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**ESMARTCITY  
Enabling Smarter City in the MED Area through Networking**

**(3MED171.1M2022)**

**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  
WP4 – Transferring  
Activity 4.4 – Transfer of Policy Recommendations  
Deliverable 4.4.1 – Smart City Protocol**

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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 Act 4.4 “Transfer of Policy Recommendations” that, by capitalizing on previous Deliverable 3.4.1 “Green Paper for Innovation Policy Change”, aims at developing a plan for the adoption of Esmartcity Policy Recommendations by local and regional public stakeholders in the implementation phase of the actions of the ERDF ROP in the project partner EU Member States.

More specifically, it represents D 4.4.1 “Smart City Protocol”, which aims at utilising the Esmartcity Policy Recommendations to give Public local and regional Stakeholders indications on which ERDF ROP actions can be improved and how. This is achieved by detailing the individual potential 2021 2027 ERDF ROP actions of each EU Member State involved in the project partnership, which should be influenced by the innovation changes recommended by Esmartcity in its Green Paper, so that the sustainability of the project results is ascertained.

Before narrowing down on real potential 2021 2027 ERDF ROP actions for each involved EU Member State, D 4.4.1 presents necessary knowledge about the 2021 2027 EU Cohesion Policy structure, as well as the interactive process between the EU Commission and each member state, that allows the development of national and regional operational programs, as well as Interreg Operational programs by the Regions, as Managing Authority.

The above context required extensive research and diligent reviewing of the most relevant 2021-2027 EU Commission Cohesion Policy documents, as well as documents produced by at least one Member State (Italy) in the process to elaborate the Partnership Agreement to be negotiated later with the EU Commission.

The main documents refer to the COM(2018) 372 final “EC Proposal for a Regulation of the European Parliament and of the Council on the European Regional Development Fund and on the Cohesion Fund”; COM(2018) 372 final ANNEX I “RCO - Regional Policy Common Output Indicator and RCR - Regional Policy Common Result Indicator”; COM(2018) 372 final ANNEX II “Core set of performance indicators for the ERDF and the Cohesion Fund”; COM(2018) 375 final “Common provisions on the European Regional Development Fund, the European Social Fund Plus, the Cohesion Fund, and the European Maritime and Fisheries Fund”; COM(2018) 375 final ANNEX I “Dimensions and codes for the types of intervention for the ERDF, the ESF+ and the Cohesion Fund”; ANNEX D “Investment Guidance on Cohesion Policy Funding 2021-2027” for Portugal, Spain, France, Italy and Greece Country Reports 2019.

Consequently, this report has been built on a two-step process.

The first step is to propose the reader the Esmartcity Policy Recommendations connected with EU 2021 2027 Cohesion Policy, describing each green recommendation for Innovation Policy Change, proposing the most appropriate EU 2021 2027 Cohesion Policy **Intervention Fields (referred to Specific Objective and Policy Objective)** on which the recommendation can be enforced.

The second step is the identification of which 2021 2027 ERDF NOP or ROP actions can be strengthened by each Esmartcity Policy Recommendation through the analysis of Investment Priorities and the Specific



Actions, related to the proposed Intervention Fields, suggested by the European Commission to each Member State in the relevant Investment Guidance on Cohesion Policy Funding 2021 -2027, annexed to 2019 Country Report.

## 1.2 Structure of the deliverable

This deliverable is structured in 6 chapters:

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

Chapter 2 "2021 2017 EU Cohesion Policy framework" presents the policy objectives, specific objectives of relevance to the ERDF and the Cohesion Fund and related Intervention Field.

Chapter 3 "National cohesion policy programming - Drafting the Partnership Agreement" describes the work on cohesion policy programming in EU Member States for the 2021–2027 to prepare the Partnership Agreement and Operational Programmes involving each country's economic, social and institutional partners.

Chapter 4, " Esmartcity Policy Recommendations connected with EU 2021 2027 Cohesion Policy" presents the selected green recommendation for Innovation Policy Change from Green Paper with joint proposal of the best EU 2021 2027 Cohesion Policy's **Intervention Fields (referred to Specific Objective and Policy Objective)** on which the recommendation can operate.

Chapter 5 "Strengthening EU Member States' ERDF ROP actions" describes the ERDF ROP Investment Priorities and Specific Actions that can be strengthened by selected Esmartcity Policy Recommendations.

Chapter 6, "Esmartcity Memorandum of Understanding" presents the on line and hardcopy format of the MoU that Public Stakeholders could accede or subscribe to, in order to take into consideration the ESMARTCITY policy recommendations to enhance Local Actions and potential influence to Regional Operational Programmes.



## 2 2021 2017 EU Cohesion Policy Framework - Specific objectives for the ERDF and the CF

On 2 May 2018 the European Commission adopted a proposal for the next multiannual financial framework for the period 2021-2027 (ref. COM (2018) 322 final, 2.5.2018). This includes the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) which support the following political objectives, set in the common provisional regulation (ref. COM (2018) 375 final):

PO1 a smarter Europe by promoting innovative and smart economic transformation;

PO2 a greener, low-carbon Europe by promoting clean and fair energy transition, green and blue investment, the circular economy, climate adaptation and risk prevention and management;

PO3 a more connected Europe by enhancing mobility and regional ICT connectivity;

PO4 a more social Europe implementing the European Pillar of Social Rights; (dedicated to ESF+ European Social Fund +)

PO5 a Europe closer to citizens by fostering the sustainable and integrated development of urban, rural and coastal areas and local initiatives.

The ERDF and the CF Regulation (COM(2018) 372 final) takes the above policy objectives and develops them into specific objectives of relevance to the ERDF and the Cohesion Fund, which can be tracked with appropriate indicators ( annex 1 COM(2018) 372 final) and further weighted and specified according to the Fields of Intervention established in Annex I of COM(2018) 375.

The majority of ERDF funding (65 % to 85 %) will focus on smart growth PO1 and the green economy PO2. The CF will continue to focus predominantly on environmental and transport infrastructure. Special provisions are for sustainable urban development by dedicating 6% of ERDF resources to this area.

The following tables separately show the specific objectives of Policy Objectives, Specific Objectives and related Fields of Intervention of the ERDF and ERDF/CF, which shall contribute to the actions of the Union leading to strengthening of its economic, social and territorial cohesion by pursuing the following goals:

(a) Investment for jobs and growth in Member States and regions, to be supported by the ERDF, the ESF+ and the Cohesion Fund; and

(b) European territorial cooperation (Interreg), to be supported by the ERDF.



## 2.1 ERDF funds –

PO	Specific Objective (SO)		INTERVENTION FIELD	
	Cod	title	Cod	Description
<b>PO1 - Smarter Europe - innovative and smart industrial transformation</b>	<b>a1</b>	Strengthen research and innovation capacities and the introduction of advanced technologies	001-003	Investment in fixed assets directly linked to research and innovation activities
			004-006	Investments in intangible assets directly related to research and innovation activities
			007-009	Research and innovation activities including online activities
				<b>for</b> a) micro-enterprises b) public research centers and in higher education c) SMEs (including private research centers)
	<b>a1</b>	Strengthen research and innovation capacities and the introduction of advanced technologies	018	Incubation, spin off support, spin out and start-up
			019	Support for innovation clusters and enterprise networks, mainly for the benefit of SMEs
			020	Innovation processes in SMEs
			021	Technology transfer and cooperation between enterprises, research centers and the higher education sector
			022	Research and innovation processes, technology transfer and enterprises cooperation focused on the low carbon economy, resilience and climate change adaptation
			023	Research and innovation processes, technology transfer and enterprises cooperation focused on the circular economy
<b>PO1 - Smarter Europe - innovative and smart industrial transformation</b>	<b>a2</b>	allow citizens, administrations to reap the benefits of digitization	010	Digitizing SMEs (including e-commerce, e-business and online business processes, digital innovation, hubs, living laboratories, web entrepreneurs, start-ups in the ICT sector and B2B)
			011	ICT solutions, services, electronics, applications for administration





			012	IT applications and services for digital skills and digital inclusion
			013	Online health care IT applications and services (including e-Care, Internet of Things for physical activity and home automation for the most vulnerable groups)
	a3	strengthen the growth and competitiveness of SMEs	014	Business infrastructure for SMEs (including industrial parks and sites)
			015	SME business development and internationalisation
			017	Advanced support services (including management, marketing and design services) for SMEs and groups of SMEs
			018	Incubation, support for spin offs, spin outs and start-ups
	a4	develop skills for smart specialization, industrial transition and entrepreneurship	016	Skills development for smart specialisation, industrial transition and entrepreneurship
PO 2 - A greener, low carbon Europe - clean and fair energy transition, green and blue investment, circular economy, climate adaptation and risk prevention	b1	promoting energy efficiency measures	024	Energy efficiency and demonstration projects in SMEs and support measures
			025	Energy efficiency renovation of existing housing stock, demonstration projects and supporting measures
			026	Energy efficiency renovation of public infrastructure, demonstration projects and supporting measures
			027	Support to enterprises that provide services contributing to the low carbon economy and to resilience to climate change
	b2	promoting renewable energies	028	Wind Renewable Energy
			029	Solar Renewable Energy
			030	Biomass Renewable Energy
			031	Marine Renewable Energy





			032	Other types of Renewable Energy: (including GEOTHERMAL energy)
	<b>b3</b>	developing smart energy systems, grids and storage at local level	033	Smart Energy Distribution Systems at medium and low voltage levels (including smart grids and ICT systems) and related storage
			034	High efficiency co-generation, district heating and cooling
	<b>b6</b>	promoting the transition to a circular economy	042	Household waste management: prevention, minimisation, sorting, recycling measures
			043	Household waste management: mechanical biological treatment, thermal treatment
			044	Commercial, industrial or hazardous waste management
			045	Promoting the use of recycled materials as raw materials
	<b>b7</b>	enhancing biodiversity, green infrastructure in the urban environment, and reducing pollution	046	Rehabilitation of industrial sites and contaminated land
			047	Support to environmentally-friendly production processes and resource efficiency in SMEs
			048	Air quality and noise reduction measures
			049	Protection, restoration and sustainable use of Natura 2000 sites
			050	Nature and biodiversity protection, green infrastructure
PO5 - Europe closer to citizens - sustainable and integrated development of urban, rural and coastal areas	e1	promoting integrated social, economic and environmental development, cultural heritage and security in urban areas	128	Protection, development and promotion of public tourism assets and related tourism services
			129	Protection, development and promotion of cultural heritage and cultural services
			130	Protection, development and promotion of natural heritage and eco-tourism
			131	Physical regeneration and security of public spaces
	e2	promoting social, economic and	128	Protection, development and promotion of public tourism assets and related tourism services



through local initiatives.		environmental development integrated at local level, cultural heritage and security, also for rural and coastal areas, inter alia through participatory local development initiatives	129	Protection, development and promotion of cultural heritage and cultural services
			130	Protection, development and promotion of natural heritage and eco-tourism
			131	Physical regeneration and security of public spaces

## 2.2 ERDF+CF funds

PO	Specific Objective (SO)		INTERVENTION FIELD	
	Cod	title	Cod	Description
<b>PO3 - a more connected Europe - mobility and regional ICT connectivity</b>	c1	enhancing digital connectivity;	051	ICT: Very High-Capacity broadband network (backbone/backhaul network)
			055	ICT: Other types of ICT infrastructure (including large-scale computer resources/equipment, data centres, sensors and other wireless equipment)
	c2	developing a sustainable, climate resilient, intelligent, secure and intermodal TEN-T;	056	Newly built motorways and roads -TEN-T
			059	Newly built other national, regional and local access roads
			064	Newly built railways - TEN-T
			066	Other newly built railways
			063	Digitalisation of transport: road
	c3	developing sustainable, climate resilient, intelligent and intermodal national, regional and local mobility, including improved access to TEN-T and cross-border mobility;	060	Reconstructed or improved motorways and roads - TEN-T
			067	Reconstructed or improved railways - TEN-T
			069	Other reconstructed or improved railways
			070	Digitalisation of transport: rail
	c4		073	Clean urban transport infrastructure



		promoting sustainable multimodal urban mobility;	074	Clean urban transport rolling stock
			075	Cycling infrastructure
			076	Digitalisation of urban transport



### 3 National cohesion policy programming - Drafting the Partnership Agreement

Each Member State shall prepare a Partnership Agreement that sets out arrangements for using the Funds in an effective and efficient way for the period from 1 January 2021 to 31 December 2027.

So, Member States start at national level the programming process for the drafting of the Partnership Agreement, engaging all country's economic, social and institutional partners.

All partners are called upon to play an active role in the programming process by way of specific contributions and participation in partner discussions organised into Thematic Discussion Tables, to identify and gradually define the scope, the procedures, and the intensity of action of 2021–2027 cohesion policy within the scope of each of the five Political Objectives.

The round-table discussions take account of the guidance concerning investments financed by 2021-2027 cohesion policy for each Member States, as expressed in Annex D of the 2019 Country Report, which provides the basis for dialogue between each Country and the related EU Commission services.

Both partners' specific contributions and all that should emerge from the partner discussions, summarized in reports that will then be used and refined by Central Government and Regions in the subsequent preparatory phases for the Partnership Agreement and Operational Programmes.

The Commission shall assess the Partnership Agreement and its compliance with this Common Provisions Regulation (COM (2018) 375) and with the Fund-specific rules. In its assessment, the Commission shall, in particular, take into account relevant country-specific recommendations, specified in the Investment Guidance on Cohesion Policy Funding 2021 -2027, annexed to 2019 Country Report.



## 4 Esmartcity Policy Recommendations connected with EU 2021 2027 Cohesion Policy

Specific policy recommendations were developed, valorising the knowledge gained through the experience acquired during the testing phase of the ESMARTCITY project and its pilot intervention results. Furthermore, the recommendations of the Interreg MED Green Growth Community - Horizontal project were studied carefully, so that the individuated recommendations act complementary to those of the community; thus, aiming to suggest concrete recommendations for Innovation Policy changes.

They were developed for topics addressed by the project, such as Smart Cities, Smart Buildings, Smart Public Lighting, Digitalization, Open Data, Green Procurement and Circular Economy and illustrated in the Deliverable 3.4.1 – \_Green Paper for Innovation Policy Change

Each of them was further analyzed, compared to what has already been done in the Green Paper to identify on which ERDF and ERDF/CF Intervention Fields, Specific Objective and Policy Objective it can operate to improve the possible 2021 2027 ROP and NOP actions.

Below the Esmartcity Policy Recommendations that could affect the implementation of the possible 2021 2027 ROP and NOP actions.



#### 4.1 #1. Open Innovation Platform

Open Innovation Platform, a collaborative tool for the implementation of new policy model for regional innovation governance system

##### *Description*

The creation of an Open Innovation Platform by regional public authorities can be a useful tool for them to implement a new policy model for regional innovation governance system. The platform can provide the environment where citizens can play an active role alongside professionals, able to use competences, ideas and solutions in the whole life cycle of the regional research and innovation policy, from the definition of strategic goals to the monitoring and evaluation phase, with a strong focus shift from institutions and organisations to individuals. Members of the platform can be both from the R&I community and from the large public, lending substance to the principle of multi-actor, public engagement. The platform can offer a broad range of tools to inform and engage, promote the competences of local actors, design and manage research and open innovation projects, for the dissemination and valorization of results. In the overall framework of open data, the platforms developed by the Regions could be released under a free, open source license with the specific aim to facilitate its adoption in similar or complementary user scenarios and promote collaboration among interested stakeholders (e.g. other Regions, company networks, clusters, large collaborative projects etc.) and to maximize content sharing and interoperability. The strategic dialog and close cooperation amongst the related stakeholders is crucial for a successful Open Innovation Scheme.

Actors	Expected results
Public authorities, citizens, researchers, professionals, enterprises networks, clusters, large collaborative projects	Permanent communication channel for all stakeholders to accelerate the innovation process in a quadruple-helix scenario, coordinated by the Regional Government

This ESMARTCITY Policy Recommendation #1 refers to the following **Policy Objective**, **Specific Objective** and **Intervention Fields** from ERDF-European Regional Development Funds and Cohesion Funds

#### ERDF-European Regional Development Funds

Intervention Fields		Specific Objective		Policy Objective	
021	Technology transfer and cooperation between enterprises, research centers and the higher education sector	a1	Strengthen research and innovation capacities and the introduction of advanced technologies	PO1	Smarter Europe - innovative and smart industrial transformation
020	Innovation processes in SMEs				



011	ICT solutions, services, electronics, applications for administration	a2	allow citizens, administrations to reap the benefits of digitization		
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#### ERDF/Cohesion Funds

Intervention Fields		Specific Objective		Policy Objective	
051	ICT: Very High-Capacity broadband network (backbone/backhaul network)	c1	enhancing digital connectivity;	PO3	a more connected Europe - mobility and regional ICT connectivity
055	ICT: Other types of ICT infrastructure (including large-scale computer resources/equipment, data centres, sensors and other wireless equipment)				





## 4.2 #2 Regional Strategy of Green and Circular Economy

Regional Strategy of Green and Circular Economy, following the EU Action Plan for the Circular Economy – “Closing the loop”

### Description

Circular Economy (CE) has become an issue to be taken into account in many kind of policies, as it is a horizontal topic affecting different governmental departments such as environment, energy, education, culture, employment, health, economy, industry, agriculture.

All European regional governments should develop a *Regional Strategy of Green and Circular Economy* with the aim to align their policies to CE. The Strategy should follow the EU Action Plan for the Circular Economy – “Closing the loop”, while *regional CE indicators* should be defined in the framework of the Strategy in order to capture specific CE aspects of each region.

The Strategy should join the existing material and human resources in the region in the search for a greener and more circular society and economy, where natural resources are a permanent source of opportunities for the regional population. The vocation of the strategy should be regional and comprehensive, aiming to bring together all the relevant initiatives in the region. Transferability of the

Strategy would be an added value for other regions with similar characteristics and needs.

Actors	Expected results
regional governments, researchers, clusters, NGOs, citizens	Alignment of regional policies to Circular Economy

This ESMARTCITY Policy Recommendation #2 refers to the following **Policy Objective**, **Specific Objective** and **Intervention Fields** from ERDF-European Regional Development Funds and Cohesion Funds

### ERDF-European Regional Development Funds

Intervention Fields		Specific Objective		Policy Objective	
023	Research and innovation processes, technology transfer and enterprises cooperation focused on the circular economy	a1	Strengthen research and innovation capacities and the introduction of advanced technologies	PO1	Smarter Europe - innovative and smart industrial transformation
045	Promoting the use of recycled materials as raw materials	b6	promoting the transition to a circular economy	PO2	PO 2 - A greener, low carbon Europe tion,.....



## ERDF/Cohesion Funds

No related Intervention Fields affected

### 4.3 #3 Inclusion of Green Smart Public Buildings and Smart Public Lighting in national funding schemes, ROPs, RIS3 and local Action Plans

#### Description

Taking advantage of the technological development and the digital transformation achievements, EU member states and their regions should enhance the investments in Green Smart Public Buildings and Smart Public Lighting. Both public buildings and lighting are two sectors which consume the biggest share of the energy consumed by public sector. Thus, the transition to green and smart solutions is a one-way decision. The existing industry already moves forward with green smart applications, products and services deployed in public buildings and street lighting infrastructure valorizing existing Open Data. Thus, having multiplier effect for sustainability and addressing more effectively energy consumption problems. Public authorities at all policy levels should support such efforts by carefully including Green Smart Public Buildings and Smart Public Lighting in national funding schemes, ROPs, RIS3 and local Action Plans.

Actors	Expected results
National governments, regional governments, local governments, enterprises, business associations, researchers	Greener and Smarter Public Buildings and Lighting led by Open Data and innovative applications

This ESMARTCITY Policy Recommendation #3 refers to the following **Policy Objective**, **Specific Objective** and **Intervention Fields** from ERDF-European Regional Development Funds and Cohesion Funds

## ERDF-European Regional Development Funds

Intervention Fields		Specific Objective		Policy Objective	
016	Skills development for smart specialisation, industrial transition and entrepreneurship	a4	develop skills for smart specialization, industrial transition and entrepreneurship	PO1	Smarter Europe - innovative and smart industrial transformation
024	Energy efficiency and demonstration projects in SMEs and support measures			PO2	



025	Energy efficiency renovation of existing housing stock, demonstration projects and supporting measures	b1	promoting energy efficiency measures		A greener, low carbon Europe tion,.....
026	Energy efficiency renovation of public infrastructure, demonstration projects and supporting measures				
033	Smart Energy Distribution Systems at medium and low voltage levels (including smart grids and ICT systems) and related storage	b3	developing smart energy systems, grids and storage at local level		
048	Air quality and noise reduction measures	b7	enhancing biodiversity, green infrastructure in the urban environment, and reducing pollution	PO2	

#### ERDF/Cohesion Funds

No related Intervention Fields affected



#### 4.4 # 4 National Strategy for supporting local communities

National Strategy for supporting local communities with specificities to enter the digital transformation era and face the challenges of technological infrastructure deployment

##### *Description*

Nowadays, technological infrastructure deployment is critical for addressing challenges presented in human communities. However, there is no blueprint for a successful implementation of digital solutions. Different sectors, positions in the global value chain, or sizes of organisations need different approaches. Especially for small local communities with specificities, such as those located in isolated mountain or insular areas, it is difficult to meet the challenges related to the cost and expertise needed for the deployment, the maintenance and the upgrade of such infrastructures. The National Strategy should provide support to both local public authorities and local SMEs in such areas, providing solutions to these issues by offering context-related approaches followed by standardization of solutions so that overall cost decreases and economies of scale are accomplished. The Strategy should define the framework for bringing together researchers, local authorities and SMEs in order to help them proceed on their path of digital transformation, facilitating the mutual learning and exchange of experience.

Actors	Expected results
National government, Local and Regional public authorities, SMEs	Systematized approach for local communities with specificities to enter the digital transformation era.  Bridging the gap between areas and support local SMEs.

This ESMARTCITY Policy Recommendation #4 refers to the following **Policy Objective**, **Specific Objective** and **Intervention Fields** from ERDF-European Regional Development Funds and Cohesion Funds

##### ERDF-European Regional Development Funds

Intervention Fields		Specific Objective		Policy Objective	
010	Digitizing SMEs (including e-commerce, e-business and online business processes, digital innovation, hubs, living laboratories, web entrepreneurs, start-ups in the ICT sector and B2B)	a2	allow citizens, administrations to reap the benefits of digitization	PO1	Smarter Europe - innovative and smart industrial transformation



012	IT applications and services for digital skills and digital inclusion				
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#### ERDF/Cohesion Funds

Intervention Fields		Specific Objective		Policy Objective	
051	ICT: Very High-Capacity broadband network	c1	enhancing digital connectivity;	PO3	a more connected Europe - mobility and regional ICT connectivity
076	Digitalisation of urban transport	c4	promoting sustainable multimodal urban mobility;		

#### 4.5 #5 Mobilising R&TD projects

Mobilising R&TD projects that aim at the creation of new green products and processes with a high knowledge content and innovation.

##### Description

National Governments should mobilise strategic R&TD projects that aim at the creation of innovative green products, processes and services with a high knowledge content and degree of technological innovation, while contributing to environmental sustainability. The projects should be designed to contribute towards their value chain and constitute themselves as focal drivers of capabilities and specific scientific and technological competencies; thus, leading to significant impacts at multisectorial level, namely allowing an effective technology exploitation. At national level, funding opportunities should be shaped for researchers and the industry so as to develop such R&TD project ideas. Applicants should set concrete objectives, valorizing existing Open Data and enabling the endogenization of already developed technologies.

##### Actors

national government, industry, clusters, researchers

##### Expected results

Strategic R&TD projects aimed at creating new green products, processes and services with a strong technology and innovation component

This ESMARTCITY Policy Recommendation #4 refers to the following **Policy Objective**, **Specific Objective** and **Intervention Fields** from ERDF-European Regional Development Funds and Cohesion Funds



#### ERDF-European Regional Development Funds

Intervention Fields		Specific Objective		Policy Objective	
022	Research and innovation processes, technology transfer and enterprises cooperation focused on the low carbon economy, resilience and climate change adaptation	a1	Strengthen research and innovation capacities and the introduction of advanced technologies	P01	Smarter Europe - innovative and smart industrial transformation
047	Support to environmentally-friendly production processes and resource efficiency in SMEs	b7	enhancing biodiversity, green infrastructure in the urban environment,	P02	A greener, low carbon Europe

#### ERDF/Cohesion Funds

No related Intervention Fields affected

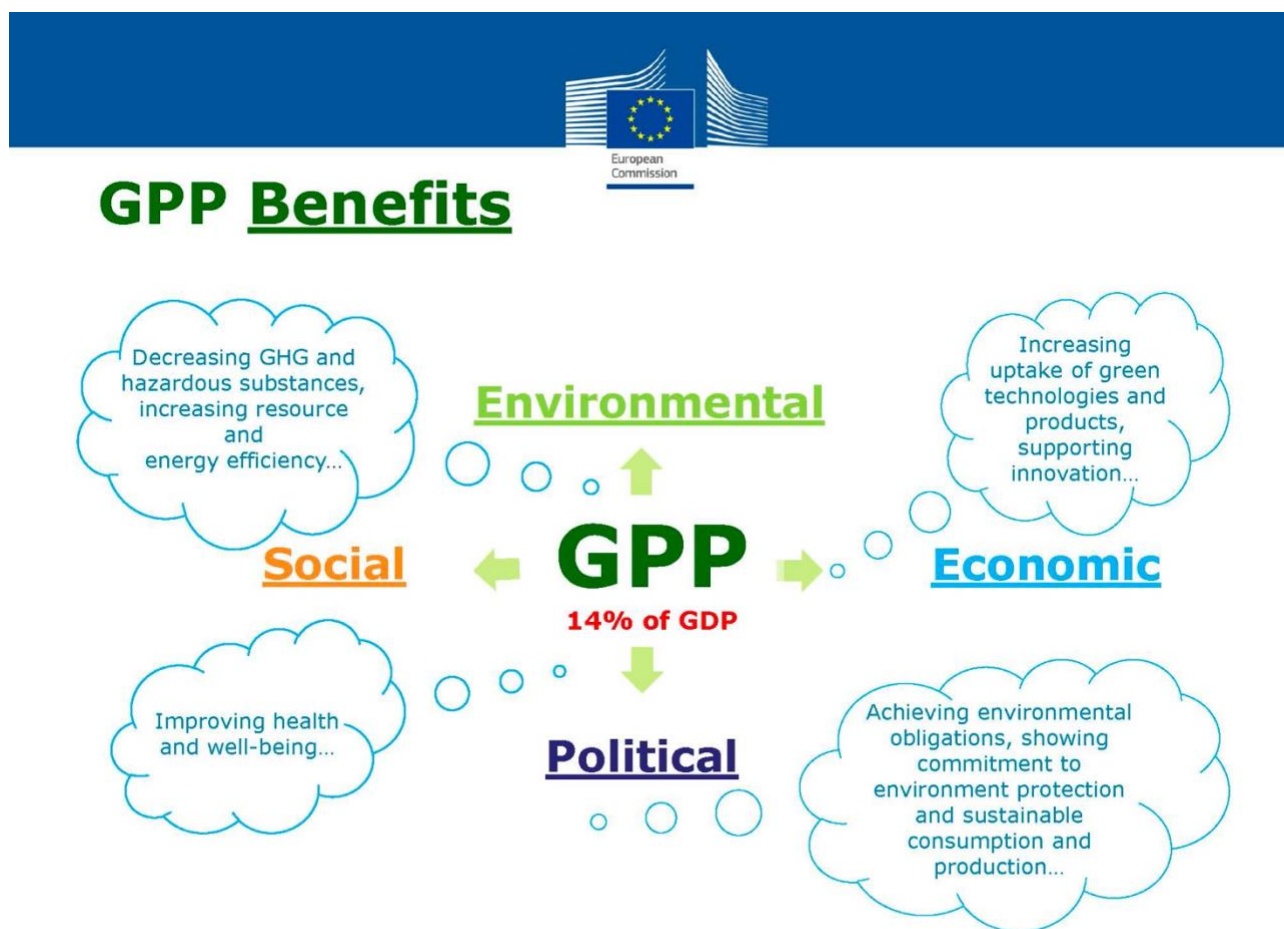


## 5 Esmartcity Policy Recommendations connected with Green Public Procurement

A number of 4 Policy Recommendations contained in the Green Paper are directly connected with an important horizontal issue pertaining the functionalities and efficient operation of the public sector, i.e. the Green Public Procurement, referenced by the European Commission as follows:

“Green Public Procurement is the approach by which Public Bodies integrate environmental criteria and/or requirements into all stages of their procurement process, thus encouraging the development of environmental technologies and the spread of environmentally sound products, by seeking and choosing outcomes and solutions that have the least possible impact on the environment throughout their whole life-cycle.”

The benefits associated with GPP are not limited to the environmental impact, but can include everything from social impact and health to economic and political benefits.





In EU the public sector accounts for more than 25% of total employment, and its over 250,000 public authorities spend around 14% of GDP annually purchasing services, works and supplies. In this context procurement appears as a quite important tool in the process of European transformation. Sustainability of cities mandates them to become smarter and procurement could contribute to this end, while at the same time addressing Circularity through Green Public Procurement.

GPP influences in this sense all Policy Objectives of 2021 2027 EU Cohesion Policy and the Esmartcity four policy recommendations should be used to enhance GPP National Action Plans so as to horizontally affect the implementation of the possible 2021 2027 ROP and NOP actions.

Alignment with the EC Action Plan for the Circular Economy (COM (2015) 0614 final) should be sought. The basic concept of EU GPP relies on Communication “Public procurement for a better environment” (COM (2008) 0400final). EC recommends the development of a process for setting common GPP criteria at EU level, comprising core criteria for use by any contracting authority with minimum additional verification effort or cost increases, and comprehensive criteria aiming at purchases of the best environmental products available in the market.

EU Member states are encouraged to apply GPP criteria to at least 50% of public tenders.

At an international scale, the Circular Economy policy of the EU contributes to achievement of Sustainable Development Goals (SDGs) on Sustainable Consumption and Production by 2030, and more specifically

- SDG 12 - responsible consumption and production
- SDG 6 - clean water and sanitation
- SDG 11 - sustainable cities and communities
- SDG 9 - industry, innovation and infrastructure

Circular Economy also supports such major initiatives as the European Union 7th Environment Action Programme and its 2050 vision of “living well within the limits of the planet”, the UN 2030 Agenda for Sustainable Development, and the G7 Alliance on Resource Efficiency.

GPP initiatives supporting the EU Action Plan for the Circular Economy include

- Sustainable Public Procurement SPP Regions
- Procura+ European Sustainable Procurement Network
- GPP 2020 – Procurement for a low carbon community
- Public Procurement for Innovations (PPI) platform

Below the Esmartcity Policy Recommendations that could affect the implementation of the GPP National Action Plans in the project partner EU Member States:



## 5.1 #6 Compulsory adoption and use of EU GPP criteria

### Compulsory adoption and use of EU GPP criteria from national and regional public authorities

#### *Description*

Public authorities are currently the largest consumers in Europe, with annual expenditure of approximately 1.8 trillion euro annually, representing around 14% of the European gross domestic product. Thus, by using their purchasing power to choose goods and services with a low environmental impact, they can make an important contribution to sustainable production and consumption. 27 member states have already developed Action Plans for the adoption of the EU GPP criteria at national and regional level and/or have defined minimum environmental criteria. However, the adoption and use of the EU GPP criteria should be defined as compulsory when national and regional public authorities procure goods and services. The compulsory use should be defined by national Action Plans, and adjustment based on states' and regions' needs should be taken into account.

#### *Actors*

National public authorities, regional public authorities

#### *Expected results*

National and regional public authorities will implement GPP for their good and services



## 5.2 #7 Application of Life Cycle Cost calculation methods

Application of Life Cycle Cost calculation methods by national and regional public procurers during GPP procedures

### *Description*

Life Cycle Costing (LCC) is a methodology that can be used to estimate all the costs that will be incurred throughout the lifetime of a product, work or service. By applying LCC, public purchaser s can take into account some cost aspects which are not reflected in the purchase price (such as resource use, maintenance and disposal), thus directing their buying decision towards products with increased resource efficiency and longer lifespan, which, in turns, stimulates the offer of innovative and circular solutions on the market.

As a result, national and regional frameworks should be shaped to define the application of LCC calculation methods by national and regional public procurers during GPP procedures. In the national and regional frameworks, existing LCC tools should be suggested (after being evaluated by experts), while legal schemes should force enterprises to disclose relevant information regarding products components. The use of Open Data to feed databases with specific item costs would facilitate the application of LCC tools and ensure more precise results.

### *Actors*

National public authorities, regional public authorities, companies

### *Expected results*

Use of LCC will lead to increase of procured products and services with low environmental impact



### 5.3 #8 National Action Plan for training

National Action Plan for training local public authorities in GPP procedures and LCC tools.

<p><i>Description</i></p> <p>Despite the significant environmental benefits of GPP and LCC, most of local public authorities are not yet capable of executing green public procurement and using LCC tools to evaluate the tender's results. This is mainly due to lack of guidance from the higher policy makers, lack of experienced personnel and lack of proper training and educational activities.</p> <p>To face these challenges, national action plans should be developed including systematized capacity building initiatives for local PAs to improve their knowledge and capacity in GPP and LCC. A short educational programme should be designed for the local PAs, as well as training seminars and workshops. Experts and experienced national/regional public procurers should be involved in the initiatives, transferring their experiences and communicating the difficulties faced and the corresponding solutions.</p>	
<p><i>Actors</i></p> <p>National public authorities, regional public authorities, local public authorities, experts</p>	<p><i>Expected results</i></p> <p>Increase of local PAs' capacity building in implementing GPP and LCC procedures</p>

## 5.4 # 9 Funding the implementation of PPI and PCP

Funding the implementation of PPI and PCP through national funding schemes, ROPs and RIS3

### *Description*

Public Procurement of Innovative solutions (PPI) provides a large enough demand to incentivize industry to invest in wide commercialization to bring innovative solutions to the market with the quality and price needed for mass market deployment. Pre-Commercial Procurement (PCP) challenges industry to develop innovative solutions for public sector needs and it provides a first customer reference that enables companies to create competitive advantage on the market. As a result, PPI and PCP enable public procurers to drive innovation from the demand side by acting as technologically demanding customers that buy the development and testing of new solutions; thus, covering society's needs with better solutions, while providing growth opportunities for companies.

PPI and PCP procedures are not yet common practice among public authorities, since they demand a lot of effort and time from the side of public procurers. Also, the lack of experience worsens the situation. To overcome these difficulties, the implementation of PPI and PCP should be included in national funding schemes, ROPs and RIS3. New taxes incentives for enterprises involved in such procedures would also contribute to the implementation of PPI and PCP.

### *Actors*

National public authorities, regional public authorities, industry

### *Expected results*

Increase of public procurer s implementing PPI and PCP procedures

## 6 Strengthening EU Member States' ERDF and CF ROP actions

The ERDF aims to strengthen economic and social cohesion in the European Union by correcting imbalances between its regions, whereas the Cohesion Fund is aimed to reduce economic and social disparities and to promote sustainable development in Member States whose Gross National Income (GNI) per inhabitant is less than 90 % of the EU average.

For the 2014-2020 period, the Cohesion Fund concerns Greece and Portugal as countries involved in ESMARTCITY project.

### 6.1 Portugal

Built on the “Investment Guidance on Cohesion Policy Funding 2021-2027 for Portugal” Annex D of the Country Report Portugal 2019, the preliminary Commission services views on priority investment areas for an effective delivery for the 2021-2027 Cohesion Policy in Portugal are presented below.

These priority investment areas are derived from the broader context of investment bottlenecks, investment needs and regional disparities assessed in the Country Report Portugal 2019:

#### 1. P01

- Portugal remains a "moderate" innovator and the low overall intensity of research and development hinders the strengthening of the economic production structure.
- Digital skills and the spread of digital technologies by businesses and people remain low.
- A predominance of micro and small businesses affects innovation capacity and productivity
- Skill shortages hamper productivity, technological diffusion and affect the development of innovative skills.



## 2. P02

- Further efforts are needed to focus on the long-term decarbonisation targets for 2030 and 2050.
- Portugal is one of the areas in Europe most vulnerable to climate change
- Portugal still faces significant challenges with waste management

## 3. P03

No high priority investments envisaged in PO3 c1 “enhancing digital connectivity”.

Therefore, the 2021 2027 ERDF NOP or ROP possible actions, being defined by the Portuguese Central Government and its Regions, which can be strengthened by each Esmartcity Policy Recommendation are:

Policy Recommendations		possible ERDF actions			EU 2021 2027 Cohesion Policy		
n°	Title	#	High priority investment	Action	PO	SO	Int Field
#1	Open Innovation Platform, a collaborative tool for the implementation of new policy model for regional innovation governance system	1	enhance research and innovation capacities and the uptake of advanced technologies	Promotion of public and private investment in research and innovation, as a tool to move up the value-added chain and to increase innovation in firms across sectors, and develop technologies for transition to a carbon neutral economy.	PO1	a1	021





		2	reap digitisation benefits for citizens, companies and governmental bodies and promote digital inclusion,	Increase the range of digital services provided (e-government, e-procurement, e-inclusion, e-health, e-learning, e-skilling, e-commerce) and taken up by citizens, with special focus on rural, remote and outermost regions and on vulnerable groups of the population.	PO1	a2	011
#2	Regional Strategy of Green and Circular Economy, following the EU Action Plan for the Circular Economy – “Closing the loop”	1	enhance research and innovation capacities and the uptake of advanced technologies	public and private investment in research and innovation, as a tool to move up the value added chain and to increase innovation in firms across sectors, and develop technologies for transition to a carbon neutral economy	PO1	a1	023
#3	Inclusion of Green Smart Public Buildings and Smart Public Lighting in national	1	develop skills for smart specialisation, industrial transition and entrepreneurship	stimulate training and re-skilling in smart specialisation areas, in particular in key enabling technologies and related skills and in the new emerging fields	PO1	a4	016



	funding schemes, ROPs, RIS3 and local Action Plans.	2	promote energy efficiency measures and renewable energy	improve energy efficiency in small and medium-sized enterprises, including their premises, installations and processes;	PO2	b1	024
		3	promote energy efficiency measures and renewable energy	improve energy efficiency in public buildings and renovation of residential buildings, focusing on “energy poverty”;	PO2	b1	026
		4	promote energy efficiency measures and renewable energy	support the integration of higher shares of renewables in the energy system through smart energy systems at local level, including smart electricity distribution grids and storage solutions	PO2	b3	033

#4	National Strategy for supporting local communities with specificities to enter the digital transformation era and face the challenges of technological infrastructure deployment	2	reap digitisation benefits for citizens, companies and governmental bodies	support the integration of digital technologies into businesses and production processes of SMEs by developing infrastructures and services like digital innovation hubs	PO1	a2	010
		1	promote digital inclusion	promote the acquisition and development of digital skills and market-driven information and communication technology skills	PO1	a2	012



		3	promote sustainable multimodal urban mobility	Intelligent Transportation System, digitisation and innovative solutions for Smart Cities, improving infrastructure use and service quality.	PO3	c4	076
#5	Mobilising R&TD projects that aim at the creation of new green products and processes with a high knowledge content and innovation	1	enhance research and innovation capacities and the uptake of advanced technologies	public and private investment in research and innovation, as a tool to develop technologies for transition to a carbon neutral economy	PO1	a1	022

## 6.2 Spain

Built on the Annex D of the Country Report Spain 2019 “Investment guidance on Cohesion Policy Funding 2021-2027 for Spain”, the preliminary Commission services views on priority investment areas for an effective delivery for the 2021-2027 Cohesion Policy in Spain are presented below.

These priority investment areas are derived from the broader context of investment bottlenecks, investment needs and regional disparities assessed in the Country Report Spain 2019:

### 1. PO1

- Spain remains a moderate innovator and the innovation capacities of its public sector and businesses are insufficient to increase their productivity.
- The small size of Spanish small and medium-sized enterprises affects their capacity for innovation and productivity.



- Skills gaps and discrepancies hamper the productivity and spread of technology and affect the development of innovative skills in Spain.

## 2. P02

- The 2016 and 2017 data show an increase in energy consumption, particularly in industry and construction.
- Spain's electricity interconnection level was 6% in 2017.
- The increase in the share of renewable energy in Spain slowed visibly between 2014 and 2017
- Spain is one of the areas in Europe most vulnerable to climate change
- In 2017, the recycling rate of municipal waste in Spain was 34%, while the landfill rate was 54%, well above the EU average (24%). Conservation of biodiversity is a challenge in Spain

## 3. P03

- Spain performs well in terms of broadband connectivity, but the digital divide between regions and urban and rural areas persists

Therefore, the 2021 2027 ERDF NOP or ROP possible actions, being defined by the Spanish Central Government and its Regions, which can be strengthened by each Esmartcity Policy Recommendation are:

Policy Recommendations		possible ERDF actions			EU 2021 2027 Cohesion Policy		
n°	Title	#	High priority investment	action	PO	SO	Int Field



#1	Open Innovation Platform, a collaborative tool for the implementation of new policy model for regional innovation governance system	1	enhance research and innovation capabilities and the uptake of advanced technologies	Enhancement of technology transfer and market-oriented cooperation between SMEs, research centres and universities, in particular through the development and use of innovation eco-systems;	PO1	a1	020
		2	reap the benefits of digitisation for citizens, companies and governmental bodies	Development and promotion of interoperable e-government and e-services (health, education and other public services), including joint provision of services in urban and rural areas.	PO1	a2	011
#1	Open Innovation Platform, a collaborative tool for the implementation of new policy model for regional innovation governance system	3	enhance digital connectivity	deploy very high capacity broadband networks for backward regions (including the outermost), providing speeds of at least 100 Mbps, and eliminate the urban-rural coverage gap;	PO3	c1	51
		4	enhance digital connectivity	deploy or upgrade very high capacity network connections enabling access to 1Gbps for the main socio-economic drivers (schools, transport hubs, public service providers, digitally intensive enterprises, etc.) in all regions.	PO3	c1	55



#2	Regional Strategy of Green and Circular Economy, following the EU Action Plan for the Circular Economy – “Closing the loop”	2	enhance research and innovation capabilities and the uptake of advanced technologies	Foster investment in research and innovation, in particular to increase the number of innovative firms in the Smart Specialisation Strategy sectors, including development of new (circular) products, processes and services	PO1	a1	023
		1	improve resource efficiency and waste management	Foster a transition towards a circular economy by developing waste recycling and material recovery facilities for separately collected waste.	PO2	b6	045
#3	Inclusion of Green Smart Public Buildings and Smart Public Lighting in national funding schemes, ROPs, RIS3 and local Action Plans.	1	develop skills for smart specialisation, industrial transition and entrepreneurship,	stimulate innovation management, specific training and re-skilling in the areas of smart specialisation, industrial transition and entrepreneurship, in particular on key enabling technologies and emerging fields;	PO1	a4	016
		2	promote energy efficiency	accelerate the energy efficient renovation of the public buildings stock, prioritising the renovation of residential buildings and focusing on the energy poor.	PO2	b1	025



		3	promote smart energy systems at local level	deploy smart electricity distribution grids and storage solutions – linked to demand and supply planning	PO2	b3	033
		4	enhance biodiversity and green infrastructures	protect and restore biodiversity by promoting green infrastructures, especially in urban areas	PO2	b7	048

#4	National Strategy for supporting local communities with specificities to enter the digital transformation era and face the challenges of technological infrastructure deployment	1	reap the benefits of digitisation for companies	support the uptake of digital technologies and Information and Communication Technology based business models for SMEs, including infrastructures and services like digital innovation hubs	PO1	a2	010
		2	reap the benefits of digitisation for companies	promote e-skilling and market-driven Information and Communication Technology skills in small and medium sized enterprises	PO1	a2	012





		3	enhance digital connectivity	deploy or upgrade very high capacity network connections enabling access to 1Gbps for the main socio-economic drivers (schools, transport hubs, public service providers, digitally intensive enterprises, etc.) in all regions.	PO3	c1	51
		4	promote sustainable multimodal urban mobility	enhance the deployment of intelligent transport systems	PO3	c4	076
#5	Mobilising R&TD projects that aim at the creation of new green products and processes with a high knowledge content and innovation	1	enhance research and innovation capabilities and the uptake of advanced technologies	foster investment in research and innovation, in particular to increase the number of innovative firms in the Smart Specialisation Strategy sectors, including development of new products, processes and services	PO1	a1	022



### 6.3 France

Built on the Annex D of the Country Report 2019 “Investment guidance on Cohesion Policy Funding 2021-2027 for France”, the preliminary Commission services views on priority investment areas for an effective delivery for the 2021-2027 Cohesion Policy in France are presented below.

These priority investment areas are derived from the broader context of investment bottlenecks, investment needs and regional disparities assessed in the Country Report France 2019:

#### 1. P01

- Despite being a strong innovator, France's innovation performance remains below that of EU innovation leaders and shows much disparity between regions. France is not on track to achieve the 3% research and development intensity target for 2020.
- France performs below the EU average in terms of entrepreneurial activity and the regional competitiveness index of small and medium-sized enterprises shows high internal disparities.

#### 2. P02

- In line with the European energy and climate objectives of 2030, France aims to produce more renewable energy and improve energy efficiency, leading to a 40% reduction in greenhouse gas emissions compared to 1990 levels.
- France is concerned about the protection of biodiversity, as it is one of the 10 Member States with the highest number of threatened species and which is the Member State with the largest number of biogeographical regions.
- In France, the negative impacts of climate change, including flooding in river basins (Loire, Rhone) and coastal areas (Atlantic regions), and of major natural hazards are increasingly felt.

#### 3. P03

No high priority investments envisaged in P03 c1 “enhancing digital connectivity”.

Therefore, the 2021-2027 ERDF NOP or ROP possible actions, being defined by the French Central Government and its Regions, which can be strengthened by each Esmartcity Policy Recommendation are:



Policy Recommendations		FR possible ERDF actions			EU 2021 2027 Cohesion Policy		
n°	Title	#	High priority investment needs	action	PO	SO	Int Field
#1	Open Innovation Platform, a collaborative tool for the implementation of new policy model for regional innovation governance system	1	enhance research, development and innovation capacities	support the transformation and the development of new value chains, by supporting the development of the necessary skills, technologies and infrastructures and by stimulating the integrated cooperation in new value chains across programmes	PO1	a1	021
		2	enhance research, development and innovation capacities	reap the benefits of digitisation for citizens, small and medium sized enterprises and governments, in particular in inter-regional projects	PO1	a2	011



#2	Regional Strategy of Green and Circular Economy, following the EU Action Plan for the Circular Economy – “Closing the loop”	1	promote the transition toward a circular economy.	Promotion of the transition toward a circular economy	PO2	b6	045
#3	Inclusion of Green Smart Public Buildings and Smart Public Lighting in national funding schemes, ROPs, RIS3 and local Action Plans.	1	enhance research, development and innovation capacities	support the transformation and the development of new value chains, by supporting the development of the necessary skills, technologies and infrastructures	PO1	a4	016
		3	promote energy efficiency measures	contribute to energy efficiency in the industry (buildings and emissions of Greenhouse gases from processes)	PO2	b1	024
		2	promote energy efficiency measures promote energy efficiency measures	contribute to energy efficiency in the social and private (low revenue owners) residential sector;	PO2	b1	025



		4	promote energy efficiency measures promote energy efficiency measures	contribute to energy efficiency in the social, education and health infrastructures	PO2	b1	026
		5	enhance biodiversity, green infrastructure in the urban environment, and reducing pollution	enhance green infrastructure in the urban environment to reduce pollution	PO2	b7	048
#5	Mobilising R&TD projects that aim at the creation of new green products and processes with a high knowledge content and innovation	1	enhance research, development and innovation capacities	support the transformation and the development of new value chains, by supporting the development of the necessary skills, technologies and infrastructures	PO1	a1	022

## 6.4 Italy

Built on the Annex D of the Country Report 2019 “Investment guidance on Cohesion Policy Funding 2021-2027 for Italy”, the preliminary Commission services views on priority investment areas for an effective delivery for the 2021-2027 Cohesion Policy in Italy are presented below.

These priority investment areas are derived from the broader context of investment bottlenecks, investment needs and regional disparities assessed in the Country Report Italy 2019:



### 1. P01

- Research and innovation expenditure in Italy is significantly lower than the EU average and the country is considered a moderate innovator.
- Italy shows the lack of integration of digital technologies in the economy and the low level of digital skills
- Italian SMEs perform below the EU average in terms of productivity and growth

### 2. P02

- Italy has performed well compared to the 2020 climate and energy targets. However, the decoupling between economic growth and energy consumption is still weak and recent progress in renewable energy and energy efficiency is modest.
- Due to its geography, Italy is particularly vulnerable to threats deriving from climate change, hydrogeological events and seismic activity.
- Regarding waste management, despite some improvements, further efforts are needed to meet post-2020 recycling targets, especially in less developed regions.

### 3. P03

- On ultrafast internet connectivity (100 Mbps and above), Italy still lags behind EU average.

Therefore, the 2021 2027 ERDF NOP or ROP possible actions, being defined by the Italian Central Government and Regions, which can be strengthened by each Esmartcity Policy Recommendation are:

Policy Recommendations	IT possible ERDF actions	EU 2021 2027 Cohesion Policy
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n°	Title	#	High priority investment needs	action	PO	SO	Int Field
#1	Open Innovation Platform, a collaborative tool for the implementation of new policy model for regional innovation governance system	1	enhancing research and innovation capacities and the uptake of advanced technologies	foster knowledge exchanges between research organisations and businesses, especially innovative small and medium sized enterprises, in particular through collaborative partnerships and training.	PO1	a1	021
		2	promote digitisation for citizens, companies and governments	increase digital skills in small and medium sized enterprises and their uptake of digital technology solutions, including e-commerce, e-payments, cloud-computing services, and also internet of things, cybersecurity and artificial intelligence;	PO1	a1	020
		3	enhance digital connectivity	build very-high capacity broadband networks, starting from the deployment of infrastructure networks for ultrafast internet access (100 Mbps or more) in uncovered areas	PO3	c1	51



#2	Regional Strategy of Green and Circular Economy, following the EU Action Plan for the Circular Economy – “Closing the loop”	1	enhance growth and competitiveness of SME	foster growth and productivity-enhancing strategies through promotion of entrepreneurship, managerial and financial skills, skills related to industrial transition (circular economy), and value chains integration;	PO1	a1	023
		2	promote circular economy	Supporting small and medium sized enterprises in implementing innovative circular economy and other green economy solutions	PO2	b6	045
#3	Inclusion of Green Smart Public Buildings and Smart Public Lighting in national funding schemes, ROPs, RIS3 and local Action Plans.	3	priority investments for renewable energy	promote innovative and less mature renewable technologies in industrial processes in small and medium sized enterprises	PO2	b1	024





		1	promote energy efficiency measures	promote energy efficiency through renovation of social housing and public buildings, giving priority to deep renovations, innovative technologies and most advanced standards and practices	PO2	b1	025
		2	priority investments for renewable energy	promote innovative and less mature renewable technologies, particularly for heating and cooling, in public buildings, social housing	PO2	b1	026
		4	priority investments for renewable energy	promote technologies, such as energy storage, to integrate more renewable energy in the system and increase flexibility and smartening of the grid, also increasing the coupling of energy sectors.	PO2	b3	033
		5	promote climate change adaptation	deploy green infrastructure aimed at ecosystem restoration and climate adaptation in urban areas more vulnerable to biodiversity loss and air pollution	PO2	b7	048



#4	National Strategy for supporting local communities with specificities to enter the digital transformation era and face the challenges of technological infrastructure deployment	1	promote digitisation for citizens, companies and governments	increase digital skills in small and medium sized enterprises and their uptake of digital technology solutions.	PO1	a2	010
		2	promote digitisation for citizens, companies and governments	improve the deployment of digital public services for both citizens and businesses	PO1	a2	012
		3	enhance digital connectivity	build very-high capacity broadband networks, starting from the deployment of infrastructure networks for ultrafast internet access (100 Mbps or more) in white areas,	PO3	c1	051
		4	promote sustainable urban mobility	intelligent transport systems solutions for improved infrastructure use and service quality	PO3	c4	076



#5	Mobilising R&TD projects that aim at the creation of new green products and processes with a high knowledge content and innovation	1	promote climate change adaptation	deploy green infrastructure aimed at ecosystem restoration and climate adaptation in urban areas	PO2	b7	047
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## 6.5 Greece

Built on the Annex D of the Country Report 2019 “Investment guidance on Cohesion Policy Funding 2021-2027 for Greece”, the preliminary Commission services views on priority investment areas for an effective delivery for the 2021-2027 Cohesion Policy in Greece are presented below.

These priority investment areas are derived from the broader context of investment bottlenecks, investment needs and regional disparities assessed in the Country Report Greece 2019:

### 1. P01

- The Greek economy is characterized by very low public and private investments in innovation and a low positioning in the global competitiveness index (latest in the EU28). Especially in relation to SME innovators, performance has decreased since the start of the crisis.
- Greece is very low in adopting information technologies and is the latest in the EU28 in the e-government scoreboard
- Access to finance for SMEs remains a very problematic area and the framework conditions for entrepreneurship, innovation and start-ups are unfavorable. Credit conditions declined significantly during the financial crisis and remain very restrictive compared to other EU countries.



## 2. P02

- The building stock in Greece has mostly aged, with many public, residential and commercial buildings built before 1980, with zero or very low levels of thermal protection.
- Greece still relies heavily on fossil fuels and the great opportunities for the production of renewable energy, in particular from wind and solar sources, remain untapped.
- Greece relies heavily on solid waste landfills and lags behind in recovery / recycling and in the circular economy.

## 3. P03

- Greece's transition to fast broadband is slow and coverage of households with next generation access remains low compared to the EU average;
- ultra-fast speeds for families and SMEs are practically non-existent.

Therefore, the 2021 2027 ERDF NOP or ROP possible actions, being defined by the Greek Central Government and Regions, which can be strengthened by each Esmartcity Policy Recommendation are:

Policy Recommendations		GR possible ERDF actions			EU 2021 2027 Cohesion Policy		
n°	Title	#	High priority investment needs	action	PO	SO	Int Field



#1	Open Innovation Platform, a collaborative tool for the implementation of new policy model for regional innovation governance system	1	enhance research and innovation capacities and the uptake of advanced technologies	promote business investment in research and development and foster collaboration between public and private research on targeted smart specialisation areas	PO1	a1	021
		2	close the gap with respect to the Digital Agenda for Europe, to reap the benefits of digitalisation for citizens, businesses and the public sector,	support the increase of information and communication technology uptake in small and medium sized enterprises (business to business, business to consumer, consumer to consumer), including supporting infrastructures and services	PO1	a2	011
		3	support the country's digital transformation and enhance its digital connectivity	complete investments in future-proof broadband infrastructure to meet the EU2025 strategic objectives with download speeds of at least 100 Mbps upgradable to 1 Gbps for households and all main socio-economic drivers (businesses, transport/logistics hubs, universities, research centres, schools, hospitals, public services)	PO3	c1	51



#2	Regional Strategy of Green and Circular Economy, following the EU Action Plan for the Circular Economy – “Closing the loop”	1	promote sustainable water management, and to improve resource efficiency and waste management,	promote measures to facilitate the transition to a circular economy	PO2	b6	045
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#3	Inclusion of Green Smart Public Buildings and Smart Public Lighting in national funding schemes, ROPs, RIS3 and local Action Plans.	1	promote energy efficiency measures	enhance the energy efficiency of small and medium sized enterprises premises and installations	PO2	b1	024
		2	promote energy efficiency measures	enhance the energy efficiency of private/residential buildings	PO2	b1	025
		3	promote energy efficiency measures	enhance the energy efficiency of public buildings	PO2	b1	026
		4	promote renewable energies	Promote smart grids and smart storage systems related to renewable energy sources	PO2	b3	033



4	National Strategy for supporting local communities with specificities to enter the digital transformation era and face the challenges of technological infrastructure deployment	1	close the gap with respect to the Digital Agenda for Europe,	support the increase of information and communication technology uptake in SMEs (business to business, business to consumer, consumer to consumer), including supporting infrastructures and services	PO1	a2	010
		2	reap the benefits of digitalisation for citizens, businesses and the public sector	expand and complete the range of e-service provision (e-government, e-procurement, e-inclusion, e-health, e-learning, e-skilling, e-commerce) and their uptake by citizens, businesses and the public sector	PO1	a2	012
		3	support the country's digital transformation and enhance its digital connectivity	complete investments in future-proof broadband infrastructure to meet the EU2025 strategic objectives with download speeds of at least 100 Mbps upgradable to 1 Gbps for households and all main socio-economic drivers (businesses, transport/logistics hubs, universities, research centres, schools, hospitals, public services).	PO3	c1	051



## 7 Esmartcity Memorandum of Understanding

The local and regional public stakeholders of the Member States participating in the ESMARTCITY project and beyond, by adhering to the Memorandum of Understanding "Resilient territorial policies improve innovation ecosystem and capacities", express their interest in taking into consideration the improvements in the implementation of the actions of the 2021 2017 ROP identified in the previous chapter Strengthening EU Member States' ERDF and CF ROP actions.

Taking into account the difficulties deriving from the COVID 19 pandemic to deal personally with the aforementioned stakeholders, the MoU has been developed in two versions, the first will be published as an interactive form on the project website to collect the expressions of interest of the stakeholders involved and involved using the social media, the second, a hardcopy form, to be signed by the stakeholders contacted directly by the project's partners.

Here are the two versions:

### 7.1 On line MoU version

#### MEMORANDUM OF UNDERSTANDING

#### **Resilient territorial policies improve innovation ecosystem and capacities**

We kindly ask you to accede to this memorandum by 16<sup>th</sup> July 2020!

#### **Preamble**

By 2050, two thirds of the world population will be living in cities, consuming over 70% of world energy and emitting just as much greenhouse gases. As city populations grow, the demand for services and pressure on resources increases. This demand puts a strain on energy, water, waste, mobility and any other services that are essential for city prosperity and sustainability.

A smart city is a place where traditional networks and services are made more efficient with the use of digital and telecommunication technologies for the benefit of its inhabitants and businesses.

A smart city goes beyond the use of information and communication technologies (ICT) for better resource use and less emissions. It means striving for sustainability through smarter urban transport networks, upgraded water supply and waste disposal facilities, and more efficient ways to globally manage the buildings and public lighting.

It also means a more interactive and responsive city administration, safer public spaces and meeting the needs of an ageing population.

#### **Reshaping our future Cities**

To improve Mediterranean City innovation capacity, the Esmartcity project enhanced city innovation ecosystems by applying the Smart City concept towards infrastructure deployment and digitalization, leading to better citizen services, more efficient use of resources, and less environmental impact. Digitalization is an on-going socio-technical transition including new technologies and how they become embedded in society.

In order to reap digital innovation contributions in making urban environments more livable, cities must act proactively in using open infrastructure and open data to offer new services, breaking the silos between application domains, and enhancing entrepreneurship and innovation.

ESMARTCITY project has enrolled into 9 pilot testing interventions in the themes of smart buildings and smart street lighting. It has tested working methods, with key elements of bottom-up and participatory



approaches, that have resulted in transferable and replicable policy recommendations on innovation policy change. These recommendations are targeted to local and regional policy stakeholders on the basis of a win-win Smart City paradigm opportunity for local communities, with positive impacts ranging from CO<sub>2</sub> emission decrease to new jobs creation, opening of new and green businesses, and improving local population quality of life.

## The ESMARTCITY Memorandum of Understanding

By acceding to this Memorandum of Understanding, I manifest interest in:

\* Promoting smart energy efficient buildings, smart and efficient lighting, smarter urban transport networks, upgraded water supply and waste disposal facilities, as possible drivers for urban sustainable development.

\* Sharing information regarding ESMARTCITY project, contributing to the dissemination and relevance of Smart City communities in the Mediterranean area and beyond.

\* Taking into consideration the ESMARTCITY policy recommendations for enhancement of Local Actions, and potential influence to Regional or National Operational Programmes.

### Form

Name and family name

Position

Address \*

Postcode \*

City \*

Country/ Region

E- mail\*

Company/ Institution\*

Web page

CI ID MIT

## 7.2 Hardcopy MoU Version

### MEMORANDUM OF UNDERSTANDING

#### *Resilient territorial policies improve innovation ecosystem and capacities*

##### **Preamble**

By 2050, two thirds of the world population will be living in cities, consuming over 70% of world energy and emitting just as much greenhouse gases. As city populations grow, the demand for services and pressure on resources increases. This demand puts a strain on energy, water, waste, mobility and any other services that are essential for city prosperity and sustainability.

A smart city is a place where traditional networks and services are made more efficient with the use of digital and telecommunication technologies for the benefit of its inhabitants and businesses.

A smart city goes beyond the use of information and communication technologies (ICT) for better resource use and less emissions. It means striving for sustainability through smarter urban transport networks, upgraded water supply and waste disposal facilities, and more efficient ways to globally manage the buildings and public lighting.

It also means a more interactive and responsive city administration, safer public spaces and meeting the needs of an ageing population.

### **Reshaping our future Cities**

To improve Mediterranean City innovation capacity, the Esmartcity project enhanced city innovation ecosystems by applying the Smart City concept towards infrastructure deployment and digitalization, leading to better citizen services, more efficient use of resources, and less environmental impact. Digitalization is an on-going socio-technical transition including new technologies and how they become embedded in society.

In order to reap digital innovation contributions in making urban environments more livable, cities must act proactively in using open infrastructure and open data to offer new services, breaking the silos between application domains, and enhancing entrepreneurship and innovation.

ESMARTCITY project has enrolled into 9 pilot testing interventions in the themes of smart buildings and smart street lighting. It has tested working methods, with key elements of bottom-up and participatory approaches, that have resulted in transferable and replicable policy recommendations on innovation policy change. These recommendations are targeted to local and regional policy stakeholders on the basis of a win-win Smart City paradigm opportunity for local communities, with positive impacts ranging from CO<sub>2</sub> emission decrease to new jobs creation, opening of new and green businesses, and improving local population quality of life.

### **By signing this Memorandum of Understanding, I manifest interest in:**

- Promoting smart energy efficient buildings, smart and efficient lighting, smarter urban transport networks, upgraded water supply and waste disposal facilities, as possible drivers for urban sustainable development.
- Sharing information regarding ESMARTCITY project, contributing to the dissemination and relevance of Smart City communities in the Mediterranean area and beyond.
- Taking into consideration the ESMARTCITY policy recommendations for enhancement of Local Actions, and potential influence to Regional or National Operational Programmes .

Name

Email

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Entity

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