation**: Enabling cities in the periphery to thrive independently and drive their own growth and development.

- **Sustainable Tourism**: Balancing tourism with the preservation of cities' unique identity, nature and culture, while prioritizing the wellbeing of local residents and its alarming interconnection with climate change.

Core Experience Elements

MULTIMODAL WORKSHOPS & AGORA
Engage in hands-on sessions and formats, designed to inspire and equip participants with practical solutions for sustainable living and ecological belonging.

CO-CREATIVE ACTIVITIES
Collaborate with a diverse group of stakeholders to connect on a personal and cognitive level, develop actionable plans and forge new partnerships.

DECOMPRESSION ZONE
spaces that participants can learn about the healing effects of nature and take time for themselves by reading or relaxing

PANEL DISCUSSIONS & DEBATES
Hear from leading experts and thought leaders as they discuss critical issues and innovative strategies to adopt wellbeing as a goal for decision makers and influencers of the city life.

KEYNOTE SPEECHES & FIRESIDE SESSIONS
Gain insights from influential speakers who are shaping the future of urban sustainability.

ARTISTIC ENRICHMENT
Emerge into difficult conversations with the guidance of contemporary artists and embrace the topic from a sentimental perspective through performances and art installations.

POSTER SESSION
Researchers and startupers present their unique tech or soft solutions and theoretical frameworks for nature based practices in the urban context.

Posters Session

The Hearth Summit in Athens invited the submission of poster papers (work in progress/late-breaking research) to be presented in the poster sessions of the event. The goal was to **provide opportunities for participants from academia, public institutions and industry** to **interact with diverse audiences and present their latest developments** in the interest areas around the topic of Wellbeing Cities- Sustainable Urban Living.

Presenters exhibited their poster in a poster hall, where all Summit participants had the chance to walk by and engage in a fruitful conversation.

The Posters Session was hosted at Eteron Institute and the participants had the opportunity to interact with **14 research ideas and solutions from multidisciplinary backgrounds.**

This booklet includes most of them allowing more people to **engage and to access the poster ideas sparking a creative dialogue about the future of our cities.**

Hosted at: ETERON

THE POSTERS

Plausible Athens

Architecture is Climate is a project that reimagines the future of architecture through exploring its entanglement with climate breakdown. The installation: A mountain of rising CO2 emissions, cut to reveal the sediments of past climate breakdowns and architecture's complicity, is punctuated by white shards symbolizing gaps where futures—resistant to past violences—can be levered open, while on the reverse, a blue surface bears floating embroidery projecting prompts for confronting and transforming these crises.

Curated by:
Costas Bissas

Architecture is Climate

What if Athens was as a resilient community? How might it gently serve locals and visitors? How might it take care of its inhabitants given the climate conditions underway and the current technological developments? “Plausible Athens” is an artistic approach to mapping infrastructure and activities within the centre of the city of Athens: a dreamy, idealistic and on the verge of (non) realistic map of city center, which could exist. Food and energy production, weather extremes, technological developments, education, hospitality, mobility services and new belief systems are now in the hands of the local community, located downtown.

Curated by:
MOULD. EARTH

Creative industries, creative tourism and sustainability perspectives: The case study of traditional pottery-making in Crete

This study draws on the case study of pottery handcrafting in Crete, with origins tracing back to the Minoan civilization, as one of the ways to offer creative tourism experiences and at the same time abide by all sustainability pillars

Curated by: Papadaki Eirini, Arvanitaki Alexandra, Apostolakis Alexandros

Solar Hub Project. Community-based Urban Agrivoltaic Systems

The Solar Hub project will demonstrate how community-based agrivoltaic systems in urban areas can provide an innovative, socially inclusive solution to the challenges of climate change, food security, and urbanization, helping cities become more resilient, sustainable, and self-sufficient.

Curated by:
D.Kitsikopoulos, Dr. E. Papaioannou

In partnership with:
Electra Energy UA

Promoting greening tourism in Greece: The role of the Cultural and Creative Industries

The study “Digital Marketing of Cultural Organizations as a Driver for Enhancing Sustainability” advocates for a holistic approach that integrates cultural sustainability into urban development, ensuring that cultural organizations play a vital role in fostering sustainable communities.

Curated by:
Eirini Papadaki, Charis Avlonitou

Place 4 Hope: empowering youth through co-creation for climate change

Place4Hope- YOUNG PEOPLE & CLIMATE HEALTH
An online programme driven by a global community of young leaders who come together to co-create art works that address the urgent themes of planetary health and climate justice. Our vision is to empower young people worldwide to become agents of positive change through collaborative and creative initiatives that address pressing social and environmental challenges. We build an active and committed community of youth leaders, who create cultural works that advocate for cultural change and influence policy.

Curated by: Lucinda Jarrett, Creative Director of Rosetta Life Produced by Rosetta Life, supported by the Wellcome Trust for the Canopy, Climate Week, New York 2024.

The Aegean Film Festival's Echoes

The international Aegean Film Festival is an annual summer meeting point for filmmakers, audiences and artists to celebrate the finest independent cinema and storytelling. Filmmakers present their work at the purpose built cinemas we set up next to the sandy coasts or at the cobbled streets of the Aegean islands. Award winning premieres, parallel events, seminars, workshops, art exhibitions and an environmental conference complete the unique experience the Aegean Film Festival has created over the past 15 years

Curated by:
Aegean Film Festival

Inclusive co-creation: Fostering environmental equity in Smart Cities. The impact of grassroot environmental initiatives in engagement models

The research conducts a critical analysis of Smart City engagement models in terms of inclusiveness, highlighting the importance of environmental grassroots initiatives in preserving environmental justice and promoting social inclusion, using examples of co-co-creation processes from major smart cities.

Curated by:
Nicole Vermez, Panteion University

THE POSTERS

Exploring the Role of Crowdsourcing Platforms in Enhancing Citizen Participation

This poster explores how digital crowdsourcing platforms can enhance citizen participation for sustainable, livable, and resilient cities. It reviews relevant literature to identify platform characteristics and participation motives, such as gamification and altruism, that drive user involvement. As part of an ongoing study, select examples demonstrate how these platforms enable co-creation between governments, businesses, and citizens.

Curated by:
Aikaterini Katmada

From Ideas to Action: DestinE Platform Use Cases for a Sustainable Future

The DestinE initiative aims to create a digital twin of Earth. The DestinE Use Cases project is seeking use cases that demonstrate the benefits of using the DestinE platform. Examples include monitoring extreme weather, assessing urban climate risks, and supporting renewable energy policies. The project is also engaging the community to gather feedback and improve the DestinE infrastructure.

Curated by:
Eleni Karachaliou, Costas Bissas, Aikaterini Bakousi, Anna Dosiou, Zoi – Eirini Tsifodimou, Efstratios Stylianidis, Antonios Mouratidis, Eleni Katragou, Antonio Romeo, Sofia Catracchia, Rob Carrillo, Valeriya Fetisova

Mainstreaming Nature-based solution to promote climate resilience in the Mediterranean

The 2021 EU climate adaptation strategy underlines that NBS represent multipurpose, “no regret” solutions, simultaneously provide environmental, social, economic and aesthetic benefits. More than anywhere else, this is true for densely-populated, urban areas which are particularly affected by heatwaves and extreme precipitation, exposing residents and their wellbeing at risk. CARDIMED project, a part of the EU Mission on Adaptation to Climate Change, will mainstream NBS to improve Climate Resilience by delivering 36 different types of Nature-based Solutions through 90 interventions on a large scale in 20 locations across the Mediterranean

Curated by:
Tadej Stepišnik Perdih

In partnership with:
CARDIMED/ NTUA

Enhancing Urban Health and Wellbeing through Blue-Green Technologies

The 'HEART' project addresses urban health challenges by integrating Blue-Green (BG) technologies into city planning to tackle environmental, climate, and socioeconomic issues. Through case studies in Belgrade, Aarhus, and Athens, it explores BG interventions' impact on public health, environmental quality, and resilience to climate change, especially in underserved areas. The project promotes citizen engagement and provides evidence-based recommendations for local health policies to build sustainable, livable, and inclusive cities, enhancing wellbeing and reducing health disparities.

Curated by: Kon/nos Apostolopoulos , Christos Kontopoulos, Charalampos Zafeiropoulos , Anastasios Temenos , Anastasios Doulamis , Vassiliki (Betty) Charalampopoulou

Empowering rural areas through entrepreneuship: The case of Rural Innovation program of Impact Hub Athens

This research presents the main results of a mixed methodological approach - quantitative with the collection of data from the beneficiaries of the program and qualitative with in-depth interviews with local entrepreneurs and other stakeholders - with the aim of investigating if sustainable entrepreneurship can enhance employability in the Greek region and attract new human resources and what is the role of the green transition in the development of the business ecosystem at the local and inter-local level.

Curated by: Lida Tsene
In partnership with: Impact Hub Athens

Sustainable Consumption in Greece: evolution, challenges and opportunities

This poster presents the main findings of a qualitative and quantitative research conducted in 2022 regarding the perceptions, trends and limitations of sustainable consumption in Greece. The research is part of the Ten Million Hands project and was supported by Impact Hub Athens and Helidoni Foundation.

Curated by: Lida Tsene
In partnership with:
Impact Hub Athens, Ten Million Hands

Research Papers

Digital Marketing of Cultural Organizations as a Driver for Enhancing Sustainability

Abstract

This paper explores the role of digital marketing in advancing sustainability within cultural institutions, focusing on the Greek cultural sector. A survey of 26 cultural managers and policymakers from Greek museums and cultural organizations provides insights into digital strategies, challenges, and sustainability efforts. The study also highlights best practices from global leaders like Museum of Modern Art (MoMA) and the Metropolitan Opera (the Met), while considering the impact of human-centered management on arts marketing and audience engagement amidst socio-economic and technological changes.

Using a mixed-methods approach that combines a literature review, observational techniques, and primary research, this study highlights the unique potential of cultural institutions to drive sustainability as both market and public goods. It suggests that Greek cultural organizations could benefit from a deeper cultural understanding of sustainability, prompting a reevaluation of its role in organizational strategies. The paper advocates for a holistic approach to help cultural professionals and policymakers recognize sustainability's broader benefits in promoting economic resilience, environmental stewardship, social justice, and urban well-being.

1. Problem statement – study aim

In an era of globalization, digital transformation, and climate crisis, museums and cultural organizations are crucial in tackling global challenges. This study explores how digital marketing, particularly social media, can enhance sustainability in cultural organizations. It argues that digital marketing can advance sustainability across environmental, economic, and social dimensions while promoting cultural values. Focusing on Greek institutions, it evaluates their commitment to sustainability and draws insights from international best practices, including MoMA and the Met, to highlight effective strategies.

The study seeks to address the following questions:

1. How does the international community approach sustainability in museums and cultural organizations, and how is cultural identity integrated into this framework?
2. In what ways can digital marketing contribute to promoting both cultural and overall sustainability for cultural organizations?
3. How do contemporary Greek cultural organizations approach digital marketing and sustainability? What strategies and challenges do they face, and how can they improve

2. Literature Review

Sustainable development, as defined by the 1987 Brundtland Report, emphasizes meeting present needs without compromising the future (WCED, 1987). The 2015 UN 2030 Agenda expanded on this with 17 Sustainable Development Goals (SDGs) aimed at global peace and poverty eradication (https://www.un.org/sustainabledevelopment/). The museum sector has increasingly embraced sustainability, particularly after the International Council of Museums (ICOM) adopted the 2030 UN Agenda in 2019(Garthe, 2020; Garmpis, 2024). Museums contribute to the SDGs by fostering social inclusivity, developing economic strategies, and implementing eco-friendly practices like water and energy management (Wickham & Lehman, 2015; Attia et al., 2021; Leandri, 2024; Querci & Gazzola, 2021). Researchers stress the importance of comprehensive sustainability strategies for the world's 55,000 museums, aligning with global goals (Fuhrmann, 2021; Dalle Nogare & Murzyn- Kupisz, 2021).

The cultural dimension of sustainability is increasingly recognized as essential and should be integral to sustainability agendas. Scholars like Adams (2010), Loach et al. (2016), and Sabatini (2019) argue for cultural sustainability as a distinct pillar of sustainable development, alongside social, economic, and environmental aspects. Stylianou-Lambert et al. (2014) and Loach & Rowley (2022) have proposed models aligning internal sustainability practices with broader cultural sustainability goals. Digital marketing and technology play a critical role in enhancing sustainability in museums. Cohesive and adaptable digital strategies, incorporating sustainable practices like collection digitization and effective online communication—particularly via social media—are crucial for transforming museums into resilient, brand-driven platforms for knowledge sharing and user engagement (Belenioti & Vassiliadis; 2015; Papadaki, 2022).

Finally, the literature emphasizes the importance of integrating sustainability into all aspects of museum operations, from adopting eco-friendly practices to including cultural dimensions and digital innovations. Cultural organizations such as museums are increasingly recognized as crucial players in promoting sustainable development, with a responsibility to lead by example in addressing global challenges like climate change and social justice (Pop & Borza, 2016; Özer Sarı & Nazli, 2018; Karlsson, 2022). As sustainability evolves, museums must adopt comprehensive strategies that align with global goals while addressing their unique institutional needs.

3. Methodology

This research uses a mixed-methods approach to explore the link between sustainability and digital marketing in cultural organizations. It begins with a comprehensive literature review, drawing from academic papers and museum websites to examine how global museums address sustainability.

The study also analyzes the digital strategies of MoMA and the Metropolitan Opera, focusing on their integration of sustainability. Through observational methods, the research highlights best practices in digital marketing, showing how these institutions use social media and digital tools to promote sustainability and engage global audiences.

The methodology also includes primary research on Greek cultural organizations, both public and private, actively pursuing sustainability through digital marketing. This section examines how Greek institutions approach digital marketing and sustainability, investigating whether they implement strategies to promote sustainability and how they address associated challenges.

Primary data was collected via a quantitative survey targeting Greek museums and cultural organizations. The 30-question survey,distributed to 36 institutions during August–September 2024, focused on sustainability and digital marketing. It included 28 multiple-choice and 2 open-ended questions across four sections: General Approach, Digital Channel Use, Sustainability Strategies, and Challenges & Solutions (Table 1). The survey received 26 responses from 16 museums and 10 other cultural entities, with data analysis revealing key trends and insights into sustainability and digital marketing practices within the Greek cultural sector.

4. Outcomes

The Literature Review examined international approaches to sustainability in cultural organizations, with a focus on cultural sustainability. The Findings analyzed global digital marketing best practices and how Greek organizations fit into this framework. We examined MoMA and the Met's digital strategies for promoting sustainability. Both use a multifaceted approach, engaging global audiences through digital channels, blending tradition with modern content, and building long-term relationships via social media, updates, events, and interactive elements.

They also promote environmental sustainability, social impact through equity and inclusion initiatives, and economic sustainability by leveraging digital innovation and multichannel strategies to create new revenue streams, such as e-commerce, subscriptions, and donations.

The second part of the findings presents primary research, analyzed through statistical data and 23 pie and bar charts, showing how Greek cultural organizations apply digital marketing for sustainability. While museums recognize sustainable management's importance, the lack of a strategic approach limits its integration, a challenge seen across Europe (Pencarelli et al., 2016).

Greek organizations could improve by segmenting audiences, tailoring communication, and using influencers, while analyzing engagement metrics (Hindersson, 2021). Despite 84.6% viewing sustainability as crucial, they lack alignment with SDGs, and only 30% integrate sustainability into digital strategies.

Although 92% use social media, their focus is on event announcements, not engagement. Financial constraints (70.8%) and a lack of skilled personnel hinder digital marketing adoption. Unlike international institutions, Greek organizations rely on government support and electronic ticketing. Future plans focus on user-generated content and digitizing sustainability, though engagement remains low.

Future research could involve qualitative interviews with cultural managers from innovative organizations, capturing aspects that closed-ended questions miss. Analyzing Greek organizations & social media and websites could also offer valuable insights into interactive practices like contests and challenges, helping to refine their digital marketing strategies.

The collected sample was diverse and geographically representative, ensuring the research's generalizability in mapping the landscape of Greek digital marketing for sustainability in cultural organizations. Through statistical analysis, key trends were identified, providing a valuable comparative tool for assessing digital marketing in cultural institutions. The study also offers Greek cultural managers insights into their operating context, emphasizing the need to align with international frameworks and adapt global best practices to their unique profiles.

Conclusions

This study shows that digital marketing can advance sustainability goals across environmental, economic, and social dimensions while preserving cultural values. Cultural sustainability is key to broader sustainability efforts, allowing institutions to contribute to long-term goals.

The research emphasizes the importance of a well-defined digital strategy, focusing on visitor-centered profiles to promote sustainability. Institutions like MoMA and the Met demonstrate how digital marketing, especially via social media, makes cultural capital more relatable. A comprehensive strategy that integrates cultural sustainability into urban development helps enhance prestige and supports sustainable communities.

Quantitative research reveals that Greek cultural institutions are adopting strategies to meet global standards but often prioritize cultural and educational contributions over financial and environmental sustainability. While digital marketing is used to promote cultural capital, its potential is not fully exploited due to financial and technical limitations.

In conclusion, Greek cultural organizations are in the early stages of adopting sustainability principles. Increased awareness of digital marketing's role in cultural vitality and economic resilience is essential for sustainable growth. By integrating cultural sustainability into broader strategies, these organizations can strengthen their brand and enhance urban well-being, with the benefits of sustainable digital marketing outweighing the challenges.

References

- Adams, E. (2010). Towards sustainability indicators for museums in Australia. https://core.ac.uk/download/pdf/30683631.pdf
- Attia, A., Hussein, M., & El Shaer, N. (2021). The Grand Egyptian Museum Implications for Sustainability. The International Journal of Tourism and Hospitality Studies, 1(2), 13–24. https://doi.org/10.21608/ijthsx.2021.82482.1009
- Belenioti, Z.- C., Vassiliadis, C. (2015). Museums & Cultural Heritage via Social Media: An Integrated Literature Review. Tourismos, 12, 97-132 https://www.researchgate.net/publication/314465229_Museums_Cultural_Heritage_via_Social_Media_An_Integrated_Literature_Review
- Dalle Nogare, C., & Murzyn-Kupisz, M. (2021). Do museums foster innovation through engagement with the cultural and creative industries? Journal of Cultural Economics, 45(4), 671–704. https://doi.org/10.1007/s10824-021- 09418-3
- Fuhrmann, C. (2021). Digitales Nachhaltigkeitsmanagement im Museum, Deutscher Museumsbund (2021), Die soziale Dimension der Nachhaltigkeit. Umwelt und Klimaschutz. Museumskunde, Band 86. https://www.linkedin.com/posts/constanze-fuhrmann_digital-sustainability- management-in-museums-activity-6846003033168465920-zeOm utm_source=share&utm_medium=member_desktop
- Garmpis, T. (2024). From Sustainable Development to Green Museums: LEED as a Targeting, Recording, and Evaluation Tool. Aristotle University of Thessaloniki https://ikee.lib.auth.gr/record/354377?ln=el [In Greek].
- Garthe, C. (2020). Sustainability Management in Museums: A new Approach to Implementing the Sustainable Development Goals. International Council of Museums. https://icom.museum/en/news/icom-voices-sustainability-management-museums/
- Hindersson, N. (2021). Development of the digital marketing in museums : case Raseborg's museum. [Masters thesis]. https://www.theseus.fi/handle/10024/503407
- Karlsson, M. (2022). The Pursuit of Museum Sustainability : Investigating sustainability for museum databases in Sweden [Dissertation] https://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-477840
- Leandri, E., (2024). New technologies and social inclusion: Villa Rendano and the organization of the consentia itinera multimedia museum as examples of sustainability. https://scholar.google.com/citations view_op=view_citation&hl=it&user=NX6HenoAAAAJ&citation_for_view=NX6HenoAAAAJ:qjMakFHDy7sC
- Loach, K., Rowley, J., & Griffiths, J. (2017). Cultural sustainability as a strategy for the survival of museums and libraries. International Journal of Cultural Policy, 23(2), 186–198. https://doi.org/10.1080/10286632.2016.1184657 Loach, K., & Rowley, J. (2022). Cultural sustainability: A perspective from independent libraries in the United Kingdom and the United States. Journal of Librarianship and Information Science, 54(1), 80-94. https://doi.org/10.1177/0961000621992824
- Özer Sarı, F., & Nazlı, M. (2018). Sustaining Cultural Heritage by Means of Museums in an Ever-Changing World. Gaziantep University Journal of Social Sciences, 17(1), 1-14. https://doi.org/10.21547/jss.316178
- Papadaki, E. (2022). The semiotics of cultural organizations on-line branding: The examples of the Metropolitan Opera of New York and the National Opera of Greece. In E. Zantides (Ed.), Semiotics and visual communication III: Cultures of branding (pp. 426-449). Cambridge Scholars Publishing https://www.researchgate.net/publication/364166380_The_semiotics_of_cultural_organisations'_online_branding_the_examples_of_the_Metropolitan_Opera_of_New_York_and_the_National_Opera_of_Greece

- Pencarelli, T., Cerquetti, M., Splendiani, S. (2016). The Sustainable Management of Museums: An Italian Perspective. Tourism and Hospitality Management 22(1), 29-46. SSRN: https://ssrn.com/abstract=2802799
- Pop, I., & Borza, A. (2016). Factors Influencing Museum Sustainability and Indicators for Museum Sustainability Measurement. Sustainability, 8(1), 101. https://doi.org/10.3390/su8010101
- Querci, E., Gazzola, P. (2021). Museums between presence and digital as a contribution to the 2030 Goals. https://strategica-conference.ro/wp-content/uploads/2022/04/52-2.pdf
- Sabatini, F. (2019). Culture as Fourth Pillar of Sustainable Development: Perspectives for Integration, Paradigms of Action. European Journal of Sustainable Development, 8(3), 31. https://doi.org/10.14207/ejsd.2019.v8n3p31
- Stylianou-Lambert, T., Boukas, N., Yerali, M. (2014). Museums and cultural sustainability: stakeholders, forces, and cultural policies. International Journal of Cultural Policy, 20. 10.1080/10286632.2013.874420
- WCED (1987). Report of the World Commission on Environment and Development: Our Common Future. https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf
- Wickham, M., & Lehman, K. (2015). Communicating sustainability priorities in the museum sector. Journal of Sustainable Tourism, 23(7), 1011–1028. https://doi.org/10.1080/09669582.2015.1042483

Hellenic Mediterranean University
Department of Business Administration and Tourism
Eirini Papadaki & Charis Avlonitou
eirpapadaki@hmu.gr - charis.dipol@gmail.com

DIGITAL MARKETING OF CULTURAL ORGANIZATIONS AS A DRIVER FOR ENHANCING SUSTAINABILITY

ABSTRACT

The research explores how digital strategies in cultural organizations support environmental, economic, and social sustainability while integrating cultural values. A survey of Greek professionals reveals how these organizations harmonize with sustainability goals, facing financial, technical, and bureaucratic challenges. International examples (e.g., MoMA, the Met) showcase best practices, demonstrating how digital platforms boost cultural engagement and community well-being. In Greece, fragmented efforts limit impact, though innovative organizations embed sustainability as both a moral duty and strategic advantage.

STUDY AIM

To examine the role of digital marketing in enhancing sustainability in the Greek cultural sector within the context of post-pandemic global initiatives for museums and the UN Agenda 2030 Goals (17 SDGs).

METHODOLOGY

The study uses a mixed-methods approach, combining a literature review and secondary data analysis (e.g., observations of influential international cultural organizations' sites) with primary research on Greek cultural organizations. This involved a 30-question questionnaire completed by 26 organizations, offering insights into cultural managers' familiarity with sustainability goals and the use of digital marketing, particularly social media.

Huyghe's *Untilled*: Nude with Beehive Head
https://www.moma.org/calendar/exhibitions/1537

The 17 SDGs https://sdgs.un.org/goals

Stavros Niarchos Foundation CulturalCenter
https://www.topiodomi.gr/el/projects

Survey Results Based on Questionnaire

CONCLUSIONS

- Prioritizing sustainability with a robust digital marketing strategy empowers cultural managers to achieve effective management, as benefits outweigh challenges.
- Strengthening collaborations within the Cultural and Creative Industries (CCI) helps Greek organizations, especially smaller ones, close gaps, enhance brand identity, and support urban well-being.
- Greater awareness of digital marketing's role in cultural heritage will strengthen economic resilience and brand identity.
- A holistic approach that effectively integrates cultural sustainability into urban development ensures that cultural organizations play a vital role in fostering sustainable communities.

No.	Museum/Organization Name	Location	Type of Organization
1	National Gallery	Athens	Art Museum
2	National Archaeological Museum	Athens	Archaeological Museum
3	National Museum of Contemporary Art (EMST)	Athens	Contemporary Art Museum
4	MoMus ((Metropolitan Organisation of Museums of Visual Arts of Thessaloniki)	Thessaloniki	Contemporary Art Museum
5	Goulandris Natural History Museum	Athens	Multidisciplinary Museum
6	Benaki Museum	Athens	Archaeological Museum
7	Museum of Cycladic Art	Athens	Archaeological Museum
8	Acropolis Museum	Athens	Archaeological Museum
9	Museum of Asian Art (Corfu)		Museum of Asian Art
10	Olympic Museum Thessaloniki	Thessaloniki	Sports Museum
11	National Historical Museum	Athens	Historical Museum
12	Teloglion Foundation of Art, Aristotle University of Thessaloniki	Corfu	Art Museum
13	Herakleidon Museum	Athens	Museum of Science, Art, and Technology
14	Municipal Art Gallery of Larissa - G.I. Katsigras Museum	Larissa	Art Museum
15	Natural History Museum of the Petrified Forest	Lesvos	Natural History Museum
16	Museum of Contemporary Art of Crete	Rethymnon Crete	Contemporary Art Museum
17	Stavros Niarchos Foundation Cultural Center	Athens	Cultural Center
18	Thessaloniki Concert Hall	Thessaloniki	Performing Arts Venue
19	Athens State Symphony Orchestra	Athens	Symphony Orchestra
20	Thessaloniki State Orchestra	Thessaloniki	Symphony Orchestra
21	National Theatre of Greece (NTG)	Athens	National Theater
22	National Theater of Northern Greece	Thessaloniki	National Theater
23	Cultural Foundation of Piraeus Bank Group	Athens	Cultural Foundation
24	NOESIS - Science Center and Technology Museum	Thessaloniki	Science and Technology Museum
25	Athens Comics Library	Athens	Specialized library and cultural institution
26	Ktima Gerovassiliou	Thessaloniki	Winery and cultural institution

Table 1. Greek Organizations Participating in the Survey

Plausible Athens

Author: Costas Bissas - Industrial designer / Mechanical engineer

Plausible Cities

Have you ever wondered why your city is the way it is? Have you ever considered whether it could have been different, possibly showcasing unprecedented values or priorities?

How might these manifest and what opportunities and unexpected experiences might arise in such an alternative reality? For a city to have been different, past decisions should have been taken otherwise, possibly under other prevailing worldviews and strategies. After all, our current surroundings are a snapshot of what has always been there, blended with past opportunities, human and community needs, requirements, policies, laws, actions and activities, which have simmered day by day, over timespans of years and decades. And this is how one ends up with the current map of their city. An oversimplification of an argument, one could say.

Maps of opportunity

Maps, seen as two-dimensional artefacts, carry a graphic and scaled representation of facts for one's surroundings, depicting streets, locations, places of interest, infrastructure and more, to give a sense for the natural and human-made environment, the genius locus, assist in wayfinding, guidance and direction when needed and even to assert or confer power through symbolism.

So, what if a map was used as a canvas for developing our imagination and portray a different version of the city one currently lives in? For instance, depicting our city as it might be more suited to our preference, given its geographic limitations and heritage, showcasing a different value system by honestly catering to the many? Or even featuring preposterous sights and monuments? A kind of psychogeography navigating time and ideals which, in its concise dimensions, offers an alternative snapshot of what could be — given our current knowledge, and implies where we would like to go, if possible. Not to say, indicating where we might go, should we develop our knowledge on various under-researched areas, i.e. social, technological, political etc.

Now, this fictional map serves as a diegetic prototype for an alternative yet somewhat familiar reality, a representation of a plausible city with the scope of opening room for further thoughts and discussions about futures, urban lives and lifestyles.

What if Athens was a resilient community?

Plausible Athens map was presented in the summer of 2024, as a 70x100cm print of the city center of Athens, Greece, which, based on the existing town plan, offers a perspective for a different reality given existing challenges and discourse over wellbeing and climate mitigation. With the research question: "What if Athens was a resilient community?", the map covers the area between Syntagma Square, Monastiraki and Omonoia Square.

In this version of the city, central blocks have become vast green spaces, streets have turned into greenways and aqueducts, drinking water is made available in public fountains and accessible public toilets support roaming the city. Given the expected warming climate, a number of facilities are in place to help citizens cool down, seek assistance in case of emergency and even cater for mobility when the weather turns on “extreme mode”.

A number of City Resilience facilities and Community spaces suggest that community needs are met through its member’s involvement, while the required energy and food is produced close to where it is consumed. Though the city center now hosts more nature, vegetable allotments and a Community Supported Agriculture scheme, the community does not overlook technological developments. It embraces new food production technologies and alternative raw ingredients, develops installations that harvest latent energy produced by human activity and involves Artificial Intelligence in state decision-making. More inclusive and accepting of ethnic backgrounds, religions, beliefs and identities, a number of different centers ensure that most citizens can find a place to search for inner peace, making for a more confident and open society.

And even as the community inhabitants function in closer relation to open spaces and soil, as a metropolitan city center, there is still room for luxury and individual mobility services. Organized and made more unobstructive and inviting, they are supported by an existing and embellished network of public transport. City guests can be hosted within guest house areas, while HoReCa districts, monuments and attractions signal that the city is open to visitors and shares its part of history with the world.

What to make of the Plausible Athens map?

The map of this Athens is, at first, not entirely unfamiliar. However, life in this city could be quite different. More green areas are in place, and surely this city has thought deeper on where things come from and where they go, what makes humans tick and how they feel more connected with their settlement and fellow humans, irrespective of beliefs and life choices. Obviously, compared to today, there are plenty of obstacles to render this reality possible. And this is where tensions and points of interesting discussions can begin, some questions being:

- What would make Athens, or any other metropolis feel like a community?
- What strategies can cities develop to be more livable in light of climate change?
- What implication might the localization of production and consumption have for urban and rural areas, state imports and exports?
- What could be considered a luxury within a resilient community?
- What is the ideal ratio of individual vs communal transportation means, and for whom?
- What are the pros and cons for each fuel becoming prevalent — food calories, electricity or hydrogen? Where does each come from and how?
- How is property restructured to offend original owners as least as possible?

What services can occur from combining different assets on the map? Would a visitor pay their “visitor’s tax” in electricity watts produced in the athletic center? Or would a home exchange scheme make visitors live like locals — with all joys and burdens the city comes with, striving to avoid social and financial distortions? What might be taught in the School of Tolerance and Acceptance?

Yet, this map was never designed to become the exact version of the city of Athens in the future. Rather, it is meant to help us imagine different possibilities and even if we cherry-pick some of the illustrated services, which have been generated through unstructured thinking based on existing worldwide knowledge, today's community gains might be significant.

Contribute to the next version of the map

This version of Athens is surely not an exhaustive map of what a resilient Athenian community might look like, nor is it supposed to. It is an initial approach to consider ways that the city could evolve and be on the lookout for novel changes. As its designer is not the only one with ideas on this topic, anyone can add propositions for locations, infrastructure and facilities by providing input and ideas here, to be considered for the next version of the map.

What would you want the resilient city of Athens to include?

Plausible City maps are not limited to the theme of "resilience", nor to the city of Athens. Should any kind of map be of interest to the reader, their community, or organization, please get in touch. It would be great to discuss and develop more options for alternative city futures!

Plausible Athens was developed, designed and first presented as part of the Lismonir project, an attempt by 7 creatives to explore whether one can design lismonirs (from the Greek word lismono = to let go / to forget); objects to help let go, as an opposite to souvenirs.

Mainstreaming Nature-based solution to promote climate resilience in the Mediterranean

Authors: Tadej Stepisnik Perdih (a), Alexandra Tsatsou (b),Costas Noutsopoulos (b), Simos Malamis (b) * Barbara Sarnari (c) *, Anacleto Rizzo (d), Elrik Du Saillant (e), Eric Mino(e)*, Carlota García Díaz (f), Clara Lorente Martin (f)* , Ioannis Vasilakos (g)

*National Technical University of Athens
*SVI.MED - Centro Euromediterraneo Perlo Sviluppo Sostenibile Onlus Associazione
*IRIDRA Srl
*SEMIDE - Unite Technique du SEMIDE geie
*Fundacion CIRCE - Centro de Investigacion de Recursos y Consumos Energeticos
*Hydraspis - YDRASPIS E.E

Cities find themselves at the vanguard of climate change. Densely populated, urban areas are particularly affected by heatwaves and extreme precipitation, exposing residents and their wellbeing at risk. More than anywhere else, this is relevant in Mediterranean, where temperatures are increasing 20% faster than global average.
In this context, Nature-based Solutions (NBS) are vital for urban resilience. The 2021 EU climate adaptation strategy underlines that NBS represent multipurpose, "no regret" solutions, simultaneously provide environmental, social, economic and aesthetic benefits and help build climate resilience.

CARDIMED aims to enhance Climate Resilience in the Mediterranean by mainstreaming Nature-based Solutions in systemic transformation. The project, a part of the EU mission on Adaptation to Climate Change, will demonstrate 47 different types of Nature-based Solutions through 83 large scale interventions across 10 regions and 20 locations. Participating communities will establish the CARDIMED Resilience Alliance, which will function as the vehicle for expanding the network via upscaling the existing sites and adding new ones. The project expects to have 28 regions and 70 communities in the network by 2030, create 8000 jobs in the NBS sector, and mobilize over 450 M€ in climate investment.

It's not only about functionality. CARDIMED recognizes the deep connections between people and nature. Green spaces contribute to a better quality of life, attract residents and visitors and even show restorative and therapeutic benefits for people. This poster presents relevant CARDIMED urban case studies.

In Ferla (Italy), the installation focuses on advancing sustainable water management through the integration of a wall-based green facade system at the Istituto Comprensivo Statale Valle dell'Anapo primary school. This innovative setup combines the NBS with a degreaser, UV disinfection, storage tanks, flow metres, temperature sensors (3 different orientations: NE, NW, SW) to treat greywater from washbasins. Implemented across three facades of the school, the system not only enhances the building's aesthetic appeal but also plays a crucial role in reducing water usage by repurposing treated greywater for toilet flushing. Covering a vertical surface of 30 m² of an urban public building, this approach not only conserves valuable water resources but also promotes environmental sustainability, showcasing a forward-thinking model for urban infrastructure. The social impact is amplified by a short film, "Drop of Dew", shown worldwide.

Similarly, in Zaragoza (Spain) intervention encompass a combination of diverse NBS implemented in two primary schools, aimed at fostering environmental education and promoting sustainability practices among students and staff. The intervention features an innovative vegetated pergola to support the growth of shading vines and plants, enhancing the aesthetic appeal of the area while providing natural cooling. Concrete is removed (surface unsealing), permeable surfaces are installed to facilitate rainwater infiltration, and bioretention cell (rain garden) are for creating a buffer for water infiltration. Moreover, to enhance biodiversity, techniques for fauna refuge and nesting will be built (i.e insect hotels, bird houses, bat houses, and amphibian ponds).

Meanwhile, a heat island effect in two university's campuses of Marseille (France). At Saint Jérôme the waterproof asphalt has been removed from the university's forecourt, as well as from access roads and car parks. Terracing has been done to change the shape of the area and reduce the stormwater runoff. Terracing was applied and part of the unsealed area has been replaced by porous asphalt and porous concrete in order to maintain access paths. 3 bioswale were installed and planted using cover crops. A main bioswale was also installed and an urban micro forest planted around it. Mulching has been used to help the tree grow. Micro-forests and soil unsealing will reduce heat island effects and important water runoff, improving air quality and providing a suitable habitat for biodiversity is ameliorated by unsealing soil and planting 300 trees, edible fruits and shrubs. The second campus, Saint Charles, is located in the heart of the city of Marseille near the main train station. While the site doesn't allow as much freedom of changes as the first one because of its large number of visitors and its small size, surface unsealing and terracing will take place on the site porous asphalt and concrete will be set up. In a second step trees will also be planted as an urban micro forest.

Finally in Nicosia (Cyprus) greening enriches public spaces and children's playgrounds. An innovative filter drain is integrated within a hydro-pocket urban park setting. This NBS system is designed to address water scarcity and inefficient irrigation practices by promoting subsurface rainwater harvesting. Rainwater is captured directly and transferred through a hydraulic pipeline network into supportive storage units, such as detention vaults and tanks. The harvested water is then used for irrigating green areas and facilitating natural aquifer recharge. This system is supported by technologies such as online weather stations, water level sensors, water quality sensors, soil moisture sensors, and smart irrigation systems. Covering an area of 860 m2 of urban public land, the integration of these technologies ensures efficient performance and continuous monitoring, contributing to the sustainable management of rainwater resources and the long-term irrigation of urban green spaces.

To support all this, CARDIMED proposes an innovative set of digital immersive tools, available in multiple languages, aimed at improving the uptake for high-impact NBS measures with tangible, quantified and appropriately visualised impacts for regional/local governance, citizens, communities and the industrial sector. In particular, tools developed for citizens and the general public will be underpinned by the notions of emotional appeals and social incentives, adapted for each NBS sector. Participants with low NBS literacy, or those without deep knowledge of the interventions are expected to increase their engagement in an inclusive and accessible manner, removing social and economic barriers such as age, gender, education level, and tech-savviness. Examples include a mobile augmented reality-based application that will project scenarios of climate-adverse effects (and their likelihood) in the context of the demonstration sites and/or key landmarks in the region, both in baseline scenarios and after NBS deployment in a local and regional context. This will create "a sense of spatial presence", which is important to understand potential climate risks at an experiential level.

In the same way, the tools will help citizens visualise positive impacts of selected interventions in the same locations – to give them a sense of the magnitude of potential benefits. Moreover, the project is expected to mainstream the relevance and impact of the systemic implementation of NBS in relation to the overarching mission of climate resilience in the regional context for local decision-makers, in terms of the everyday life of their community or business decisions. In particular, onboarding and evidence-based decision making will be facilitated through insightful dashboards that will aim to provide integrated assessment indicators in a holistic, meaningful way (social, environmental, financial/sustainability). The dashboards will allow them to directly assess their decisions in terms of the type and scope of selected NBS, view quantified environmental, societal indicators, ESG (environmental, social, and corporate governance) indices, investments, financial impacts etc. Moreover, data storytelling will be embraced in CARDIMED: well-structured data stories help the listener embrace NBS, a method supported by evidence. A wide range of mediums that support delivery of data stories will be exploited. Examples are scroll evolving, interactive web pages, data visualisation augmented journal articles, story-enriched data. An impactful feature leveraged is interactivity, enabling users to interact with the information on data on screen and potentially adapt content to suit better to a certain user profile. This feature applies to both online interactive stories and Augmented Reality experiences through the engagement app. Among others, tools will include climate resilience dashboards for NBS operators, data storytelling and augmented reality mobile app for citizens, NBS transferability module for decision makers.

CARDIMED

Funded by the European Union

Mainstreaming Nature-based solution to promote climate resilience in the Mediterranean

Tadej Stepisnik Perdih[1], Alexandra Tsatsou[1], Costas Noutsopoulos,[1]Barbara Sarnari, [2]Anacleto Rizzo, Elrik Du Saillant, [3]Eric Mino4, Carlota García Díaz[3], Clara Lorente Martin,[5]Ioannis Vasilakos, [5]Simos Malamis [1]

1 National Technical University of Athens
2 SVI.MED - Centro Euromediterraneo Perlo Sviluppo Sostenibile Onlus Associazione
3 IRIDRA Srl SEMIDE - Unite Technique du SEMIDE geie Fundacion CIRCE - Centro de
4 Investigacion de Recursos y Consumos Energeticos Hydraspis - YDRASPIS E.E.
5
6

Project Data
Grant agreement: 10111273
Duration of the project: 1st September 2023 -29th February 2028
Budget: 20,806,271.44€
EU contribution: €19,307,911.25

Follow Us

cardimed@mail.ntua.gr
www.ntua.gr
www.cardimed-project.eu
@cardimed_eu

About the Project

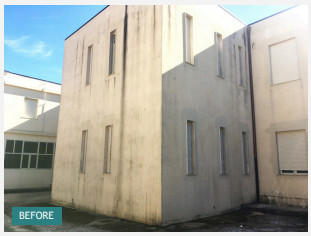
Cities find themselves at the vanguard of climate change. Densely-populated, urban areas are particularly affected by heatwaves and extreme precipitation, exposing residents and their wellbeing at risk. More than anywhere else, this is relevant in Mediterranean, where temperatures are increasing 20% faster than global average. In this context, Nature-based Solutions (NBS) are vital for urban resilience. The 2021 EU climate adaptation strategy underlines that NBS represent multipurpose, “no regret” solutions, simultaneously provide environmental, social, economic and aesthetic benefits and help build climate resilience. CARDIMED, a part of the EU Mission on Adaptation to Climate Change, will mainstream NBS to improve Climate Resilience by delivering 36 different types of Nature-based Solutions through 90 interventions on a large scale in 20 locations across the Mediterranean. It’s not only about functionality. CARDIMED recognizes the deep connections between people and nature. Green spaces contribute to a better quality of life, attract residents and visitors and even show restorative and therapeutic benefits for people. This poster presents relevant CARDIMED urban case studies. In Ferla (Italy) and Zaragoza (Spain) NBS are being implemented in primary schools, enabling children to engage with green facades, pocket parks and vegetated pergolas. Heat island effect in two university’s campuses of Marseille (France) is ameliorated by unsealing soil and planting 300 trees, edible fruits and shrubs, and in Nicosia (Cyprus) greening enriches public spaces and children’s playgrounds. This will be supported by deploying the digital infrastructure to harmonise the data collection and evaluation processes, providing open data to all the climate-resilience actors involved in cities, promoting both investments in NBS as well as their social acceptance. Among others, tools will include climateresilience dashboardsfor NBS operators, data storytelling and augmented reality mobile app for citizens, NBS transferability module for decision makers.

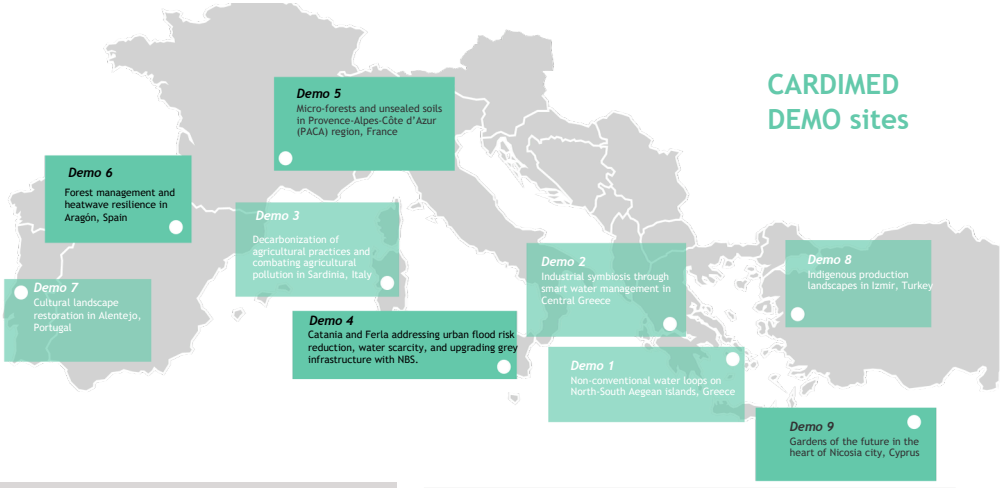
DEMO 5

Reducing runoff and heat by unsealing soil and creating green spaces. Combination of interventions: bioswale, urban micro forest, terracing, porous asphalt and mulching.

DEMO 4

The installation of a pot-based green façade on a school in Ferla. It reduces potable water consumption by producing non-conventional water, improves aesthetics, cooling and biodiversity. The social impact is amplified by a short film, "Drop of Dew", shown worldwide.





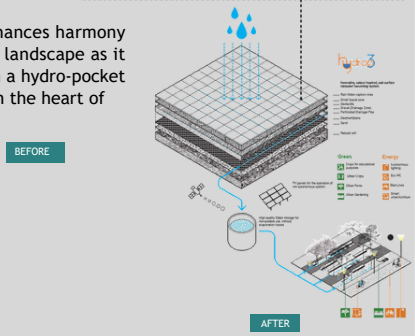
DEMO 6

An innovative vegetated pergola to support the growth of shading vines and plants, enhancing the aesthetic appeal of the area while providing natural cooling. Permeable surfaces are installed to facilitate rainwater infiltration, and bioretention cell. To enhance biodiversity insect hotels, bird houses, bat houses, and amphibian ponds will be built.

DEMO 9

An innovative filter drain promotes subsurface rainwater harvesting to address water scarcity and inefficient irrigation practices.

This NBS enhances harmony in the urban landscape as it is situated in a hydro-pocket urban park in the heart of Nicosia.



From Ideas to Action: DestinE Platform Use Cases for a Sustainable Future

Authors: Eleni Karachaliou(1), Costas Bissas(1), Aikaterini Bakousi(1), Anna Dosiou(1), Zoi – Eirini Tsifodimou(1), Efstratios Stylianidis(1), Antonios Mouratidis(1), Eleni Katragou(1), Antonio Romeo(2), Sofia Catracchia(2),Rob Carrillo(3), Valeriya Fetisova(3)

(1)Aristotle University of Thessaloniki, Faculty of Engineering, School of Spatial Planning and Development, Laboratory of Geoinformatics
(2)Starion Group
(3) Trust-IT Sr

Destination Earth
Core Service Platform Use Cases

Introduction

Destination Earth is a flagship initiative of the European Commission to develop a highly-accurate digital model of the Earth (a digital twin of the Earth) to model, monitor and simulate natural phenomena, hazards and the related human activities. These groundbreaking features assist users in designing accurate and actionable adaptation strategies and mitigation measures.
DestinE unlocks the potential of digital modelling of the Earth system at a level that represents a real breakthrough in terms of accuracy, local detail, access-to-information speed and interactivity.

DestinE is being co-developed by three Entrusted Entities, the European Space Agency (ESA), the European Centre for Medium-range Weather Forecasts (ECMWF) and the European Organization for the Exploitation of Meteorological Satellites (EUMETSAT), which will be responsible of the implementation of the three main building blocks of DestinE infrastructure:

- DestinE Platform (implemented by ESA): a cloud-based front-end for DestinE users providing access to applications, models and simulations for decision-making support purposes.
- Data Lake (implemented by EUMETSAT): a centralized storage and preservation facility for all input and output data managed within DestinE and available for the DestinE users through DESP.
- Digital Twins and Digital Twin Engine (implemented by ECMWF): a generic software infrastructure featuring global-scale simulators, data handling and Machine Learning/Deep Learning (ML/DL) capabilities, able to host and run multiple instances of thematic Digital Twins.

The DestinE Use Cases Project, executed by a Consortium led by RHEA Group with the Aristotle University of Thessaloniki, Trust-IT and d EJR-QUARTZ, develops a set of Use Cases to concretely demonstrate the value of Destination Earth in general and DestinE Platform in particular. In addition, it develops a strong (both in terms of numbers of members and interactions) and vibrant DestinE User Community to inform the successful and well targeted development and initial operations of the DestinE Platform as well as guiding the evolution and sustainability of the platform in later phases of DestinE to respond to the priorities set by European and International policy frameworks.

DestinE Platform use cases

About DestinE Platform

The objective of DestinE Platform is to be a reference for expert and non-expert users to obtain accurate, actionable and significant information regarding climate change, energy supply, hydrometeorology extreme events, hydrology, fire events, urbanization, ecosystem monitoring, etc.
The platform combines generic and user specific services in a user customizable environment to:

- unify access to data generated or collected, referenced by DestinE
- provide applications to support development, modelling, analysis, visualization
- provide on-demand simulation, data retrieval, data Transformation
- develop and operate own applications, services
- share results, data, applications, libraries

with the drive to be an open, interactive, collaborative, performant, evolutive, attractive, extensible platform.

The Use Cases

The use cases implemented on DestinE Platform are aimed at demonstrating how the use of such services improves the performance or the quality of operational or pre-operational tools for decision-making.

From a thematic perspective the Use Cases cover a wide range of issues related to the Green Deal and Digital Transformation programmes.

For instance some use cases under implementation within the DestinE initiative so far focus on the development of means to monitor extreme weather or fire events, giving key indexes and developing rapid analysis responding to requests on risks and adaptation options. Other use cases concern climate projections and improved weather forecast. This information is not just useful for the monitoring and modelling extreme events, but they can be essential in agriculture, one of the most sensitive domains to drought, desertification, floods, to cite a few.

Weather conditions play a strategic role in the weather-dependent energies, and some use cases provide the tools for ensuring the balance between electricity production and demand.

The management and conservation actions for the integrity of the ecosystems and natural capital are of central importance, since they provide essential goods and services to human societies. Urban areas also are complex ecosystems, which can be monitored and modelled giving predictions of hazardous urban areas or providing estimation of the risk of urban flooding due to infrastructure malfunctions, therefore Use Cases giving this information are crucial.

The DestinE Platform Use Cases are being developed in Agile methodology setting up an open-source environment. In particular DestinE GitHub repository will contain Use Case code and will give the possibility to the end users to interact actively in the definition of new applications and services.

In fact, the idea of the Project is to create an environment in which the end users of the Use Case play an active role in steering the agile development process and in the final validation.

Currently, the five following Use Cases are being developed by ESA and the DEUC project:

- CITYNEXUS: A novel urban DestinE Platform application - Designing an innovative urban application for the DestinE Platform to assess the potential impacts of urban development decisions. More information available here: https://destination-earth.eu/use-cases/citynexus-a-novel-urban-digital-twin-application/
- DESIDE: Supporting policy and decision-makers in decreasing pollution and optimising routes in polar regions. More information available here: https://destination-earth.eu/use-cases/deside/

- Destination Renewable Energy (DRE): Developing the Hybrid Renewable Energy Forecasting System (HYREF) demonstrator to support simulation and projection services that are part of the DRE digital ecosystem. More information available here: https://destination-earth.eu/use-cases/destination-renewable-energy-dre/
- Global Fish Tracking System (GFTS): Helping to obtain accurate insights into fish populations for data-driven conservation policies. More information available here: https://destination-earth.eu/use-cases/global-fish-tracking-system-gfts/
- UrbanSquare: Supporting decision makers in assessing climate related challenges and their impact on urban areas. More information available here: https://destination-earth.eu/use-cases/urbansquare/

ECMWF and EUMETSAT are also developing additional use cases which further contribute to showcase the value added of DestinE initiative in support to the digital transformation and the new Green Deal.

Community building

Objective and Values

The strategic target of all community building, and management activities is to pave the way towards the widespread engagement of direct and indirect users and key stakeholders of DestinE Platform. This constitutes a major priority and challenge, given the high potential that DestinE holds for responding to the priorities set by European and International policy frameworks.

The DestinE Platform community aspires to lead the creation of a network where the continuous interactions amongst users/developers as well as stakeholders/partners will enhance the development and improvement of DestinE Platform capabilities, but also catalyse cross-sectoral collaborations. In addition, this community will be the place where opportunities for ongoing exchange are offered in an open and transparent way. By getting multiple perspectives, opinions, experiences and expertise, community members will get the chance to advance their own knowledge, gain value-driven experiences and benefit from it to professional growth.

Stakeholders mapping and Communities of Practice

Considering the size and goals of the DestinE initiative, the user community is composed of multiple and diverse types including scientists, policy makers, industry representatives and the general public stemming from all the sectors impacted by environmental/climatic changes but also from the sectors related to the technical development and exploitation of the DestinE Platform.

The creation of Communities of Practice (CoPs) has been chosen as an effective way to engage the members of the community in an open and collaborative process to the co-design, development, and use of DESP capabilities. The CoPs are ‘groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly’ [2].

In the context of the DEUC project, CoPs are used to build a vibrant community by creating smaller groups that focus on specific challenges:

- Identify DestinE Platform user needs and preferences. By engaging with users through a CoP, it will be possible to get feedback on what features or functions are most important to them.
- Tap into the knowledge and expertise of individuals from different fields or industries. This can help the development of DestinE Platform that will meet the needs of a wide range of users.
- Test and validate the developed features and functionalities with the end users – which according to the feedback solicited can be refined to meet the user needs.
- Foster collaboration between individuals with different backgrounds and perspectives. This can lead to new ideas and approaches to DestinE Platform development.
- Support adoption and uptake of DestinE Platform.

The community portal

The DestinE Website (https://www.destination-earth.eu/) is the central hub for prospective users and downstream developers to interact with the initiative. It showcases open calls for DestinE use cases and showcase funded ones. Through the portal it is possible also to access DestinE Platform and become a user and a community member.

REFERENCES

[1] Destination Earth Brochure, https://digital-strategy.ec.europa.eu/library/destination-earth, 2023.

[2] J. Lave, and E. Wenger, "Situated Learning: Legitimate peripheral participation" Cambridge University Press, Cambridge, United Kingdom, doi: 10.1017/CBO9780511815355, 1991.

Empowering rural areas through entrepreneuship: The case of Rural Innovation program of Impact Hub Athens

Author: Lida Tsene, PhD, Hellenic Open University/Impact Hub Athens

rural innovation

IMPACT HUB Athens

Fostering innovation and entrepreneurship in rural areas is critical for achieving sustainable economic growth, reducing poverty, and enhancing social cohesion. Rural regions, which are home to nearly 3.4 billion people (44% of the global population), often face unique challenges such as limited access to markets, lower levels of infrastructure, and fewer employment opportunities. Addressing these disparities through entrepreneurial support and innovation can revitalize rural communities, improve quality of life, and contribute to the broader goals of regional and national development. More specifically, there are a series of benefits of promoting innovation and entrepreneurship in rural areas. Rural areas often depend on a limited number of industries, such as agriculture or resource extraction. By fostering entrepreneurship, these regions can diversify their economies, creating new businesses and industries that provide stable jobs.

Why Greece?

Rural Greece, like many rural regions across Europe, faces significant socio-economic challenges, including high levels of unemployment, outmigration, low income diversification, and limited access to modern services and technologies. Although agriculture remains a key sector for rural livelihoods, traditional farming alone is no longer sufficient to ensure sustainable economic growth and prosperity in these areas. As such, there is a pressing need to foster innovation and entrepreneurship to rejuvenate rural communities, create jobs, and attract younger generations back to rural regions.

The current situation in Greece features high unemployment and aging populations. Rural areas in Greece are disproportionately affected by high unemployment rates, especially among young people and women. The rural unemployment rate in some regions, such as Thessaly and Western Macedonia, exceeds 20%, which is significantly higher than the national average of 11.4% (2022). Moreover, a large percentage of the rural population is over the age of 65, indicating a need to attract and retain young talent through entrepreneurial opportunities. Additionally there is limited economic diversification. Agriculture accounts for around 4% of Greece's GDP, with over 90% of this output coming from small-scale farms. Many rural areas rely heavily on a few agricultural products, making them vulnerable to market fluctuations and climate risks. There is a need to promote diversification through agritourism, small-scale food processing, renewable energy, and digital services to create multiple sources of income for rural families. Another key area is the digital divide and lack of infrastructure. Access to high-speed internet and modern infrastructure is still limited in many rural areas, with some regions having up to 30% less digital coverage compared to urban centers. This lack of connectivity hampers the adoption of new technologies, reduces access to e-commerce and global markets, and isolates rural entrepreneurs from innovation networks. Migration and brain drain is one more challenge. Rural areas in Greece have been severely impacted by outmigration, with young people moving to cities or abroad in search of better employment and education opportunities. This has resulted in a "brain drain," where the loss of skilled youth exacerbates the region's demographic challenges. According to the Hellenic Statistical Authority, from 2008 to 2018, nearly 400,000 young Greeks left the country, with a significant share coming from rural and semi-rural areas. One last burning issue is the gender gap in entrepreneurship. Women in rural Greece often face additional barriers in starting and sustaining businesses due to a lack of access to finance, traditional gender roles, and limited support networks. Although women account for 50% of the rural population, their participation in entrepreneurship is only 23%, according to Eurostat.

There is a clear need for a strategic focus on innovation and entrepreneurship in order to answer all the aforementioned challenges. Fostering entrepreneurship and innovation can help rural areas transition from low-productivity activities to high-value-added sectors, including agribusiness, creative industries, and renewable energy. For example, agritourism has become a growing industry in areas like Crete and the Peloponnese, combining agriculture with tourism to provide new income streams for local farmers. There is an urgent need to design programs that specifically target women and youth, providing them with tailored training, mentorship, and access to finance. Initiatives such as the Women's Cooperative of Zagori have shown that women-led businesses can become successful economic drivers, generating employment and promoting local crafts. With over 30% of Greece's land area designated as Natura 2000 protected sites, there is a significant opportunity for developing green businesses in organic farming, eco-tourism, and renewable energy. Projects like the Tilos Island Energy Community have demonstrated that rural areas can become leaders in green innovation, creating jobs and reducing environmental impact. Finally, Greece has access to several EU funding instruments, such as the LEADER Programme and the Rural Development Programme, which support rural entrepreneurship, innovation, and community-led local development. However, the absorption of these funds has often been low due to bureaucratic hurdles and lack of awareness among rural stakeholders. Streamlining these processes and enhancing technical support can unlock the potential of these funds for rural entrepreneurs.

Why sustainability?

Sustainability and green transition have become crucial components for the future of entrepreneurship, fundamentally redefining how businesses operate and create value. In an era marked by climate change, resource scarcity, and growing consumer demand for environmentally responsible practices, integrating sustainability is not just a moral imperative but a strategic necessity for entrepreneurs globally. The shift towards greener practices and business models can help future-proof businesses, unlock new market opportunities, and enhance competitive advantage, ultimately contributing to long-term profitability and resilience.

The program (overview)

Impact Hub Athens and Google.org are collaborating to empower the entrepreneurial community in the Greek region. Innovation in rural, island, and mountainous areas is garnering significant attention from diverse stakeholders, including policymakers, researchers, and entrepreneurs. This growing trend holds increasing importance, particularly when viewed in the context of the climate crisis. It is crucial to promote the sharing of best practices and case studies, engage local partners, and empower communities through knowledge exchange and skill development. These efforts aim to foster the creation, operation, and growth of sustainable initiatives that prioritize the well-being of both the environment and the local population.

Smaller regions in the province show less engagement in the transition towards environmental sustainability compared to urban areas. Disadvantaged populations often do not prioritize environmental sustainability, highlighting the importance of empowering and mobilizing pioneering entrepreneurial initiatives in these regions.

Moreover, there is a pressing need for a comprehensive “ecosystemic” change to bring empowerment and support services closer to society as a whole. Promoting entrepreneurship and self-employment as effective means of job creation, skill development, and opportunities for the unemployed and vulnerable individuals creates new pathways for their full participation in society and the economy, with a strong emphasis on sustainability and resilience.

Interest in innovation within rural, island, and mountainous areas is growing among various stakeholders, particularly policymakers, researchers, and entrepreneurs. This trend will gain further strength and significance, especially when viewed through the lens of the climate crisis. It is essential to facilitate the sharing of best practices and case studies, involve local partners, and empower communities from within through knowledge exchange and skill development. This approach will contribute to the establishment, operation, and expansion of sustainable initiatives that consider the well-being of both nature and people.

Furthermore, promoting gender equality in these areas is of utmost importance. Rural areas are home to over 70% of the world’s poor, and the majority of rural women and men rely on agriculture for their livelihoods. These populations, particularly women, face limited access to financial resources, services, skill development organizations, productive infrastructure, and cutting-edge technology. Enhancing women’s training and facilitating their connections with entrepreneurs, peers, and partners across the country will strengthen local economies, foster employment opportunities, increase their representation in decision-making processes, and promote active participation. Ultimately, this approach will transform local communities by promoting values of equality and inclusion, leading to an improved quality of life for all individuals.

Taking into consideration all the above, Impact Hub Athens and Google.org, they have launched a comprehensive economic support program, providing a funding of 150K for the following entrepreneurial entities, which developed programs specifically targeting environmental sustainability. The objective is to establish and sustain a network of entrepreneurial entities throughout Greece, which will continue to actively engage and collaborate with Impact Hub Athens even after the program's completion. Together, they aim to generate and implement sustainable solutions for the environment.

- Rural Incubator: Northern/Southern Pindos, High Mountains
- Rural Incubator: Rethymno Prefecture, Bizrupt NGO
- Rural Incubator: Florina/Western Macedonia, Active Youth Group of Florina (O.E.N.E.F.)
- Rural Incubator: Development Agency of Karditsa, Development Corporation S.A.
- Rural Incubator: Messinia, ETAP, Development and Progress Corporation of Peloponnese and Ionian Islands
- Rural Incubator: Alexandroupolis, LightHub – Alexandroupolis Chamber of Commerce
- Rural Incubator: Cyclades, Impact Hub Athens

& the fellows:
- Southern Tzoumerka, Bouloki – Traveling Workshop for Traditional Building Techniques
- Kalamata, Phaos Cooperative Society

More specifically, the program provided :

Financial Support of 20-50k for Entrepreneurial Structures, Educational Tools, Mentoring, Empowerment, and Networking.

- Funding: Providing financial support in the range of 20-50k.
- Educational Workshops: Conducting skill development workshops to enhance the capabilities of the entrepreneurial team. These workshops will focus on methodologies and tools relevant to social entrepreneurship.
- Implementation Guide: Offering a comprehensive guide for implementing a social entrepreneurship program. This guide includes ready-made educational materials.
- Strategy and Development Guidance: Providing guidance on strategic planning and the development of entrepreneurial centers.
- Individual Support and Coaching: Offering personalized support and coaching throughout the implementation of the social entrepreneurship program.
- Official Connection to Impact Hub: Establishing an official connection with the Impact Hub network and community.

The Incubation DNAu
The incubation process lasted for one year with all participants attending online masterclasses, hands on workshops and one to one mentoring as well as meetings with experts and speed dating, excursions and visits to conferences and demo sites and participation in hackathons and other events. In total more than 200 hours of mentoring and interaction occurred during this year aiming to the entrepreneurial support of the participants with the involvement of 45+ experts and mentors.

In total the program received 300 + applications, 184 out of them successfully selected and 134 entrepreneurs concluded the incubation.

Regarding the sectors represented, the program attracted representatives from a variety of fields. More specifically:

Sector	Number of Teams
Education Sector	19
Tourism and Sustainable Tourism	33
Cultural Heritage	25
Agrifood	21
Biodiversity	16
Small Industry/Artisanship	26
Retail	29
Entertainment, Arts and Leisure	15

Tourism and Sustainable Tourism has the highest number of teams (33), while retail follows closely with 29 teams. Cultural Heritage and Small Industry/Artisanship have significant representation with 25 and 26 teams, respectively and Biodiversity has the lowest number of teams at 16.

This project demonstrated a significant reduction in the gender gap, underscoring the importance of encouraging women to actively participate in the entrepreneurial landscape of their local ecosystems. 41% of the total incubatees were women, with Rethymnon/Crete scoring the higher percentage of 69.2% and Karditsa/Thessaly the lowest with 17%.

Finally in regards with age, the group 35-49 was the most dominant highlighting the fact that a combination of experience, financial stability, personal motivation, and supportive societal trends makes individuals aged 35-49 particularly well-suited to embark on entrepreneurial ventures. It is rather remarkable though, that a tiny-but still important percentage of people aged over 60s applied and participated to the program.

The impact

If we attempt to measure the direct impact of the program, we could summarize it as such, looking into the hard numbers:

- 20+ new businesses launched
- 10 + new jobs were created with half of them supporting women
- 100 + entrepreneurs learned new tools. Half of them created their business models
- 30+ upcoming business designed their MVP
- 3 businesses got extra funding
- 10 + businesses had the opportunity to present their ventures to potential funders and investors through 2 demo days organized by Impact Hub Athens.

In a more qualitative approach, the main achievements could be summarized as following:

1. **Empowered Entrepreneurs**
   - Significant increase in entrepreneurial skills and business knowledge
   - 70% of teams launched or plan to launch businesses
2. **Job Creation**
   - New businesses created employment opportunities
   - Contributed to the local economy
3. **Market Expansion**
   - Some businesses established presence beyond their local markets
   - Potential for broader regional economic impact
4. **Network Building**
   - Established network of mentors and peers
   - Provided ongoing support for long-term success

5. Community Impact

- Raised awareness about entrepreneurship in the local community
- Increased community engagement and support for local events

6. Government Attention

- Attracted interest from local government officials
- Discussions initiated about policy support and potential funding

7. Personal Growth

- Participants reported increased confidence and motivation

Barriers and Challenges

According to the participants of the Rural Incubators program, the main challenges that highlight the unique difficulties faced in rural entrepreneurship programs are the following:

- Unequal access to labor market and entrepreneurial empowerment programs
- Demographic issues
- Geographic and infrastructure challenges
- Difficulty connecting with markets
- Social issues
- Participant engagement
- Varying levels of business knowledge

Conclusion

In conclusion, enhancing rural innovation through sustainable entrepreneurship presents a transformative opportunity for rural communities to thrive economically while preserving their unique cultural and environmental heritage. By fostering an entrepreneurial ecosystem that prioritizes sustainability, local stakeholders can leverage their resources and knowledge to create innovative solutions tailored to their specific challenges. Initiatives aimed at skill development, access to funding, and the regeneration of family businesses are crucial in building a resilient and dynamic rural economy. As rural areas embrace sustainable practices, they not only improve their economic prospects but also contribute to broader environmental goals, ultimately paving the way for a more sustainable future. The collaboration between public and private sectors, along with community engagement, will be pivotal in driving this change, ensuring that rural innovation flourishes for generations to come.

Empowering rural areas through entrepreneuship: The case of Rural Innovation program of Impact Hub Athens

Lida Tsene, PhD Impact Hub Athens Team Member Teaching Associate, Hellenic Open University

Introduction

Sustainability and green transition have become crucial components for the future of entrepreneurship, fundamentally redefining how businesses operate and create value. In an era marked by climate change, resource scarcity, and growing consumer demand environmentally practices, for responsible integrating sustainability is not just a moral imperative but a strategic necessity for entrepreneurs globally.

In addition, fostering innovation and entrepreneurship in rural areas is critical for achieving sustainable economic growth, reducing poverty, and enhancing social cohesion. Rural regions, which are home to nearly 3.4 billion people (44% of the global population), often face unique challenges such as limited access to markets, lower levels of infrastructure, and fewer employment opportunities. In Greece almost 51% of people resides in the big cities, while rural areas have been abandoned . Addressing these disparities through entrepreneurial support and innovation can revitalize rural communities, improve quality of life, and contribute to the broader goals of regional and national development.

Our Case Study

Impact Hub Athens with the support of Google.org , focused on empowering the entrepreneurial community in the Greek periphery through a a comprehensive economic support program, providing a funding of 150K for selected entrepreneurial entities in 7 regions across Greece, which developed programs specifically targeting environmental sustainability- circularity, renegeration, restoration.

More specifically, the program provided :

- **Financial Support of 20- 50k for Entrepreneurial Structures**
- **Educational Tools**
- **Mentoring**
- **Empowerment, and Networking**
- **Policy making events**

All curated by the Impact Hub Athens Team.

Aim and Methodology In this paper will present research findings, employing both qualitative and quantitative methodologies, on how this program managed to enhance entrepreunerial culture in the selected areas.

Research Tools

- questionnaires (structured)
- participant observation
- in depth interviews (semi structured)

Research Question

What are the benefits of such a program to the local entrepreneurial and social ecosystem?

Key Findings- Numbers

- The program received **300 + applications, 184 out of them successfully selected and 134 entrepreneurs** concluded the incubation.
- In total more than **200 hours of mentoring and interaction** occurred during this year aiming to the entrepreneurial support of the participants with the involvement of **45+ experts and mentors.**
- **20+ new businesses** launched
- **100 + new jobs** were created with half of them sup0porting women
- **100 + entrepreneurs learned new tools and advanced with contemporary skills.** Half of them created their business models and launched their new ventires.
- **30+ upcoming business designed their MVP**
- **3 businesses got extra funding**
- **10 + businesses** had the opportunity to present their ventures **to potential funders and investors** through 2 demo days organized by Impact Hub Athens.
- **24 multistakeholder** sessions with the participation of **1564** representatives from all sectors- private, public, civil society, research, funding schemes, embassies, chambers and more in all 7 regions and Athens.

Key Findings - Impact

Empowered Entrepreneurs
- Significant increase in entrepreneurial skills and business knowledge/ 70% of teams launched or plan to launch businesses

Job Creation
- New and existing participating businesses created employment opportunities

Market Expansion
- Some businesses established presence beyond their local markets and potential for broader regional economic impact

Network Building
- Established network of mentors, peers, allies & ambassadors within their industry and client base/ Provided ongoing support for long-term success

Community Impact
- Raised awareness about entrepreneurship in the local community/ Increased community engagement and support for local entrepreneurs and products

Government Engagement
- Attracted interest from local government officials/ Discussions initiated about policy support and potential funding

Personal Growth
- Participants reported increased confidence and motivation, clear direction and business growth path

Enhancing Urban Health and Wellbeing through Blue-Green Technologies: Insights from the HEART Project in European Cities

Authors:
Konstantinos Apostolopoulos1, Anna Papadima1, Christos Kontopoulos1, Charalampos Zafeiropoulos2, Anastasios Temenos2, Anastasios Doulamis2, Vassiliki (Betty) Charalampopoulou1

1 Geosystems Hellas S.A., Athens, Greece, mail@geosystems-hellas.gr
2. Department of Rural Surveying Engineering and Geoinformatics Engineering, National Technical University of Athens, 157 80 Athens, Greece

Introduction

Global geopolitical, economic, and climate changes pose significant challenges for cities across Europe and globally. These challenges exacerbate health inequalities driven by various factors such as living conditions, health behaviors, education, occupation, and income disparities. Consequently, urban areas are under increasing pressure to develop policies that promote sustainability, livability, and environments that foster public health and wellbeing.

The HEART project is dedicated to transforming urban environments by prioritizing public health and well-being in city planning. By integrating innovative Blue-Green Solutions (BG), HEART seeks to design urban spaces that not only promote healthier lifestyles but also actively work to bridge health disparities across populations. This holistic approach leverages medical expertise from both clinical and non-clinical settings, ensuring that health considerations are embedded in every decision-making process. The ultimate goal is to foster safer, more resilient communities where well-being is a central pillar of urban development.

HEART tackles a wide array of factors influencing public health and well-being (PH, WB), with a strong emphasis on encouraging positive behavioral changes that benefit individuals and communities alike [1]. A standout feature of this initiative is its commitment to community engagement. By involving local residents at every stage of planning, HEART ensures that health, environmental quality, and well-being are woven into the fabric of urban design. This collaborative approach not only enhances the inclusivity of the process but also empowers communities to take an active role in shaping their environments.

Ultimately, HEART aspires to set a new benchmark for urban planning, creating cities that are inclusive, health-oriented, and environmentally sustainable. Its methodology is demonstrated through implementation in three distinct European urban settings—Aarhus, Belgrade, and Athens—offering a diverse and practical showcase of the system's capabilities. Through these case studies, the HEART project highlights how smart, health-focused urban planning can become a catalyst for positive change in cities around the world.

Project Methodology

Phase I: Setting the Scene - Stakeholders engagement
The initial phase of the HEART project focuses on establishing the foundational requirements for its innovative urban planning approach. This phase is characterized by several critical activities designed to ensure a comprehensive and impactful framework:

- Conducting a comprehensive baseline analysis to evaluate the current state of public health and well-being in the three pilot cities, identifying gaps and opportunities for improvement.
- Presenting the Health and City Planning Methodology (HCPM) to key health and urban stakeholders, integrating their feedback to ensure the approach is tailored and impactful.
- Reviewing the clinical validation framework in detail, focusing on its design, organization, targeted diseases, populations, and alignment with urban green initiatives.
- Establishing measurable objectives that encompass urban built green spaces, environmental factors, and health indicators to track progress effectively.
- Developing customized HCPM solutions for each pilot site, ensuring they address local needs and integrate seamlessly into urban planning efforts.
- Engaging a broad range of stakeholders, including government agencies, local authorities, community organizations, and residents, to foster collaboration and inclusivity.
- Analyzing stakeholder inputs to generate actionable insights and strategies aimed at achieving specific health and social objectives.

By systematically addressing these activities, the HEART project lays the groundwork for a robust, health-oriented urban planning model that can drive meaningful change in cities around the world.

Phase II: Designing HEART Modules and Urban Policies Centered on Green Spaces
This phase is divided into two components: the development of HEART's technological modules and the assessment of green space (BG) urban policies.

a) The technological modules include [2]:
- Development of emotional sensing devices to monitor psychological and emotional states.
- Implementation of wearable sensors to track physical activity and provide real-time data.
- Creation of a chatbot offering personalized recommendations and insights on emotional well-being and quality of life.
- Establishment of the Heart-Around bio platform to facilitate connections between users and medical professionals.
- Integration of a Data Management System (DMS) leveraging machine learning and AI for advanced decision-making processes.
- Design and application of certified medical workflows to monitor and assess the health impacts of Blue-Green (BG) interventions.
- Cities independently design their unique green urban policies, tailoring them to local needs and priorities.
- Collected data and urban policies are combined to evaluate the effectiveness of BG interventions, contributing to the refinement and evolution of the HCPM model in subsequent phases.

b) Each city is responsible for designing its own unique green urban policies. The collected data in combination with the derived urban policies evaluate the effectiveness of BG interventions and contribute to the development of the HCPM model in later phases.

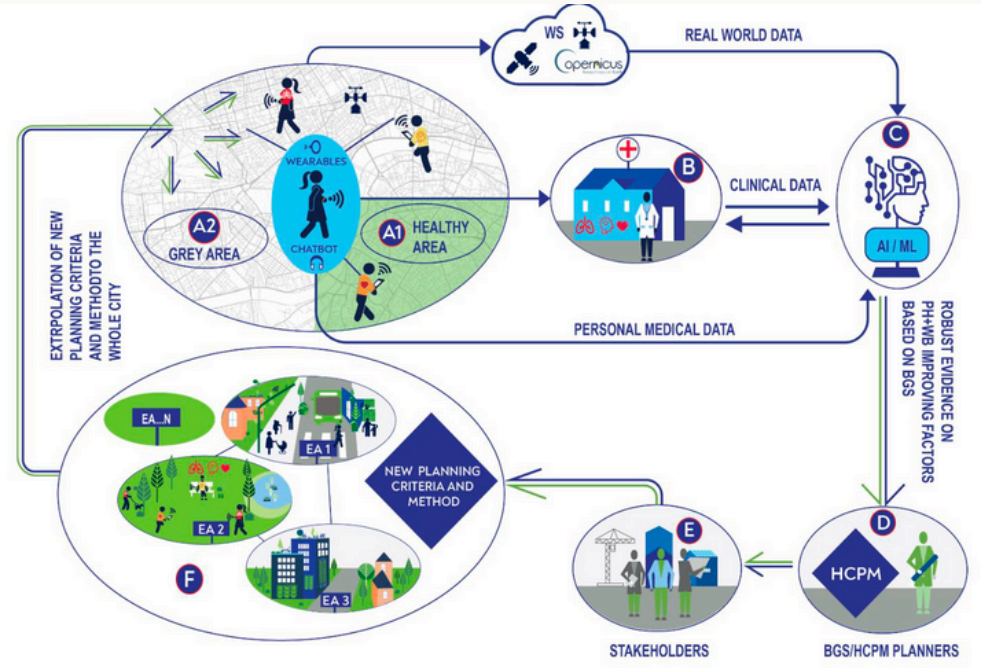


Figure 1. HEART's main conceptual diagram

Phase III: Data Gathering, Analysis and Processing
In this phase, the HEART project focuses on gathering and processing comprehensive datasets to validate and assess the real-world impact of Blue-Green (BG) interventions, particularly in addressing cardiovascular, metabolic, and respiratory diseases. This phase builds on the methodology established in Phase I, organizing the data into four key categories to ensure a thorough and multifaceted analysis:

Medical Data: Data collected from personal monitoring devices or healthcare professionals using certified medical equipment. Specific health indicators are tailored to each targeted disease, ensuring precise and relevant medical insights.

Environmental and Urban Green Space Data: Information on environmental factors such as air pollution, extreme temperatures, noise levels, and metrics related to urban green spaces. These include vegetation indices, building heights, urban density, and proximity to greenery, providing a detailed understanding of the environment's influence on health.

Well-being and Social Data: Emotional and psychological health metrics obtained through wearable devices and self-reported inputs, offering insights into the broader social and mental health benefits of BG interventions.

Analysis and Processing Toolkits: Advanced software tools designed to enhance the accuracy and reliability of the collected data. These tools perform tasks such as outlier removal, noise reduction, and feature extraction. Cutting-edge analytical methods, including spectral clustering,based grouping, and both linear and non-linear regression techniques, are employed to refine big data analysis and improve the precision of interpretation.

By leveraging these diverse data streams and sophisticated analytical tools, Phase III not only validates the health impacts of BG interventions but also provides actionable insights to optimize their design and implementation, advancing the overall effectiveness of the HEART project.

Figure 2. Data Gathering in case study of Athens

Phase IV: Built up the HCPM model using AI tools
In this phase, the HCPM model reaches its full potential by integrating the comprehensive datasets from Phase II with the cutting-edge technological solutions developed in Phase III. This integration establishes a sophisticated framework that seamlessly connects environmental and urban green space data with detailed medical and well-being information.

Leveraging advanced AI-driven data analysis, the model uncovers intricate, non-linear relationships between Blue-Green interventions, environmental factors, and individual health outcomes, including mental and psychological well-being. This innovative approach allows HEART to precisely analyze the connections between environmental and urban design elements and the health challenges addressed by the project.

The phase is dedicated to several critical objectives:

- Identifying actionable HEART interventions based on specific HCPM targets, ensuring focused and impactful solutions.
- Mapping the interactions between diverse urban components to create a holistic understanding of their dynamic interconnections.
- Introducing innovative planning criteria that prioritize health, sustainability, inclusivity, and resilience in urban development.

Implementing a Business Activation Module to foster economic viability and encourage the adoption and scaling of Blue-Green Solutions.

- Establishing clear and measurable links between the health impacts of each Blue-Green Solution, providing valuable insights for stakeholders and policymakers.
- Constructing the final iteration of the HCPM model, rigorously designed for real-world clinical validation, ensuring its practicality and scalability across diverse urban settings.

Through this comprehensive and integrative process, HEART advances toward its vision of revolutionizing urban planning by embedding health, well-being, and environmental sustainability at the core of city design. This phase lays the groundwork for scalable, evidence-based interventions that deliver transformative health benefits and set new standards for urban resilience and inclusivity.

Discussion

Monitoring the health of residents in large urban areas presents a complex challenge that demands a strategic integration of technological innovation and urban planning. The HEART project tackles this challenge through a comprehensive and citizen-centered framework, empowering individuals to track their health and emotional well-being using mobile devices. This process is supported by an intuitive virtual health assistant that encourages healthier lifestyle choices and fosters proactive engagement with personal well-being.

All collected data is anonymized and securely processed within the advanced Data Management System (DMS). In this system, AI-powered analytical tools uncover critical connections between social, environmental, and atmospheric factors that influence public health (PH) and well-being (WB). These insights provide robust, evidence-based assessments of how Blue-Green (BG) solutions impact urban health and quality of life. The findings are then integrated into the Health and City Planning Methodology (HCPM), which serves as a decision-making guide for stakeholders.

HCPM delivers evidence-driven urban planning strategies to health, city, and regional authorities, ensuring health and well-being are prioritized as foundational elements in urban design. These strategies emphasize the transformation and renewal of urban spaces, particularly in underserved or disadvantaged areas, to create environments that promote healthier and more resilient communities. By seamlessly linking technology, data analytics, and urban planning, the HEART project sets a new benchmark for addressing the health challenges of modern cities while fostering inclusivity and sustainability.

References

[1] Zafeiropoulos, C., Temenos, A., Angeli, A., Giakoumaki, A., Gallos, P., Katsorida, E., & Doulamis, A. (2024). Toward Health-Centered Monitoring framework promoting Well-Being and Nature-based Solutions. Proceedings of the 17th International Conference on PErvasive Technologies Related to Assistive Environments, 435–439.

[2] Bozovic, R., Maksimovic, C., Mijic, A., Smith, K., Suter, I., & van Reeuwijk, M. (2017). Blue green solutions. A systems approach to sustainable, resilient and cost-efficient urban development. Unpublished.

"Enhancing Urban Health and Wellbeing through Blue-Green Technologies: Insights from the HEART Project in European Cities"

Konstantinos Apostolopoulos1, Anna Papadima1, Christos Kontopoulos1, Charalampos Zafeiropoulos2, Anastasios Temenos2, Anastasios Doulamis2, Vassiliki (Betty) Charalampopoulou1

[1] Geosystems Hellas S.A., Athens, Greece, mail@geosystems-hellas.gr

[2] Department of Rural Surveying Engineering and Geoinformatics Engineering, National Technical University of Athens, 157 80 Athens, Greece

HEART Healthier Cities through Blue-Green Regenerative Technologies

HEARTH SUMMIT ATHENS

1 Introduction

The HEART project focuses on improving urban health by making public health and well-being a priority in city planning. Using smart Blue-Green Solutions (BG) HEART aims to create city spaces that support healthier lifestyles and help reduce health differences among people. By using medical knowledge from both clinical and non-clinical settings, this approach ensures that health is considered in every decision, leadingto saferandmore resilient communities. HEARTaddressesmanyfactorsthat affect public health and well-being (PH, WB), encouraging positive behavior changes to benefit everyone1. A key part of this project is involving local communities in each step, making sure that health, environmental quality, and well-being are built into every phase of planning. Ultimately, HEART aims to set a new standard for urban design, creating cities that are more inclusive, health-focused, and sustainable. The overall methodology and the capabilities of the system are demonstrated in three different and diverse Europeanurbanenvironments,thecitiesof:

Aarhus | Athens | Belgrade

2 Project Methodology

Phase I: Setting the Scene-Stakeholders engagement

The initial phase focuses on defining the core requirements for the proposed urban planningapproachinvolvingseveralkeyactivities:

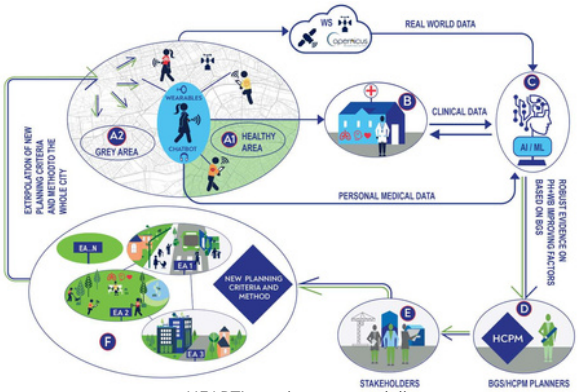
- Conducting a Baseline Analysis of the current state of PH and WB across three casestudies.
- Presenting and adapting the Health and City Planning Methodology (HCPM) to key health and urban stakeholders, ensuring their voices are heard and make animpact.
- Detailed examination of the framework used for clinical validation, including design and organization, with attention to specific diseases, targeted populations,andplannedurbangreeninitiatives.
- Establishing and delivering specific objectives that includes measuring urban builtgreenspaces(BGS),environmentalfactors,andhealthindicators.
- Developing tailored HCPM solutions for each pilot site, ensuring that the necessaryfunctionsareintegrated.
- Engaging a wide range of stakeholders, including governmental bodies, local authorities, and the broader community, to contribute to the formation and refinementoftheHCPM.
- Processing inputs from stakeholders to generate valuable insights and define strategiesforachievinghealthandsocialobjectives.

Phase II: Designing HEART Modules and Urban Policies Centered on Green Spaces

This phase is divided into two components: the development of HEART's technologicalmodulesandtheassessment ofgreenspace(BG) urbanpolicies.

a) The technological modules Include2:

- Emotionalsensingdevicestomonitorpsychologicalandemotionalstates.
- Wearable sensorstotrackphysicalactivity.
- Chatbot with personalized recommendations and data of emotional well-being andqualityoflife.
- Heart-Aroundbioplatformconnectingusers withmedicalprofessionals.
- Data Management System (DMS) powered by machine learning and AI for enhanceddecision-making.
- CertifiedmedicalworkflowsmonitoringthehealthimpactofBGinterventions.



HEART's main conceptual diagram

b) Each city is responsible for designing its own unique green urban policies. The collected data in combination with the derived urban policies evaluate the effectiveness of BG interventions and contribute to the development of the HCPM modelinlaterphases.

Phase III: Data Gathering, Analysis and Processing

In phase III, HEART gathers and processes data to validate and assess the impact of Blue-Green (BG) interventions in real-world clinical settings, specifically examining effects on cardiovascular, metabolic, and respiratory diseases. Following themethodologyoutlinedinPhaseI,dataarecategorizedintofourmainareas: (a) Medical Data—collected from personal measurements or professionals using certifiedequipment,withspecificindicatorsforeachtargeteddisease,

(b) Environmental and Urban Green Space Data—covering environmental factors

like air pollution, extreme temperatures, noise, and green space metrics such as vegetationindex, buildingheight,urbandensity,andproximityto greenery (c) Well-being and Social Data—tracking emotional and psychological health via wearabledevicesorself-reportedinputsand (d) Analysis and Processing Toolkits—software tools for refining data accuracy by removing outliers, reducing noise, and extracting relevant features. Advanced clustering methods, such as spectral clustering, density-based grouping, and linear/non-linear regression techniques, enhance the precision of big data analysis andinterpretation.

Data Gathering Image

Phase IV: Built-up the HCPM model using AI tools

In this phase, the HCPM model is developed by connecting data from Phase II with technological solutions from Phase III, creating a framework that links environmental and urban green space data to medical information. This model captures complex, non-linear relationships between green urban interventions, environmental factors, and individual health outcomes, including mental and psychological well-being, using AI-driven data analysis. This approach enables HEART to analyze how specific environmental and Blue-Green factors relate to health issues supported by the project. The phase also focuses on: (1) identifying potential HEART interventions from HCPM targets, (2) mapping interactions between urban components, (3) introducing innovative planning criteria, (4) implementing a Business Activation Module, (5) linking each Blue-Green Solution's impact on health, and (6) constructingthefinalHCPMmodelforreal-worldclinicalvalidation.

3 Discussion

Monitoring residents'healthinlargeurban areasisa complexchallenge, requiring a coordinated approach that merges technological innovation with urban planning. The HEARTproject addresses this through a comprehensive framework that allows citizens to monitor their health and emotional well-being using mobile devices, assisted by a virtual health assistant promoting healthier lifestyle choices. Data collected is anonymized and processed through the Data Management System (DMS), where AI-driven tools analyze it to reveal connections between social, environmental, and atmospheric factors influencing PH and WB. This data processing provides solid evidence on the impact of BG solutions on PH and WB, which informs the HCPM. HCPM then guides stakeholders—including health, city, and regional authorities—with evidence-based urban planning strategies. These strategies prioritize health and well-being as essential criteria, focusing on the design and renewal of urban areas, especially those underserved or disadvantaged,topromotehealthierandmoreresilientcommunities.

4 References

[1] Zafeiropoulos, C., Temenos, A., Angeli, A., Giakoumaki, A., Gallos, P., Katsorida, E., & Doulamis, A. (2024). Toward Health-CenteredMonitoring framework promoting Well-Being and Nature-based Solutions.Proceedings of the 17th International Conference on PErvasiveTechnologies Related to Assistive Environments, 435–439.

[2] Bozovic, R., Maksimovic, C., Mijic, A., Smith, K., Suter, I., & van Reeuwijk, M. (2017). Blue green solutions. A systems approach to sustainable, resilient and cost-efficient urban development. Unpublished.

@he art pro j e c t 2020 | @HEARTproject20

@heart-horizon2020 | @he art pro j e c t 7055

Website

Partners

The 'HEART' project has received funding from the European Union's Horizon 2020 researchand innovation programmeunder grantagreementNo 945105.

Creative industries, creative tourism & sustainability perspectives: The case study of traditional pottery-making in Crete

Authors: Papadaki Eirini, Arvanitaki Alexandra, Apostolakis Alexandros

Department of Business Administration and Tourism, School of Management Sciences and Economics, Hellenic Mediterranean University, Ioanni Athitaki Str., Estavromenos, Heraklion Crete.

As a new genre in tourism or rather a more participatory form of cultural tourism, creative tourism has inspired contemporary scientific research and has been the subject of numerous scientific conferences and journals worldwide (Richards, 2014). Its nature and economic dimensions have been examined in various frameworks and contexts, geographical areas and differentiated communities, with or without established bonds to the tourism industry. Creative tourism's potential to local communities with active and vibrant creative industries is now starting to emerge in the literature. What is more, the contribution of the sector's impact on local communities is also receiving increasing attention lately, as a means to emphasize its role towards sustainable consumption and production patterns (UN, 2023). This is because, the positive effects of creative industries on the local tourism industry are well manifested in the literature nowadays (McGuinan 2009).

Creative industries, associations and actors in traditional handcrafting are among the stakeholders that have been connected to creative tourism and have been given a significant role in the tourism ecosystem. These stakeholders seem to satisfy travelers' three main contemporary needs. First, the need to participate and interact with the visited community. Second, the desire to discover local traditions and differentiated aspects of the destination—the so-called "authenticity" of the visited places. Third, the need to show their concern and care for sustainability issues in the tourism sector and the world in general.

The personalized tourism experiences offered by creative bodies represent one of contemporary tourists' stronger motives, as they search for participatory experiences at the destination. In other words, cultural and creative industries offer the opportunity for value co-creation in the tourism industry (Purzakarya 2022). As competition for additional visitors and revenue between destinations intensify, so does the need to offer personalized and co-created tourism experiences.

The opportunities offered to visitors "to develop their creative potential through an engaged experience in the destination visited" (Qiang and Kovacs, 2023: 1) guarantees tourists' increased level of involvement, making them "active" in the visited community. "Tourists develop their creativities through participation and engagement in the learning experience that is characteristic of local destinations" (Li and Gareth, 2022: 199). According to Malisiova and Kostopoulou (2023), cultural associations can be seen as "authentic associations" related to local culture and tradition. This makes them crucial gatekeepers of the authenticity and identity of the destination. Based on our empirical findings, local cultural and creative organizations can be perceived as local hidden treasures to the unwary, or otherwise visitors.

Thus, in an ever-changing world, where destinations aim to build their local identity and deconstruct it at the same time, local cultural and creative organizations could facilitate rational and sustainable development practices in the locale. Creative tourism can be seen as an alternative path towards more sustainable tourism (Korez-Vide, 2013; Lim 2016; Duxbury et al, 2021; Remoaldo et al, 2022).

The objectives of the research

This research attempts to emphasize the role of local culture and creative industries in promoting sustainable tourism practices by shifting tourism activity from coastal to inland areas (environmental sustainability pillar). In addition, the research examines the level of residents and visitors' engagement in local cultural practices—regardless of gender, origin, age, income and/or educational background (social sustainability pillar)—and provides insights into maintaining a long-lasting cultural tradition (cultural sustainability) that would help the locals stay in the villages and have a dignified life (economic sustainability pillar). The objectives are twofold. On the one hand, the research aims to highlight local cultural and creative industries' contribution towards sustainable tourism practices in all three pillars of sustainability. On the other hand, it aims to operate as a blueprint for improving sustainable practices among local cultural stakeholders, proposing cultural sustainability as an umbrella concept for all sustainability pillars. At the same time, the research examines traditional pottery making in Crete as a means for destinations to offer differentiated and co-created tourism experiences.

Crete is a Greek island broadly known for its history, tourism infrastructure and services, a famous destination that attracts seaside mass tourism primarily from many European countries. Pottery making is one of the traditional handcrafting activities performed in Crete, finding its roots back to the Minoan civilization. The most prolific remaining ceramic centers in Crete, with a long-lasting tradition in the art of pottery, are Thrapsano in the Heraklion prefecture, Margarites in Rethimno prefecture, Nohia in Chania prefecture and Kentri in Lasithi prefecture.

Research Methodology

The methodological tools used for the collection of the research data included field work research and structured observation in two of the currently most prominent pottery centers on the island, namely the villages of Thrapsano and Margarites. Data on pottery sustainable production practices and future visions was collected through interviews with pottery artists and presidents of local ceramic associations, while hotel owners, local people/residents and tourists in the area at the time of our visit were asked about the potential for creative tourism in the areas studied. In the case of Thrapsano village, other activities were also studied as part of the pottery-related destination image shaping, such as a pottery-themed festival named "Earth, Fire, Water" and the "Potter Feast". Additional data was collected by digital ethnography tools, as the research team recorded and studied the visibility of the villages, the pottery workshops and the hotels of the area in the digital semiosphere.

Results

There are considerable variations in the production and promotion practices between the two villages of the study. The potters in Margarites specialize in crafting small ceramic objects, like plates, cups, cooking vessels, cutlery and decorative objects. The ceramists in Thrapsano manufacture huge jars primarily utilized as planters or ornamental features in outer spaces. Although the number of pottery workshops is almost identical in the two villages, the number of potters in Thrapsano is double than the one in Margarites, demonstrating the level of difficulty in creating big pottery containers, in relation to small ceramic items. The potters in Thrapsano demonstrate a strong commitment to preserving the traditional craft that originated during the Minoan period. In contrast, potters in Margarites aspire to broaden their artistic horizons by embracing contemporary ceramic artforms. They also aim to captivate tourists' and daily visitors' attention by crafting not only functional but also visually striking and vibrant decorative pieces.

Thrapsanian potters demonstrate superior organization in digital communication, utilizing digital channels to receive orders from international businesses, as the 80% of their creations are sold abroad. Conversely, many potters in Margarites perceive such communication channels as unnecessary and potentially detrimental, fearing that it may compromise the artistic integrity of their creations. The online presence of both villages on official websites is equally prominent, and Margarites village is also extensively promoted by numerous travel agencies. A large quantity of images is distributed extensively in the digital realm, but through distinct digital channels. Foreign pottery stores and potters actively promote Thrapsanian pottery, while tourists themselves promote the pottery produced in Margarites through their social media accounts. They share selfies in front of the pottery-decorated walls of the village's houses or engage in the pottery creation process. The pottery workshops in both villages have established clientele, with Thrapsanian potters using a business-to-business (B2B) approach, while potters in Margarites mostly sell their products through a business-to-consumer (B2C) procedure. Both threatened by mass produced plastic items, Thrapsanian pottery containers and ceramic items made in Margarites, have found ways to travel abroad, either through international shipping following online placed orders or by limiting their size in order to fit in tourist luggage. Thrapsanian jars travel with a distinguishing seal, while the items created in Margarites mostly carry handwritten signatures.

Although the technique is mainly passed from generation to generation, there are newcomers that want to learn the craftmanship—mainly in Margarites—, while there are plans for a Pottery School in Thrapsano.

Traditional handcrafting, as part of the creative industries in Crete, has, according to this research, significant effects in all three pillars of sustainable development and could play—as part of Cretan cultural heritage—a crucial role in satisfying the goals of the 2020 Strategy for a smart, sustainable and inclusive growth. Regarding the economic pillar, it can enhance creative tourism, contribute to local and regional development and the regeneration of the small villages by generating diverse types of employment. At the same time, the opportunities for creative tourism in the villages could re-direct tourist flows from coastal and urban areas and the countryside, developing a more sustainable tourism model for the island (environmentally). As far as the social pillar is concerned, creative practices and the events organized around them seem to inspire community engagement, improving the quality of life for individuals in the villages and strengthen the sense of “belonging”. At the same time, such initiatives could facilitate social inclusion and intergenerational communication, through the given opportunities to develop skills, knowledge and one’s creativity.

Conclusions

The objectives of this research are defined twofold. On the one hand, it aims to highlight local cultural and creative industries’ contribution towards sustainable tourism practices through the spatial displacement of tourism activity away from coastal areas and towards the mainland. Crete as an archetypal mass tourist destination is experiencing serious environmental problems, all associated with heightened tourism activity (water shortages, waste management etc.). Easing up tourism pressure away from coastal tourism hotspots could alleviate such pressures. At the same time, pottery-making activities are not energy and resource demanding, so they are less damaging to the natural environment both during their production and their use. The jars made in Thrapsano are made by water and earth from the village, fired at a furnace and are used mainly as flower pots, instead of the plastic mass-produced planters and window-boxes

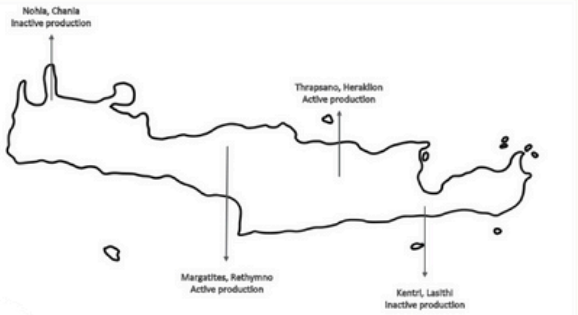
On the other hand, the paper aims to operate as a blueprint for improving sustainable production practices among local cultural and creative industry stakeholders. In particular, the paper maintains that in order for local producers and other stakeholders to cope with both increased levels of competition, as well as the ever-evolving tourists' preferences, they have to find ways to network, and coordinate their actions. Tourists are driven by highly authentic, unique and tailor-made experiences. This means that local stakeholders would have to identify ways to bolster the "glo-cal" nature of their offerings to the demanding tourist, enriching local entrepreneurship practices and in the long term the sustainability of a century-long cultural production mechanism and the Minoan evolved Cretan jars.

References

- Duxbury, N., Bakas, F. E., De Castro, T. V., Silva, S. (2021). Sustainability. 13 (1) 2. DOI: 10.3390/su13010002.
- Korez-Vide, R. (2013). Promoting sustainability of tourism by creative tourism development: how far is Slovenia? Innovative Issues and Approaches in Social Sciences 6 (1): 77-102.
- Li, S., Gareth, S. (2022). Creative tourism and creative tourists. A review. In Creative Business Education: exploring the contours of pedagogical praxis. Palgrave Macmillan, Cham. pp. 199-219. DOI: 10.1007/978-3-031-10928-712.
- Lim, W. M. (2016). Creativity and sustainability in hospitality and tourism. Tourism Management Perspectives. 18. pp. 161-167.
- Malisiova, S. & Kostopoulou, S. (2023). Regional creative capacity and creative tourism development. The case of cultural associations in peripheral areas. Highlights of Sustainability, 2 (4): 241-258. DOI: 10.54175/hsustain2040017.
- McGuigan, J. (2009). Doing a Florida thing: the creative class thesis and cultural policy, International Journal of Cultural Policy, 15 (3): 291-300, DOI: 10.1080/10286630902763281
- Pourzakarya, M. (2022). Searching for possible potentials of cultural and creative industries in rural tourism development; a case of Rudkhan Castle rural areas. Consumer Behavior in Tourism and Hospitality, 17(2), 180-196. doi.org/10.1108/CBTH-09-2021-0210
- Remoaldo, P., Alves, J., Ribeiro, V. (2022). Creative Tourism and Sustainable Territories: Insights from Southern Europe. Emerald Insight. DOI: 10.1108/9781802626810.
- Richards, G. (2014). Creativity and tourism in the city, Current Issues in Tourism, 17 (2): 119-144. DOI: 10.1080/13683500.2013.783794
- Qiang, P., & Kovacs, J. (2023). Creative tourism and visitor motivation. International Journal of Tourism Research. 1-13. DOI: 10.1002/jtr.2601
- United Nations (UN). (2023). Sustainable development goals. Goal 12: Ensure sustainable consumption and production patterns. United Nations. Available from: http://www.un.org/sustainabledevelopment/sustainable-consumption-production [access: 14.12.2023]

CREATIVE INDUSTRIES, CREATIVE TOURISM & SUSTAINABILITY PERSPECTIVES: THE CASE STUDY OF TRADITIONAL POTTERY MAKING IN CRETE

Eirini Papadaki, Alexandra Arvanitaki, Alexandros Apostolakis
Department of Business Administration & Tourism,
Hellenic Mediterranean University
eirpapadaki@hmu.gr



CREATIVE TOURISM

•An expanding genre in cultural tourism
•Potential for growth in local communities hosting creative industries
•Tourists seek participatory & personalized experiences in destinations
•Cultural associations presented as authentic elements of a destination's identity
•Alternative path towards sustainable tourism and antidote to mass tourism and overcrowded destinations
•Promotes and supports local entrepreneurship
•Long-term sustainability of cultural production mechanisms

OBJECTIVE

• Encourage creative routes and co-created tourism experiences
• Study creative tourism in pottery villages in Crete

Crete: Known for its history, tourism infrastructure
Pottery making: Traditional activity dating back to Minoan civilization

METHODOLOGY

Data collection
1.Interviews with pottery artists, hotel owners, residents and tourists
2.Digital ethnography tools
3.Recording and studying the presence and visibility of the villages in the digital semiosphere.
4. Structured observation in the villages of Thrapsano and Margarites.

RESULTS

• Despite the fact that Thrapsano has developed a strong name due to its large exports abroad, the village itself has not been developed touristically
• Margarites village has developed a tourism model that attracts visitors, since it welcomes a large number of tourists during the summer and at weekends all year long.

SUSTAINABILITY PERSPECTIVES

ENVIRONMENTAL SUSTAINABILITY PILLAR

- divertion of large numbers of tourists from coastal regions to inland Crete, contributing to the solutions of problems like water shortages & waste management.
- pottery-making activities have a low energy & resource requirement - crafted using locally sourced water & dirt & burnt in fire furnaces
- jars utilized as flower pots, an alternative to the mass-produced plastic planters & window-boxes

ECONOMIC SUSTAINABILITY PILLAR

- tourism: potential to generate income
- demand of local products grows
- local infrastructure & services are enhanced
- agricultural markets are stimulated
- Thrapsano: pottery containers exported to Europe & the USA (loyal clients)
- Margarites: potters produce small decorative objects suitable for travellers to carry in their luggage
- daily trips for tourists to visit surrounding locations such as Arcadi or the archaeological site of Ancient Eleftherna (cultural route)
- Thrapsano: BtoB sales, Margarites:BtoC

SOCIAL SUSTAINABILITY PILLAR

- involvement of locals in the tourist experience
- community-based tourism as an important part of sustainable tourism (locals participate in the decision-making process & local events, run tourism businesses, etc)
- Thrapsano: residents participate in pottery festivals (regardless of age, gender, income or occupation)
- Margarites: locals adorn their spaces with pottery artefacts, marketing pottery as the defining characteristic of the community

CONCLUSION

Preference of tourists for Margarites
- geographical location (Margarites as a lunch stop during a cultural route)
- size of pottery items (might function as souvenirs)
- tourist infrastructure & services
- synergies & cooperation patterns (between the potters & between potters & local authorities)
- tourists' engagement with the creation process (creative tourism)

Pottery villages in Crete attract creative tourism.
Trhapsano: during themed festivals
Margarites: all year round for all the reasons mentioned above.

For a place on the tourist map:
- potters & Cultural Associations should cooperate with official local authorities
- propose cultural routes
- create infrastructure
- offer tourist services
- develop initiatives for tourists' engagement; open their workshops, accept guests and create pottery with them

↓

Sustainable culture & tourism in Crete

Learn more

Sustainable Consumption in Greece: Trends, Challenges and Opportunities

Author: Lida Tsene, PhD, Hellenic Open University/Impact Hub Athens

ten million hands
SUSTAINABILITY IN ACTION

This research aims to map the field of conscious consumption in Greece. It is the first stage of an ongoing research work, which will evolve over the years, recording changes, but also common patterns in trends and behaviors, and is part of the 10 Million Hands project, which is implemented by Impact Hub Athens with the support of the Helidoni Foundation. For this reason, in this first survey we wanted to investigate the familiarity of the Greek consumer with the concepts of sustainability, to study some of his purchasing habits and to capture, at a first level, the values that may co-shape his choices. The research followed a combination of qualitative and quantitative methodology, involving both consumers and important representatives of different sectors and fields that are involved in or are somehow involved in the fields of sustainable production and consumption. Like any research process, this one had challenges and limitations, which were recorded so that they could be better answered in the next stage. The following text presents the findings of both the quantitative and qualitative research, while we also attempt a synthetic interpretation and decoding of the most important ones, laying the foundations for future, additional research questions.

Research Methodology

With the aim of attempting a first mapping of trends and perceptions of conscious consumption in Greece, we conducted a quantitative survey with a structured questionnaire (dichotomous questions, scale questions, etc.) on a sample of 2,202 individuals, men and women, aged 18 to 64. The survey was carried out in July 2021 (July 1-22, 2021), by telephone, online and face to face at a national level with stratified sampling. The R and IMBD programs of SPSS Statistics v.23 were used for the statistical analysis of the results. Through the questions, we tried to record the perception that Greek consumers have of responsible and sustainable consumption, the motivations, but also the obstacles to adopting such a lifestyle, the role of the Media in shaping a more conscious consumer behavior, and the role of Covid in all of the above. The main variables for the analysis were mainly demographic characteristics (age, gender, level of education, family status, etc.), but also geographical (urban center or region). During the time the survey was conducted, there was no specific political, economic or social event that could have influenced the results, except for the pandemic situation, which is now considered something consolidated in the last year.

Qualitative research shed light into specific aspects that allowed us to understand in greater depth the challenges, but also the opportunities, of conscious consumption in Greece. With 32 interviewees, with different backgrounds and representing different sectors, we attempted to approach the concept of conscious consumption and to interpret specific trends and behaviors towards it, always in relation to both the results of the quantitative research and the findings of corresponding studies. The methodological tool we used was the in-depth interview, wanting to give our interviewees the opportunity to express their opinions and experiences as freely and comprehensively as possible. We therefore conducted 32 semi-structured interviews with open-ended questions, lasting approximately one hour, with important stakeholders. The interviews were conducted via Zoom, as, on the one hand, the restrictive measures against Covid do not allow for in-person meetings very easily, and on the other hand, because several of the participants in the survey are also located in the region. The interviews were based on a discussion guide, which included 10 open-ended questions, the same for all participants, and three more specialized questions, depending on the sector each represented.

The main thematic axes of the discussion guide concerned the definition of the concept and practice of conscious consumption, the investigation of the motivations that an organization/brand has to adopt production and distribution practices of products and services that are characterized as sustainable, responsible or ethical, the profile and scope of the culture of responsible consumption in Greece, the most important obstacles that Greek consumers face in the process of selecting such products and services, the evaluation of institutional interventions and incentives in the field, the evaluation of the information that Greeks receive on issues of responsible production and consumption, the role that the pandemic probably played in enhancing or not the adoption of a more responsible lifestyle, both by consumers and by organizations/brands.

Key Findings

If we were to discuss the research results together, we would observe several convergences, as well as common emerging themes. The definition of conscious and sustainable consumption remains fluid, which also reflects international bibliographic sources and corresponding research. According to the recent research by the IBM Institute for Business Value (2020), the term sustainability is a more general definition, which includes a wide range of activities and behaviors from environmental protection to labor rights or is used as an umbrella for issues such as quality of life, resource conservation, waste management, etc. (Mont, Plepys, 2007).

In our country, it seems that the majority of consumers associate sustainability and sustainable consumption with environmental footprint, while for stakeholders it has a more holistic meaning. This shows that people who have a greater familiarity with specific practices, either due to their professional environment or due to personal interest, can perceive that “purchasing choices and preferences, as well as lifestyles, have indirect or direct consequences on the environment, social cohesion and personal and collective well-being”. (Jackson, 2009; UNEP, 2011 in Jackson, 2014).

And despite the fact that both the results of the quantitative and the findings of the qualitative research show that Greeks are able to attribute specific characteristics to a product or service, in order for them to be characterized as sustainable and ethical, they have difficulty naming specific brands. The categories of organic or fair trade products are mentioned, but without being specified. In cases where a specific reference is made to a brand, it is mainly associated with better shelf placement and visibility through advertising. This observation is also quite connected to the common finding concerning the way in which products and services are communicated. As a large part of the participants argued, businesses - mainly smaller ones - that have embarked on the process of producing and distributing products and services in a sustainable and ethical manner need to put more effort into communication and marketing in order to achieve the right positioning in the minds of consumers. However, the same often happens with larger brands. According to Doorn, Risselda and Verhoef (2020), this has to do with many reasons, some of which are also highlighted by our own research.

The relationship between quality and price is the equation that concerns most Greek consumers. Price remains the main obstacle to choosing organic products or sustainable and ethical products and services (Van Doom & Verhoef, 2011), raising the question of whether this particular lifestyle ultimately concerns only specific consumer profiles and how this obstacle could be overcome. It should be noted here that the economic crisis, as well as the pandemic, have exacerbated these concerns in recent years. The answer comes through simpler solutions provided by our own research participants, which reveal different aspects of conscious consumption, such as non-consumption, better food waste management, supporting the local economy, and product reuse. Choosing seasonal and local products from conventional or organic markets, buying only the necessary, and buying "second-hand" products are some of the solutions proposed by the participants. The above finding seems to be in line with the larger debate currently underway on whether sustainable consumption is a privilege of the few, with the opposing view arguing that more developed countries, as well as people with higher incomes, can negatively affect the sustainability of the planet in the long term.

Accessibility to products and services, the greater demand for effort and time from consumers themselves, and the lack of appropriate information are additional points that emerged from both our qualitative and quantitative research. Despite the fact that one can find sustainable products in more points of sale, there is still difficulty in certain areas, which are not located, for example, in urban centers. On the other hand, many people state that they do not have the time to research and identify where they could purchase such products or use corresponding services, and that while they have the intention, they cannot or do not want to devote additional time.

Appropriate information about products and services seems to be of considerable concern to both consumers and producers/entrepreneurs operating in the respective sectors, as well as representatives of communication companies. On the one hand, consumers seem to need more knowledge in order to be able, for example, to read a product's label correctly or to understand its potentially higher selling price, and on the other hand, producers, entrepreneurs and representatives of communication companies argue that a greater effort is needed on their part to convince the public to choose them, and to convey the appropriate messages so that specific choices are not associated with greenwashing and social washing phenomena.

And although sustainable production and consumption is here to stay, both because it is imposed by the European Union and because it is a matter of survival for many businesses, what is happening in our country? And in Greece, despite the fact that, as our own research shows, it still takes time, both from the consumer and brand perspective, to be able to talk about a conscious culture of sustainable consumption. When categorizing the types of consumers in Greece, a small percentage are completely indifferent to issues of sustainable production and consumption, as well as the environment in general. On the other hand, there is a percentage, mainly of older age, which stands somewhere in the middle, a percentage that declares an intention, but ultimately cannot support it due to financial weakness, difficulty of access or even ignorance, and a percentage, usually younger people, which is growing dynamically, which takes into account the economic, social and moral impact in their consumption habits.

Accordingly, describing the demographic characteristics of the Greek conscious consumer, he/she is 8-35 years old, single, lives in an urban center, has a tertiary education, and has a medium to high income. He/she is informed mainly through social media, shops online, but also chooses smaller neighborhood stores and organic markets, supports local producers, is sensitive to animal abuse and exploitation, prioritizes respect for human rights, recycles and tries to reduce the use of plastic, is interested in his/her personal health, understands the connection between production, consumption and the environment, and is willing to pay more for a sustainable environment and most of the time does so. The above reflects to a large extent the new consumer trends, which are emerging in the light of the pandemic and the economic crisis. According to the IBM Institute of Value (2020) research, "sustainability has reached a high point. As consumers increasingly embrace social impact, they are looking for products and brands that align with their values." The same research highlights a new type of consumer, the "purpose driven", who chooses brands according to how much they correspond to their personal values and who is willing to change even their purchasing behavior for them, paying more.

The younger generations in general and Generation Z in particular are the ones that will bring even greater changes in the consumer culture and behavior of Greeks, driving conscious consumption to higher levels and requiring brands to increasingly commit to such practices.

As mentioned above, insufficient information is one of the factors that prevent Greek consumers from switching to a more responsible lifestyle. The role of the media seems to be of great importance, as most seek better and more comprehensive information on environmental issues, climate change, and sustainability, while at the same time they can influence consumers on issues of conscious consumption. Special mention is made of social media and the role they play in providing better and more targeted information to citizens, from different and independent sources, as well as the role of influencers.

In closing, the direction for the future of conscious consumption in our country should be a collective effort of citizens, the private sector, and the society of citizens, as well as the individual responsibility of each of us.

Sustainable Consumption in Greece: Trends, Challenges and Opportunities

Lida Tsene, PhD
Impact Hub Athens Team Member
Teaching Associate, Hellenic Open University

Introduction

A century ago, if a consumer entered a store to buy a product, the only concerns would be whether the product was on the shelf and its price. Today, consumers seek additional information, such as the product's ingredients, its environmental impact, whether it was produced fairly (fair trade/labor), and often are willing to pay more for products that meet these criteria. In a 2019 study (CGS, 2019), nearly half of consumers stated they would pay more for sustainable products, with representatives of Generation Z claiming they would pay 50-100% more for such items. Currently, the criterion of responsible consumption can influence not only purchasing decisions but also affect other consumers and brand loyalty.

`The Ten Million Hands Project

The purpose of Ten Million Hands is to motivate changes in the way we make decisions and operate towards a more sustainable future.
Ten Million Hands started as an initiative by Impact Hub Athens and the Helidoni Foundation, and since late 2022, it has been established as an independent organization, the first in Steward Greece to adopt the Ownership model.
TMH was created to provide information and propose solutions within the framework of the United Nations' 12th Sustainable Development Goal. Its purpose is to provide quick and reliable information, as well as daily tools and incentives, to strengthen Sustainable Consumption and Production at both individual and social levels.

The Research

In this paper will present research findings, employing both qualitative and quantitative methodologies, on how this program managed to enhance entrepreunerial culture in the selected areas.

Research Tools

- questionnaires (structured).
- in depth interviews (semi structured)

Sample

- 2000 consumers
- 32 in depth interviews

Time Frame

July-September 2021

Research Goals

To map the ecosystem of sustainable consumption in Greece, identify challenges and opportunities.

Key Findings

- The definition of conscious and sustainable consumption remains fluid, a fact that is reflected in international literature
sources and corresponding research.
- In Greece it appears it that the majority of consumers associate sustainability and sustainable consumption with environmental footprint while for stakeholders it has a more holistic meaning.
- Both from the quantitative results and the qualitative research findings we observe that while Greeks attribute specific characteristics to a product or service in order for them to be characterized as sustainable and ethical be as ethical, they find it difficult to name specific brands.
- In cases where a specific brand is mentioned, it is primarily associated with better shelf placement and through visibility advertising exposure.

Key Findings

- A large portion of participants asserted that businesses - especially smaller ones - that have engaged in producing and distributing products and services in a sustainable and ethical manner need to make a greater effort in terms of communication and marketing in order to achieve proper positioning in consumers' minds.
- The quality-to-price ratio is the equation that concerns most Greek consumers. Especially for new products launched as sustainable, consumers may follow a more popularized view which dictates that companies sacrifice some quality for sustainability.
- The price remains the main barrier for choosing organic products or sustainable and ethical products and services.
- Accessibility to products and services, the greater demand for effort and time from the consumers themselves, as well as the lack of appropriate information, are additional points that were highlighted by both our qualitative and quantitative research.
- Appropriate information about products and services seems to be a concern for both consumers and producers/entrepreneurs operating in the respective sectors, as well as for representatives of communication companies
- Green and social washing are phenomena that are often observed and seem to have an impact on the perception of Greek consumers regarding which companies are considered sustainable, as in the findings of our quantitative research, we noted several large brands that have been accused of greenwashing.
- Younger age groups in general, and Generation Z in particular, are expected to bring even greater changes to the consumer culture and behavior of Greeks, leading conscious consumption to higher levels and demanding that brands increasingly commit to such practices.

Ten Million Hands

Place4Hope: Young People and Climate Health

Authors: Lucinda Jarrett, Creative Director of Rosetta Life Dina Ntziora, Producer Place4Hope

Place4Hope marks Rosetta Life's second venture into engaging a global community of young individuals on issues close to their hearts. The inaugural project, Room2Dream, launched in 2022, explored the concept of home in the aftermath of the pandemic and was presented as an immersive film experience.

In the course of producing Room2Dream, we invited all our partners to nominate one youth leader to form a youth leadership group. Their first task was to write a shared chorus and their second to determine the subject matter for the next proposal. This leadership group chose to explore an issue that is shared across the global community, the health of the planet itself.

Over the course of the next four years we will co-create cultural projects with the young leaders to advocate for separate elements of climate health. 2025 - 26 we will explore the element of fire through storytelling and immersive 360filmmaking, 2026 - 27 we will explore cultural festivals (Harvest, Spring and Fertility Festivals in May, linked to agriculture and farming, feasts and food) 2027 - 28 we will explore music and dance through air and breath and 2028 - 29 we will return to water. In 2030 we plan to hold a festival to mark the inclusion of health as a priority and an urgency in the Climate Change Convention. We recognise that other cultures also include wood and metal and dependent upon participating centres may also include these. The project unfolds in two distinct phases: firstly, empowering participants to enact tangible actions within their local communities to bolster climate health and justice; secondly, collaborating with them to co-create immersive narratives through 360-degree film, poetry, music, and dance.

The programme launches with a pilot programme looking at Water.

Place4Hope was launched on July 8th with a four-day Summer School focused on the global water crisis and its link to climate change. Participants examined the challenges of drought, water access, flooding, and the health risks associated with waterborne diseases. They worked with filmmakers to shape their own storyboards, with lyricists to write lyrics that became a song and submitted video and imagery to create a short film. Separately, they also documented the processes that they had participated in a zine so that other communities could replicate the process. The final artwork will be showcased at Climate Week in New York in September 2024 as part of The Wellcome Trust's Canopy program, which addresses climate and health issues.

The Summer School involved a diverse range of activities designed to foster connections between course leaders and participating young people. The schedule included presentations from climate activists, policy and research experts, and creative workshops led by artists and composers. This approach allowed for dynamic feedback loops, incorporating the lived experiences of attendees. By ensuring direct engagement between course leaders and participants, the program was able to adapt in real-time to better meet the needs and interests of the young people involved.

Vision & Mission

Our vision is to empower young people worldwide to become agents of positive change through collaborative and creative initiatives that address pressing social and environmental challenges.

Our mission is to provide a platform for young individuals to express themselves, explore their creativity, and engage in meaningful dialogue and action around issues such as climate justice, social equity, and mental health so that young people are mobilized to make a difference in their communities and beyond. We aim to create long-lasting friendships among young leaders across the world, developing their agency in advocacy and policy engagement through immersive storytelling, creative expression, and collaborative problem-solving.We seek to foster a global community that embraces diversity, fosters empathy, and works together to create a more sustainable and equitable future for all.

Participation

The Summer School engaged with 28 Young Leaders from across the globe, offering them a platform to critically examine the pressing issues of climate change and the global water crisis. These young leaders, coming from diverse backgrounds and regions, brought with them a wealth of perspectives and experiences that enriched the discussions and workshops. The program emphasized the importance of their role in shaping the future, acknowledging that it is natural for them to feel both critical and anxious about the challenges ahead. However, the Summer School also fostered a sense of hope and empowerment, encouraging these young leaders to co-design the future they wish to see. By equipping them with the tools, knowledge, and networks to influence change, the program reinforced the powerful idea that their voices and actions are vital in driving the solutions needed for a sustainable and equitable future.

Each Young Leader was nominated by a partner organization and subsequently completed an application form detailing their motivations and aspirations for attending the Summer School.

“This is a great opportunity for me as a young climate advocate, hence attending this summer school will provide me with the tools and unique perspectives to advocate for climate action. it will also provide me with the chance to network with like-minded individuals and experts, fostering collaboration and enhancing your impact as a young climate advocate. Above all, attending this summer school will also help amplify my voice and impacts as a passionate advocate for a sustainable future”

Praize, 19 years old, Nigeria

The Summer School brought together a diverse range of partners from across the globe, each contributing unique local perspectives on the intersection of climate change and health. These partners included educational institutions, cultural organizations, NGOs, and community groups from the UK, Greece, Syria, Scotland, Gaza, Nigeria, Myanmar, the USA, Brazil, Colombia, India, Uganda, South Africa, and Hong Kong.

The involvement of these varied organizations allowed the Summer School to explore the local impacts of climate change on health within different cultural and geographical contexts. For example, while partners in Nigeria and Uganda focused on mental health challenges and social work in the face of climate stress, organizations in Greece and Gaza highlighted the experiences of displaced communities and the role of education in fostering resilience. The collaboration with arts and cultural institutions like the North Carolina Museum of Art and the American Museum of Natural History emphasized the power of creativity and storytelling in addressing these global challenges.

This wide-ranging exploration of local content is crucial because climate change affects communities differently based on their specific environments, economies, and social structures. By understanding these localized impacts, the Summer School empowered young leaders to develop more nuanced and effective solutions that are tailored to the needs of their communities. The diverse perspectives also facilitated a richer dialogue, helping participants to see the interconnectedness of global challenges and the importance of collaborative, cross-cultural approaches to designing a sustainable future.

The Summer School program this year was meticulously crafted to reflect our foundational Pillars of Practice—Health, Science, Art, Climate Justice & Advocacy, and Young People & Leadership. Each session and interaction was designed to not only impart knowledge but also to empower participants to become leaders in their own right, addressing the urgent challenges of our time with a multi-faceted approach. The engagement and enthusiasm shown by our young leaders were a testament to the program's success.

- *Health: An Indivisible Healthcare Emergency*

At the heart of our discussions was the recognition that the climate crisis and planetary health are inseparable from global health. The speakers emphasized that addressing environmental degradation is not just an environmental issue but a healthcare imperative. Our young leaders engaged deeply with this material, understanding that the health impacts of climate change—ranging from heatwaves and air pollution to the spread of infectious diseases—demand immediate and sustained action. The interactive sessions allowed participants to explore how they could advocate for policies that integrate environmental sustainability with public health, ensuring that future healthcare systems are resilient and equitable.

- *Science: The Foundation of Understanding*

Science was a cornerstone of our programming, underscoring the importance of evidence-based approaches to tackling climate change. The young leaders were introduced to cutting-edge research and data, learning how to critically evaluate scientific information and apply it to real-world challenges. Through workshops and discussions led by renowned scientists, participants gained a deeper understanding of the complex systems that drive climate change and how scientific inquiry can inform effective solutions. Their engagement was evident in the probing questions they posed, demonstrating a commitment to grounding their advocacy and leadership in solid scientific understanding.

- *Art: Communicating Climate Justice*

Art was celebrated as a powerful tool for communication and activism. The program highlighted the role of creative expression in conveying the urgency of climate action and in making abstract concepts tangible. Participants were encouraged to explore their artistic talents, whether through visual arts, music, or storytelling, as a means to raise awareness and inspire change. The UN Climate Change's Entertainment & Culture for Climate Action alliance was presented as a model of how art can transcend cultural barriers and mobilize communities around the world. Our young leaders eagerly engaged in these creative sessions, producing works that reflected their personal visions of climate justice and resonated with their peers.

- *Climate Justice & Advocacy: A Call for Equity*

Central to the Summer School was the theme of Climate Justice & Advocacy, which called for a focus on environmental equity. The program emphasized that those who are least responsible for climate change often bear its greatest burdens. Through sessions on policy advocacy and grassroots activism, participants learned how to amplify the voices of marginalized communities and push for systemic change. The discussions were enriched by the diverse backgrounds of the participants, who shared insights from their own experiences and communities. Their active participation in these sessions demonstrated a strong commitment to fighting for a just and equitable future for all.

- *Young People & Leadership: Empowering Future Leaders*

Finally, the program was dedicated to cultivating the leadership skills of young people. Recognizing that the next generation will bear the brunt of climate impacts, the Summer School provided them with the tools and knowledge needed to lead effectively. Workshops on public speaking, negotiation, and strategic planning were designed to build confidence and competence. The young leaders engaged with these materials with enthusiasm, taking full advantage of the opportunity to refine their leadership skills. They also actively networked with the speakers and each other, forming connections that will support their ongoing efforts to drive positive change in their communities and beyond.

As a testament to their commitment, we co-created a film on climate change and climate health. The film was developed from material provided by the young leaders and edited by Curley Street (India). The soundtrack was a collaborative effort, co-created by these young leaders and edited by musicians from Syria and the UK, with the participation of the Al Farah Choir. This project embodies the spirit of global collaboration and the shared responsibility to address the pressing issues of our time.

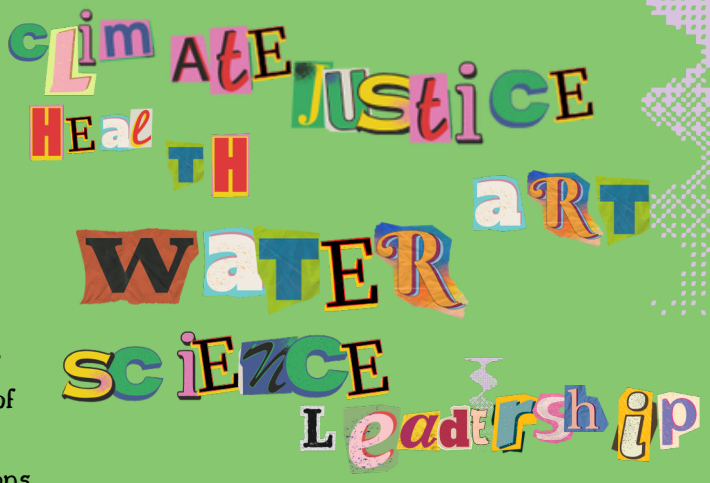
PLACE4HOPE
YOUNG PEOPLE & CLIMATE HEALTH

An online programme driven by a global community of young leaders who come together to co-create art works that address the urgent themes of planetary health and climate justice.

VISION

Our vision is to empower young people worldwide to become agents of positive change through collaborative and creative initiatives that address pressing social and environmental challenges. We build an active and committed community of youth leaders, who create cultural works that advocate for cultural change and influence policy.

PILLARS



PLACE4HOPE SUMMER SCHOOL

The Summer School engaged 28 diverse Young Leaders globally, providing a platform to critically examine climate change and the water crisis. Shared stories enabled the young people to gain the knowledge of the global water crisis, while creative skills gave them the tools to advocate for change, highlighting their essential role in shaping solutions for a more equitable world.

YOUNG CLIMATE LEADERS

The Summer School brought together a diverse range of LEADERS from across the globe, each contributing unique local perspectives on the intersection of climate change and health from the UK, Greece, Syria, Scotland, Gaza, Nigeria, Myanmar, the USA, Brazil, Colombia, India, Uganda, South Africa, and Hong Kong.

LIFE.HOPE.WATER

The film celebrates water's beauty while addressing its vulnerability, using poetry and imagery of environmental damage. The film concludes with a powerful call to action, as participants drink water to symbolize humanity's dependence on it, accompanied by placards urging the protection of water and health.

WATCH NOW

CLIMATE WEEK NEW YORK

Place4Hope as presented at the Canopy, September 2024. The Canopy is Wellcome's citizen art, science and policy festival and a cross-sector collaborative network launching for Climate Week NYC's first ever health program in September 2024.

PLACE4HOPE ZINE

Our Young Leaders also created the Place4Hope Zine, a creative compilation of reflections, learnings, and aspirations from our incredible Young Leaders.

READ MORE

DREAM A DIFFERENCE Rosetta Life

Inclusive Co-Creation for Environmental Equity in Smart Cities

Authors: Nikoleta Vermez, PhD Candidate, Panteion University

Community engagement and co-creation play pivotal roles in the development and implementation of sustainable environmental solutions (Reed et al. 2010). Recently, there has been a growing recognition that addressing environmental challenges requires collective action and collaboration among diverse stakeholders, including local communities, governmental bodies, non-governmental organizations, and businesses. By involving community members in the decision-making process, projects can be designed in a way that reflect the unique socio-cultural and environmental contexts of the area (Arnstein et al., 1969). This maximizes the potential of successful implementation and long-term sustainability of the proposed solutions, fostering a sense of ownership, with mutual benefits for the involved parties.

To this end, co-creation emphasizes the importance of knowledge sharing among stakeholders. By bringing together individuals with diverse expertise and perspectives, co-creation encourages innovative thinking and the development of holistic approaches towards effective solutions for addressing environmental challenges (Puerari et al., 2018). Therefore, the adoption of co-creation approaches becomes an increasingly essential tool through which communities can leverage their local knowledge alongside scientific expertise to devise effective strategies (Westley et al., 2011).

Following the above, the study performs a comparative case study analysis in order to examine inclusive engagement methods that involve residents in the design and implementation of sustainable solutions, taking into account their diverse needs, preferences and local knowledge. Through three co-creative process examples from three major smart cities, London, Barcelona, and Copenhagen, we illustrate that although participation through co-creation attempts to acknowledge the heterogeneity of citizens, we need to reexamine the smart city participation mechanisms in the light of urban social justice and inclusion. At this point grassroot environmental initiatives seem to empower marginalized communities and foster environmental equity within the smart city paradigm.

Considering that well-being and inclusiveness are the main objectives of smart cities the research questions we try to answer in this study are listed as follows:
(a) What are the key facilitators for the creation of inclusive green smart city solutions?
(b) What are the challenges against inclusive civic engagement?
(c) What is the potential of grassroot initiatives in the enhance of social inclusion?

A descriptive case study approach was adopted to answer the research questions. A literature survey was conducted to define the characteristics of inclusive smart cities, as well as initiatives and frameworks about inclusive smart cities. Three cases have been selected: London, Barcelona, Copenhagen for several reasons. First, all these cases have established smart city strategies for more than a decade and have employed multiple types of engagement models. Second, all cases have faced environmental challenges and adopted green solutions in urban environment. Third, each city has some positive outcomes from smart city initiatives though the existing grassroot movements implying that there is a gap between official strategies and citizen's needs. The research was based on secondary data analysis from multiple sources. These sources include official policy documents of each city, evaluation reports, articles, webpages, documents produced by civil organizations, local community groups, research institutes involved directly or indirectly with inclusive smart initiatives and previous research projects. In the research, a first approach of participation models is made in the light of inclusiveness concerning environmental issues. However, in order to obtain an overview regarding smart inclusive green cities, an empirical case study should be adopted, in the future, based on evidence obtained through semi-structured interviews.

A core aspect of this study is the examination of co-creation tools for urban innovation within the European Innovation Ecosystem. This model emphasizes a quadruple-helix framework, promoting knowledge exchange among citizens, academia, government, and industry. Various co-creation tools in smart cities are assessed, such as digital platforms (community portals, collaborative platforms, social networking tools, and interactive applications), living labs (co-creation workshops and real-world test environments), and hackathons. Open data platforms also play a significant role, with examples like London Datastore for open data access, Barcelona's Decidim platform for citizen proposal submissions, and Copenhagen's Citizen Lab, which facilitates collaborative projects on sustainability.

In addition to digital platforms, Living Labs provide spaces for hands-on experimentation and innovation, addressing issues from carbon footprint reduction to sustainable food design. Living Labs work both as co-creation workshops applying design thinking methods and as real-world testbeds for smart applications. This approach facilitates the involvement of multiple stakeholders in urban innovation initiatives. This method suggests that the entire community is initially engaged in the urban development process during city project planning, enhancing the potential for active resident participation (Paskaleva et al., 2015).

Various stakeholders contribute to the conceptualization of ideas and the testing of urban prototypes. Living labs also assist in conducting market assessments, exploring diverse urban concepts, and mitigating business risks for enterprises operating within the city (Simonofski et al., 2017).

For example, London's Green Lab offers a collaborative environment for carbon footprint reduction, public engagement, and awareness-building around ecological design. Similarly, Barcelona's FabCity Hub focuses on food waste reduction, renewable energy, and water conservation, while Copenhagen's Solution Lab tests solutions for carbon emission reduction, energy efficiency, and broader environmental sustainability.

Open data culture plays a crucial role in co-creation, drawing from various stakeholders to tackle complex urban challenges (Capdevila & Zarlenga, 2015; Ma & Lam, 2019). According to Capdevila & Zarlenga (2015), open data refers to non-confidential and non-restricted data which is publicly produced and is disseminated without any restrictions on its distribution or usage. In an urban context, it enhances administrative transparency and fosters innovative business opportunities for citizens, enterprises, and municipal administrations (Anthony Jnr, 2021c; Capdevila & Zarlenga, 2015). However, scholars like Berntzen and Johannessen (2016) contend that simply distributing open data does not guarantee community engagement, as citizens may lack the technical skills to utilize it for co-creation. Nonetheless, open-source platforms or applications can be developed from open data to facilitate citizen collaboration in addressing urban issues (Simonofski et al., 2017).

The process of co-creation within smart cities involves several stages: the collected data is analyzed to identify patterns, trends and areas of improvement within the city. This analysis helps city officials and urban planners better understand the needs and preferences of citizens. Based on these insights' co-creation work-shops are organized where different stakeholders collaborate to develop innovative urban solutions. Following the co-creation workshops, prototypes of the proposed solutions are developed and tested in real-world-scenarios. Citizens are actively involved in testing and providing feedback on these protypes ensuring that the final solutions meet their needs and expectations. Once the prototypes have been refined based on citizen feedback, they are implemented on a larger scale. Continuous monitoring and evaluation help ensure that the solutions remain effective and responsive to the evolving needs of the community. This iterative process of engagement aims to embed citizen voices into the fabric of smart city projects, creating a more responsive and inclusive urban ecosystem.

However, several factors influence the implementation of citizen engagement models and thus inclusiveness in the development of a smart, sustainable city. These factors are separated in three distinctive categories according to prior studies a. technological b. social and c. institutional (Bokolo A. Jnr, 2021b). These challenges include the limited availability of infrastructure, lack of technical knowledge, data security concerns, citizens' varying perceptions and motivations, unequal demographic representation, and institutional limitations such as distrust in government and inadequate funding. In this context there is a need to reconsider the existing models and focus more on citizen-led initiatives which aim to feel the gap that official top-down and bottom-up organized approaches leave. Self-organizing citizen initiatives can have significant impact in innovation and urban development as they create a domino effect that ripples throughout society.

Grounded in the Theory of Community Empowerment, originating in the 1970s, this research emphasizes the potential for societal change when marginalized communities are empowered. The theory posits that empowering individuals and communities with knowledge, skills and decision-making authority enables them to actively participate in shaping their own futures. Grassroot movements refer to collective actions driven by community members aiming to address local issues or advocate for broader social, political, or environmental change. These movements originate at the local level and rely on the active participation and mobilization of ordinary people, rather than top-down directives from larger organizations or political entities. Such initiatives in smart cities offer an essential avenue for inclusivity, emphasizing decentralized, community-driven change. These efforts go beyond traditional local engagement, extending to supralocal connections where community interactions within neighborhoods can foster broader social patterns and connections. Thus, individuals' interactions in their immediate neighborhoods may give rise to strong community-wide patterns and these patterns may lead to broader interactions (Tselios V. et al, 2017).

In London, the Sustainable Hackney initiative promotes sustainable practices. Hackney Fixers (2024) is a group of volunteers, part of Sustainable Hackney initiative, who aim to promote electrical and electronic repair in Hackney as an alternative to growing mountains of waste and consumption while the Hackney Food Partnership promotes local food growing and sustainable eating as well as attempting to tackle food poverty.

Barcelona has a reputation for being one of Europe's most attractive and liveable cities. Known for its progressive urban planning measures including the widely celebrated car-free Superblocks model, the city continues to consolidate its trajectory by making neighborhood revitalization, climate adaptation and the creation of green, public spaces a priority (Vermez et. al, 2022). According to the Barcelona's Urban Lab for Environmental Justice (BCNUEJ) although this new urban model sounds ideal, a closer look reveals problematic trends. Various typologies of nature-based solutions are implemented in the city, from city-planned large-scale projects to community-driven, informal interventions. Grassroots groups, also, are fighting to stay in their neighborhoods as gentrification and urbanistic pressures mostly set to transform formerly industrial lots into service and IT sector areas. ConnectHort is a community-driven urban gardening project in Barcelona that exemplifies grassroots environmental initiatives. Located in the Poblenou district, ConnectHort transforms unused urban spaces into vibrant community gardens, promoting sustainability, community engagement, and environmental education. The project adapts a collaborative decision-making process regarding the garden's development and activities, with input from all participants.

Copenhagen's approach includes a network of community gardens. ØsterGRO is the first rooftop farm and a Community Supported Agriculture Association with the vision to create local and sustainable food production in the city and thereby give the city's citizens the opportunity to follow the year's progress in an organic vegetable garden up close. The farm provides opportunities for volunteering, education, cultural exchange and integration. Similar examples can be found all around the city such as Birkemosegaard or Nabo Farm.

The conclusions drawn from this study underscore the necessity of reconsidering current engagement tools in smart cities to enhance inclusivity, particularly through the support of community-led initiatives. Official strategies are often limited by technological, social, and institutional constraints, highlighting the vital role of grassroots movements in bridging these gaps. For smart cities to foster environmental justice and social inclusion effectively, funding and expertise must be directed toward community-driven initiatives. The research calls for further empirical study to assess the practical application and scalability of inclusive engagement tools, using real-world case studies as a basis for refining the framework.

This study makes a significant contribution to the discourse on smart cities by emphasizing the potential of grassroots environmental initiatives to promote inclusivity, environmental justice, and social cohesion. By incorporating insights from the Theory of Community Empowerment, the findings advocate for an urban development approach that is not only smart but also equitable and inclusive, transforming smart cities into platforms where all citizens can contribute to and benefit from sustainable, community-oriented urban progress.

References:

- Anthony Jnr, B. (2021b). Exploring data driven initiatives for smart city development: Empirical evidence from techno-stakeholders' perspective. Urban Research & Practice, 15(4), 529–560. https://doi. org/ 10. 1080/ 17535 069. 2020. 18698 16
- Arnstein, S. R. (1969). A ladder of citizen participation. Journal of the American Institute of Planners, 35(4), 216-224.
- BCNUEJ (2020). Justice Struggles Around Formal and Informal Greening in Barcelona's Poblenou https://www.bcnuej.org/2020/10/27/justice-struggles-around-formal-and-informal-greening-in-barcelonas-poblenou/
- Berntzen, L., & Johannessen, M. R. (2016). The role of citizen participation in municipal smart city projects: Lessons learned from Norway. In Smarter as the new urban agenda (pp. 299–314). Springer.
- Bokolo Anthony Jnr (2021b). Exploring data driven initiatives for smart city development: Empirical evidence from techno-stakeholders' perspective. Urban Research & Practice, 15(4), 529–560. https://doi. org/ 10. 1080/ 17535 069. 2020. 18698 16

- Capdevila, I., & Zarlenga, M. I. (2015). Smart city or smart citizens? The Barcelona case. Journal of Strategy and Management., 8(3), 266–282.
- Copenhagen Solutions Lab (CSL). https://cphsolutionslab.dk/
- Green Lab (2024). https://www.greenlab.org/
- Hackney Fixers (2024). https://sustainablehackney.org.uk/
- Ma, R., & Lam, P. T. (2019). Investigating the barriers faced by stakeholders in open data development: A study on Hong Kong as a “smart city”. Cities, 92, 36–46
- Reed, M. S., et al. (2010). What is social learning? Ecology and Society, 19(1), 1-9.
- Puerari, E., Jotte I. J. C. de Koning, Timo von Wirth, Philip M. Karré, Ingrid J. Mulder and Derk A. Loorbach (2018). Co-creation dynamics in urban living labs. Sustainability 2018. https://doi.org/10.3390/su10061893
- Westley, F., Olsson, P., Folke, C. et al. Tipping Toward Sustainability: Emerging Pathways of Transformation. AMBIO 40, 762–780 (2011). https://doi.org/10.1007/s13280-011-0186-9
- Paskaleva, K., Evans, J., & Watson, K. (2021). Co-producing smart cities: A quadruple helix approach to assessment. European Urban and Regional Studies, 28(4), 395–412.
- Simonofski, A., Asensio, E. S., De Smedt, J., & Snoeck, M. (2017). Citizen participation in smart cities:Evaluation framework proposal. In 2017 IEEE 19th conference on business informatics (CBI) (Vol.1, pp. 227–236).
- Tselios V., McCann P. and van Dijk J. (2017) ‘Understanding the Gap between Reality and Expectation: Local Social Engagement and Ethnic Concentration’, Urban Studies, 54(11), 2592- 2612
- Vermez N., Zourou M., Karambou E., Panzara E., (2022). Do you have time for a breATH? A (re)branding project for the city of Athens. https://medium.com/athens-co-creation-city-branding-project/do-you-have-time-for-a-breath-3e34618b4f53

Inclusive co-creation: Fostering environmental equity in Smart Cities. The impact of grassroot environmental initiatives in engagement models

Nikoleta Vermez, PhD Candidate, Panteion University Athens

Introduction

Community engagement and co-creation play pivotal roles in the development and implementation of sustainable environmental solutions. This participatory approach maximizes the potential of successful implementation and long-term sustainability of the proposed solutions, fostering a sense of ownership, with mutual benefits for the involved parties.
The research conducts a critical analysis of engagement models in Smart Cities in terms of inclusiveness, highlighting the importance of grassroot initiatives in preserving environmental justice and promoting social inclusion, using examples of co-creation processes from major smart cities.

Research Questions

- What are the key facilitators for the creation of inclusive green smart city solutions?
- What are the challenges against inclusive civic engagement?
- What is the potential of grassroot initiatives in the enhance of social inclusion?

Methods

- A literature survey to define the characteristics of inclusive smart cities, as well as initiatives and frameworks about ISCs
- Secondary data analysis from multiple sources: official policy documents of each city, evaluation reports, articles, web-pages, documents produced by civil organizations, local community groups, research institutes involved directly or indirectly with inclusive smart initiatives and previous research projects.

Co-creation Tools for Urban Innovation

- European Innovation Ecosystem: the quadruple helix- knowledge exchange between citizens, academia, government, and industry
- Digital platforms: community portals, collaborative platforms, social networking tools, interactive applications, questioning applications
- Living Labs: co-creation workshops & real-world testbeds
- Hackathons
- Open Data Platforms

Co-Creation Tools from Smart Cities

	London	Barcelona	Copenhagen
Online /Open Data Platforms	London Datastore (open data access) ,Talk London (collaboration platform)	Decidim (access to open data and proposal submissions)	Citizen Lab (collaboration platform), Copenhagen Solution Lab (access to data)
Living Labs	Green Lab (co-creation space for carbon foodprinting, ecological food design, public engagement and awareness)	Fabcity Hub (co-creation hub for food waste, energy, water)	Copenhagen Solution Lab (workshops & testbeds for carbon emissions, energy efficiency and environmental sustainability in general)

Table 1: *London, Barcelona, Copenhagen co-creation tools*

Smart City Innovation Flow

- Data Collection (sensors, mobile apps etc.)
- Analyze data to identify patterns
- Co-creation workshops transform data information to solutions
- Protypes are developed and tested in real-world environments

Figure 1: *Innovation flow in Smart Cities*

Challenges Against Inclusion in SC

- Technological Factors:
  - Availability of Infrastructures
  - Technical Knowledge
  - Data Security
- Social Factors
  - Citizen's perception
  - Unequal Demographics
  - Investment of time
- Institutional Factors
  - Distrust of Government Authorities
  - Inadequate Funding
  - Physical and Social Limitations [1]

Grassroot Initiatives for Sustainable Society

- Theory of Community Empowerment (1970's) states that true societal change can only be achieved through the empowerment of marginalized communities. [2]
- Smart City environmental initiatives underscore the importance of enabling community members to take ownership of environmental issues and decision-making processes.
- Grassroot environmental initiatives demonstrate the inclusiveness gap left by public and private sector.
- They are characterized by their decentralized nature, inclusivity, and focus on com-munity-driven change.
- Community is not only a local entity but also a wider (supralocal) entity. Thus, individuals' interactions in their immediate neighborhoods may give rise to strong community-wide patterns and these patterns may lead to broader interactions [3].

Examples of Grassroot Initiatives in Smart Cities

- London: "Sustainable Hackney " for sustainability. "Hackney Fixers" on-going project for sustainable eating and local food growing
- Barcelona: Barcelona's Urban Lab for Environmental Justice focuses on putting equity at the center of urban planning. "ConnectHort" gardening project in Poblenou
- Copenhagen: Community Gardens Network · ØsterGROrooftop farm for the creation of local and sustainable food production

Figure 2: *Photo by Sandra Cohen-Rose and Colin Rose of Flicker*

Conclusions

- Co-creation plays a crucial part in SC as a new mean to enhance participation for diverse and marginalized groups
- The engagement tools used often fail to be inclusive mainly due to technological, institutional and social factors
- Grassroot environmental initiatives pinpoint the gap left by official strategies
- Reconsider the existing co-creation tools, enhance community-led projects (funding and expertise)
- Further research to be conducted in the future based on empirical case study

References

[1] Anthony Jnr, B. (2021b). Exploring data driven initiatives for smart city development: Empirical evidence from techno-stakeholders' perspective https://doi. org/ 10. 1080/ 17535 069. 2020. 18698 16 [2] Edgar R. Eslit (2023). Empowering Change at the Grassroots: Community-Led Initiatives for Local Environmental Protection doi: 10.20944/preprints202307. 1055.v1 [3] Tselios V., McCann P. and van Dijk J. (2017) 'Understanding the Gap between Reality and Expectation: Local Social Engagement and Ethnic Concentration', Urban Studies, 54(11), 2592- 2612

HEARTH SUMMIT ATHENS

Nikoleta Vermez
Email Address: n.vermez@panteion.gr

Authors Bios

Prof. Alexandros APOSTOLAKIS is a professor in Tourism Marketing at the Hellenic Mediterranean University, Crete, Greece. During his PhD thesis he examined individual tourists' preferences for two cultural resources in the island of Crete, Greece at the University of Portsmouth, UK. Professor Apostolakis is also the director of the Tourism and Entrepreneurship Laboratory at the Dept. of Business Administration and Tourism. He serves as the post–graduate director in the MSc Hospitality and Tourism Management at the same department. Alexandros is also an affiliate member of staff at the Hellenic Open University, where he leads the Tourism Marketing year-long post-graduate course.

Konstantinos Apostolopoulos is a Geoinformatics Engineer and a Senior Project Manager in Geosystems Hellas S.A. He is a graduate from School of Rural, Surveying & Geoinformatics Engineering (SRSE-GI), NTUA and he holds an Msc and Ph.D (2024) from the same university. He provides assistant teaching in the SRSE-GI, NTUA (2017-present) and the MSc program of Geoinformatics (2016-present). His research interests include Land Administration, Crowdsourcing, Participatory Design, Gamification, Geoinformatics and Sustainable Development. He is an author in scientific journals in peer-reviewed journals and international conferences. He has volunteered in the organization of seminars, workshops, and international conferences. He has participated in commercial and research projects in the fields of Geoinformatics and Land Management. He has been a member of the Technical Chamber of Greece since 2014 and a member of scientific committees of the Technical Chamber of Greece, the Ministry of Environment and Energy, and the Ministry of Rural Development, as well as the International Federation of Surveyors (FIG).

Alexandra Arvanitaki is a student at the Department of Business Administration and Tourism, Hellenic Mediterranean University (HMU). She has experience in graphic design, business strategy, crisis management and branding. She has completed a training program on the connection between the primary and tourism sectors at the University of Crete. She has also attended several seminars in Google Project Management through Coursena and Google, as well as the “Online Branding and Communication” program with UCERT Greece.

Charis Avlonitou is a postdoctoral researcher at the Hellenic Mediterranean University, Greece, specializing in smart museums and sustainable development. Since 1997, she has held key roles at the Hellenic Organization of Cultural Resources Development, including Coordinator for Northern Greece and Deputy Cultural Director. Avlonitou holds a Ptychion in Archaeology and Art History from the National and Kapodistrian University of Athens, master’s degrees in Art History and Cultural Management, and a PhD in Art History from the School of Fine Arts, Ioannina. She has scientifically led the collection organization at the Greek State Museum of Contemporary Art (now MOMus).

Costas Bissas is a design consultant based in Greece. His research interests lie between design, technology, wellbeing and culture, focusing on the use of design as a creative tool for the development of innovative products and services. He has collaborated with international organizations such as DeBalie Centre for Culture & Politics in Amsterdam, FutureEverything in Liverpool, the Barbican Centre in London and the SENSEable city Laboratory of MIT in Boston. His work has been acclaimed by the European Space Agency (ESA) Open Space Innovation Platform, the European Innovative Games Award, the Greek Graphic Design & Communication Awards, Mikser Festival of Creativity & Innovation and Athens Startup Weekend Sustainability. He is an adjunct lecturer at the Department of Product and Systems Design Engineering at the University of the Aegean and although he has lived for 2.5 years next to the Loch Ness, he never managed to locate the monster.

Authors Bios

Vasiliki (Betty) Charalampopoulou is the President, CEO, and shareholder of GEOSYSTEMS HELLAS S.A. (GSH), a Greek SME and "sister company" of OHB SE. A geologist specialized in remote sensing, photogrammetry, and GIS, she graduated from the National and Kapodistrian University of Athens in 1992 and has since led numerous research and commercial projects in Earth observation and geoinformatics. Betty is a leader in the downstream space sector, with active roles in Horizon Europe, ESA, EARSC, HASI, and more. She pioneered GSH's R&D division and fosters global collaborations while contributing to ISO standardization and Space 4.0 initiatives.

Prof. Anastasios Doulamis earned his Diploma and Ph.D. in Electrical and Computer Engineering from NTUA, graduating top of his class. He received many awards, including the NTUA Medal for Best Young Engineer and recognition for his Ph.D. thesis. His research has over 14,000 citations (h-index 52), and his traffic modeling work is known as the "Doulamis Model." He has published 125+ journal papers, 4 books, 27 chapters, and 300+ conference papers. At NTUA, he teaches signal processing, computer vision, and programming. He leads 27+ EU projects on remote sensing, hyperspectral imaging, road inspection, and cultural heritage preservation.

Lucinda Jarret is a writer, independent dance artist, and performance maker who co-founded Rosetta Life in 1997. She currently leads a performance company of emerging artists, an international alliance of carers working through digital immersive storytelling to increase visibility of unpaid carers and she also founded and leads Dream a Difference – www.dreamadifference.art – a poetry and song making project building awareness of social justice and peace across twenty countries.

Eleni Karachaliou holds a MEng/BEng in Urban/Spatial Planning & Development Engineering (5 year degree) from the Engineering Faculty of Aristotle University of Thessaloniki (AUTH) and an additional Master's degree in Geoinformatics (emphasis on Management of Photogrammetric production and Remote Sensing with GIS), also from AUTH, as a fellow of the Onassis Foundation (2014-2015).
Over the last 7 years I participate in national and international research, development, and innovation projects in several sectors (i.e. Transport, ICT, Environment, Energy, Health, etc.) as a research associate, consultant, and project manager.

Christos Kontopoulos is a Rural and Surveying engineer. He graduated from National Technical University of Athens (NTUA) in 2015 and his field of expertise lies in geospatial and computer vision applications. He has been enrolled in several research projects and research teams, in the fields of remote sensing and geospatial data analysis while also presenting a great experience on photogrammetric, LIDAR data analyzing, cadastre and satellite data exploitation projects. He is employed at GEOSYSTEMS HELLAS as a remote sensing and photogrammetry specialist, dealing with the processing and the analysis of multispectral and hyperspectral optical data, UAV data as well as LIDAR and SAR data. His main expertise also includes the development of Machine Learning and Deep Learning models for EO data classification and pattern recognition techniques. Now, he is working as Chief Technology Officer of the Company and he is responsible for finding and evaluating EU proposals both in qualitative and quantitative analysis.

Authors Bios

Dina Ntziora is an Engagement Manager and Researcher, specialising in fostering inclusive and collaborative practices. She focuses on promoting inclusion, wellbeing, and ethical principles. Dina champions cultural diversity and intercultural dialogue, striving to identify and address systemic barriers that prevent underserved and marginalised groups from participating in the arts.

Eirini Papadaki is an associate professor of Communication, Mediation, and Cultural Industries at the Department of Business Administration and Tourism, Hellenic Mediterranean University, Greece. She holds a ptychion in Journalism and Mass Media Communication from Aristotle University of Thessaloniki and a PhD in Communication and Visual Culture from the University of Kent. She has taught at several Greek universities and abroad, and served as a scientific advisor for various cultural projects. Her research focuses on cultural communication, cultural industries, strategic communication, and feedback in different contexts, from live performances to technoculture.

Anna Papadima is a graduate of the School of Rural, Surveying, and Geoinformatics Engineering at the National Technical University of Athens and holds a Master's degree in Urban and Regional Planning from NTUA. Her research interests include geospatial data analysis, GIS, machine learning applications, and urban planning. She has contributed to several EU-funded projects under Horizon 2020, focusing on urban resilience, environmental monitoring, and sustainable agriculture. Anna has also published research in conferences and journals, exploring innovative applications of GIS and AI in urban growth modeling and spatial analysis, driving advancements in geoinformatics and sustainability.

Tadej Stepišnik Perdih is a project manager and a postdocoral researcher at the National Technical University of Athens in the multidisciplinary Department of Water Resources and Environmental Engineering. His work focuses on NBS and water treatment technology transfer at pilot or demonstration scale towards commercialization. He is a core team member of the EC funded projects CARDIMED (EU Mission Clima, Project Manager), REMEDIES (EU Mission Oceans), Water Scarcity in Southern Europe (EIT Food, expert), NexusNet (COST), iWAYS(Horizon 2020, Project Steering Committee member), SureNexus (PRIMA, Exploitation Manager), INNO4CFIs (ERDF), FIT4REUSE (PRIMA, Impact Assessment Board member). He also works with the University of Ljubljana, Mechanical Engineering Laboratory on project CAVIPHY (ERC PoC). In addition to his research and engineering background, he also completed a one year accelerated My Lean MBA programme.

Anastasios Temenos is a graduate of the School of Rural, Surveying, and Geoinformatics Engineering at the National Technical University of Athens (NTUA, 2021) and a current Ph.D. candidate there. His research focuses on Remote Sensing, Artificial Intelligence, eXplainable AI, and Earth Observation Data Cubes for monitoring Land Use and Land Cover changes and studying climate change impacts. He has published over 12 papers in journals and conferences. Anastasios also participates in EU-funded projects under Horizon 2020 (H2020), closely tied to his research interests, contributing to advancements in geoinformatics and sustainable development through innovative applications of AI and remote sensing.

Authors Bios

Lida Tsene holds a PhD on social responsibility and social media from Panteion University in Athens, Greece. For more than 10 years she has been researching and teaching on media, responsibility, sustainability and impactful storytelling. Currently, she is Teaching Associate at the Hellenic Open University and the University of Athens. She is also the Founder of Athens Comics Library, an organisation that uses comics and creative storytelling as an educational, healing and community empowerment tool. She is also a proud member of the Impact Hub Athens team.

Nikoleta Vermez received her bachelor's degree in history in 2005 and her first master's degree in modern history in 2010 from the National and Kapodistrian University of Athens. In 2015, she graduated from the National School of Public Administration. In 2023, she earned her second master's degree in Cultural Management from Panteion University, Department of Media, Communication, and Culture, focusing on open innovation ecosystems in Smart Cities. She is currently a PhD candidate in the same department. Her main academic interests include stakeholder engagement methods in Smart Cities, green solutions, environmental justice, and city branding. For the past four years, she has been working for the Greek Ministry of Environment and Energy.

Charalampos Zafeiropoulos holds a Master's degree in Statistics from Athens University of Economics and Business, with specialization in Applied and Computational Statistics. His thesis was about "Statistical analysis for the players' evaluation in team sports". His bachelor's degree is in Mathematics from the National and Kapodistrian University of Athens with specialization in Applied Statistics. He worked as a Data analyst for the Regulatory Authority for Energy for a year and, currently, he works as a Junior Researcher at the Photometry lab of National and Technical University of Athens specializing in Climate Change and the resilience of Cultural Heritage monuments.

Thank you!

IMPACT HUB Athens