

INTERREG MED Programme

2014-2020

ESMARTCITY

Enabling Smarter City in the MED Area through Networking

(3MED17_1.1_M2_022)

Priority Axis 1. Promoting Mediterranean innovation capacities to develop smart and sustainable growth

Specific Objective 1.1 To increase transnational activity of innovative clusters and networks of key sectors of the MED area

WP2 – Project Communication

Activity 2.10 – Synergies with the Green Growth Community

Deliverable 2.10.3 – “Information to Horizontal Project”

Contractual Delivery Date: **None**

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Dissemination Level		
PU	Public	
PP	Restricted to Programme Partners and MED Programme	
RE	Restricted to a Group defined by the Partnership and MED Programme	
CO	Confidential, only for members of the partnership and MED Programme	

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1 Introduction

1.1 Scope and objectives of the deliverable

This report has been developed within the ESMARTCITY project of the European program Interreg MED, and serves as a deliverable for the activity A2.10 “Synergies with the Green Growth Community”. More specifically, it represents D2.10.3 “**Information to Horizontal Project – Working group on Green and Smart Public Services**” and its aim is to develop a report on the working group on Green and Smart Public Services activities and main results within Green Growth community by means of the work coordinated by SYNGGI horizontal project.

SYNGGI (Synergies for Green Growth Initiative - Energising the Impact of Innovation in the Mediterranean) aims to support the modular approved projects under the objective Green Growth of the priority Axis 1. Innovation of the Interreg MED Programme. The activities of the project support the sub-objective 1.1 and especially the Green Growth sub-priority, in order to serve the targets and strategies of the Managing Authorities for the MED Area. The project has been designed as an agile tool that will unify project results, support MED stakeholders and create a fruitful and collaborative environment for all implicated bodies.

Due to the work coordinated by SYNGGI project and Green Growth MED community, during ESMARTCITY project different activities have been accomplished, such as attendance to coordination/sharing events, collaboration with third Interreg MED projects on topics that could create synergies, and specifically speaking about this deliverable, participation in the Working Group 1 on Resource Efficiency with other projects and institutions in which lessons learn by the project were shared to achieve mainly the following common deliverables:

- The white paper on Green and Smart Public Services “Towards circular towns and cities – Promoting Green and Smart Public Services within Mediterranean Municipalities to move towards a Circular Economy”
- Circular Economy Green Growth Policy Recommendations
- Circular Economy Green Growth Legal Recommendations
- Green Growth Book

The work done within this WG has been at the same time useful for the development at internal level within ESMARTCITY project of deliverable 3.4.1 “Green paper for Innovation Policy Change”, to develop necessary skills in policy makers at regional and local level of MED partner countries, and influence their attitude towards innovation enhancement through the Smart City paradigm.

1.2 Structure of the deliverable

This deliverable is structured in 4 chapters:

Chapter 1, "Introduction" provides the generalities of the deliverable identity.

Chapter 2, "Methodology" presents the methodology used to work on this WG2 of Resource Efficiency to achieve the results aimed at.

Chapter 3, “Main activities” presents main organizational details and activities in which ESMARTCITY project has been involved in this TWG2.

Chapter 4, "Results" presents the main recommendations of ESMARTCITY project within this TWG2, and the transferring activities associated with lesson learnt and the project itself.



2 Methodology

2.1 Creation of working groups:

According to the “Interreg MED Green Growth Community MEMORANDUM OF UNDERSTANDING”, the Interreg MED Green Growth Community is a thematic community of 14 modular projects that has been established to address the challenges of creating effective, efficient and systematic change related to Green Growth, with a specific focus on innovation. The main objective of the Community is to promote sustainable development in the Mediterranean area, based on sound management of natural resources through enhancing cross-sectoral innovation practices and impacting on the labour market by promoting social inclusion and green jobs.

Its cooperative and transnational structure, allows the Community to exemplify the benefits of applying an interdisciplinary and horizontal structure to Green Growth initiatives, tackling environmental challenges that extend beyond national borders. As a result, the Community urges to be used as a model and a motivation for future cooperative efforts towards achieving Green Growth and implementing a Circular Economy in the Mediterranean.

This community has been endorsed by the 43 UfM (Union for the Mediterranean) Member States acknowledging its potential to deliver concrete benefits to the citizens of the Euro-Mediterranean region and contribute to sub-regional and regional integration. The labelling of the Interreg MED Green Growth Community is in line with the Union for the Mediterranean’s mandate of advancing cooperation in the field of green, circular economy and sustainable development in the Mediterranean, with a view to transfer and capitalize to other countries of the region.

And thus, among other activities, the Interreg MED Green Growth community calls for action in different thematic areas, creating 4 working groups to present the contributions of the Interreg MED Green Growth community and their efforts in transitioning towards a circular economy, in the areas of:

- 1) Resource Efficiency,
- 2) Green and Smart Public Services,
- 3) Waste Prevention and Management,
- 4) Competitiveness and Innovation.

The synthesis and homogenisation of the results delivered by the modular projects was achieved through systematic technical cooperation, synergies and joint work among the modular projects, which was facilitated through the creation of Thematic Working Groups (TWGs). Given the strong relevance of our community thematic for the circular economy pillar and the dynamism of this topic at EU level, which implies the need for constant inputs to revise the supporting policy and legal framework, the themes of the TWGs were related to the EU Circular Economy Action Plan, and the indicator framework developed within this strategy.

Therefore the 14 projects belonging to the Community, based on the respective main topic addressed, were grouped into four different TWGs and associated with a specific circular economy indicator (see table 1):



Table 1 - Modular projects grouped by TWG and CE indicator		
Thematic Working Group	Modular projects involved	Relevant CE indicator
TWG1 – Sustainable Consumption and Production – Smart and Green Public Services – RESOURCE EFFICIENCY	CAMARG, ESMARTCITY, MADRE, MED GREENHOUSES, PEFMED, REINWASTE	EU self-sufficiency for raw materials (indirectly, e.g. resource efficiency)
TWG2 – Sustainable Consumption and Production – Smart and Green Public Services	ESMARTCITY, GRASPINNO, GREENMIND	Green Public Procurement (GPP)
TWG3 – Waste prevention and management	REINWASTE RE-LIVE WASTE	Waste generation, Overall recycling rates, Recycling rates for specific waste
TWG4 - Competitiveness and innovation	ARISTOIL, CRAINNOVATION, EMBRACE, FINMED, GRASPINO, GREENOMED, REINWASTE	Private investments, jobs and gross value added, Patents

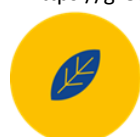
Each TWG was composed by partners of the modular projects and was moderated by the SYNGGI partners and external experts having the most relevant experience for the respective theme. Each modular project participated in the TWG with at least two representatives designated within the respective consortium of partners. Where possible each modular project was asked to be represented by both a technical coordinator with an extensive overview on the technical work deployed in the respective project and a policy coordinator in charge of the capitalisation/ policy inputs working package(s) of the project.

The work within the TWGs was focused on exploring similarities, consistency and possible complementarities among findings of the different modular projects. It was carried out through communication by email and participation in online meetings, webinars and face-to-face meeting.

The GGC is composed by 14 modular projects¹, namely:

- **ARISTOIL** - aimed at optimising and cross validating the best available methods of chemical analysis of olive oil, offering new commonly accepted tools for quality monitoring;
- **CAMARG** - aimed at testing and validating an advanced e-Commerce solution suited to support small producers in MED regions;
- **CRAINNOVATION** - aimed at promoting real and feasible ideas for innovation in SMEs, public and academic institutions;

¹ <https://green-growth.interreg-med.eu>



- **ESMARTCITY** - aimed at improving the innovation capacity of the cities in the MED region by creating innovative ecosystems, involving Quadruple Helix actors;
- **EMBRACE** - aimed at supporting innovation process in MED area according to the principle of CE;
- **finMED** - aimed at studying, testing and transferring concrete solutions to sustain the financing of innovation for green sectors;
- **GRASPINNO** - aimed at creating, testing and promoting a platform for supporting public administrations in the management of electronic Green Public Procurement (eGPP);
- **GREENMIND** - aimed at developing and strengthening SMEs' economic competitiveness and innovation capacities in the field of green and smart mobility in the Mediterranean area;
- **GREENOMED** - aimed at contributing to green manufacturing in MED regions, through the design and implementation of a European network of pilot plants on green manufacturing;
- **MED GREENHOUSES** - aimed at promoting, disseminating & transferring innovative Greenhouses in the MED area, minimizing water & energy demand;
- **MADRE** - aimed at promoting innovative practices and cooperation among actors dealing with urban and peri-urban agriculture in the Mediterranean;
- **PEFMED** - aimed at encouraging a pool of companies to green the own production according to the new EU Product Environmental Footprint method (PEF);
- **REINWASTE** - aimed at finding smart and innovative solutions to reduce waste of packaging and increase competitiveness in the food and agriculture sector.
- **RE-LIVE WASTE** – aimed at improving the innovation capacities of public and private actors involved in the management of waste from intensive livestock farming through stronger cooperation among academia, civil society, public authorities and the private sector.

2.2 Organization and tasks of working groups:

SYNGGI's main results have been defined through a participatory approach, thanks to the active involvement of modular projects' partners, SYNGGI Associated Partners and external experts.

The process that led to the definition of the all results have been the following one:

1. **As already stated in the previous subsection the creation of 4 Thematic Working Groups (TWGs)** was done in November 2018). TWGs were established, by involving modular projects' partners, SYNGGI Associated Partners and external experts. The four TWGs are:
 - *TWG1 - Production and Consumption: Resource efficiency.* TWG1 tackled issues related to resource efficiency mainly in the agro-food sector and in the urban context.
 - *TWG2 - Production and Consumption: Smart and Green Public Services.* TWG2 addressed issues linked to the inclusion of sustainability and circular economy criteria for public procurement and provision of public services.
 - *TWG3 - Waste Prevention and Management.* TWG3 addressed issues linked to waste collection system, waste to energy, food waste reduction, food donation and utilisation of former food for animals, recycling of construction and demolition waste, urban waste, recycling of overall packaging waste, plastic packaging, wood



- packaging, waste electrical and electronic equipment, recycled biowaste, Innovation capacity and awareness-raising, prevention of waste generation.
- *TWG4 - Competitiveness and Innovation*. TWG4 addressed issues linked to smart specialization, public-private partnerships, innovative funding, private investments, Innovation capacity and awareness-raising, SMEs and entrepreneurship, job creation, Clustering and economic cooperation, patents.
2. **TWGs Roadmap definition** (14th November 2018 – Durres, Albania²). Start of TWGs' activities, by defining objectives, expected outcomes and working methodology of each TWG.
 3. **TWGs representatives' selection** (December 2018). Each modular project selected their representatives for the TWGs.
 4. **Monthly on-line meetings of the TWGs** (January-March 2019). TWGs worked for the definition of policy inputs/recommendations under the coordination of SYNGGI partners.
 5. **TWGs face-to-face meeting** (6th March 2019 – Thessaloniki, Greece). TWGs met in a face-to-face meeting in order to structure their insights, on their respective topics, and contribute to Green Growth policies recommendations and white papers. External experts participated in the meeting.
 6. **On-line data collection tool** (April-May 2019). On the basis of the inputs gathered during the previous phases, a data collection tool was developed and disseminated on-line to TWGs' representatives (ref. Section 1.3.2).

² Green Growth Community building event.



3 Main activities

3.1 Definition of ESMARTCITY technicians working on TWG1 and TWG2:

After the definition phase of the technicians that were going to work on TWG1 and TWG2 by ESMARTCITY project, as agreed, 2 workers from partners ISI and APEGR were endorsed to work on both WGs but being each one the main responsible of a different TWG as shown here:

ESMARTCITY main contact for TWG1:

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ESMARTCITY main contact for TWG2:

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3.2 Meetings:

The main events organized by the Green Growth community are the following ones:

- **1st MED Green Growth transnational event** – “*New Challenges in the Agrofood sector*” – 28-30 June 2017, Girona (Spain) – The event gathered the whole Green Growth community, relevant stakeholders of the Mediterranean area and other European regions to jointly discuss about the new challenges that the agrofood sector is facing nowadays. *ESMARTCITY Project was still not operative.*
- **2nd MED Green Growth transnational event** – “*Roles and Opportunities for competitiveness in public and private sectors*” – 12-13 October 2017, Rome (Italy). The event was an opportunity to debate about the emerging opportunities for green competitiveness in the MED area and about the role of various public and private actors to exploit these opportunities. The event was hosted by the Forum Compraverde - Buygreen, at its 11th edition in 2017. *ESMARTCITY Project was still not operative.*
- **3rd MED Green Growth transnational event** – “*Role of regional and local policy makers in enhancing Green Innovation*” – 15-16 November 2018, Durres (Albania) – The event



analysed the role of policy makers in enhancing the Green Growth innovation and policies and at created contexts of exchanges on the impact of several key players in boosting Green Growth economies. *ESMARTCITY representatives attended this event.*

- **Interreg MED Green Growth Community Thematic Working Groups workshop** – 6 March 2019, Thessaloniki (Greece) – The workshop supported the modular projects in identifying both challenges and success factors related to the respective TWG themes. The results were used to feed the policy outcomes of the community. *ESMARTCITY representatives attended this event.*
- **MADE IN MED event:** Interreg MED mid-term event, April 2018 in Rome. The conference was dedicated to showcasing projects' results and thinking about the future of cooperation in the Mediterranean. The Interreg MED programme organised an interactive exhibition where participants could discover and experiment the projects' results in a concrete manner. *ESMARTCITY representatives attended this event.*
- **MED FOR YOU:** unfolding a strong narrative for policy change" that will take place on 24th October 2019 in Athens. This event will premiere the first evidence of the successful Interreg MED new architecture, how it has taken shape and produced concrete results thus demonstrating its added value. The results will be presented around questions directly linked to hot topics on the European Commission agenda but also to the objectives of the European cohesion policy. Moreover, it will be a chance to debate on post 2020 and the added value of European territorial cooperation in the Mediterranean. *ESMARTCITY representatives attended this event.*

3.3 Other activities in which ESMARTCITY project participated:

As stated in section 2.2 of this document, the work done in this groups on resource efficiency has not only been the one of the meetings previously mentioned but as well the continuous work of collaboration with other activities such as:

1. **Monthly on-line meetings of the TWGs** (January-March 2019). TWGs worked for the definition of policy inputs/recommendations under the coordination of SYNGGI partners.
2. **TWGs face-to-face meeting** (6th March 2019 – Thessaloniki, Greece). TWGs met in a face-to-face meeting in order to structure their insights, on their respective topics, and contribute to Green Growth policies recommendations and white papers. External experts participated in the meeting.
3. **On-line data collection tool** (April-May 2019). On the basis of the inputs gathered during the previous phases, a data collection tool was developed and disseminated on-line to TWGs' representatives (ref. Section 1.3.2).



4 Results of thematic working group 2 by ESMARTCITY project.




4.1 Main inputs of ESMARTCITY project




4.1.1 Policy Context

ESMARTCITY	
Policies targeted by the project	<p>ESMARTCITY targets innovation policy change in the MED territories with reference to the Smart City paradigm. There are two sectorial focuses of Smart City in the project:</p> <ul style="list-style-type: none"> - energy efficiency and public buildings - smarter districts – public lighting <p>Smart Cities are viewed as innovation ecosystems and not just as end users of innovation. In this context different policies are relevant, i.e. use of Open Data as opposed to proprietary data systems, entrepreneurship enhancement through experimentation and co-creation over existing Smart City infrastructures for the provision of innovative services to the citizen, models for efficient maintenance and upgrade of infrastructures and services, influence at procurement level.</p> <p>The funding programmes relevant for the project include H2020 (which has an existing policy focus on open data and opensource applications); frameworks at national and regional levels (RIS3 strategies, ERDF); the regional level is a primary focus.</p> <p>The project has also a focus on SMEs capacity building for open data -> open data as a business case for SMEs to provide new urban services; there can be some potential synergies with the SME focus of GreenMind. A wider involvement of the business sector is crucial for the development of an open data platform.</p>
Ways of targeting the policies	<p>A “Green Paper for Innovation Policy Change” in the MED area will be drafted structuring a set for recommendations and investment priorities for innovation enhancement in the partner territories. This set results from the assessment and lessons learnt of pilot testing related to the Smart City paradigm. The Green Paper targets improvement of the implementation of regional policies and programmes with reference to their innovation perspective.</p> <p>Recommendations might take into account also mobility issues.</p>
Deadlines	<p>The Green Paper is expected to be delivered on November 2019.</p>



4.1.2 Policy Recommendation Feedback




 Investments and finance	 regulation	 Relevance
Advocate a correct inclusion of green and smart mobility industry in the ROPs, national funding programmes and RIS3		
<i>Description</i>		
<p>Brief description of the proposed instrument, its main objectives and possible actions.</p> <p>With 60% of the global population living in cities by 2030 up from 50% in 2008 green and smart urban mobility can have a multiplier effect for sustainability and enhancement of Circular Economy. Extrapolating from the Smart City to the Smart Region or even the Smart Nation concept overall mobility industry could help develop new business paradigms for Circular Economy leading to higher sustainability and addressing more effectively environmental problems caused by transport and mobility.</p> <p>Absence of open data related to mobility represents an issue that hinders the development of new innovative services and solutions. There is an open discussion on whether existing data should remain public or be open to the industry that could develop greener and smarter mobility schemes. Funding mechanisms at regional and national level could help transition towards more open schemes for the benefit of new application paradigms enhancing sustainability.</p>		
<i>Actors</i>	<i>Expected results</i>	
Main actors involved in the definition/implementation of the instrument Clusters/Consortiums, Enterprises, Trade Associations, public authorities	Expected results Greener and smarter mobility led by Open Data and Innovative Applications and Services	

 Technological infrastructure	 regulation	 Relevance
Adopt context-related rather than one-size-fits-all approaches and solutions, so as to avoid increasing existing social, digital and economical gaps among communities		
<i>Description</i>		
<p>Brief description of the proposed instrument, its main objectives and possible actions.</p> <p>Technological infrastructure deployment is critical for addressing challenges presented in human communities. Some of the issues behind such deployments are the cost and expertise needed that is difficult to be met by smaller communities of more isolated areas, such as mountain and island areas. Furthermore, issues related to maintenance and upgrade of deployed infrastructures are applicable both in the above categories and larger communities. Some solutions to these issues could be offered by context-related approaches followed by standardization of solutions so that overall cost decreases and economies of scale are accomplished. Widening the “context” by following a “breaking the silos” approach could further contribute to this end.</p>		
<i>Actors</i>	<i>Expected results</i>	
Main actors involved in the definition/implementation of the instrument	Expected results	



Clusters/Consortiums, Development Agencies, Research/Academia, Standardization Bodies	Decreasing the gap between areas. Holistic approach of solving problems. Business models promoting innovation, standardization and openness for enterprises.
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 Labour market	 Training/ dissemination	 relevance
Strengthen SMEs and entrepreneurs capacities to enter the green market (energy, smart city, mobility) and use/exploit open data opportunities		
<i>Description</i>		
<p>Brief description of the proposed instrument, its main objectives and possible actions. Capacity building is necessary for the model change behind the Circular Economy and the Green Market. First of all, a mentality change is necessary for otherwise competing enterprises to identify themselves as collaborating partners of a wider more standardised and more open ecosystem. When it comes to offering new services and applications either in the energy or smart city or mobility sectors, the pace of technological change makes it apparent that to cope with and enhance market shares, enterprises have to standardise their products so that they can offer their solutions to more end users at lower costs. Having proprietary solutions usually involves high customization and therefore maintenance costs that hurt overall competitiveness. Exploiting standardised technologies and building on top of open data can help boost innovation producing new products and services. Furthermore, not being constrained by the application domain, but rather breaking the silos between domains can create new innovative products and services and further enhance competitiveness.</p> <p>Secondly, at a time of such disruptive technologies as Virtual Reality, Augmented Reality, Artificial Intelligence and Collaborative Platforms there is also a need for disruptive education to be offered to SMEs and entrepreneurs in order to understand and grasp the direction the market goes. In this context capacity building is essential.</p> <p>Innovative ways of capacity building could be utilised comprising funding of Hackathons, Datathons in order to identify and attract new talent, find innovative solutions to specific challenges and problems and develop solutions that cross the boundaries between domains.</p>		
<i>Actors</i>		<i>Expected results</i>
Main actors involved in the definition/implementation of the instrument Clusters/Consortiums, Development Agencies, Local Authorities, Regional Authorities, Training Organisations, Academia/Research		Expected results Changing business mentality towards a more collaborative innovation ecosystem. Offer disruptive education and training. Enhance innovative solutions and overall competitiveness.

 Awareness and knowledge	 Training/ dissemination	 relevance
Raise awareness towards the general public regarding technology availability and towards the industry sector regarding the actual needs of the market		
<i>Description</i>		
<p>Brief description of the proposed instrument, its main objectives and possible actions. The rapid pace of technological advancement makes it difficult for the general public as well as the end users of the technology to be constantly aware of technological availability and</p>		






direction of the technological progress. It is even more difficult to cope with disruptive technologies and their combination that can change significantly life in relatively short intervals. It is thus quite important to raise awareness among both end users and the general public of technological availability that could resolve everyday problems and promote greener and more sustainable paradigms. Pilot projects adequately deployed and disseminated could help towards the direction of creating / enhancing end user pull to respond to the technology push that is already present. Furthermore, such pilot deployment should focus more proactively on involving the end users in a participatory process collecting feedback and sentiments on the new offered solutions and actual needs, so as to finetune innovative products and services to the actual needs of the market.

<i>Actors</i>	<i>Expected results</i>
Main actors involved in the definition/implementation of the instrument Civil Society Organisations, Development Agencies, Technological Centres/Research Institutes/Universities, SMEs, enterprises	Expected results Generation of the adequate end user pull to match the technology push. Finetuning of products and services to market needs.

 Cooperation and technology transfer	 incentive	 relevance
Provide greater support to already existing clusters and promote their cooperation rather than the competition among them		
<i>Description</i>		
<p>Brief description of the proposed instrument, its main objectives and possible actions. Collaboration is a critical parameter for success in a globally competitive market. Changing the mentality of enterprises from competing partners offering proprietary solutions to collaborating partners in a synergetic way promoting open standardised solutions that supplement one another and help offer solutions in a holistic way is a first step. Clusters can help cultivate this collaborative spirit among their members and usually focus on a specific thematic domain or a specific technological domain. Enhancing existing clusters and the services that they offer to their members is quite substantial for achieving a paradigm shift in a quickly changing world and facilitate disruptive capacity buildings.</p> <p>Furthermore, it is critical to enhance collaboration among clusters at national and international scale. It is usual that clusters are developed at a local or national scale servicing the interests of their local industries and markets. This could create an oxymoron of competing organisations that otherwise promote collaboration among their members. Cooperation among existing clusters and networks should be promoted so as to create greater critical mass, enhance interdisciplinarity when clusters deal with different domains or technologies, promote transnational cooperation easing transfer of knowledge / best experiences and promoting synergetic approaches. Such an approach could help address in a uniform way common problems appearing in different sectors or enrol into solving problems of different sectors following a holistic approach. This is especially valid for Circular Economy that the “problem” of one sector, i.e. waste, can be regarded as the “raw material” of another sector. And when it comes to technological domains it could involve breaking the silos between different applications.</p>		
<i>Actors</i>	<i>Expected results</i>	



Main actors involved in the definition/implementation of the instrument Chambers of Commerce, Development Agencies, Local Authorities, Regional Authorities, Clusters/Networks, Academia/Research	Expected results Change of business models towards more collaborative ecosystems. Promotion of interdisciplinarity and transnational cooperation. Enhancement of synergetic approaches.
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 Cooperation and technology transfer	 Training/ dissemination	 relevance
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Establishing an open network of technological infrastructures for SMEs at EU level to integrate advanced manufacturing technologies into their production processes

Description

Brief description of the proposed instrument, its main objectives and possible actions. Research infrastructures represent a good tool of the EU in order to foster scientific research and innovation in sectors of critical importance. They follow different paths being distributed among countries, centralized or virtual and they offer facilities to the scientific community for open access and experimentation. It would be a good idea to establish in a similar way technological infrastructures for SMEs aiming at the integration of manufacturing technologies into their production processes. In this context a first step would be to identify existing technological infrastructures in the EU space that promote advances in manufacturing technologies. For instance, advances related to Industry 4.0, the Industrial Internet of Things, Edge Computing, Big Data analytics for manufacturing processes, Artificial Intelligence, New Materials could be of interest to a significant number of SMEs and industries. Upon identification of existing infrastructures an effort to network them should be made. This networking means agreeing on the terms of models of offering access to their facilities for purposes of dissemination, capacity building, and experimentation, and to this end developing a common collaborative platform describing the individual offerings of each infrastructure and governing access to them. In order to address the need of SMEs more appropriately there will be a need for e-learning applications offering remote capacity building and mentoring / guidance on ways of incorporating advanced manufacturing technologies.

<i>Actors</i>	<i>Expected results</i>
Main actors involved in the definition/implementation of the instrument Development Agencies, European Authorities, Technological Centres/Research Institutes/Universities	Expected results Advanced capacity building towards SMEs. E-learning solutions for coaching incorporation of advanced technologies.

4.1.3 White Paper No.2

Specific challenges

- How to allow new services over existing infrastructure (open data) is critical for both ensuring the proper maintenance and updating of existing infrastructure as well as enhancing the city as innovation ecosystem breaking the silos between application domains



and providing opportunities for new service development based on the analysis of acquired big data representing a new asset and service providers

- A lack of mobility data, due to missing data and/or reluctance to data sharing seen as public data for cities which aggregation has cost a lot of money. Different approaches however exist related to cutting down city cost significantly by licensing mobility data use to private companies utilizing it to build innovative apps.

Tools, technologies and Services

❖ **Open data and API solutions for smart cities**

The ESMARTCITY project deals with the thematic areas of energy efficiency in public buildings and public street lighting performing pilot testing in 6 MED countries. The pilot testing utilizes some common preparatory activities comprising a) Feasibility Study detailing available technological solutions, user requirements, and drawing functional specifications, b) Methodology for Testing detailing test cases and evaluation indicators, and c) a pilot deployment Operational Framework offering details per site, taking into account diversities and openness requirements. The general idea behind the testing is the deployment of the necessary infrastructure that can enable smarter solutions and services for cities and their citizens. Capacity building towards innovative SMEs and clusters in the area is envisaged. Lessons learnt during the testing will lead to a Green Paper for Innovation Policy change detailing proposals for policy improvement.

The challenge for policy change is driven by the need of the cities to better deal with the maintenance / upgrade of their infrastructures becoming technically obsolete over time, while offering their citizens more advanced and innovative services. Breaking the silos between application domains represents a significant challenge as deployed infrastructures can be useful for multiple city services. The idea of openness of data and / or infrastructures is significant in this context as it represents a way to address these challenges. Data represent an asset for cities and their licensing could provide a way for cities to cut down costs. Further to enabling deployment of innovative solutions across different application domains, open data could significantly enhance entrepreneurship and innovation ecosystems for cities, enabling new SMEs to experiment and co-create.

Pilot application and testing

	GRASPINNO	ESMARTCITY	GREEN MIND
Number of Countries		6	
Number of pilots/case studies	10	10	
Number of companies engaged/supported		40	
Other?			

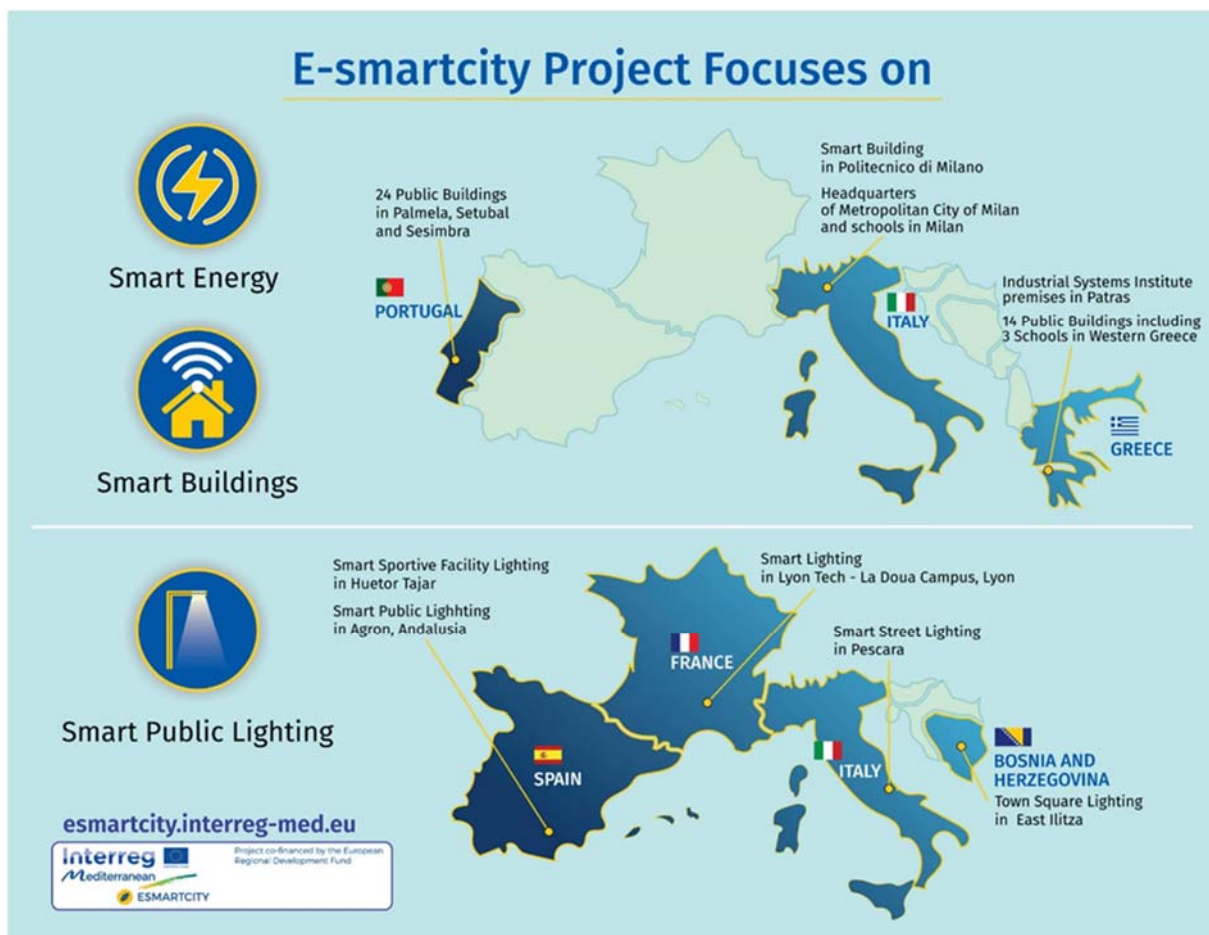


Examples of results

ESMARTCITY

Pilot testing green and smart mobility solutions

The pilot testing of the ESMARTCITY project comprises a number of different sites in 6 different partner countries: Living Lab at the Industrial Systems Institute premises in Patras, Greece; Living Lab at the premises of Politecnico di Milano; energy efficiency in public buildings at the Region of Western Greece in Achaia, Aetoloacarnania and Ileia; energy efficiency in schools and the headquarters of the Metropolitan City of Milan; energy efficiency of 24 public buildings in Palmela, Setubal and Sesimbra, Portugal; public lighting at Veljine square in East Ilidza, Bosnia and Herzegovina; public lighting in sportive facility of Huetor Tajar and city of Agron, Andalusia, Spain; smart lighting at La Doua Campus, Lyon, France; public lighting in Pescara, Abruzzo, Italy. In order to ensure conformity and coordination pilot there are different preparatory activities. The preparatory activity is followed by the pilot testing comprising (i) pilot deployment following a common approach detailed in the preparatory phase, (ii) pilot capacity building offered towards SMEs and networked community to enable experimentation and co-creation over the deployed pilots. During the assessment phase a benchmarking of the pilot sites before and after the intervention, and lessons learned will be documented leading to a Green Paper for Innovation Policy Change, detailing the project proposals for policy improvements so that sustainability of project results is ascertained.



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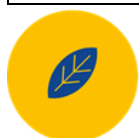
ESMARTCITY:

Energy consumption in public lighting and public buildings facilities

Introduction of open data platforms and involvement of SMEs

4.1.4 SYNGGI Green Growth Book Questionnaire

Questions	Answers
<p>Which are the capitalization activities already carried out so far?</p> <p>Please also specify:</p> <ul style="list-style-type: none"> • eventual critical issues and points of strength experienced during the process • eventual changes made with respect to your original capitalization plan and the reasons they were made 	<p>Esmartcity project will draft a “Green Paper for Innovation Policy Change” detailing the necessary strategies that need to be reinforced in partner territories in order to enable a sustainable Smart City paradigm. The Green Paper will built upon the lessons learnt during the pilot testing phase of the project comprising pilots in 6 partner countries associated with the Smart City theme and more specifically Smart Street Lighting and Smart Energy Efficient Buildings. The Green Paper focuses on policy recommendations and investment priorities for innovation enhancement in partner territories. It is expected to be produced in November 2019.</p> <p>Transfer of the project results is scheduled in the period December 2019 – July 2020. Transfer targets include policy makers in the area and innovative SMEs and clusters of SMEs. Capacity building interventions towards policy makers are scheduled in the period December 2019 – March 2020 and aim at transferring project outcomes towards local and regional public authority stakeholders. Eight workshops are envisaged to this end. Transfer activities towards SMEs and clusters in the area is scheduled in the period December 2019 – May 2020, through capacity building interventions towards innovative SMEs that could result in enhancing entrepreneurship and innovation in the MED area. Furthermore, it is envisaged that the project participated in the Green Growth Cluster Training Seminar envisaging a coordination with the Green Growth community and other modular projects.</p> <p>The capitalization efforts of the project will be concluded with the adoption of a Smart City Protocol by policy makers in the area on July 2020.</p>
<p>Which are the capitalization activities foreseen for the future?</p> <p>Please also specify:</p> <ul style="list-style-type: none"> • eventual concerns about their outcomes; • eventual activities of the Green Growth 	<p>As above.</p> <p>Expected coordination of capitalization activities with the Green Growth community is envisaged both through the participation in the community events and especially Cluster Training Seminar, as well as through the overall thematic working group approach adopted.</p>



community which you think could be of support for your capitalization process	
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4.2 Transferring activities

A resume up of the main strategic documents to be transferred after the implementation of the pilots, are the following ones:

“Green Paper for Innovation Policy Change” detailing the necessary strategies that need to be reinforced in partner territories to enable a sustainable Smart City paradigm	February 2020
A “Smart City Protocol” will be adopted by those policymakers willing to endorse the innovation policy change strategy developed within the project	July 2020
8 Workshops addressed to local and regional public authorities in the area of smart lightning and smart energy-efficient buildings. As well few online workshops addressed to SMEs and clusters in the same area as above	December 2019 – July 2020

In the last phase of the project, the deliverable “Green Paper for Innovation Policy Change” was finished, detailing the necessary strategies that need to be reinforced in partner territories in order to enable a sustainable Smart City paradigm. The Green Paper built upon the lessons learnt during the pilot testing phase of the project comprising pilots in 6 partner countries associated with the Smart City theme and more specifically Smart Street Lighting and Smart Energy Efficient Buildings. The Green Paper focuses on policy recommendations and investment priorities for innovation enhancement in partner territories. Nevertheless it was finished after the end of SYNGGI project, and thus some recommendations had to be delivered in advance.

Nevertheless, the work done in the Green Growth community and lessons learn have influenced the finalization of this “Green Paper”, and in the last part of ESMARTCITY project transfer of the project results is scheduled in the period December 2019 – July 2020. Transfer targets include policy makers in the area and innovative SMEs and clusters of SMEs. Capacity building interventions towards policy makers are scheduled in the period December 2019 – March 2020 and aim at transferring project outcomes towards local and regional public authority stakeholders.

As well, eight workshops are envisaged to this end. Transfer activities towards SMEs and clusters in the area is scheduled in the period December 2019 – May 2020, through capacity building interventions towards innovative SMEs that could result in enhancing entrepreneurship and innovation in the MED area. Furthermore, it is envisaged that the project participated in the Green Growth Cluster Training Seminar envisaging a coordination with the Green Growth community and other modular projects.



The capitalization efforts of the project will be concluded with the adoption of a Smart City Protocol by policy makers in the area on July 2020.

4.3 Influence on Green Growth Community main achievements

4.3.1 White Paper 2 on Green and Smart Public Services

The White Paper is part of a series of thematic Circular Economy White papers presenting the contribution of the community. The focus of the White Paper is on Green and Smart Public Services.

There is reference to Esmartcity as one of the Interreg MED Green Growth Community projects in page 4:

“ESMARTCITY (Enabling Smarter City in the MED Area through Networking) aims at improving the innovation capacity of Mediterranean cities by creating innovation ecosystems and applying the Smart City concept (the use of digital and energy saving technologies to supply better services to citizen with less impact on the environment). The project tests solutions in the field of intelligent urban districts, energy efficiency of buildings and smarter public lighting.”

In page 5 there is reference to project challenges:

“- Cities need to allow new smart and green services over the existing city infrastructure. This is critical for both ensuring the proper maintenance and updating of existing infrastructure as well as enhancing the city as innovation ecosystem breaking the silos between application domains and providing opportunities for new service development based on the analysis of acquired big data representing a new asset and on new service providers.

- Vendor lock-in for cities (i.e. public authorities becoming dependent on a particular vendor of a product or service, only able to change the vendor at significant costs) and city lock-in for vendors (i.e. the vendor becoming dependent on a particular city for the provision of its product or service, unable to provide the same service to another city).”

In page 6 there is reference to tools, technologies and services offered as solutions by the Green Growth Community:

“Open data and API (Application Programming Interface) solutions for smart cities

The ESMARTCITY project promotes the idea of open data and infrastructures as a way to help cities address challenges to the maintenance and upgrading of their infrastructures, while also allowing them to offer citizens more advanced and innovative services, enabling deployment of innovative solutions across different application domains. Breaking the silos between application domains represents a significant opportunity, as deployed infrastructures can be useful for multiple city services. Open data is an asset for cities and could provide a way for them to cut down costs. Open data also has the potential to significantly enhance entrepreneurship and innovation ecosystems within cities, enabling new SMEs to experiment and co-create.

The ESMARTCITY project deals with the thematic areas of energy efficiency in public buildings and public street lighting performance, applied through pilot testing. The pilot testing utilizes some common preparatory activities, including the development of feasibility studies, testing and evaluation methodologies, and an operational framework for the pilot deployment. The general



idea behind the testing is the deployment of the necessary infrastructure that can enable smarter solutions and services for cities and their citizens.”

In page 7 there is reference to the pilot testing:

“Together, the featured projects:

- Implement activities in 9 Mediterranean countries: Bosnia and Herzegovina, Croatia, Cyprus, Greece, France Italy, Portugal, Slovenia, Spain.
- Test and implement solutions in 23 pilot applications and case studies. • Address 3 main sectors: Public Buildings, Public Lighting, Urban Mobility.
- Work with 246 companies (currently and planned) in areas related to energy efficiency, mobility and transport, ICT and others.”

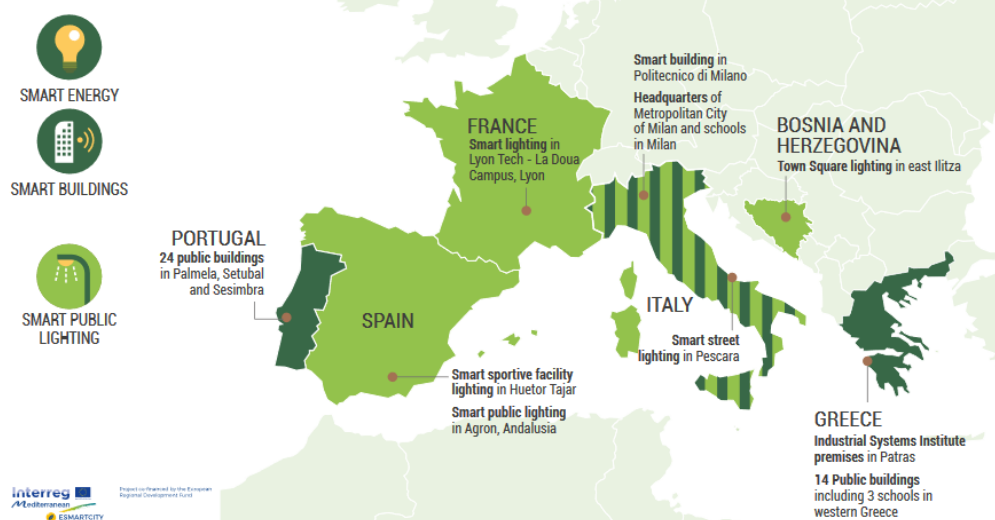
In page 8 there is reference to Esmartcity pilot testing:

“Esmartcity Pilot Testing

The pilot testing of the ESMARTCITY project comprises a number of different sites in 6 partner countries: Living Lab at the Industrial Systems Institute premises in Patras, Greece; Living Lab at the premises of Politecnico di Milano; energy efficiency in public buildings at the Region of Western Greece in Achaia, Aetoloacarnania and Ileia; energy efficiency in schools and the headquarters of the Metropolitan City of Milan; energy efficiency of 24 public buildings in Palmela, Setubal and Sesimbra, Portugal; public lighting at Veljine square in East Ilidza, Bosnia and Herzegovina; public lighting in sportive facility of Huetor Tajar and city of Agron, Andalusia, Spain; smart lighting at La Doua Campus, Lyon, France and public lighting in Pescara, Abruzzo, Italy. In order to ensure conformity and coordination between the pilot sites, there are different preparatory activities.

The preparatory activities are followed by the pilot testing comprising of: (i) pilot deployment following a common approach detailed in the preparatory phase, and (ii) pilot capacity building offered towards SMEs and networked communities to enable experimentation and co-creation over the deployed pilots. During the assessment phase, a benchmarking of the pilot sites before and after the intervention, as well as lessons learned, will be documented, leading to a Green Paper for Innovation Policy Change, detailing the project proposals for policy improvements so that sustainability of project results is ascertained.”

E-SMARTCITY PROJECT FOCUSES ON



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In page 11 there is reference to Circular Economy monitoring indicators:

“• Number of transnational innovation clusters receiving support on green and circular economy issues

- Number of operational instruments in place to support innovation in SMEs on green and circular economy
- Number of enterprises receiving non-financial support on green and circular economy issues
- Energy consumption in public lighting and public building facilities
- Number of open data platforms in place, and number of SMEs involved”

In page 12 there is reference to Call to Action:

“• Open data solutions prevent vendor lock-in for cities by reducing the barriers to market entry for service providers, and also prevent city lock-in for SMEs by enabling replicability of solutions in other cities.”

In page 13 there is reference to Call to Action at EU and national level:

“• To promote open data and APIs with reference to the Smart City paradigm in the context of public procurement, so that Smart City related deployments are increasingly vendor independent, more open and enabling new services on top of them.”

In page 14 there is reference to project contact:

“ESMARTCITY:

Website: <https://esmartcity.interreg-med.eu/>

Contact: Athanasios Kalogeras

(Communication Partner), Research Centre ATHENA- Industrial Systems Institute (Greece)

kalogeras@isi.gr”

4.3.2 Policy Recommendations

The document presents Policy Recommendations of the Green Growth Community structured into six main areas and more specifically

- Investment and access to finance
- Technological infrastructure
- Legal Framework
- Labor market and employment
- Awareness & Knowledge
- Cooperation among stakeholders and technology transfer

In page 7 there is reference to Esmartcity as part of the TWG 2 activities:

“Production and Consumption:

Smart and Green Public Services

Projects ESMARTCITY, GRASPINNO, GREENMIND

Relevant CE Indicator Green Public Procurement

Main targets capacity building of Pas and SMEs, urban ICT”



In page 15 there is reference to possible interventions related to Technological Infrastructure:

“Adoption of context-related rather than one-size-fits-all approaches and solutions

The costs and the availability of expertise are two of the main issues for technological infrastructure deployment (especially in smaller and more isolated areas, such as mountain and islands). Furthermore, issues related to the maintenance and upgrade of deployed infrastructures are relevant both in small and in larger areas. A possible solution could be the adoption of a context-related approach, followed by a standardization of solutions, allowing for a decrease in overall costs and the accomplishment of economies of scale. Moreover, widening the “context” by following a “breaking down the silos” approach could further contribute to this.”

In page 18 there is reference to possible interventions related to the Legal framework:

“Promotion of energy efficiency measures in urban infrastructures

According to municipal energy audits, measures that promote the use of efficient street lighting systems and the renovation of existing buildings (the main energy consuming municipal services) would lead to significant energy savings. Moreover, in some regions of the MED area, water pumping facilities are another sector in which energy savings can be achieved. In order to improve the capacity of public authorities to achieve energy efficiency, it is fundamental to act not only at the technical level, but also at the legal level (i.e. public procurement process). In this sense, a fundamental step could be the adoption of a Smart City Strategy at the municipal level (or by other Public Authorities).”

In page 21 there is reference to possible interventions related to Labor Market and Employment:

“Reinforcement of SMEs’ and entrepreneurs’ capacities to access to the green market (energy, smart city, mobility) and use/exploit open data opportunities

Capacity building is necessary for a model shift, towards CE. First of all, companies now competing should perceive themselves as partners, cooperating in a wider, more standardised and more open ecosystem. For example, in the framework of technological innovation, exploiting standardised technologies and building on top of open data, could lead to overcome scale costs and define new products and services. Secondly, at a time of such disruptive technologies (e.g. Virtual Reality, Augmented Reality, Artificial Intelligence and Collaborative Platforms) there is also a need for a disruptive education, to be offered to SMEs and entrepreneurs, allowing them to understand and grasp the direction in which the market goes (e.g. through Hackathons, Datathons, or LABs - Innovation hubs or Living LABs, etc.)”

4.3.3 Legal Recommendations

The document describes the methodology and roadmap for the formulation of Legal Recommendations on the Green Growth Community.

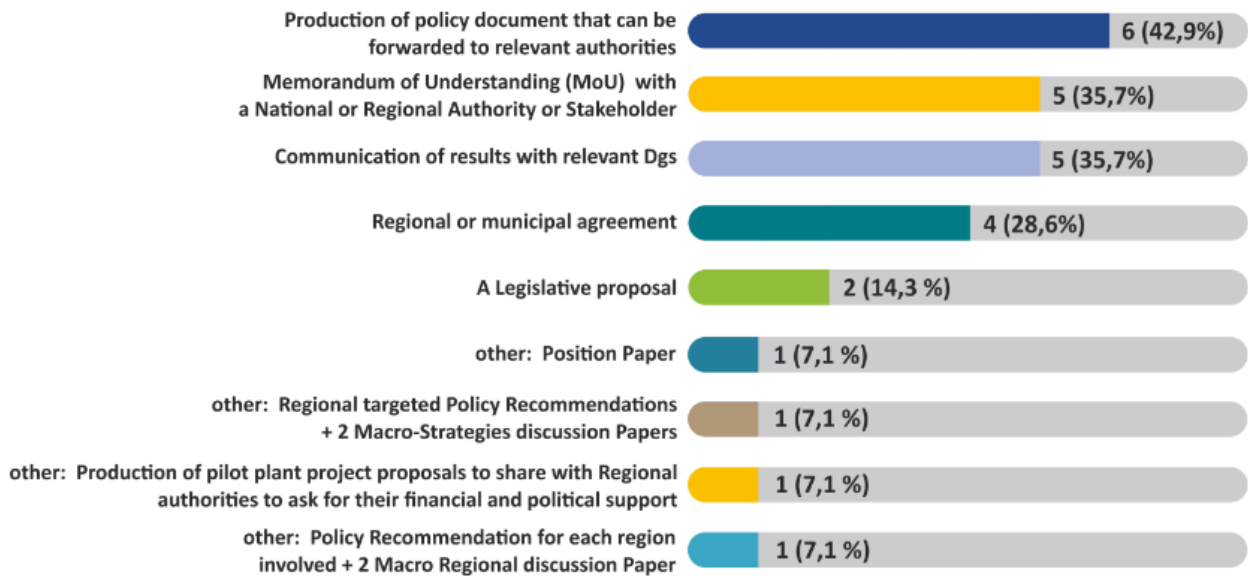


In page 5 there is reference to Esmartcity as part of the Green Growth Community:

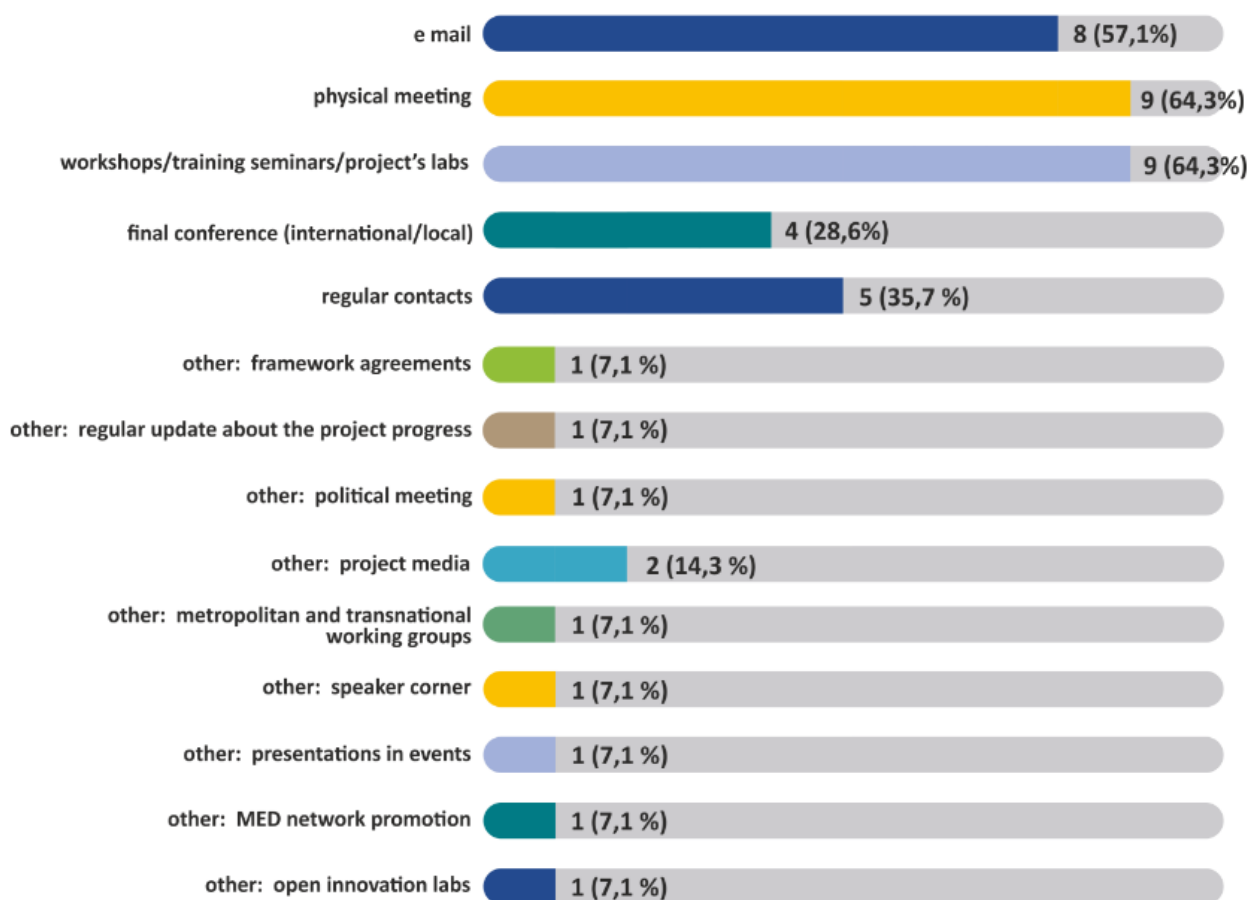
“ESMARTCITY (Enabling Smarter City in the MED Area through Networking) promoting the Smart City concept enabling cities touse energy more efficiently in buildings.”

Esmartcity has participated in the process of survey / interview conducted by the Green Growth Community and its responses are part of the aggregated results presented in the document:

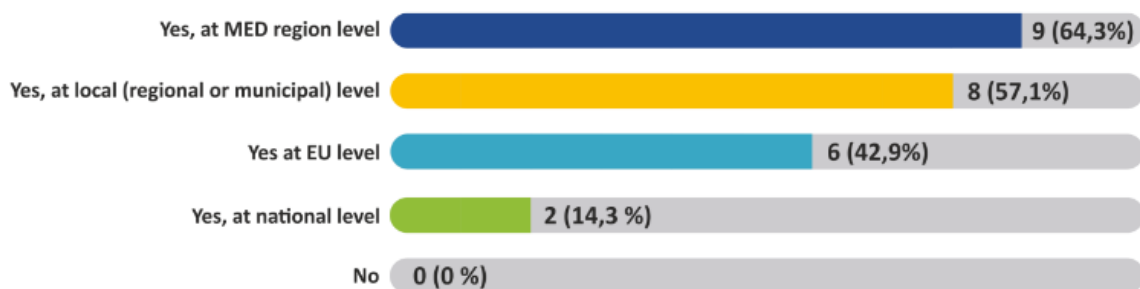
At which level does your project aspire to achieve its policy objectives?



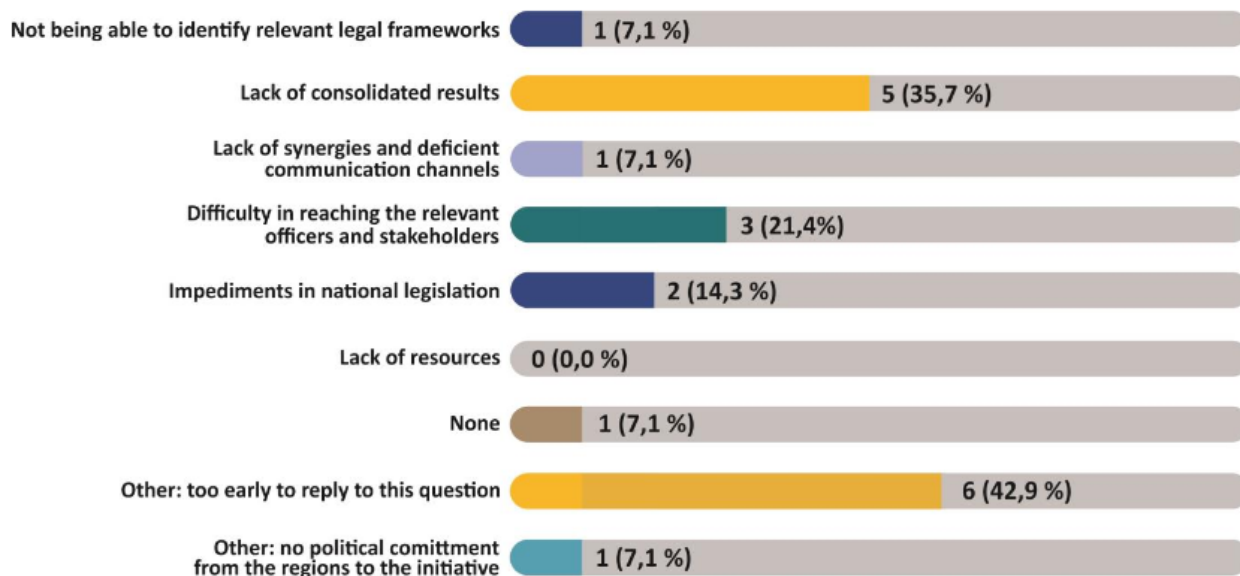
What type of communication have you established so far?



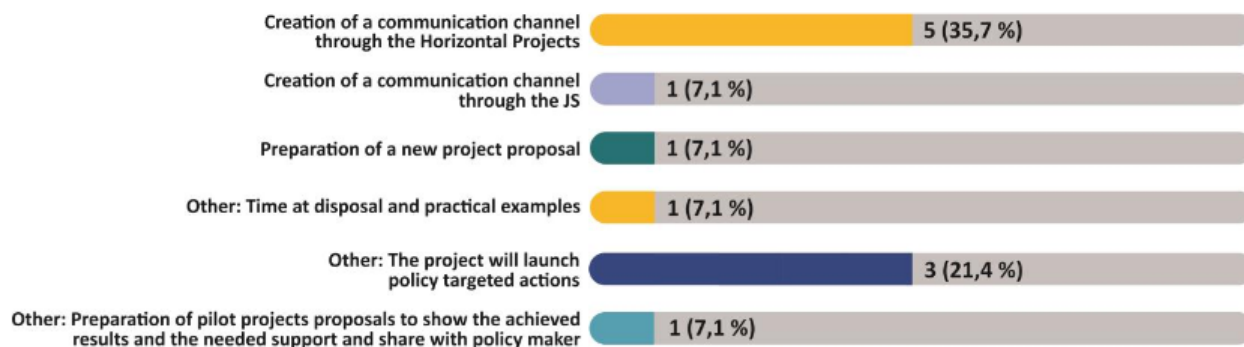
Have you or are you planning to communicate your project to any relevant National or EU Authorities in terms of policy recommendations?



Which have been the main barriers in achieving your policy objectives in terms of translating them into legal recommendations?



How do you plan to overcome them?



4.3.4 Green Growth Book

The purpose of the Green Growth Book is to facilitate capitalization and transferring activities of the Green Growth Community.

In page 17-18 there is reference to the envisaged Esmartcity capitalization activities:

“Development of Strategic Documents

Green Paper for Innovation Policy Change detailing the necessary strategies that need to be reinforced in partner territories to enable a sustainable Smart City paradigm



A Smart City Protocol will be adopted by those policy makers willing to endorse the innovation policy change strategy developed within the project

Dissemination (Public Events and Training Activities)

8 Workshops addressed to local and regional public authorities in the area of smart lighting and smart energy-efficient buildings

8 Workshops addressed to SMEs and clusters in the same area as above”

