

Horizon 2020 and the Local and Regional Authorities

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List of acronyms

CoR/CdR European Committee of the Regions/ Comité européen des CORDIS Community Research and Development Information Service

CSA Coordination and Support Actions

EC European Commission

EDP Entrepreneurial Discovery Process

EGTC European Grouping of Territorial Cooperation

EIPs European Innovation Partnerships

EIT European Institute of Innovation and Technology

EJP European Joint Programme ERA European Research Area

ERA-NET European Research Area Network

ERC European Research Council

ESIF European Structural and Investment Funds

ETPs European Technology Platforms

EU European Union

EUR Euro

FP Framework Programme

FPA Framework Partnership Agreements

FTI Fast Track to Innovation

HES Higher Education Establishments in the CORDIS database

H2020 Horizon 2020

IA Innovation ActionsJRC Joint Research Centre

KICs Knowledge and Innovation CommunitiesLEAR Legal Entity Appointed Representative

LRAs Local and Regional Authorities

LRAs_iAB LRAs including Agencies and Bodies

LRAs_oMR LRAs including only Municipalities and Regions

MFF Multiannual Financial Framework

MS Member States

MSCA Marie Skłodowska-Curie Actions

NCP National Contact Point

NGO Non-profit organisations in the CORDIS database

NUTS Nomenclature of Territorial Units for Statistics

OTH International organisations and International and national

organisations of European interest in the CORDIS database

PIC Participant Identification Code
PCP Pre-Commercial Procurement

PPI Public Procurement of Innovative solutions

PRC Private for profit companies in the CORDIS database

PUB Public bodies in the CORDIS database

QH Quadruple Helix

R&D Research & Development

RDI Research, Development and Innovation

REA Research Executive Agency

REC Research organisations in the CORDIS database

RIA Research and Innovation Actions

RIS Regional Innovation Scheme

RIS3 Research and Innovation Strategies for Smart Specialisation

R&I Research and Innovation

SME/SMEs Small and Medium-sized Enterprises

S2E Stairway to Excellence

Smart Specialisation Strategy

ToR Terms of Reference

TH Triple Helix

WP Work Programme

4Ps Public-Private People Partnerships

Executive summary

This study provides quantitative and qualitative information on the participation of local and regional authorities (LRAs) in the Horizon 2020 (H2020) programme. The analytical review of LRAs' participation is mainly based on the quantitative evidence publicly available in the CORDIS database up to January 3, 2017. Participation patterns are additionally investigated through interviews conducted during the months of February and March 2017 and addressed to LRAs and other relevant stakeholders such as H2020 National Contact Points (NCPs) and representatives of European institutions. The research method applied and the sources used in this study are presented in Part 1.

Overall, the study aims at providing the European Committee of the Regions (CoR) with evidence for contributing the LRAs' perspective to the upcoming interim evaluation of H2020 as well as to the planning and design of future EU programmes for research and innovation (R&I). Specific objectives of the study include suggesting ways to i) facilitate LRAs' accessibility to the programme, ii) enhance the matching of future programmes to innovation and growth needs of LRAs, and iii) improve the role of LRAs in specific areas of intervention such as the seeking of synergies between H2020 and other programmes funded through the European Structural and Investment Funds (ESIF).

Accessibility to H2020 by LRAs is characterised by two aspects: the role(s) taken up by territorial authorities and the way the authorities accomplish participation. In the past, the CoR has expressed opinions on the envisaged roles and modalities of participation in R&I programmes for LRAs. These opinions are reviewed in Part 2 of the report. Essentially, such roles have been grouped into three main categories: contributors, facilitators, and beneficiaries. This grouping is functional to the understanding of whether, in practice, some of these roles prevail on others, especially when distinguishing between local and regional authorities; or if some are rarely taken up and shall therefore be supported further in order to enhance the participation of LRAs in H2020. On the modalities of participation, the opinions of the CoR emphasise the importance of having instruments and measures specifically addressed to LRAs outlined in the R&I programmes. These instruments and measures which include a regional dimension are believed to facilitate participation and to have an impact at the territorial level besides being pivotal to the creation of an open innovation culture. In fact, the current design of H2020 encompasses parts characterised by a territorial dimension. Likewise, eligibility and admissibility criteria do not appear to create formal impediments to LRAs' participation. Rather, some of the H2020 topics, in a more or less explicit way, require the participation of a local and/or regional authority for the proposal to be eligible.

Eligibility and admissibility conditions as well as H2020 funding opportunities are discussed in Part 1 of the report.

Notwithstanding this rather favourable theoretical background to involvement of LRAs in H2020, participations of Public Bodies (PUB, among which LRAs are included) since January 1, 2014, are only 2,831. This is equivalent to a share of 6.4% of the 44,422 participations in H2020 of all the types of organisations (i.e. public sector, private sector, academic and research institutes, as well as national/international organisations and other organisations of European interest). Participations of LRAs, including agencies and bodies called to represent them (referred to as 'LRAs_iAB'), are 731 (1.6% of the total), while the participations of municipalities and regions without agencies/bodies (referred to as 'LRAs oMR') are 608 (1.4% of the total). The quantitative analysis of participations presented in section 3.1 highlights some important findings. First, the geographical distribution of participations clearly reveals a divide between the newer MS (EU13) and the older ones (EU15), which is particularly significant at NUTS2 level (where only 11 participations out of 247 are from a limited number of newer MS). This uneven geographical distribution of participations is partially explained by the relatively more centralised governance structures of the newer MS, and subsequent fewer administrative competences assigned to regions. Second, there is evidence of concentration of participations in some countries and of 'H2020 champions' which suppose the existence of either specific strategies at country or organisation level to access the H2020 programme, or of effective participation models. Third, the divide between the newer MS and the older ones is also confirmed in terms of allocations of EC contribution, a circumstance which is partially explained by the mechanism used to set the budget in H2020 projects.

From a project level perspective, participations of LRAs_iAB mainly focus (514 participations) on the 'Societal Challenges' priority of the programme. Following at a distance (167 participations) is the 'Industrial Leadership' priority while the 'Spreading Excellence and Widening Participation' specific objective, characterised by a territorial dimension, is neglected with only four participations. Among the seven themes of the 'Societal Challenges' one third of the participations is in Secure, clean and efficient energy (166), followed by Smart, green and integrated transport (93) and by Climate action, environment resource efficiency and raw materials (71). Within the 'Industrial Leadership', most of the participations are in projects connected to Innovation in SMEs (56). In terms of the type of involvement of LRAs in a consortium, the large majority of LRAs participate as 'partner'. Concerning the preferred types of action, when coordinating, LRAs prefer Coordination and Support Actions (CSA), followed by Research and Innovation Actions (RIA) and Innovation Actions (IA). When agencies/bodies acting on behalf of LRAs are not involved there is evidence that

participations as coordinators are less frequent and that some types of actions lose importance (e.g. the ERA-NET Cofund).

On the qualitative aspects of participation, presented in section 3.2, the main findings indicate the importance of having appropriate human resources, a strategy, and/or a proper organisational structure, internally or delegated to others, to tackle EU funding opportunities in general, and hence also H2020 calls for proposals. Previous experience in R&I programmes is not necessary meaning that entry points for newcomers to H2020 exist. However, past or ongoing project experience, especially in the framework of territorial cooperation, seems to be a shared characteristic of all interviewed LRAs. Another important finding relates to the low awareness of consulted LRAs about the supportive function NCPs may have in enhancing their accessibility to H2020. The two interviewed NCPs confirmed that LRAs' information needs were not addressed in a targeted way. If the role of NCPs thus appears as a policy area which needs to be examined, interviews revealed that there is also room for improvement with respect to other roles among those envisaged by the CoR for LRAs. In particular, there seems to be a lack of a systematic implementation of a coaching/mentoring role with respect to lesser-known but competent partners from research-lagging regions. More in general, respondents provided a long list of factors hampering participation in H2020, from unsatisfactory financial returns and low chances of success to practicalities. Most importantly, among the factors fostering participation is the presence of areas in the programme which are relevant to LRAs' needs.

The issue of the creation of synergies between Horizon 2020 and ESIF is still immature and on-going institutional initiatives such as the 'Stairway to Excellence' project or the compilation of showcase examples represent the main reference points for measuring progress. Section 3.3 reviews the most common functions LRAs may take up in the pursuit of synergies. Such functions are identified as being performed at the level of awareness, governance and programming, and implementation. Against some identified drawbacks, suggestions for overcoming these critical aspects are made. Nevertheless, it is noted that even if synergies are defined in terms of adding value, they are not attractive to all LRAs, especially where alternative funding sources are available, sufficient for the scope, and/or easy to access.

The report concludes with a series of recommendations (Part 4) which distinguish between a macro perspective (i.e. for overcoming the reasons for LRAs for not applying to the H2020 programme) and a micro perspective (i.e. for overcoming the reasons hampering an effective contribution of LRAs to H2020 projects). Within the macro perspective it is necessary to raise LRAs' awareness of the value they may add in consortia addressing specific H2020

topics and create opportunities for coupling LRAs with active players in H2020. NCPs shall have a role in this sense. The mission of NCPs is indeed crucial and it would be appropriate to assess within each country if their organisational approach is effective enough in reaching all types of stakeholders, including LRAs. As part of their mandate, it would also be desirable to have activities which are better tailored to the needs of territorial public authorities. On the side of the LRAs, the set-up of a 'participation in H2020' strategy is deemed essential to succeed in accessing the programme while the direct procedural assistance from the EC services during the application stage would benefit the quality of the proposals and hence increase the chance for LRAs to be funded. For those LRAs which may not rely on enough resources, it is suggested that shared knowledge and expertise environments be created, where an experienced entity (e.g. agency, region) takes the role of mentor/coach with the aim of gathering more smaller entities together, reaching economies of scale, and making capacities and skills which may not exist individually due to size and/or budget constraints available within the consortium. Finally, accessibility to H2020 programme may certainly be improved if the actions/funding schemes preferred by LRAs (e.g. grants for collaboration) are more frequently adopted to address R&I topics and/or if the thematic domains of evident interest to LRAs are more frequently covered/financially supported by the WPs. Within the micro perspective, it is first suggested for LRAs that are involved in a H2020 project, to clearly set up an appropriate organisational and cultural model for management. Afterwards, it is necessary within the context of a H2020 project to assess and properly value the role of the participating LRA(s) both in terms of contribution to research activities and in terms of exploitation of innovation results. Finally, two proposals with a cross-cutting nature (i.e. targeting both an increased number of applications of LRAs to the H2020 programme and an enhanced participation of LRAs in H2020 projects) relate to the boosting of the facilitator function of LRAs and to the need for a shared EU capacity building strategy for LRAs.

Part 1: Introduction

1.1 Objectives of the study

The **overall objective** of this study is to **provide a better understanding** of the **participation of local and regional authorities** (**LRAs**) in the Horizon 2020 (**H2020**) **programme** in both quantitative and qualitative terms. This is relevant for the European Committee of the Regions (CoR) in order to contribute the LRAs' perspective to the upcoming interim evaluation of the programme¹ as well as to the planning and design of future European Union (EU) programmes for research and innovation (R&I).

As for the **specific objectives** of the study, the **analysis of LRAs' current participation in and role within Horizon 2020** is meant suggesting ways to i) facilitate LRAs' accessibility to the programme, ii) enhance the matching of future programmes to innovation and growth needs of LRAs, and iii) improve the role of LRAs in specific areas of intervention. One of these areas is the seeking of synergies between H2020 and other programmes funded through the European Structural and Investment Funds (ESIF).

1.2 Description of Horizon 2020

Horizon 2020 is the eighth Framework Programme (FP) of the EU dedicated to R&I. With a budget of nearly EUR 80 billion in current prices over the Multiannual Financial Framework (MFF) 2014-2020, it brings the EU funding for R&I under a single common strategic framework. Established by Regulation (EU) No 1291/2013, H2020 contributes to enhance Europe's competitiveness globally and to achieve the European Research Area (ERA) as well as the objectives of the Europe 2020 strategy relating to R&I. Primarily, these objectives pertain to the flagship initiative 'Innovation Union'. However, the general objectives of H2020 also relate to other Union's initiatives (e.g. 'Digital Agenda for Europe') and policies (e.g. climate and energy).

Article 5 and Annex I of Regulation (EU) No 1291/2013 outline the priorities and the specific objectives through which the general objectives of the programme are to be pursued. In H2020, there are: a) three priorities ('Excellent science', also referred to as Pillar I; 'Industrial leadership', or Pillar II; and 'Societal challenges', or Pillar III), each with associated specific objectives; and

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¹ The interim evaluation of Horizon 2020 is due to be completed by the end of 2017. It is a mandatory exercise set by Regulation (EU) No 1291/2013 and shall cover the first half of the implementation period of the programme, i.e. the period 2014-2016.

b) two self-standing specific objectives ('Science with and for society' and 'Spreading excellence and widening participation'). In addition, c) two entities (the European Institute of Innovation and Technology – EIT – and the Joint Research Centre – JRC) are called to contribute to the general objective and priorities. The structure of the programme is mirrored in its budget breakdown (Table 1).

Table 1. Horizon 2020 budget, in current prices (excluding EURATOM budget)

Table 1. Horizon 2020 budget, in current prices (excluding EC	EUR	Share
	(million)	(%)
I Excellent science, of which:	24,441	31.73
1. The European Research Council	13,095	
2. Future and Emerging Technologies	2,696	
3. Marie-Skłodowska-Curie Actions	6,162	
4. European research infrastructures (including eInfrastructures)	2,488	
II Industrial leadership, of which:	17,016	22.09
1. Leadership in enabling and industrial technologies	13,557	
2. Access to risk finance	2,842	
3. Innovation in SMEs	616	
III Societal challenges, of which	29,679	38.53
1. Health, demographic change and wellbeing	7,472	
2. Food security, sustainable agriculture and forestry, marine	3,851	
maritime and inland water research and the bioeconomy		
3. Secure, clean and efficient energy	5,931	
4. Smart, green and integrated transport	6,339	
5. Climate action, environment, resource efficiency and raw materials	3,081	
6. Europe in a changing world – Inclusive innovative and reflective societies	1,309	
7. Secure societies – Protecting freedom and security of Europe and its citizens	1,309	
Science with and for society	462	0.60
Spreading excellence and widening participation	816	1.06
European Institute of Innovation and Technology (EIT)	2,711	3.52
Non-nuclear direct actions of the JRC	1,903	2.47
TOTAL	77,028	100

Source: Extracted from the EC Factsheet: Horizon 2020 Budget

On the three pillars, 'Excellent science' aims to "reinforce and extend the excellence of the Union's science base and to consolidate the European Research Area in order to make the Union's research and innovation system more competitive on a global scale"²; 'Industrial leadership' intends to "speed up development of the technologies and innovations that will underpin tomorrow's businesses and help innovative European SMEs to grow into world-

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² https://ec.europa.eu/programmes/horizon2020/en/h2020-section/excellent-science

leading companies"; and the 'Societal challenges' addresses "major concerns shared by citizens in Europe and elsewhere." On the self-standing specific objectives, 'Science with and for society' is to "build effective cooperation between science and society, to recruit new talent for science and to pair scientific excellence with social awareness and responsibility"⁵, while the 'Spreading excellence and widening participation' singles out the support addressed to those regions having a weaker research structure and capacity. This specific objective has therefore a territorial dimension which is meant to be tackled through defined measures. In particular, these measures include: the "Teaming" action, of institutions, agencies or regions for collaborating, networking and adding value to their research and innovation activities; the "Twinning" action, to link for strengthened research capacity; the "ERA Chairs" scheme, to retain and attract important research and innovation resources, including human ones; and the 'Policy Support Facility' for the peer review of research and innovation policies at the national or regional level. On the entities called to contribute and allocated part of the H2020 budget, the **EIT** promotes innovation and entrepreneurship across Europe, bringing together actors of the 'knowledge triangle' through dynamic cross-border partnerships called 'Knowledge and Innovation Communities' (KICs)⁶; while the **JRC**, structured as a research hub located in five Member States (MS) with six centres⁷, is the science and knowledge service of the European Commission (EC), providing independent scientific advice and policy support.

1.2.1 Which opportunities for whom?

H2020 provides funding opportunities on a competitive basis. These opportunities are set in work programmes (WPs) usually covering a biennium and prepared on the basis of a consultative approach⁸. So far, WPs have been published with respect to the periods 2014-2015 and 2016-2017. The R&I topics selected for funding and included in the related WPs are among those considered of utmost importance for the concerned biennium. For each topic, details are provided in terms of: specific challenge, scope, expected impact, type of action, allocated indicative budget, opening date for submission of project proposals, deadline for submission, funding rates, eligibility and admissibility conditions, indicative timetable for evaluation and grant agreement signature, evaluation

³ https://ec.europa.eu/programmes/horizon2020/en/h2020-section/industrial-leadership

⁴ https://ec.europa.eu/programmes/horizon2020/en/h2020-section/societal-challenges

https://ec.europa.eu/programmes/horizon2020/en/h2020-section/science-and-society

⁶ Six of these KICs are currently active, i.e. the KICs on Climate, Digital, Health, Food, Raw Materials, and InnoEnergy.

⁷ Growth & Innovation in Seville (ES); Energy, Transport & Climate in Petten (NL); Sustainable Resources in Ispra (IT); Space, Security & Migration in Ispra (IT); Health, Consumers & Reference Materials in Geel (BE); and Nuclear Safety & Security in Karlsruhe (DE).

⁸ A wide range of stakeholders is invited to contribute to the preparation stage of the WPs, including mechanisms such as the European Innovation Partnerships (EIPs) and the European Technology Platforms (ETPs).

criteria, scoring and threshold, evaluation procedure, and consortium agreement requirements.

Typically, applications, if topic requirements do not indicate differently, have to be submitted by a consortium of partners led by a project coordinator. In terms of legal status, organisations eligible to apply for H2020 funding belong to one of the following types: **Public bodies** (excluding research and education) (**PUB**)⁹, Private for profit companies (PRC), Non-profit organisations (NGO), Research organisations (excluding education) (REC), Secondary or higher education establishments (HES), Small or medium-sized enterprises (SME), International organisations, and International and national organisations of European interest (OTH). Submission of applications and execution of administrative tasks related to the funded projects occur totally through the 'Participant Portal' (Box 1).

Box 1. The necessary administrative arrangements to apply for and manage H2020 projects

The Participant Portal (https://ec.europa.eu/research/participants/portal/) is the single gateway allowing interaction between applicants/participating organisations in EU-funded programmes (e.g. H2020, ERASMUS+) and the contracting authority (i.e. the EC through, for example, the Research Executive Agency — REA). Registered users can insert/update information of the organisation to which they belong, submit proposals, monitor their evaluation status, and manage administrative aspects of their approved projects. Registration of the organisation requires that the legal representative of the organisation selects a 'Legal Entity Appointed Representative' (LEAR). The LEAR is the reference person in charge of managing the profile, procedures, and any other required action related to the organisation. This is done through the Participant Portal and a Participant Identification Code (PIC). The LEAR can also grant access to the portal and to most of its functions (including the submission of proposals) to the staff of the organisation. The choice of the LEAR and of the organisation's staff accessing the Participant Portal impacts on the efficiency of the application process and on the effectiveness of the project management.

Source: H2020 online manual

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⁹ LRAs have to register as Public Bodies.

1.2.2 Overview of the actual participation in the programme

Overall participation in the H2020 programme since its inception in 2014 is reported in Table 2 in terms of **number of participations** in successful proposals¹⁰. Participations are the number of times an organisation is included in the consortium of a H2020 project. According to this indicator, public bodies (PUB) are among the less active while the best performer is the private sector (PRC), followed by academic (HES) and research entities (REC)¹¹.

Table 2. Participations in H2020 successful proposals, by type of organisation, 2014-2016

Type of organisation	Number of participations	Share of participations
PRC	15,114	34.0%
HES	14,242	32.1%
REC	9,550	21.5%
PUB	2,831	6.4%
OTH	2,685	6.0%
TOTAL	44,422	100.0%

Note: elaborated by the Contractor. Data are sourced from the CORDIS database.

This situation is mirrored in terms of applications. According to the Horizon 2020 Monitoring Report 2015, on the basis of data related to the years 2014 and 2015, the largest part of applications in eligible proposals came from HES (39.1%) and PRC (35.2%) (Chart 1). Similarly, the largest share of retained proposals were from HES (35.2%) and from PRC (31.9%) (Chart 2). In both cases (eligible proposals and proposals retained for funding) the fewest applications were from PUB and OTH. In particular, in 2014 and 2015, total applications from PUB were 9,570 (equivalent to 3.5% of the total) in eligible proposals and 2,170 in retained proposals (equivalent to 5.1% of the total).

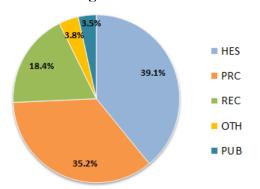
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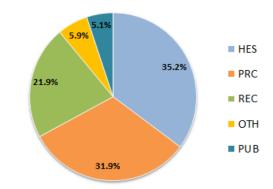
¹⁰ Applications of organisations (usually gathered into consortia) to a specific topic within a call become proposals. Proposals are 'approved' after passing the thresholds of the evaluation criteria (i.e. **retained proposals**). Once approved, they are ranked by total score. Taking into account the overall budget allocated to the topic, the top-ranked proposals are **eligible** for funding and **funded** as soon as the contract with the EC is signed (i.e. **successful proposals**). A project is therefore equivalent to a 'successful proposal'. For further details reference is to 'Annex VII: Glossary' of the Horizon 2020 Monitoring Report 2015 (EC-DG RTD, 2016).

Another indicator to measure participation is the number of participating organisations in H2020, i.e. the number of legal entities participating to the programme. This is further detailed in Part 3 of the study. The number of participations differs from the number of participating organisations if the same organisation participates to more than one H2020 project. For example, one organisation participating to 10 projects counts 1 as participating organisation and 10 as participations.

Chart 1. Applications in eligible proposals, 2014-2015, share (%) by type of organisation

Chart 2. Applications in retained proposals, 2014-2015, share (%) by type of organisation





Notes: elaborated by the Contractor. Data are sourced from Horizon 2020 Monitoring Report 2015 and refer to calls in 2014 and 2015 with signed grants cut-off date by 1/09/2016.

Actually, data from the Monitoring Report 2015 show huge gaps on the average number of applications per organisation type. Over the 2014 and 2015 total, there were on average 24.2 applications per HES, 11.0 applications per REC, 2.9 applications per PUB, 2.3 applications per OTH, and 2.2 applications per PRC. Data also show that applications in eligible proposals increased in 2015, compared to 2014, for all types of organisations. Similarly, for all types, the number of retained applications decreased in 2015 with respect to 2014. For public bodies (PUB), applications in eligible proposals increased by 16% from 2014 to 2015, while applications in retained proposals decreased by 18% in the same years. The success rate for PUB was 24.2% in 2014 and 18.2% in 2015. Out of the 3,300 PUB applicants with eligible proposals over the period 2014-2015, 1,130 participated in signed grants. Notwithstanding this lower participation of PUB in signed grants in 2015 compared to 2014, EU funding for PUB in the two years is comparable (EUR 300 million in 2014 and EUR 308 million in 2015).

The Horizon 2020 Monitoring Report 2015 does not single out information on the participation of LRAs within the PUB type. Hence, the quantitative and qualitative analysis performed by the Contractor in Part 3 of this study.

1.2.3 Eligibility conditions for LRAs

H2020 provides for several **types of action**. Each topic selected for funding within the WPs has the corresponding eligible type(s) of action specified. In turn, each type of action addresses one or more type(s) of participant. For example, Research and Innovation Actions (RIA), for projects leading to the development of new knowledge or new technology, and Innovation Actions (IA), mainly focusing on the concept "closer to the market activities" through prototyping, testing and piloting, can be undertaken by consortia of partners

coming from different countries. Coordination and Support Actions (CSA), aimed at coordinating and networking R&I projects, programmes and policies, are also for consortia as well as for single entities. Frontier research grants -European Research Council (ERC) and Marie Skłodowska-Curie Actions (MSCA) are more for research-related stakeholders, teams, or programmes. The Small and Medium-sized Enterprises (SME) instrument is dedicated to SMEs, while the Fast Track to Innovation (FTI) concerns both the large industry and SMEs. Other H2020 funding schemes promote the implementation of joint programmes and activities. The ERA-NET Cofund actions support public-public partnerships and are designed with the aim of facilitating aspects related to coordination, networking and implementation of joint funding activities, including cross-border ones. The European Joint Programme (EJP) Cofund actions aim at bringing together national resources, by realising a joint effort under the umbrella of H2020 and by targeting the achievement of significant economies of scale. The Pre-Commercial Procurement (PCP) and the Public Procurement of Innovative solutions (PPI) aim at providing the public sector with innovative solutions either before these solutions are available on the market, or when they are available but on a small scale only. Framework Partnership Agreements (FPA) establish long-term cooperation between the EC and partners with whom collaboration is required on a regular basis or through recurring grants (i.e. RIA, IA, and CSA) during the programming period. In addition, R&I practices are stimulated through the means of prizes (i.e. monetary rewards) for exemplary participants who succeed in giving valid operational answers to specific challenges.

Eligibility conditions for organisations aiming to access H2020 funding are determined by the type of action. In practice, the overview provided in Table 3 shows that LRAs are potentially eligible to participate in all actions envisaged in H2020.

Table 3. Summary of eligibility conditions by type of action in H2020

Type of action	H2020 eligibility conditions	Eligibility for LRAs
Research and	At least three legal entities. Each of the three	
Innovation	must be established in a different EU Member	
Actions – RIA	State or Horizon 2020 associated country. All	Yes
Innovation	three legal entities must be independent of each	
Actions – IA	other.	
Coordination and	At least one legal entity established in an EU	
Support Actions –	Member State or Horizon 2020 associated	Yes
CSA	country.	
SME instrument	At least one SME. Only applications from for	No, unless the
actions	profit SMEs established in EU Member States	LRA(s) is (are)
	or Horizon 2020 associated countries are	brought in by the
	eligible.	applicant SMEs as
		sub-contractor(s).

ERA-NET Cofund actions	At least three legal entities . Each of the three must be established in a different EU Member State or Horizon 2020 associated country. All three legal entities must be independent of each other. Participants in ERA-NET Cofund actions must be 'research funders' , i.e. legal entities owning or managing public research and innovation programmes.	Yes, provided that the LRA is a 'research funder'.
European Joint Programme – EJP Cofund actions	At least five legal entities . Each of the five must be established in a different EU Member State or Horizon 2020 associated country. All five legal entities must be independent of each other. Participants in EJP Cofund actions must be legal entities owning or mandated to manage national research and innovation programmes .	Yes, provided that the LRA owns or is mandated to manage national (regional) research and innovation programmes.
Pre-commercial procurement – PCP, and Public procurement of Innovative solutions actions – PPI	At least three legal entities . Each of the three must be established in a different EU Member State or Horizon 2020 associated country. All three legal entities must be independent of each other. Furthermore, there must be a minimum of two legal entities which are 'public procurers' from two different EU Member States or Horizon 2020 associated countries. Both legal entities must be independent of each other.	Yes, especially as 'public procurers'.
Framework Partnership Agreement – FPA	At least one legal entity established in an EU Member State or Horizon 2020 associated country.	Yes
Prizes	Conditions for participation are set in the Rules of Contest.	Yes, depending on applying rules (see example in Box 2).

Source: General Annexes of the Horizon 2020 Work Programme 2016 – 2017.

Note: The text in the column 'General H2020 eligibility conditions' is taken from the source.

Box 2. A prize for the innovation potential of the European cities

The European Capital of Innovation Award – iCapital is a **prize** initiative connected to the Societal Challenge 'Europe in a changing world - Inclusive, innovative and reflective societies'. The prize is "to provide European recognition to those cities that make the most to promote innovation within their communities and thereby improve the quality of their citizens' lives." In terms of eligibility, only cities from EU Member States and countries associated to Horizon 2020 and which have a population above 100,000 inhabitants may compete for the prize. For the first pilot edition of the award in 2014, Barcelona was recognised 'iCapital' of Europe with a prize of EUR 500,000. In the 2016 edition, out of the 36 applications and the nine cities shortlisted, Amsterdam was nominated the European Capital of Innovation 2016 and awarded EUR 950,000 for the first prize. Turin and Paris, ranked, respectively, second and third, were titled runners-up and received prizes for EUR 100,000 and EUR 50,000. The third edition of the award,

launched in March 2017, foresees a cash prize of EUR 1,000,000 for the first ranked and of EUR 100,000 for the second and third ranked.

Sources: The European Capital of Innovation Award – iCapital website; Horizon 2020 Work Programme 2016-2017 - Europe in a changing world – inclusive, innovative and reflective Societies

The eligibility reported in Table 3 is 'general'. At the level of topic further indications on the type of participating legal entity may be given in the WPs. For illustrative purposes only, Table 4 lists some topics in the WPs 2016-2017 which require LRAs' participation as a formal condition to make the proposal go through the evaluation process.

Table 4. Examples of opportunities for LRAs to participate in H2020 according to the requirements of the topic

WP	Topic	Topic description	
,,,,	Торіс	Type of action	Topic description
Food security, sustainable agriculture and forestry, marine, maritime and inland Water research, and the bioeconomy	SFS-48-2017: Resource- efficient urban agriculture for multiple benefits — contribution to the EU-China Urbanisation Partnership	IA	"With increasing urbanisation, massive daily flows of agricultural products, water and energy coming from rural/remote areas to cities generate high amounts of heat, CO2, waste water and other waste. In certain contexts, urban agriculture has been shown to improve food security and to bring economic, environmental and social benefits to cities" "The work should be carried out at least in one European city and in one Chinese city."
Europe in a changing world – inclusive, innovative and reflective societies	European Capital of Innovation prize (Other actions)	Prize	"The candidate cities must be established in an EU Member State or in Associated Country and have a population above 100,000 inhabitants" (see Box 2).
Secure societies – Protecting freedom and security of Europe and its citizens	SEC-10-FCT- 2017: Integration of detection capabilities and data fusion with utility providers' networks	IA	"Demonstrations must take place in at least 2 agglomerations: one of over 1,000,000 inhabitants, and another of between 100,000 and 300,000 inhabitants, located in 2 different Member States, and using different types of sewage systems (separating domestic waters from rain waters, or not.)."
Cross-cutting activities (Focus Areas)	SCC-1-2016- 2017: Smart Cities and Communities	IA	"Each project must: Be realised in 3 new lighthouse cities that are situated in different EU Member states or associated countries. Involve at least 3 follower cities from at least

	lighthouse projects		3 different EU Member states or associated countries (that are different also from the countries of the lighthouse cities of the project)."
Cross-cutting activities (Focus Areas)	CIRC-03- 2016: Smart Specialisation for systemic eco-innovation /circular economy	CSA	"The purpose is to support a transition towards the circular economy in European regions in synergy with Smart Specialisation Strategies. A systemic approach should be adopted that seeks connections between sectors, value chains, markets, natural resources and relevant societal actors" "Participants must be regional authorities and/or national/regional/local structures responsible for the implementation of Smart Specialisation Strategies."

Notes: Table elaborated by the Contractor on the basis of the analysis of the 'Eligibility and admissibility conditions' per topic in the H2020 Work Programmes 2016-2017; bolding in quoted text added by the Contractor.

The analysis of the requirements of H2020 calls at the topic level is important to appreciate the concrete opportunities for participation available to LRAs. The representative of the Research Executive Agency of the EC, during the interview, pointed out that one of the main obstacles to LRAs' participation in H2020 is the lack of awareness about the existence of these possibilities, as the latter are often 'implicit' and not explicitly addressed to territorial authorities. For example, in several of the topics of the WP 'Secure societies — Protecting freedom and security of Europe and its citizens' it is possible for municipalities to take up a role of 'practitioner'. Also, municipalities have a role in those topics related to disaster resilience and crisis management, at least in those countries where the responsibility for civil protection is decentralised at the territorial level.

1.3 Research method and sources

This study is based on three main research methods: bibliographic research, interviews-based research and raw data handling and analysis.

Bibliographic research was aimed at the location and collection of evidence (e.g. case studies, projects, and initiatives), of EU documents (e.g. legal texts, programming documents), and of relevant academic works, papers, studies, evaluations, and web-based information. Bibliographic research was followed by documentary review and evaluation, as well as by analysis and commentary. This working approach was used to develop Part 1 of the study. Documentary review was implemented for the analytical appraisal of the opinions of the CoR

under Part 2 of the study; to support the analysis of the qualitative aspects of LRAs' participation in H2020 in Part 3; and to develop the section on the fostering of synergies between H2020 and ESIF, also in Part 3.

Interviews-based research provided an important source of evidence. This evidence has been extensively used in Part 3 of the study where a quantitative and qualitative analysis of LRAs' participation in Horizon 2020 is provided. Interviews were addressed by phone, or by VoIP tools, to LRAs and other relevant stakeholders such as H2020 National Contact Points and representatives of European institutions. **A total of 16 interviews** were conducted over the period February-March 2017. Each interview was followed by the production of minutes, which then had to be validated by the interviewed individuals. The validation process continued over the month of March 2017. All but two interviewed persons confirmed their agreement on the full public disclosure of the content of the interviews, a summary of which is enclosed as Annex 1.

Interviews with LRAs were based on semi-structured guidelines (summarised in Box 3) and involved only those public authorities which participated, as partners or coordinators, in at least one project in H2020¹². A total of 12 LRAs were interviewed, out of which there were 4 coordinators and 8 partners. By considering the total number of LRAs coordinating H2020 projects (i.e. 30 entities, with reference to the analysis undertaken in Part 3.1 of this study), the four interviewed authorities acting as coordinators represent 13% of the total. Balanced geographical coverage and belonging NUTS levels (i.e. NUTS2 and NUTS3) were duly considered in addressing the candidates for interviews. Interviews with the other stakeholders (2 National Contact Points and 2 representatives of EU institutions – JRC and REA) were topic-led and included the 'achievement of synergies' or the identification of obstacles for 'non-participation of LRAs' as the main topics of investigation. Interviews took into account relevant questions included in the on-going public stakeholders' consultation on the interim evaluation of H2020 (e.g. "What are the main reasons for not participating in Horizon 2020?") as well as some of the answering options (e.g. "Horizon 2020 project implementation rules are *cumbersome* ") (Horizon 2020, 2016).

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¹² For LRAs with multiple participations in H2020 a specific project was selected and the interview was addressed to the reference person(s) of the selected project.

Box 3. Guidelines for semi-structured interviews to LRAs

The guidelines developed to collect qualitative information from LRAs towards the scope of this study are structured around five sections. The content of each section is summarised below.

Section 0 reports on the information related to the respondent, the affiliated local or regional authority (LRA) and the selected project.

Section 1 collects information on the experience of the LRA in EU-funded projects. The perspective is general and not exclusively focused on H2020. Questions relate to: i) the existence, if any, of a dedicated structure within the LRA to coordinate/implement the participation in EU-funded projects; ii) the EU programmes in which the LRA participated since 2014; and iii) whether synergies have been fostered between H2020 funds and ESIF. **Section 2** investigates the specific experience of the LRA in H2020. Questions relate to: i) the parts in which the LRA participated and the funding modalities/instruments of H2020; ii) the difficulties experienced, if any, in accessing one or more of the parts of H2020 or the funding modalities/instruments of H2020; iii) whether participation in H2020 was the LRA's own initiative or if it was the result of being invited by others; iv) the role performed by the LRA in the project; v) the main factors fostering the participation of the LRA in H2020; and vi) the main factors, if any, hampering the participation of the LRA in H2020 projects.

Section 3 is specific to the H2020 project for which the LRA was selected for the interview and where the LRA had a 'coordinator' or 'partner' role. Questions relate to: i) the reasons behind the choice to coordinate or participate as a partner in the selected project; ii) the main benefits expected from the participation in any of the two roles; and iii) the main difficulties/obstacles faced in coordinating the project or in participating as a partner.

Section 4 provides the opportunity to the interviewed individuals to formulate any suggestion on ways to facilitate LRAs' participation in H2020 and in future R&I programmes.

Source: The guidelines for interviews elaborated by the Contractor.

The undertaking of interviews was followed by the systematic analysis of replies and the production of minutes. The information gathered through the interviews was used to complement and/or validate the information generated through documentary analysis and review, as well as expert knowledge.

Raw data handling and analysis was implemented to extract the data relevant to the scope of the research from the original databases of CORDIS. As the official depository of the information related to H2020 participations by organisation and by project, the CORDIS database was considered the principal source to be used to quantify and characterise the participation of LRAs to H2020 in Part 3 of the study.

Since the LRAs-related information is not explicitly tagged in the database, a five-step procedure had to be followed to extract the relevant information. First, the full databases of participations by organisation and by project were

First, the full databases of participations by organisation and by project were downloaded from the EC website (http://cordis.europa.eu/, accessed on January 3, 2017). Second, the records of the database of participations by organisation (44,422) were filtered by the 'PUB' tag (resulting in 2,831 participations of public bodies). Third, the database of participations by PUB organisations was divided into 28 country-based databases, one for each Member State. Fourth, all the records of participations of the organisations belonging to the PUB type were individually screened in order to identify which of the public entities were territorial authorities (i.e. LRAs). This fourth step implied the double checking of the nature/type of each authority on the web. Finally, the obtained database, filtered to include only participations of territorial authorities to H2020, was merged with the database of participations by project approved since January 1, 2014. The CORDIS database of H2020 participations by organisation and the CORDIS database of H2020 participations by project used for the scope of this study were downloaded on January 3, 2017. As of this date, the database of participations by project included 11,069 records¹³.

Ancillary sources used to complement CORDIS data include the Horizon 2020 Monitoring Report 2015 (EC-DG RTD, 2016), which provides information on applications. Data on applications is not available in the CORDIS database since CORDIS refers only to approved and financed projects (i.e. successful proposals) and corresponding participants. Other data used in the study is sourced from the 'Stairway to Excellence' (S2E) project, and from the R&I Regional Viewer tool in particular. Data handling and analysis is based on statistical techniques. The creation of maps is done through the use of specific software, unless otherwise stated.

Literature review is at the basis of the investigation of the main factors influencing the establishment by LRAs of synergies between different funds. Suggestions on ways to enhance these synergies are based on the evidence gathered through the interviews, other recent studies and the activities of the S2E project¹⁴.

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¹³ The actual number of active projects as of January 3, 2017, may have diverged from the number of records because: 1) the CORDIS databases are updated on a monthly basis at a certain unspecified point during the month, hence some of the projects signed in December 2016 might have yet to be included in the database on January 3, 2017; 2) within the database of participations by project there are projects included which have a signed contract but have not yet commenced. Around 1,100 projects are expected to start over the period 1 January 2017 – 1 January 2018.

¹⁴ Participation of one representative of the Contractor to the event on 'Synergies between European Structural and Investment Funds (ESIF) & Horizon 2020 Research and Innovation Funding: The Stairway to Excellence (S2E)' held in Brussels on March 8, 2017, provided another opportunity to gather insights from EU national and regional authorities on obstacles to participation in H2020 in general, and on difficulties to the implementation of synergies between ESIF and H2020 in particular.

Finally, recommendations in Part 4 are elaborated on the basis of the evidence produced throughout the timeframe of the study and in particular of the findings presented in Part 3. Recommendations are developed having two principal best-practice scenarios in mind (i.e. the ideal LRA's profile for enhancing LRAs' application rate to H2020 programme, and the ideal LRA's profile for enhancing the quality of LRAs' involvement in H2020 projects), against which a gap analysis approach is applied. This methodology relies on the comparison of the actual performance against the potential or desired situation (e.g. the best-practice scenario) highlighting which commensurate and evidence-supported measures are needed in order to fill the existing gap.

Part 2: The role of LRAs in research and innovation programmes as suggested by the Committee of the Regions

Part 2 reports on the analytical appraisal of past opinions of the CoR related to R&I. It outlines which roles and modalities of participation by LRAs in R&I programmes have been suggested by the political dialogue in the last years. The aim is to ground the subsequent analyses carried out in the study in a framework which **is relevant to and consistent with** the political processes and priorities of the CoR in the field of R&I. In particular, the level of matching of these priorities with the factual evidence presented in Part 3 is finally meant to inform the recommendations proposed under Part 4 of the study.

The reviewed opinions are those specified in the Terms of Reference (ToR) of the study and include (in chronological order): CdR 230/2010 on 'Simplifying the Implementation of the Research Framework Programme' (CoR, 2011a); CdR 67/2011 on 'Common Strategic Framework for EU Research and Innovation funding' (CoR, 2011b); CdR 402/2011 on 'Horizon 2020' (CoR, 2012); and CdR 2414/2012 on 'Closing the Innovation Divide' (CoR, 2013). These opinions were approved in different plenary sessions of the CoR held over the period 2011-2013.

2.1 Roles

Analytically, the roles most commonly envisaged for LRAs by the CoR with respect to the involvement in R&I programmes may be grouped under three main headings: 'contributors', 'facilitators' and 'beneficiaries'. Contributing roles are those where the involvement of the LRA is direct, active, and implies a concrete input in terms of engagement (human resources), financing (financial resources) or policy-making (strategic planning). Facilitating roles are those where the LRA involves third parties (e.g. SMEs, other LRAs from research-lagging regions) which may directly participate in the programme (e.g. private companies through public-private partnerships) or be engaged indirectly through the LRA (e.g. SMEs through public procurement). The beneficiaries' roles imply that the LRA obtains a specific return, for example through the participation in a project developing innovative technologies for application by the administration, or through the gaining of competences in the management of European projects.

LRAs usually take up **several of the above roles concurrently** but the grouping is proposed in order to understand:

- Whether some of these roles prevail on others i) when a local rather than a regional authority (or vice versa) is involved in H2020, and ii) when a LRA participates in a project as coordinator or partner.
- Whether some of these roles are rarely taken up.

This understanding is assumed on the basis of the interpretation of the results of the undertaken interviews to LRAs as presented in section 3.2 of this study.

2.1.1 Contributors

- **Actively engaging** in projects' consortia as coordinators, partners, publicly owned/participated agencies/structures, or institutionally participated clusters/hubs/poles (e.g. metropolitan areas).
- (Co) funding R&I activities (e.g. through actions such as the ERA-NET).
- Seeking synergies between different funding instruments, including between H2020 and ESIF as well as national, regional and local funding. This role is also at the core of the design of smart specialisation strategies (S3). More specifically, through integrated strategies and by means of an entrepreneurial discovery process (EDP), LRAs are expected to create synergies across funds (investments) from both the public and the private sector.

2.1.2 Facilitators

• Pursuing a more 'holistic' governance approach for research, development and innovation (RDI), able to link with other concerned policy structures at EU, national and sub-national level. If H2020 provides a common strategic framework to fund R&I at the EU level, at the regional level further coordination with development and cohesion and, more in general, complementarity with EU policies is desirable. In particular, research and innovation strategies for smart specialisation (RIS3) are expected to achieve the creation of synergies and complementarities across policies, besides investments, with a view to enhance their overall impact on the economic and social spheres of the territory.

- Supporting the involvement of regional stakeholders (including SMEs) in R&I programmes. This goes along with strengthening the link or having a mediation role between R&I on one side and universities and research centres and business on the other side, for the definition of projects and/or of R&D regional strategies in a collaborative manner. Triple and quadruple helix approaches are considered to be supportive in the development of these collaborative relationships by LRAs.
- Encouraging the development of competitive clusters (also through institutional funding of research besides the competitive EU financial support) and of regional innovation ecosystems. The latter are, in turn, linked to the concepts of open innovation and reform of the public administration at the territorial level, including with respect to decision making. LRAs are expected to actively participate to the creation and maintenance of these innovation ecosystems to be used as test-beds for prototyping innovations, including the user-driven ones.
- Supporting the creation of new forms of partnering where open innovation and users have a greater role towards the development of innovative solutions to societal challenges (e.g. public-private people partnerships 4Ps¹⁵).
- Implementing a coaching/mentoring role, with renowned stakeholders facilitating the participation in projects and programmes of lesser-known but competent partners from research-lagging regions. According to the same principle, pioneering regions are called "to form European consortiums integrating different capabilities to create ground-breaking societal innovations for Europe-wide use" (CdR 402/2011). Regional bench-learning and bench-doing are other initiatives considered to move towards the closing of the R&I divide. ¹⁶
- Fostering the transfer to or adoption by SMEs of R&I results, for example through the granting of funds to projects for the publication of results and for their dissemination by means of application in new areas. SMEs are considered crucial with respect to rapid prototyping, marketing/commercialisation and implementation/usage of R&I knowledge and results.

¹⁶ Within CdR 2414/2012, bench-learning is defined as "validating ideas that work in one region by testing them in other regions" and bench-doing as "giving added value to new ideas by turning them into practical innovations in several regions at the same time".

¹⁵ The 4Ps concept, indicated in CdR 402/2011, refers to a public-private partnership to which the active participation of people is added. It is a form of new governance where civil society is directly engaged. As such, this model fosters open innovation and an active role for users in design and implementation.

- Effectively interacting with H2020 National Contact Points (NCPs) with a view to increase the chances of potentially interested and competent regional actors to participate in R&I programmes.
- Linking territorial cooperation elements to R&I activities (e.g. cross border collaboration agreements, networking structures or platforms). The European Grouping of Territorial Cooperation (EGTC) is considered a useful instrument to foster this cross-territorial and transnational cooperation.

2.1.3 Beneficiaries

- **Recipient of funding** for R&I activities and their implementation (e.g. as members of a project consortium).
- Recipient of knowledge and technologies, including through the implementation of research results by means, for example, of innovative public procurement (e.g. the innovation partnership procedure as envisaged by Directive 2014/24/EU), or specific mechanisms providing resources/funds for the purchase of results of research projects by regional authorities. The inclusion of RDI services in public procurement procedures is believed to strengthen the European Research Area and focus R&I programmes on real and everyday practices and needs. Investment by LRAs in the practical application of RDI is considered necessary to give knowledge and technology a tailored and useful regional dimension.
- **Increasing capabilities** to access H2020 and recognise RDI as an essential element of decision making.

2.2 Modalities of participation

The way the participation by LRAs to R&I programmes is accomplished is the second important aspect of accessibility. Within the CoR opinions, the importance of having R&I instruments and measures dedicated to LRAs is often reiterated¹⁷. Instruments and measures which include a regional dimension are believed to facilitate participation and to have an impact at the territorial level besides being pivotal to the creation of an open innovation culture.

¹⁷ Bottom-up political commitments towards competitiveness and innovation such as those of the regions involved in the Vanguard Initiative were set up to integrate these top-down EU-led initiatives. Launched in 2013, the <u>Vanguard Initiative</u> aims at revitalising European industrial growth through regional smart specialisation.

2.1.4 Instruments

- The **ERA-NET** is considered an important vehicle for involving regional authorities and promoting cooperation across regions which have different levels of innovation performance. In the past opinions, continuation of the ERA-NET and simplification of the modalities for participating were called for by the CoR in order to increase the rate of involvement of LRAs in R&I programmes. The ERA-NET is currently running under H2020 as an instrument to support public-public partnerships in responding to single joint calls and transnational actions.
- **Initiatives by the EIT** such as the Knowledge and Innovation Communities (KICs) and the Regional Innovation Scheme (RIS) have been shown to strengthen the local-global connectivity and to promote a culture of synergy between research, education and business innovators (the so-called 'knowledge triangle'). Both EIT initiatives are currently on-going.

2.1.5 Specific 'programmes' in FP7 and measures in H2020

Past CoR opinions report on examples of programmes in FP7 **specifically addressed to LRAs.** These are believed to support LRAs' participation in R&I activities and enhance their level of involvement. Examples include the 'Research Potential' programme and the 'Capacities' programme addressed to convergence (and outermost) regions (2007-2013) and aimed at unlocking their research potential while also supporting their SMEs and industrial organisations. Within H2020, the **Twinning** and **ERA Chairs** measures are believed to support the activities of regional innovation ecosystems and facilitate the transfer of research findings to regions' strategic areas of development. While building up these 'project systems', they are also believed to transform the regional innovation ecosystems into hubs for innovation, facilitating innovative activities by the regional 'agents of change'.

As mentioned in the descriptive part of the programme (Part 1), other measures besides the Twinning and ERA Chairs have a territorial dimension in H2020. In addition, general eligibility criteria do not appear to constrain in any way LRAs' participation from a formal point of view and, on the contrary, topic-specific eligibility and admissibility requirements are supportive of LRAs' involvement. This **apparent effort in the design of H2020 to facilitate the participation of LRAs** is confronted with the results of the quantitative analysis described in section 3.1 of this study.

Part 3: Quantitative and qualitative analysis of LRAs' participation in Horizon 2020, including synergies

This part primarily focuses on the outlining of the participation of LRAs in H2020 in quantitative (Section 3.1) and qualitative terms (Section 3.2). Participation is determined on the basis of the factual evidence publicly available as of January 3, 2017, and, for the qualitative aspects, of the information gathered by the Contractor through the interviews carried out during February-March 2017. Finally, Section 3.3 investigates at which levels the establishment of synergies between different funds (i.e. H2020 and ESIF) is fostered by LRAs and the problems encountered so far.

3.1 Quantification of participation

LRAs are not only considered as 'eligible public bodies' for participating in almost all the funding opportunities available within H2020 but also as implicit or explicit target groups of specific topics¹⁸. The reason behind this is the assumption that the territorial component is essential for boosting the R&I capacity of a socio-economic system as indicated in the 'Guide to Research and Innovation Strategies for Smart Specialisation (RIS 3)' (EC, 2012). An in-depth quantitative analysis of the modalities of involvement of LRAs in H2020 is the only way to understand the extent territories and their policies have directly contributed to R&I and, at the same time, how much municipalities and regions have benefited from funding to build local and regional innovative ecosystems.

3.1.1 Participation from a territorial perspective

The data contained in the CORDIS database on approved and funded (i.e. successful) proposals¹⁹ involving LRAs are analysed principally by means of the indicator 'participations of LRAs'. Participations are the number of times each type of organisation (e.g. municipality, region) participates in a project²⁰. Furthermore, the analysis is done according to two different concepts of LRAs. The first concept refers to the quantitative participation of both LRAs and of those legal entities external to LRAs but having the form of public agencies/bodies acting in a certain domain on behalf of a municipality;

¹⁸ This is explained in Part 1, section 1.2.3.

¹⁹ The CORDIS database contains information on all the projects activated in H2020 since January 1, 2014.

²⁰ Reference is to footnote 11 for additional explanations on participations and participating organisations.

public agencies/bodies acting in a certain domain on behalf of a region; or other relevant public legal entities acting as territorial authorities. Public agencies/bodies acting on behalf of a LRA are, for example, the agencies for innovation such as the JIC - Zájmové Sdružení Právnických Osob (South Moravian Innovation Centre), Czech Republic; while an example of agency acting on behalf of a region on a specific domain is the Azienda Regionale Territoriale per l'Edilizia della Provincia di Genova (Regional Agency for Social Housing of the Genoa Province), Italy. Examples of public legal entities acting as territorial authorities are Métropoles, Communautés Urbaines, Communautés d'Agglomération and Communautés de Communes in France; Città Metropolitane and Unioni di Comuni in Italy; Landkreis in Germany; Mancomunidades and Area Metropolitana in Spain; and Combined Authorities in the United Kingdom. When LRAs are analysed including these external legal entities, they are labelled as LRA_iAB (i.e. LRAs including Agencies and Bodies). The second concept refers to municipalities and regions only. In this case, LRAs are labelled in the analysis as LRA_oMR (i.e. LRAs including only Municipalities and Regions). Participations of LRA_iAB and of LRA_oMR in terms of absolute numbers and their share over the total PUB are summarised by country in Table 5.

Table 5. Participations of LRAs in H2020, by country, 2014-2016

	, ,							Perce	entage
	Number of particpations							(in terms of	participations)
	I DA JAR	LRA_oMR	Agencies/	LRA_iAB	LRA_iAB	PUB	TOTAL	_	LRAs_oMR/
	LKA_IAD	EKA_OWK	Bodies	in NUTS2	in NUTS3	100	TOTAL	PUB	PUB
AT	11	10	1	6	5	77	1,399	14.3%	13.0%
BE	13	9	4	5	8	96	2,199	13.5%	9.4%
BG	11	11	0	0	11	30	238	12.5%	36.7%
CY	4	4	0	0	4	16	227	25.0%	25.0%
CZ	8	4	4	0	8	26	502	30.8%	15.4%
DE	27	27	0	6	21	177	6,233	15.3%	15.3%
DK	61	61	0	41	20	109	1,147	56.0%	56.0%
EE	3	3	0	0	3	16	236	18.8%	18.8%
EL	19	19	0	9	10	48	1,411	39.6%	39.6%
ES	158	102	56	75	83	391	4,984	40.4%	26.1%
FI	12	11	1	0	12	180	1,012	6.7%	6.1%
FR	24	22	2	8	16	277	4,406	8.7%	7.9%
HR	11	10	1	0	11	43	211	25.6%	23.3%
HU	4	2	2	2	2	47	437	8.5%	4.3%
IE	9	9	0	1	8	54	849	16.7%	16.7%
IT	119	102	17	48	71	303	4,624	39.3%	33.7%
LT	2	2	0	0	2	34	171	5.9%	5.9%
LU	0	0	0	0	0	16	165	0.0%	0.0%
LV	7	4	3	0	7	37	141	18.9%	10.8%
MT	1	1	0	0	1	25	83	4.0%	4.0%
NL	35	34	1	9	26	115	3,078	30.4%	29.6%
PL	16	16	0	2	14	79	775	20.3%	20.3%
PT	35	28	7	11	24	130	1,077	26.9%	21.5%
RO	22	16	6	6	16	58	429	37.9%	27.6%
SE	35	35	0	0	35	141	1,502	24.8%	24.8%
SI	8	4	4	0	8	46	417	17.4%	8.7%
SK	2	2	0	1	1	32	235	6.3%	6.3%
UK	74	60	14	17	57	228	6,234	33.3%	26.3%
TOTAL	731	608	123	247	484	2,831	44,422	25.8%	21.5%

Note: data elaborated by the Contractor. Raw data are sourced from the CORDIS database.

Since 1 January 2014, LRA_iAB participations total 731 while LRA_oMR participations total 608. The overall total participations of Public Bodies (PUB, among which LRAs are included) are 2,831 while the overall total of participations of all the types of organisations is 44,422. Luxembourg is the only country with no participations from LRAs.

The participation of legal entities external to municipalities and regions but acting on their behalf (123 in total) concerns the 28 MS across the EU differently. Three main 'organisational models' may be derived in this respect. In Spain and in Italy, the model envisages that some thematic competencies of the LRAs are delegated externally. As a consequence, participations of LRAs in projects concerning these thematic domains are also outsourced. The approach found in the United Kingdom implies giving the 'innovation mandate' in general to partnerships, for specific projects (e.g. South-East of Scotland Transport Partnership), or to public third entities whose goal is to push R&I at the territorial level (e.g. Highlands and Islands Enterprise). The aggregation of LRAs with the creation of a new legal entity is another type of model which is found, for example, in the Netherlands (e.g. the *Metropoolregion Rotterdam Den Haag*).

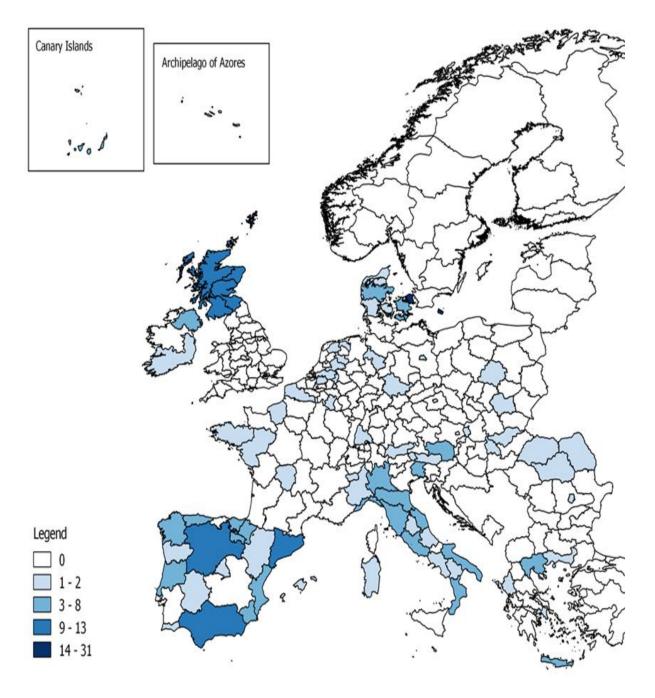
Focusing on the geographical perspective, participations of LRA_iAB at the local level (484 NUTS3) are almost double the participations at the regional level (247 NUTS2). Map 1 and Map 2 show participations of LRA iAB from this geographical perspective. Participations are very heterogeneous within Member States at both NUTS2 (Map 1) and NUTS3 (Map 2) level but a marked divide is evident between the newer MS and the older ones²¹. In fact, only 99 LRA iAB out of the 731 are from the newer MS, i.e. about 13.5%²². This divide is larger than the one existing within the PUB group (i.e. all public bodies, at all administrative levels) since out of the 2,831 participations from PUB, 17.3% comes from the newer MS. This different level of participation in H2020 between the two groups (newer and older MS) is partially explained by the evidence which clearly emerged during the S2E event of March 8, 2017, that most of the newer MS are relatively more centralised than the older ones, with fewer administrative competences assigned to regions (e.g. in the management of the ESIF). This situation is mirrored in the comparison of participations at NUTS level. At NUTS2 level, the divide is quite significant: only 11 participations out of 247 (4.5%) are from 4 out of the 13 newer MS (6 participations from Romania, 2 each from Hungary and Poland,

²¹ Newer MS, or EU13, include Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, and Slovenia. Older MS, or EU15, include the remaining EU countries.

²² Since participation in H2020 contributes to increasing the research excellence and the innovation potential of participating organisations, the participation divide may exacerbate the innovation divide across territories. Although this correlation is more likely to exist for research and education institutions as well as for private firms, it possibly also applies to LRAs.

and 1 from Slovakia). Within the older MS, participations of LRA_iAB at NUTS2 level are from 12 countries (exceptions are Finland and Sweden that have only participations of LRA_iAB at NUTS3 level and Luxembourg that has no participations at the territorial level).

Map 1. Participations of LRA_iAB in H2020 at NUTS2 level, 2014-2016

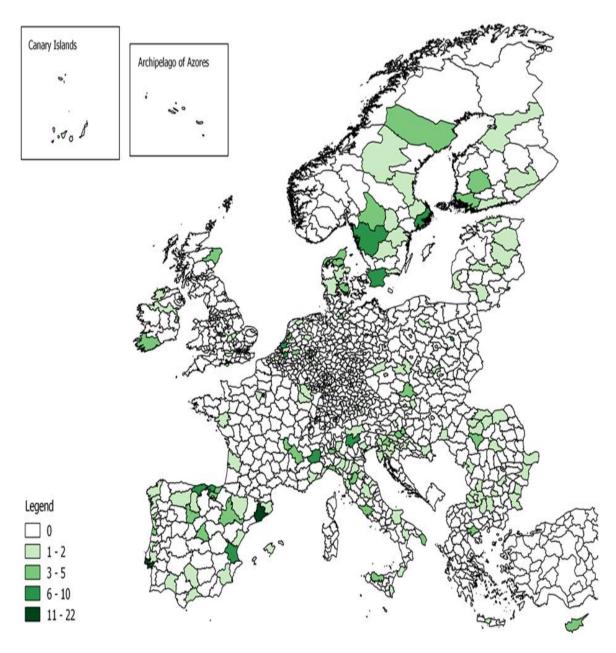


Note: data elaborated and map created by the Contractor. Raw data are sourced from the CORDIS database.

At NUTS3 level, LRA_iAB participations are from all the 13 newer MS (88). They are still well below the number of participations from the older MS (396)

but are in line in terms of share (18.2%) with the participations of the newer MS in the PUB group. The participations of LRA_iAB at NUTS3 level from the newer MS come mainly from Romania, Poland, Bulgaria and Hungary.

Map 2. Participations of LRA_iAB in H2020 at NUTS3 level, 2014-2016

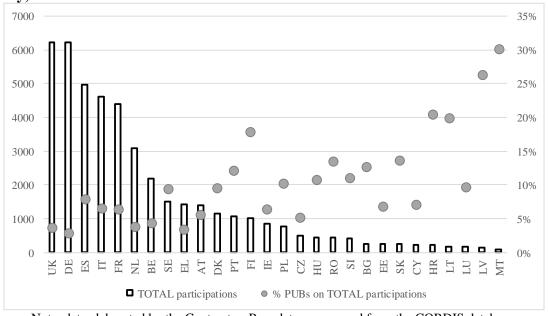


Note: data elaborated and map created by the Contractor. Raw data are sourced from the CORDIS database.

The three **top countries** in terms of **total number of participations** (i.e. all types of organisations) in H2020 funded projects, as reported in the CORDIS database downloaded on January 3, 2017, are the **United Kingdom** (6,234), **Germany** (6,233), and **Spain** (4,984). Countries with the lowest number of

participations are Malta (83), Latvia (141), and Luxembourg (165). Regardless of the type of organisation, the number of participations by MS is driven by at least three factors: i) the size of the country which influences its capacity in terms of the number of existing eligible organisations; ii) the country's 'attitude' towards H2020, intended as a top-down strategy aimed at facilitating the participation in the programme for R&I in general or for some specific thematic areas (e.g. as a consequence of limited funds available at the national level to pursue such R&I scope); and iii) the 'attitude' of individual organisations towards being involved in R&I activities through H2020. Looking at the data of participations of PUB (Table 5), the leading countries are Spain (391), Italy (303), and France (277). The countries with the lowest number of PUB participations are Cyprus, Estonia and Luxembourg (with 16 participations each). Chart 3 shows that the highest share of participations of PUB over the total participations is usually found in countries which have a low number of total participations. For example, in the UK, where participations since the beginning of H2020 total more than 6,000, participations from PUB are less than 5%; while in Malta, where total participations are less than 100, those from PUB represent a share of 30% of the total. This reverse correlation suggests the likely existence of a participation model to H2020 where public bodies have a 'pulling effect' when the involvement in H2020 of the other types of organisations is limited by either the country size and/or the attitude²³.

Chart 3. Participations of PUB and their share on the total number of participations, by country, 2014-2016

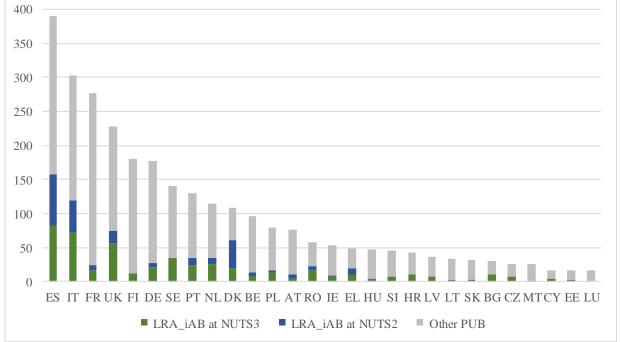


Note: data elaborated by the Contractor. Raw data are sourced from the CORDIS database.

²³ During the interviews carried out with one agency acting on behalf of a Spanish region (NUTS2 level) and with the *JIC - Zájmové Sdružení Právnických Osob* (NUTS3 level), this role of 'facilitator' taken up by public actors was confirmed. In both cases, the main benefit expected by the participation in, respectively, an ERA-NET and a FPA, is the involvement of regional/local private companies that have no capacities and resources to directly/individually compete for R&I funds at the European level.

Concerning the participations of LRA_iAB, Spain leads with 158 participations, followed by Italy (119 participations), and the UK (74 participations). Focusing on the relevance of LRAs participation in the public domain, Denmark is the country with the highest share of LRAs' participations (i.e. 56%) over the total number of PUB participations (Chart 4).

Chart 4. Participations of LRA_iAB at NUTS3 level, of LRA_iAB at NUTS2 level and other Public Bodies (NUTS1 and NUTS0 level), by country, 2014-2016



Note: data elaborated by the Contractor. Raw data are sourced from the CORDIS database.

Concerning the funding aspects (in terms of **EC contribution**), LRA_iAB have so far received EUR 228,393,500 reduced to EUR 207,844,231 if LRA_oMR are considered (Table 6). LRAs have succeeded diversely across countries. In absolute values, looking at the overall EC contribution obtained by LRA_iAB, the **top five countries** are **Spain**, the **UK**, **Denmark**, **Italy** and **Sweden** which raised altogether some two thirds of the total EC contribution allocated to LRAs in the EU. **The 'participation divide' between the newer MS and the older ones is confirmed in terms of allocations of EC contribution. Out of the total EC contribution raised by LRA_iAB in Europe, only EUR 19,623,923 (8.6%) relates to the newer MS. Similarly, when considering LRA_oMR, out of the total EC contribution, only a share of 8.5% relates to the newer MS.**

The **heterogeneity across countries** is also evident using as indicator the share of EC contribution raised by participations of LRAs with respect to the participations of the PUB group. This share ranges from 6.2% (for LRA_iAB) and 2.3% (for LRA_oMR) in Hungary, to 87.2% (for both LRA_iAB and LRA_oMR) in Estonia. Concerning the top five countries in terms of overall EC

contribution obtained by LRA_iAB (see above), the share over the PUB group is 32.7% in Spain (25.6% for LRA_oMR); 33.1% in the UK (26.6% for LRA_oMR); 45.1% in Italy (41.2% for LRA_oMR); 59.5% in Denmark; and 36.6% in Sweden (Table 6).

Table 6. EC contributions received by LRAs participating in H2020 projects, by country, 2014-2016

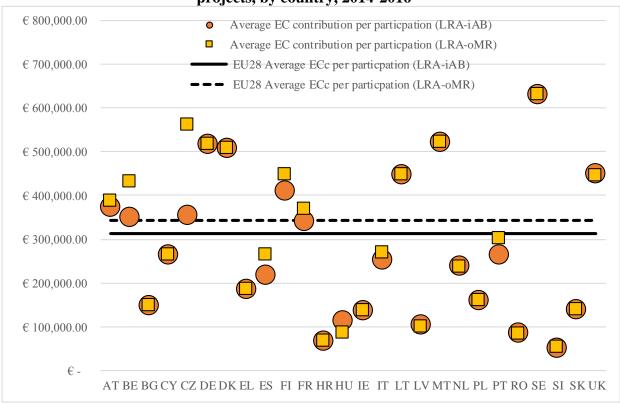
	EC contribution LRA_iAB		%ECc LRA_iAB on PUB		C contribution LRA_oMR	%ECc LRA_oMR on PUB
AT	€	4,098,697.50	20.1%	€	3,866,010.00	19.0%
BE	€	4,542,048.69	22.4%	€	3,887,810.00	19.2%
BG	€	1,635,880.66	79.6%	€	1,635,880.66	79.6%
CY	€	1,055,511.25	39.7%	€	1,055,511.25	39.7%
CZ	€	2,845,383.00	66.1%	€	2,245,874.25	52.1%
DE	€	13,954,708.66	18.6%	€	13,954,708.66	18.6%
DK	€	30,977,705.27	59.5%	€	30,977,705.27	59.5%
EE	€	5,632,708.00	87.2%	€	5,632,708.00	87.2%
EL	€	3,523,118.13	45.1%	€	3,523,118.13	45.1%
ES	€	34,321,091.39	32.7%	€	26,929,440.80	25.6%
FI	€	4,925,480.00	6.4%	€	4,913,105.00	6.4%
FR	€	8,190,660.81	10.9%	€	8,131,626.11	10.8%
HR	€	744,338.50	25.8%	€	656,557.25	22.8%
HU	€	456,200.75	6.2%	€	171,448.25	2.3%
IE	€	1,236,852.25	6.6%	€	1,236,852.25	6.6%
IT	€	30,067,482.54	45.1%	€	27,478,149.47	41.2%
LT	€	895,537.50	33.6%	€	895,537.50	33.6%
LU	€	-	0.0%	€	-	0.0%
LV	€	722,107.50	17.6%	€	396,938.75	9.7%
MT	€	521,480.00	14.6%	€	521,480.00	14.6%
NL	€	8,348,849.19	25.9%	€	8,041,349.19	25.0%
PL	€	2,562,564.50	12.5%	€	2,562,564.50	12.5%
PT	€	9,228,282.84	36.9%	€	8,466,195.76	33.8%
RO	€	1,881,188.75	35.9%	€	1,343,232.50	25.6%
SE	€	22,064,151.79	36.6%	€	22,064,151.79	36.6%
SI	€	395,033.50	9.0%	€	207,567.50	4.7%
SK	€	275,988.75	8.7%	€	275,988.75	8.7%
UK	€	33,290,448.72	33.1%	€	26,772,719.64	26.6%
TOTAL	€ :	228,393,500.44		€	207,844,231.23	

Note: data elaborated by the Contractor. Raw data are sourced from the CORDIS database.

Another indicator highlighting heterogeneity across countries is **the average EC contribution per participation of LRAs.** The average at the EU level is EUR 312,440 for LRA_iAB and EUR 341,849 for LRA_oMR (Chart 5). This means that LRAs have, on average, a contribution from the EC which is over EUR

300,000 in each H2020 project where they participate. At country level, the average EC contribution ranges from about EUR 50,000 for Slovenian LRAs to almost EUR 1,900,000 for Estonian LRAs. Excluding the case of Estonia, considered as an outlier with three participations only, LRAs in Bulgaria, Croatia, Hungary, Latvia, Poland, Romania, Slovenia and Slovakia have an EC contribution in projects which is half the EU average (however, this is also the case for Irish LRAs) while Swedish LRAs get an average EC contribution which almost doubles the EU average. This situation may partially be explained by the mechanism used to set the budget in H2020 projects. The allocation for human resources (usually representing the largest part of the budget) for each partner in the projects is, in fact, determined by multiplying the assigned man-months (i.e. the effort in terms of human resources) by the average monthly rate applied in the partner's organisation. Since the average monthly rate is the weighted mean of the actual costs of the personnel, the result is that a Belgian municipality, for example, with the same role and the same number of man-months as a Romanian municipality, has a larger budget than the Romanian authority given that Belgian salaries are higher.

Chart 5. Average EC contribution per participation received by LRAs in H2020 projects, by country, 2014-2016



Notes: data elaborated by the Contractor. Raw data are sourced from the CORDIS database. Estonia (outlier) and Luxembourg (no LRAs participating to H2020) are excluded.

Moving the perspective of the analysis from participations of LRAs to the number of LRAs as **participating organisations** in H2020 projects, results are slightly different. There are **402 LRA iAB participating in H2020**. The

difference between the number of LRA_iAB participations (731) and the participating LRA_iAB is explained by **multiple participations** (i.e. one LRA_iAB may participate in more than one project). In some countries, this phenomenon is evident and affected by the presence of some 'H2020 champions' with a large number of participations (Box 4).

Box 4. The three most successful LRAs in Horizon 2020

According to the data on participations by organisation contained in the CORDIS database till January 3, 2017, *Region Hovedstaden* (Capital Region of Denmark), Denmark (DK01) is the most successful LRA in Horizon 2020. Since the inception of the H2020 programme, *Region Hovedstaden* has received funding in **31 projects**, in six of which it is acting as coordinator. The projects relate mainly (23 projects) to 'Health, demographic change, and wellbeing' (*Societal Challenges*). Six projects relate to European Research Council and Marie Sklodowska-Curie Actions (*Excellent Science*), while only one project deals with Information and Communication Technologies (under 'Leadership in enabling and industrial technologies' in *Industrial Leadership*). The region received an overall EC contribution from H2020 of almost EUR 19.5 million. This amount represents 37.4% of the total funds granted to Danish public bodies in H2020 and 3.8% of the total funds assigned to Denmark in H2020.

The second ranked LRA in terms of participations is the *Camara Municipal of Lisboa* (Municipality of Lisbon), Portugal (PT170), with **11 projects.** The municipality never acts as coordinator and mostly takes part as partner in projects (7 projects) focused on 'Climate action, environment, resource efficiency and raw materials', 'Secure, clean and efficient energy', and 'Smart, green and integrated transport themes' (*Societal Challenges*). Three more projects are in European Research Council and Marie Sklodowska-Curie Actions (*Excellent Science*), and one project is in Information and Communication Technologies (under 'Leadership in enabling and industrial technologies' in *Industrial Leadership*). The *Camara Municipal of Lisboa* received almost EUR 5.4 million as EC contribution from H2020 (i.e. 21.7% of the total funds granted to Portuguese public bodies in H2020).

The third ranked LRA is still a Danish authority, and namely the *Kobenhavns Kommune* (Municipality of Copenhagen), Denmark (DK011) with **10 projects** where it is acting both as coordinator (2 times) and partner (8 times). Among all the H2020 themes, the municipality mainly (8 projects) applied for 'Smart, green and integrated transport', and 'Climate action, environment, resource efficiency and raw materials' (*Societal Challenges*). It has also one project in Information and Communication Technologies (under 'Leadership in enabling and industrial technologies' in *Industrial Leadership*), and one cross-theme project concerning *Industrial Leadership* and *Societal Challenges*. The *Kobenhavns Kommune* received almost EUR 4.1 million of EC contribution from H2020 (i.e. 7.9% of the total funds granted to Danish public bodies in H2020).

Source: Analysis of the CORDIS raw data by the Contractor.

Chart 6 compares the number of participations of LRA_iAB and the number of participating LRA_iAB by country. Rankings at the country level are essentially the same, with the evident exception of Denmark. The top three countries by number of LRAs participating in H2020 are Spain (with 79 LRA_iAB), Italy (with 62 LRA_iAB), and the United Kingdom (with 41 LRA_iAB). Only one LRA is participating in H2020 from Malta, two each from Cyprus, Lithuania and Slovakia, and three from Estonia.

As previously commented, the apparent success of the LRAs of some MS in participating in H2020 depends on different reasons among which the organisational model seems to have an important role. LRAs from Spain, Italy, the UK and the Netherlands importantly rely on the presence of external legal entities to participate in H2020. This add to the 'attitude' towards being involved in R&I activities through H2020 which may be set at the country or regional level (by means of a 'participation in H2020 strategy') or be embedded in individual organisations (this is the case of Denmark and Portugal – see Box 4).

number of participating LRA_iAB, by country, 2014-2016

140

120

100

80

40

ES IT UK DK NL PT SE DE FR RO EL PL BE FI BG HR AT IE CZ SI LV CY HU EE SK LT MT

Number of participations of LRA_iAB

Number of LRA_iAB

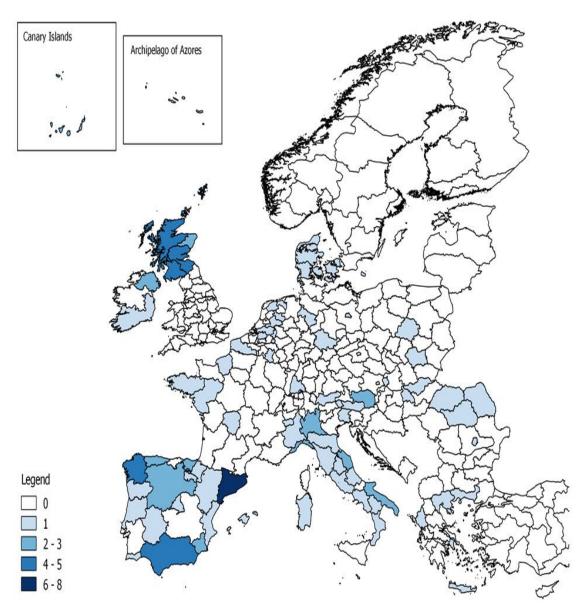
Chart 6. Comparison between the number of participations of LRA_iAB and the number of participating LRA_iAB, by country, 2014-2016

Notes: data elaborated by the Contractor. Raw data are sourced from the CORDIS database. Excluding Luxembourg because it has no LRAs participating in H2020.

Average participations by each LRA_iAB (i.e. average number of projects by LRA_iAB) range from 1 in Estonia, Hungary, Latvia, Malta and Slovakia, to 4.7 in Denmark. At the EU level, average participations by LRA_iAB are 1.6. Countries in which the average participations are higher than the European average are Denmark (4.7), Belgium (2.2), Cyprus (2.0), Slovenia (2.0), Spain

(2.0), Italy (1.9), Poland (1.9), the United Kingdom (1.9), Austria (1.8), Ireland (1.8), the Netherlands (1.8), Portugal (1.8), and Sweden (1.8). Map 3 and Map 4 show the geographical location of LRA_iAB participating in H2020, at NUTS2 and NUTS3 level, respectively.

Map 3. Number of LRAs_iAB in H2020 at NUTS2 level, 2014-2016



Note: data elaborated and map created by the Contractor. Raw data are sourced from the CORDIS database.

Legend

0

1

7-11

Map 4. Number of LRAs_iAB in H2020 at NUTS3 level, 2014-2016

Note: data elaborated and map created by the Contractor. Raw data are sourced from the CORDIS database.

Table 7 summarises by country some of the main features presented above and related to LRAs' participations in H2020. In particular, the table specifies whether participations occur through agencies/bodies (ref. Table 5); whether participations of LRA_iAB are at NUTS2 level (ref. Table 5); whether the share of LRAs_iAB over the PUB group is higher than the EU average (ref. Table 5); whether the received EC contribution per participation of LRA_iAB is higher than the EU average (ref. Table 6); and whether the average participations by LRA_iAB are higher than the EU average.

Table 7. Main features related to LRAs' participations in H2020, by country, 2014-2016

	LRAs participate also through Agencies/Bodies	Participations from NUTS2	Share of LRAs on PUB higher than the EU28 value (LRA_iAB=25.8%)	Average EC contribution per participation higher than the EU28 value (LRA_iAB=EUR 312,440)	
AT	•	•		•	•
BE	•	•		•	•
BG					
CY					•
CZ	•		•	•	
DE		•		•	
DK		•	•	•	•
EE				•	
EL		•	•		
ES	•	•	•		•
FI	•			•	
FR	•	•		•	
HR	•				
HU	•	•			
IE		•			•
IT	•	•	•		•
LT				•	
LU					
LV	•				
MT				•	
NL	•	•	•		•
PL		•			•
PT	•	•	•		•
RO	•	•	•		
SE				•	•
SI	•				•
SK		•			
UK	•	•	•	•	•

Notes: 'yes' is indicated by the dot, 'no' is indicated by the empty cell. Luxembourg has all empty cells because it has no LRAs participating in H2020. Bulgaria has all empty cells because it does not match any of the considered features. Data elaborated by the Contractor. Raw data are sourced from the CORDIS database. The newer MS are grey shaded.

By considering the 'yes' status (dots) as a proxy of effective participation by the LRAs of a country in H2020, there is evidence that older MS are characterised by more dots than newer MS, confirming the divide.

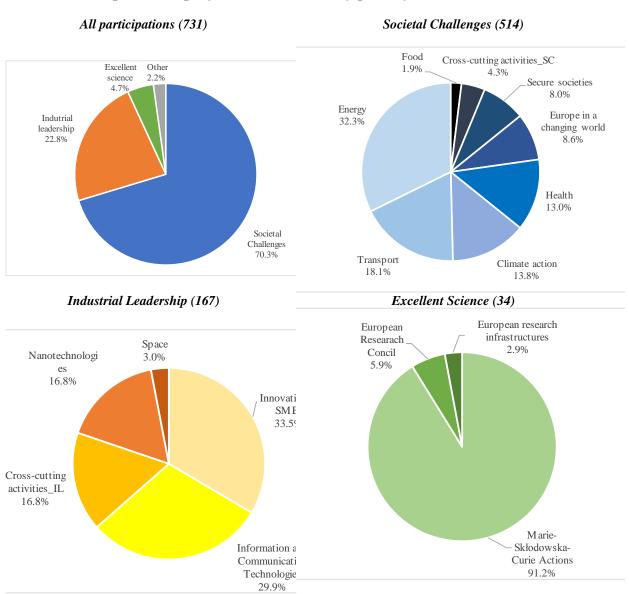
3.1.2 Participation from a project level perspective

CORDIS data analysed up until now focus on a territorial perspective. Moving to a project level perspective, participations of LRAs are **participations in projects in which LRAs are included in the consortium** (as coordinators or partners) and participating LRAs are **coordinators or partners in a consortium for a project**.

Looking at participations in projects of LRA_iAB (Chart 7, top-left pie chart), calls in *Societal Challenges* (SC) are those addressed the most (514). They are followed by calls in *Industrial Leadership* (IL)(167) and *Excellent Science* (ES)(34). Category 'Other' refers to 6 projects in *Science with and for Society*, 6 *Joint Undertakings* and 4 *Spreading Excellence and Widening Participation*. As mentioned, most of the participations in projects of LRA_iAB are in *Societal*

Challenges (514, corresponding to 70.3% of the total) (Chart 7, top-right pie chart, blue colour). Among the corresponding seven themes, one third is in 'Secure, clean and efficient energy' (i.e. Energy) (166), followed by 'Smart, green and integrated transport' (i.e. Transport) (93) and by 'Climate action, environment, resource efficiency and raw materials' (i.e. Climate action) (71). Within the *Industrial Leadership* most of the participations are in projects connected to topics of 'Innovation in SMEs' (56 corresponding to 33.5% of those in IL) (Chart 7, bottom-left pie chart, orange colour), while in the *Excellent Science* participations in projects in the Marie-Skłodowska-Curie Actions prevail (31, corresponding to 91.2% of those in ES) (Chart 7, bottom-right pie chart, green colour).

Chart 7. Participations in projects of LRA_iAB, by priority and theme, 2014-2016



Note: Data elaborated by the Contractor. Raw data are sourced from the CORDIS database.

Analysing priorities and themes of LRA_iAB participations in projects, five main indications emerge: 1) Most of the participations of LRAs are in Societal Challenges. While its relevance at NUTS3 level is high (77.1%), at NUTS2 level it is lower (57.1%), the reduction being in favour of *Industrial Leadership* (35.2%). 2) Within Societal Challenges, there is an equivalent importance of themes for LRAs at NUTS2 and NUTS3 level. 3) Within *Industrial Leadership*, more than half of the projects in which regions and their agencies/bodies are involved are in 'Innovation in SMEs' (46 projects). The situation is different at NUTS3 level where local authorities have 10 participations only (12.5%). 4) Concerning Excellent Science, participations of LRAs at NUTS3 level are only in the Marie-Skłodowska-Curie Actions (20 participations). Participations of LRAs at NUTS2 level also encompass 'European research infrastructures' and 'European Research Council' (out of 14 participations). 5) Participations in Excellence and Widening Participation are limited participations of LRAs at NUTS2 level and two at NUTS3 level).

Concerning the types of action, participations of LRA_iAB are mainly in RIA (245), followed by CSA (183) and IA (179), together representing 83% of the total participations (Chart 8). Relevance is given to ERA-NET Cofund (39) only with participations from NUTS2 level LRA_iAB.

MSCA* OTHER**
4.2%
4.7%
ERA-NET-Cofund
5.3%

IA
24.5%

CSA
25.0%

Chart 8. Participations of LRA_iAB by type of action, 2014-2016

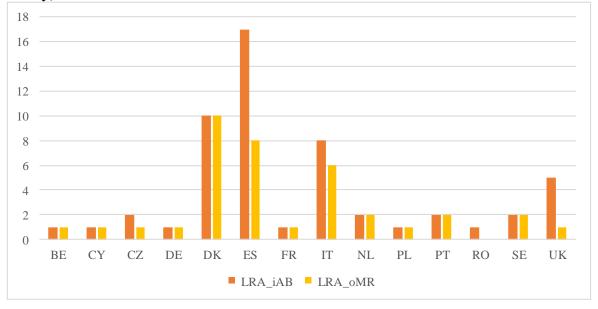
Notes: * ITN-EID, ITN-ETN, IF-EF-ST, RISE, COFUND-FP; ** BBI-RIA, PCP, ERC-ADG, FCH2-RIA, COFUND-EIP, FCH2-IA, COFUND-PCP, CSA-LP. Data elaborated by the Contractor. Raw data are sourced from the CORDIS database.

Looking at the type of involvement of LRAs in a consortium for a H2020 project, the large majority of LRAs participate as partner. Over the 731 participations of LRA_iAB, 54 participations are as coordinators (7.4%), of

which 33 at NUTS2 level and 21 at NUTS3 level. Over the 608 participations of LRA_oMR, 37 are as coordinators (6.1%). This suggests that agencies/bodies acting on behalf of LRAs are more suitable to coordinate projects with respect to municipalities and regions. Against the 54 participations, there are 41 LRA_iAB coordinating H2020 projects, with 34 entities coordinating one project, 4 entities coordinating two projects, 2 entities coordinating three projects, and 1 entity (Region Hovedstaden) coordinating six projects. Excluding agencies and bodies acting on behalf of municipalities and regions, there are 30 LRA_oMR coordinating H2020 projects, with 27 entities coordinating one project, 2 entities coordinating two projects, and 1 entity (Region Hovedstaden) coordinating six projects.

LRA_iAB coordinating projects are from 14 MS (Chart 9). The highest participations are found in Spain, Denmark and Italy (altogether totalling 35 participations). Participations as coordinators from the newer MS are 5. LRA_oMR coordinating projects are from 13 MS, i.e. the same of LRA_iAB but without Romania. For LRA_oMR, participations as coordinators from the newer MS are only 3. Hence, the divide seems to be exacerbated when the focus is on the coordination role. The highest participations of LRA_oMR with a coordination role are still found in Denmark, Spain and Italy (altogether totalling 24 participations) but in the last two countries the exclusion of agencies and bodies acting on behalf of municipalities and regions implies an evident reduction of the coordinating roles (the same occurs in the UK). As explained above, this is a direct consequence of the model these countries follow in order to participate in H2020 projects.

Chart 9. Participations of LRA_iAB and LRA_oMR coordinating H2020 projects, by country, 2014-2016



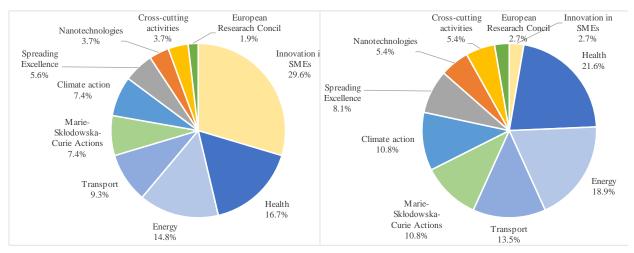
Note: Data elaborated by the Contractor. Raw data are sourced from the CORDIS database.

Concerning the addressed parts of H2020 (Chart 10), most of the LRA_iAB are coordinating projects in *Societal Challenges* (27), and in particular in 'Health, demographic change and wellbeing' (9) and in 'Secure, clean and efficient energy' (8). The most coordinated theme is 'Innovation in SMEs' (16) under the *Industrial Leadership*. When analysing LRA_oMR, coordinating is still predominant in *Societal Challenges* (25), namely in 'Health, demographic change and wellbeing' (8) and in 'Secure, clean and efficient energy' (7); while coordination in 'Innovation in SMEs' is drastically reduced (1).

Chart 10. Participations of LRA_iAB and LRA_oMR coordinating H2020 projects, by theme, 2014-2016

54 coordinating LRA_iAB

37 coordinating LRA_oMR



Notes: blue slices correspond to *Societal Challenges*, orange slices to *Industrial Leadership* and green slices to *Excellent Science*. Data elaborated by the Contractor. Raw data are sourced from the CORDIS database.

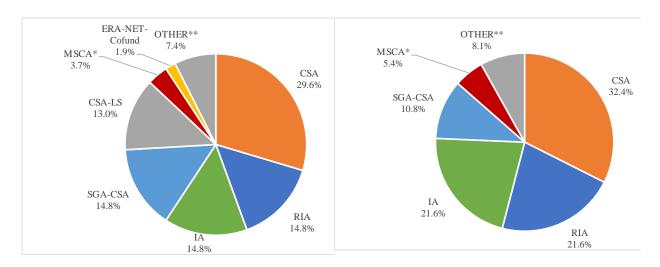
Concerning the types of action (Chart 11), when coordinating, LRAs prefer CSA (16 in the case of LRA_iAB and 12 in the case of LRA_oMR), followed by RIA and IA. Excluding agencies and bodies acting on behalf of LRAs, two types of actions lose importance, the CSA-lump sum and the ERA-NET Cofund.

Finally, in terms of average EC contribution per participation of LRAs, the share of coordinators is much higher than the EU average for LRA_iAB and for LRA_oMR (respectively of EUR 312,440 and EUR 341,849). In fact, the 54 LRA_iAB coordinating projects receive an average EC contribution of EUR 855,328 (2.7 times the EU average), while the 37 LRA_oMR coordinating projects receive an even higher average amount of EUR 1,064,780 (3.1 times the EU average).

Chart 11. Participations of LRA_iAB and LRA_oMR coordinating H2020 projects, by type of action, 2014-2016

54 coordinating LRA_iAB

37 coordinating LRA_oMR



Notes: * IF-EF-ST, COFUND-FP; ** PCP, ERC-ADG, COFUND-PCP. Data elaborated by the Contractor. Raw data are sourced from the CORDIS database.

Table 8 reports the main characteristics of the 30 LRA_oMR coordinating a H2020 project. Among these, 11 are at NUTS2 level and the remaining 19 at NUTS3 level. Only three of them are coordinating more than one H2020 project (including two of the 'Horizon champions' described in Box 4), but 20 had at least one other project experience in H2020. Seven coordinators are from Spain, six from Italy and four from Denmark. Only three coordinators are from the newer MS. Most of the coordinators (20) have projects in *Societal Challenges*, out of which seven in 'Secure, Clean and efficient energy', and most of them (16) are coordinating a Coordination and Support Action (CSA).

Table 8. List of the 30 LRA_oMR participating in H2020 projects as coordinators, 2014-2016

LRA name	NUTS level	NUTS code	Number of participations in H2020 (as coordinator)	Number of participations in H2020 (total)	EC	contribution coordintor	Country	Acronym of the coordinated project(s)	Part of H2020	Theme	Type of action
REGION HOVEDSTADEN	2	DK01	6	31	€	9,881,795.74	DK	Click-It, ELECTOR, NoHow, OPEDGP, SCIENCE, uPET	SC, ES	Health, MSCA, ERC	RIA, MSCA, ERC
GOBIERNO DE CANARIAS	2	ES70	2	3	€	351,543.75	ES	IC-Health, UrBAN-WASTE	SC	Health, Climate action	CSA, RIA
COMISSAO DE COORD. E DESENV. REGIONAL DO NORTE	2	PT11	1	1	€	73,125.00	PT	NORTEXCEL2020	SEWP	SEWP	SGA-CSA
COMUNIDAD AUTONOMA DE CANARIAS	2	ES70	1	1	€	-	ES	E3Canarias 2015-2016	IL	Innovation in SMEs	SGA-CSA
CONSELLERIA DE SANIDADE DE GALICIA	2	ES11	1	1	€	862,750.00	ES	EMPATTICS	SC	Health	COFUND-PCP
MALOPOLSKA VOIVODSHIP	2	PL21	1	1	€	94,567.50	PL	Power2Nights	ES	MSCA	CSA
REGION NORD-PAS DE CALAIS	2	FR30	1	1	€	-	FR	SYNAMERA	IL	Nanotechnologies	CSA
REGION SYDDANMARK	2	DK03	1	2	€	1,272,147.00	DK	ImpleMentAll	SC	Health	RIA
COMISSAO DE COORD. E DESENV. REGIONAL DO CENTRO	2	PT16	1	3	€	15,101.00	PT	MIA	SEWP	SEWP	SGA-CSA
REGIONE LAZIO	2	ITI4	1	3	€	424,750.00	IT	SCREEN	IL	Cross-cutting activities (Focus Areas	CSA
REGIONE LIGURIA	2	ITC3	1	3	€	281,437.50	IT	EnerSHIFT	SC	Energy	CSA
KOBENHA VNS KOMMUNE	3	DK011	2	10	€	1,721,250.00	DK	FORCE, SPICE	SC	Climate action, Transport	IA, CSA
BIRMINGHAM CITY COUNCIL	3	UKG31	1	9	€	225,937.00	UK	CEPPI 2	SC	Energy	CSA
GEMEENTE ROTTERDAM	3	NL339	1	6	€	1,729,982.50	NL	Ruggedised	SC	Cross-cutting activities (Focus Areas)	IA
STAD ANTWERPEN	3	BE211	1	6	€	2,523,370.00	BE	PORTIS	SC	Transport	IA
A YUNTAMIENTO DE BILBAO	3	ES213	1	5	€	240,485.00	ES	BRODISE	SC	Climate action	CSA
STOCKHOLMS LANS LANDSTING	3	SE110	1	5	€	3,368,125.58	SE	LIVE INCITE	SC	Health	PCP
COMUNE DI GENOVA	3	ITC33	1	4	€	49,000.00	IT	Party do not stop	ES	MSCA	CSA
STOCKHOLMS STAD	3	SE110	1	4	€	3,436,590.57	SE	GrowSmarter	SC	Energy	IA
A YUNTAMIENTO DE DONOSTIA SAN SEBASTIAN	3	ES212	1	3	€	1,676,625.00	ES	REPLICATE	SC	Energy	IA
A YUNTAMIENTO DE MADRID	3	ES300	1	3	€	1,969,727.00	ES	CIVITAS ECCENTRIC	SC	Transport	IA
COMUNE DI PRATO	3	ITI15	1	3	€	1,845,480.00	IT	TCBL	IL	Nanotechnologies	IA
GEMEENTE EINDHOVEN	3	NL332	1	3	€	320,413.00	NL	R4E	SC	Energy	CSA
DIPUTACION DE GERONA	3	ES512	1	2	€	922,398.75	ES	BEenerGI	SC	Energy	CSA
LEFKOSIA MUNICIPALITY	3	CY000	1	2	€	113,875.00	CY	RISE	SEWP	SEWP	SGA-CSA
AERO KOMMUNE	3	DK031	1	1	€	2,880,075.38	DK	E-ferry	SC	Transport	IA
COMUNE DI CREMONA	3	ITC4A	1	1	€	424,525.00	IT	Urban_Wins	SC	Climate action	RIA
FREIE HANSESTADT BREMEN	3	DE501	1	1	€	524,593.75	DE	ELIPTIC	SC	Transport	RIA
PROVINCIA DI MATERA	3	ITF52	1	1	€	338,207.00	IT	FESTA	SC	Energy	CSA
REGION OF SOUTH MORA VIA	3	CZ064	1	1	€	1,829,000.00	CZ	SoMoPro 3	ES	MSCA	MSCA-COFUND-FP

Notes: elaborated by the Contractor, data are sourced from the CORDIS database. The LRAs whose name is indicated in *italic* & **bold** were interviewed for the qualitative assessment of LRAs' participation in H2020 (Part 3.2).

3.2 Qualitative aspects of participation

The information presented in this section is based on phone interviews carried out by the Contractor during February-March 2017. Interviews were addressed to pertinent stakeholders including LRAs, or agencies acting on behalf of LRAs, with one or more projects in H2020; National Contact Points; and representatives of the European institutions. Interviews were meant to provide qualitative information with the aim of widening the analysis of the participation of LRAs to H2020 beyond the figures gathered from the CORDIS database, in particular in terms of reasons and modalities of participation.

The pool of LRAs selected for interviews guarantees a multi-stakeholder approach as well as the coverage of the key features of H2020 participating organisations (e.g. country of origin, type of LRA, experience in H2020, experience in other EU programmes, role in the selected project), and of H2020 projects (e.g. part of the programme, type of action). In particular, five interviews were addressed to LRAs coordinating H2020 projects and seven to LRAs involved in consortia as partners. Coordinators were represented by different types of LRAs, namely two regions, a province, a municipality and a network of municipalities (Eurocities²⁴). The sample of the LRAs involved as partners includes two agencies acting on behalf of their regions (although South Moravia is a territory at NUTS3 level) and five municipalities with a heterogeneous background in terms of participation in R&I programmes (i.e. FP7 and H2020). One LRA, Budapaest Fovaros Onkormanyzata, and one agency, JIC - Zájmové Sdružení Právnických Osob, are from the newer MS.

Concerning the projects, all, with the exception of those of the agencies which focused on *Industrial Leadership*, are addressing the *Societal Challenges* priority, and eight of them responded to a call in 'Secure, clean and efficient energy'. On the types of action, CSA prevail (5), while RIA and IA are more or less equally represented, the exception again being with the agencies which implemented one ERA-NET and one FPA (EEN-SGA, Enterprise Europe Network – Specific Grant Agreement). Table 9 illustrates the pool of interviewed LRAs and agencies. Table 10 illustrates the features of the H2020 projects of the interviewed LRAs which were the focus of part of the individual interviews. Among the other stakeholders interviewed are two H2020 National Contact Points, namely the Dutch H2020 NCP for 'Climate action, environment, resource efficiency and raw materials', and the Romanian NCP for 'Nanotechnologies, advanced materials and advanced manufacturing and processing'; and two representatives of the European institutions, namely the

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²⁴ EUROCITIES is a network which brings together the local governments of over 130 of Europe's largest cities and 40 partner cities.

Project Manager of the Stairways to Excellence (S2E) project, and the Head of Unit for 'Safeguarding Secure Society' of the Research Executive Agency (REA).

Table 9. Characteristics of the interviewed LRAs and agencies, including Eurocities

Interviewed as	Interviewed LRA	Country	NUTS level	Number of projects in H2020	Coordinator in H2020	Participant in FP7	Coordinator in FP7	Acronym of the selected project
Coordinator	Regione Lazio (Lazio Region)	IT	2	3	yes	yes	no	SCREEN
Coordinator	Regione Liguria (Liguria Region)	IT	2	3	yes	yes	no	EnerSHIFT
Coordinator	Diputacion de Girona (Province of Girona)	ES	3	2	yes	no	no	BEenerGI
Coordinator	Stockholms Stad (City of Stockholm)	SE	3	3	yes	yes	no	GrowSmarter
Coordinator	Eurocities*	BE	Network of cities	7	yes	yes	yes	GuiDanCe
Partner	Budapaest Fovaros Onkormanyzata (City of Budapest)	HU	3	1	no	no	no	CEPPI 2
Partner	Magistrat der Stadt Wien (City of Wien)	AT	3	3	no	yes	no	Not to be disclosed
Partner	Municipio de Cascais (Municpality of Cascais)	PT	3	1	no	no	no	THERMOS
Partner	Roma Capitale (Municpality of Rome)	IT	3	4	no	yes	no	CITYLAB
Partner	Stadt Frankfurt am Main der Magistrat (City of Frankfurt)	DE	3	1	no	no	no	HOTMAPS
Partner	Agency acting on behalf of a spanish region (Spanish agency)	ES	Agency of a region (2)	7	no	yes	no	Not to be disclosed
Partner	JIC - Zajmove Sdruzeni Pravnickych Osob (South Moravian Innovation Centre)	CZ	Agency of a region (3)	3	yes	yes	yes	BISONet PLUS ENH

Source: CORDIS database and approved minutes of the phone interviews carried out by the Contractor.

Table 10. Characteristics of the H2020 projects of the interviewed LRAs and agencies, including Eurocities

Title	Acronomym	Part of H2020	Theme	Type of action	Project period	Interviewed LRA
Sinergic Circular Economy across European Regions	SCREEN	Societal challenges	Climate Action, Environment, Resource efficiency and Raw Materials	CSA	01/11/2016 31/10/2018	Regione Lazio
Energy Social Housing Innovative Financing tender	EnerSHIFT	Societal challenges	Secure, clean and efficient energy	CSA	01/10/ 2016 30/09/ 2020	Regione Liguria
Bundling sustainable energy investments for Girona's municipalities	BEenerGI	Societal challenges	Secure, clean and efficient energy	CSA	01/04/ 2015 - 31/03/ 2018	Diputacion de Girona
GrowSmarter	GrowSmarter	Societal challenges	Secure, clean and efficient energy	IA	01/01/2015- 31/12/2019	Stockholms Stad
Support the coordination of cities' activities via the Green Digital Charter	GuiDanCe	Societal challenges	Secure, clean and efficient energy	CSA	01/03/ 2015 - 28/02/ 2018	Eurocities
Coordinated energy-related PPIs actions for cities (CEPPI)	CEPPI 2	Societal challenges	Secure, clean and efficient energy	CSA	01/04/ 2015 - 31/03/ 2018	Budapaest Fovaros Onkormanyzata
Not to be disclosed	n.a.	Societal challenges	Secure, clean and efficient energy	IA	n.a.	Magistrat der Stadt Wien
Thermal energy resource modelling and optimisation system	THERMOS	Societal challenges	Secure, clean and efficient energy	RIA	01/10/ 2016 30/09/ 2019	Municipio de Cascais
City Logistics in Living Laboratories	CYTYLAB	Societal challenges	Smart, Green and Integrated Transport	RIA	01/05/ 2015 - 30/04/ 2018	Roma Capitale
Heating and cooling: open source tool for mapping and planning of energy systems	HOTMAPS	Societal challenges	Secure, clean and efficient energy	RIA	01/10/ 2016 30/09/ 2020	Stadt Frankfurt am Main der Magistrat
Not to be disclosed	n.a.	Industrial Leadership	Leadership in Enabling and Industrial Technologies - Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology	ERA- NET- Cofund	n.a.	Agency acting on behalf of a Spanish region
Business Innovation Support Network for the Czech Republic – Enhancing the innovation management capacities of SMEs by EEN in 2015-2016	BISONet PLUS ENH	Industrial Leadership	Innovation in SMEs	EEN- SGA	01/01/ 2015 - 31/12/ 2016	JIC, Zajmove Sdruzeni Pravnickych Osob (South Moravia)

Source: CORDIS database and approved minutes of the phone interviews carried out by the Contractor.

In total, sixteen (16) interviews were carried out by the Contractor. The summary of the main findings of the interviews are reported in Annex 1. In the following paragraphs, the analytical review of such findings with some preliminary conclusions is presented.

► Key relevance of appropriate human resources

Almost all the interviewed LRAs report the existence of a 'department' (also intended as an informal group of allocated resources) to coordinate and support the activities of internal offices which autonomously apply for EU-funded projects (i.e. not only H2020) according to their interest in a specific topic. The size of the 'department' ranges from one person to larger offices with articulated organisational charts. The role of the LEAR (see Box 1) is usually taken by one of the staff of this department. Two exceptions to this situation were reported by the Stadt Frankfurt am Main der Magistrat and the agency acting on behalf of a Spanish region (hereafter referred to as 'Spanish agency'), as in both there are no human resources formally in charge for applying and managing EU-funded projects. Project coordinators, regardless of the fact of being a region or a municipality, appear to be better organised than partners from this point of view. In terms of organisational structure, different approaches are adopted: some rely only on internal resources while others also use (in parallel or in addition) external public organisations (i.e. agencies) with experience in the management of EU-funded projects (this dual approach is adopted, for example, by the Regione Lazio). In general, from the most to the less structured LRA, concerns on the lack of human resources in quantitative and qualitative (i.e. with the adequate skills) terms were raised with respect to dealing with H2020 applications and projects. Some interviewees underlined the fact that the existence of a 'department' implies the formal adoption of a strategy by the concerned LRA which has positive effects in terms of efficiency and effectiveness. A proper organisational structure also seems to be a key feature for successful agencies/bodies participating in H2020 (Box 5).

Box 5. A best practice in the organisational structure for participating in H2020

The Research and Innovation Management Support Office (RIMS) was established in the Cyprus Institute (a non-governmental research and educational institution devoted to the social goal of achieving prosperity in the territory through science and technology) as a single administrative support structure overviewing all projects carried out by the institute. The RIMS team includes 7 persons among which are project managers with scientific background and thematic competences/tasks (e.g. participation in ERA-NET, application to H2020 calls, leveraging of structural funds including the implementation of synergies). The RIMS is the operative instrument of the Cyprus Institute for making the H2020 participation strategy concrete. Continuity over the different rounds of the programme is the key element. During the S2E event the Scientific Coordinator of the Cyprus Institute

mentioned that "the bulk of the work is done between calls". This approach allowed the institute to get FP7 funding per researcher 11 times the EU average.

Source: Evidence gathered by the Contractor during the S2E event.

▶ Importance of previous experience in EU-funded projects

All the respondents confirmed the involvement of their LRAs in previous EUfunded projects. Experience in territorial cooperation programmes, with an emphasis on INTERREG, appears to be a shared condition. This is not the case for FP7. Diputació de Girona, Budapaest Fovaros Onkormanyzata, Municipio de Cascais and Stadt Frankfurt am Main der Magistrat do not have previous experience in FP7 and hence are considered 'newcomers' in H2020²⁵. Consequently, participation in the previous framework programme does not seem to be a 'precondition' for success in H2020. Other programmes commonly participated in by the respondents include Erasmus+ (Roma Capitale, Municipio de Cascais and the Spanish agency), EaSI (Roma Capitale, Magistrat der Stadt Wien and Eurocities), KICs (Climate-KIC by the Stadt Frankfurt am Main der Magistrat and Budapaest Fovaros Onkormanyzata; and Raw Materials-KIC by Roma Capitale) and COSME (JIC - Zájmové Sdružení Právnických Osob and the Spanish agency).

► LRAs' priority is in addressing Societal Challenges

Interviews clearly highlighted the preference of LRAs for H2020 Pillar III 'Societal Challenges'. Most of the reported experiences relate to 'Secure, clean and efficient energy', 'Climate action, environment, resource efficiency and raw materials', 'Smart green and integrated transport', and 'Health, demographic change and wellbeing'. Within Pillar II (Industrial Leadership) interviewees indicated experience in 'Leadership in enabling and industrial technologies' (in Information and Communication Technologies) and 'Innovation in SMEs'. The latter was indicated in particular by the interviewed agencies. Pillar I (Excellent **Science**) was only addressed by *Municipio de Cascais* in particular with a MSCA. Eurocities reported that, among its members, preferences in terms of Societal Challenges relate to 'Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy', 'Europe in a changing world – Inclusive, innovative and reflective societies', and 'Secure societies – Protecting freedom and security of Europe and its citizens'. The indepth quantitative analysis carried out in Part 3.1 confirms that most of the participations of LRAs concern 'Secure, clean and efficient energy' (32.3%),

²⁵ For further details on participation of newcomers in H2020 reference is to the Horizon 2020 Monitoring Report 2015 (EC-DG RTD, 2016).

'Smart green and integrated transport' (18.1), 'Climate action, environment, resource efficiency and raw materials' (13.8%) and 'Health, demographic change and wellbeing' (13.0%).

► LRAs' preference is for grants among the funding options of H2020

Both quantitative and qualitative analyses confirm the LRAs' **preference for grants in collaborative projects**. Moreover, among the actions for collaborative grants (i.e. RIA, IA and CSA), CSA are the most preferred and demanded (i.e. *Regione Lazio* proposed a wider and most effective adoption of CSA in H2020 topics). According to the Romanian NCP, the choice of LRAs for grants rather than for co-funding actions is determined by the contingent situation of public budgets' shrinking that does not allow LRAs to benefit from a critical mass of joint funds.

► Evidence of few differences of roles according to the coordinator or partner status, and of many similarities

With reference to the classification of roles outlined in Part 2 of the study (contributors, facilitators, and beneficiaries), interviewed LRAs were asked which role they took up in the participated H2020 project(s). Evidence shows that there are some differences in taken up roles according to the LRA's status of coordinator or partner. Coordinators take the lead in seeking out synergies between different funding instruments (contributor role) and also in supporting the involvement of regional stakeholders and in pursuing a more holistic governance approach for RDI (facilitator role). Regarding the other roles, coordinators and partners seem to be quite aligned.

By acting as *contributors*, most of the LRAs reported being actively engaged in projects' consortia. As *beneficiaries*, with regard to the possibility of having an effective interaction with NCPs, the majority of the respondents (all with the exception of *Regione Liguria* and of the *Diputació de Girona*) reported that they did not interact with NCPs as they do not seem to be aware of the support they could receive. From the perspective of the NCPs interviewed, they confirmed that LRAs' information needs were not addressed in a targeted way. Furthermore, NCPs also appear to have very limited information on the LRAs which are actually participating in H2020. The case of the Netherlands (disclosed during the interview) where NCPs are expected to specifically target the participation of LRAs in H2020 in the future, as a consequence of having recognised their added value, reveals that this aspect of a more constructive interaction with NCPs may have an important role in enhancing the participation of LRAs in H2020. In particular, NCPs may increase LRAs' application rate to

the H2020 programme, making LRAs more aware and more informed about H2020 opportunities, as well as more networked with relevant stakeholders.

Finally, the most heterogeneous replies were received in terms of *facilitators*. The absence of systematic behaviours in facilitating functions demonstrates that there is room for improvement in key areas such as implementation of a coaching/mentoring role with respect to lesser-known but competent partners from research-lagging regions, and facilitation of the transfer to, or adoption by, SMEs of R&I results. Regarding the focus on SMEs involvement, the two agencies (i.e. *JIC - Zájmové Sdružení Právnických Osob* and the Spanish agency) clearly adopted a facilitator role within H2020 as their mission: specific instruments were adopted to pursue this objective, the ERA-NET (by the Spanish agency acting at regional level) and the EEN-SGA (by the *JIC - Zájmové Sdružení Právnických Osob*) (Box 6).

Box 6. A direct support to SMEs linking to H2020

The Enterprise Europe Network (EEN), launched in 2008 by the EC, is co-financed by COSME (Competitiveness of Small and Medium-sized Enterprises) and runs under H2020 with a total budget of EUR 2.3 billion for the programming period 2014-2020. Almost 3,000 experts across 600 member organisations (e.g. chambers of commerce, technology transfer centres, research institutes) in more than 60 countries, provide support and services (partnership, advisory, etc.) to SMEs through EEN local contact points. The goal of supporting SMEs to innovate and grow internationally is achieved through the provision of international business expertise at the territorial level. Among the innovation support services, network experts provide "advice and help for innovative SMEs to access R&I funding (e.g. H2020, SME Instrument)".

Source: **EEN** website.

Regarding the tasks that LRAs have to deal with while participating in H2020 projects, reported ones differ greatly among respondents. The only commonality is found among coordinators since, unsurprisingly, they all pointed to coordination and project management as their main tasks.

► Reasons behind the decision of participating as coordinator or partner

Among the different reasons outlined by the respondents to justify their participation in H2020 as coordinators, two LRAs mentioned their institutional responsibility (e.g. in the area addressed by the project, as is the case of *Regione Liguria* and its responsibility for social housing policy management). Three respondents conveyed the idea that participating as coordinator was favourably affecting their policy role at the territorial but also EU level, as well as their

awareness of currently debated issues Europe-wide (as in the case of *Regione Lazio* in the domain concerning circular economy). In general, the coordinator role is sought to keep control of the implementation of the project; to gain visibility and, possibly, a pivotal role at the EU level in the area addressed by the project; to better exploit the created opportunities of multilevel collaboration; and to improve project management skills. All interviewed coordinators participated in H2020 on their own initiative.

Project partners' decision to participate was mainly (all cases but two – the *Municipio de Cascais* and the Spanish agency) the result of being invited to join a consortium by coordinators or by a belonging network. Among the reasons for participating, it is worthwhile to highlight the alignment of the topic(s) addressed by the H2020 project with the working agenda of the concerned local authority or with the existing RIS3. In terms of benefits, partners mostly pointed to the opportunity to exploit the results of the projects within their territory.

► Heterogeneity of factors fostering/hampering LRAs participation in H2020

There is a common awareness among the LRAs interviewed of the advantages implied by the participation in H2020. The majority of the respondents stated that the **factors fostering participation** are mainly related to the presence of areas in the programme which are relevant to the needs of the LRAs; to the financial support made available through the H2020 project for LRAs activities; to the opportunities provided for by the H2020 programme such as visibility and funding of activities otherwise not supported nationally; and to the gains of valuable knowledge from the project partners.

Regarding **hampering factors**, almost all respondents pointed to limited inhouse human resources for applying to H2020 and/or for managing H2020 projects. Other factors mentioned include: application requirements are cumbersome; there is no support during the submission stage (versus the support that may be received before the call is open); there is no longer direct contact with officials in the Directorate-General of reference; allocated budget shares within the consortium are limited for LRAs; other funding sources provide for more advantageous conditions, for example in terms of reimbursement level of eligible costs; the impossibility of achieving synergies with other funds; the difficulty in finding project partners; and other practicalities such as problems with the PIC number. Additionally, in general it is felt that the success rate of H2020 is low especially for collaborative projects, making the effort to apply much higher than the expected benefits or even discouraging the attempt. However, the perception of this aspect is different if less common instruments are considered. The Spanish agency, for example, outlined that competition in

instruments such as ERA-NET is much lower than in grants, while according to the opinion of the Romanian NCP, LRAs in newer MS may have a higher success rate than other types of organisations. This could be due to the fact that they are becoming aware of the value they add in specific topics and are often in a position to choose which consortium to join and hence have the possibility of selecting the most promising one.

3.3 Evidence on synergies between Horizon 2020 and ESIF

According to the EC guide on the accomplishment of synergies between different funds and programmes, synergies are essentially meant to "achieve greater impact [of investments] and efficiency" (EC-DG REGIO, 2014). They do not only imply the combination of ESIF and H2020 funds in the same project but also relate to the coordinated use of funds in sequential projects which build on each other, or in concurrent projects which complement each other. When a sequence is envisaged, ESIF may be used upstream to facilitate participation in H2020, or downstream to follow up on the outcomes of H2020 projects with dissemination and exploitation activities. Furthermore, the EC guide also indicates the use of ESIF to support unfunded quality proposals submitted to H2020 as a form of synergy.

This section investigates the progress made so far in exploiting the synergies between Horizon 2020 and ESIF by LRAs. First, this implies the outline of the **most common functions** LRAs may take up at the different levels. Apart from the regulatory level which is normally under the competence of the EC and of the Member States (MS), the creation of synergies by LRAs is pursued at the levels of awareness/information, governance/programming, and implementation (project level). Second, the potential **critical aspects** faced by LRAs in successfully fulfilling these functions are described. Finally, according to the reviewed evidence, **possible ways to avoid drawbacks** and increase the synergies' rate of achievement are suggested. Some of these suggestions are then further developed under Part 4 'Recommendations' of the study.

The analysis is framed within on-going institutional initiatives undertaken by the EC to raise awareness on and enhance the use of synergies. In fact, among the evidence used are also the conclusions of the 'Stairway to Excellence' (S2E) project²⁶ managed by the Joint Research Centre – Institute for Prospective

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²⁶ The S2E projects in its first phase aimed at assisting the Member States which joined the Union from 2004 onwards in closing the innovation gap, in particular through the implementation of RIS3 enhancing the use of innovation funding available under the ESIF. In its second phase, starting in March 2017, the project activities will be extended to all the EU28 countries (as announced on the S2E event on March 8, 2017).

Technological Studies (JRC-IPTS), in particular those presented at two conferences, one held in October 2014 at the launching of the project (JRC – IPTS, 2014) and one held in March 2017 (this last event was attended by a representative of the Contractor). Other relevant evidence includes the results of a recent study on synergies commissioned by the European Parliament (EP, 2016) and the feedback received by the Contractor through the undertaken interviews.

3.3.1 Awareness level

Function of LRAs	Critical aspects
Understanding the synergies' opportunities provided for by the concerned programmes and appreciating their added value.	 Lack of sufficient information. Lack of capacity. Rigid mind-set towards change. Insufficiently proactive NCPs in divulging the potential opportunities of synergies. Insufficient liaison with national/regional ESIF managing authorities. "Lack of consensus among policy makers about the role of national R&I systems and ESIF R&I funding as a contributor to overall EU global competitiveness."
	Evidence

- At the launching conference of the S2E project, it was concluded that the importance of synergies is understood by relevant stakeholders. However, it was also underlined that synergies would benefit from ESIF managing authorities having "a better understanding of FP/Horizon 2020 and the NCPs a better knowledge of the regional funding" (JRC-IPTS, 2014).
- The above conclusion on the general understanding by relevant stakeholders of the importance of synergies is rather optimistic if compared to the findings of the interviews carried out within this study. Some of the respondents, in fact, stated that they did not foster synergies simply because they were not aware of the possibility of doing so. Other respondents highlighted the fact that a 'theoretical understanding' of the potential of creating synergies between funds in a pre-application phase does not correspond to a 'practical understanding' of the fostering of synergies at the project design level when the call for proposals is open and institutional

²⁷ Slides of the Deputy State Secretary, Director of the Department of Higher Education, Science and Innovation, Ministry of Education and Science of the Republic of Latvia at the S2E event on synergies held in Brussels on March 8, 2017.

- decisions need to be made. Therefore, some of the respondents were aware at the programming stage of the value added by synergies, then failed to proceed further because of other complexities or because they faced a lot of operational issues in the implementation process.
- On a better mutual understanding between NCPs and ESIF managing authorities, the event 'Aligning implementation of RIS3 and H2020 funding across research priorities' held in Brussels on March 9, 2017, was specifically aimed at initiating the exchange of best practices and at fostering cooperation between NCPs and regional/national authorities managing the ESIF on the issue of synergies. The event is an example of the type of intervention needed at the institutional level to improve liaison among relevant actors.

Suggestions:

- NCPs-led **awareness campaigns on the potentiality of synergies** (for example, to complement otherwise insufficient public funding) could raise the necessary awareness among public authorities on the opportunities implied by the synergistic process.
- LRAs having an interest in creating synergies need to **be exposed to ongoing institutional efforts** made to spread a synergies' culture. The Project Manager of S2E, when interviewed, revealed that the scope of the S2E pilot will be extended in the near future to cover all the 28 EU countries. This may indeed open new awareness opportunities for those LRAs belonging to the MS not currently covered by the S2E pilot (i.e. the older MS).
- More and more evidence needs to be gathered and shared among LRAs. DG RTD recently (2016) published a document showcasing examples of synergies between R&I framework programmes and ESIF. This evidence-based initiative contributes to enhancing both awareness and understanding of the operationalization of synergies at the programming and project level. The CoR may contribute to this process by further disseminating this and similar compilation(s) of examples as well as by inviting its members to submit additional good practices for sharing to DG RTD (RTD-SYNERGIES-STUDY@ec.europa.eu).
- Some of the services of the Commission (e.g. EASME the Executive Agency for SMEs) provide relevant support towards the understanding of synergies but, as observed by one of the interviewees, this is often limited to a pre-application phase. Mechanisms which do not affect competition but still allow the **provision of support to applicants while calls are open** may

facilitate the practical (vs. theoretical) understanding of the ways synergies may be fostered.

3.3.2 Governance & Programming level

Function of LRAs	Critical aspects
Being committed to the process.	 Unwillingness to disclose or share information (creating the so called 'silo effect'). Resistance to change within administrations which is impeding the fulfilment of new requirements in the management and programming of funds or in the implementation of open governance reaching several actors and levels.
Running the entrepreneurial discovery process (EDP).	The innovation system is not mature enough to implement an EDP which implies interaction, participation, and contribution. As a consequence, the quality of the smart specialisation strategy which should be developed on the basis of the EDP does not meet expectations.
Improving the regional innovation system.	Lack of participation by innovation actors (e.g. industry, academia, business) or limited connection among them.
Developing well-thought policy/programme frameworks where the combination of funds is tackled in a strategic manner.	 Strategic approaches (e.g. RIS3, innovation partnerships, EIT-KICs) do not provide a satisfactory framework for coordinated investment in R&I. "Lack of distinction between ESIF R&I measures targeted at small scale regional/local level and those contributing to tackle grand societal challenges (international collaboration/EU importance)."28

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²⁸ Slides of the Deputy State Secretary, Director of the Department of Higher Education, Science and Innovation, Ministry of Education and Science of the Republic of Latvia at the S2E event on synergies held in Brussels on March 8, 2017.

Being informed on whom among the regional stakeholders is participating in H2020 projects and on any successful output achieved in terms of R&I.

Unawareness by LRAs of successful results achieved by territorial stakeholders prevents the pursuit of sequential synergies.

Evidence

- Findings from the S2E underline that a 'silo thinking' approach persists at the institutional level which hampers the implementation of synergies. There is a need for improved coordination and networking, in particular between those dealing with regional development on one side, and the scientific and research community (both within the academic world and the industry) on the other side.
- The same silo mentality is underlined by a recent study on synergies commissioned by the European Parliament (EP, 2016). Silo mentality at the governance level was found to divide policy objectives and EU funds according to traditional criteria (e.g. according to the competences of individual departments) rather than to a 'synergistic logic'.

Suggestions:

- Well-prepared R&I strategies at the territorial level are a natural driver of synergies. Continuing to encourage the registering and participation in the S3 platform and initiatives is essential, especially with a view to modify/update such strategies to take synergies into account.
- 'Silo thinking' and 'silo effect' may be overcome by **improving communication flows and data/information sharing**. Regarding participation in H2020, this applies to: 1) flows from NCPs to regional managing authorities (e.g. on information related to regional stakeholders participating in H2020 and to results); 2) communication within the concerned LRA between different units/departments/offices (i.e. internal communication flows).
- Strengthening the implementation of innovative partnerships and/or collaboration models such as the 4Ps or TH/QH approaches or building the capacity of innovation actors such as SMEs may facilitate the running of the EDP.

3.3.3 Implementation level

Function of LRAs	Critical aspects			
Aligning programmes.	H2020 and ESIF-funded Operational Programmes do not have the same participation rules, eligibility criteria, implementation procedures, and timeframes. In addition, H2020 projects often gather participants from different countries while ESIF do not allow the granting of funding over a certain threshold to stakeholders outside the region. Cross-border initiatives would also require the alignment of Operational Programmes among regions which are used to collaborating or which have similar priorities in the RIS3.			
Overcoming a silo- based approach to management and implementation	Governance structures may not be flexible enough to avoid a silo-based approach while dealing in practice with EU funding.			
Defining mechanisms to practically adopt good practices by the public sector	Most of the existing good practices on the creation of synergies between H2020 and ESIF do not involve public authorities. Public administration operational rules may hamper the transfer or pose at risk an effective adoption of good practices which are, or may become, available.			
Evidence				

Evidence

- The EP study (2016) underlines that the operational stage of synergies is generally lagging behind as much more attention has so far been put on the pursuit of synergies in programming rather than in practice.
- The Project Manager of the S2E pilot, when interviewed by the Contractor, confirmed that a lot of work still needs to be done in terms of implementation practice. Even the most immediate and currently fostered form of synergy, i.e. the funding of quality research proposals left unfunded by H2020 and being given the 'Seal of Excellence'29, may be difficult for public authorities to implement because of the procurement rules applying for the allocation of structural funds.
- Similar feedback, pointing to procurement and State aid rules as

²⁹ The Seal of Excellence is a quality label awarded by the EC to those proposals submitted to the Horizon 2020 SME Instrument which passed all the selection and award criteria but did not receive funding due to budget constraints. The label is meant to highlight those SMEs-led projects which deserve alternative funding.

bottlenecks to the implementation of synergies, was given by a respondent during the interviews conducted within this study as well as at the S2E event on synergies held on March 8, 2017 (i.e. slides presented by the Deputy State Secretary, Director of the Department of Higher Education, Science and Innovation, Ministry of Education and Science of the Republic of Latvia; and slides presented by Deputy Head of Research Policy Department, Ministry of Education and Research, Estonia).

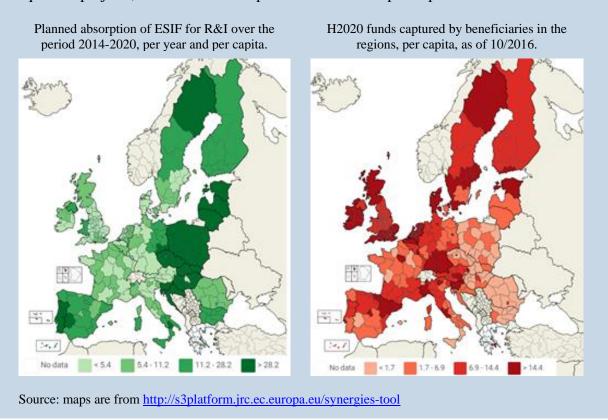
Suggestions:

- For synergies to be possible, overlapping areas need to be created between H2020 and ESIF Operational Programmes, for example, in terms of joint calls or joint work programmes, as far as this is feasible (EP, 2016). In line with this suggestion, the Project Manager of S2E, when interviewed, revealed that the S2E may in the near future focus on the operational implementation of synergies on the basis of 'thematic specialisation' between H2020 and RIS3.
- To make the creation of synergies a common practice, the limited number of good practices existing so far needs to be disseminated and shared as much as possible in order to become a practical guide to implementation for LRAs sharing similar situations and strategic priorities. This also applies to successful examples of governance systems/models which may facilitate the practical pursuit of synergies by public authorities.
- Apart from the role of NCPs in disseminating information on successful R&I projects, other centralised (i.e. at the EU level) mechanisms of information-sharing could contribute to the take up at the territorial level of project results, supporting the creation of sequential synergies.

The Project Manager of S2E confirmed during the interview that the extent of synergies may not be measured in quantitative terms. The S2E pilot, in its effort to build successful synergies in target countries and regions (but not necessarily targeting LRAs), shows that a wide range of information needs to be gathered, read and concurrently interpreted to find ways to enhance the use of funds at the territorial level. This information includes economic and funds-related data as well the analysis of concerned stakeholders, of knowledge flows, and of collaboration axes. When synergies are achieved, because of the complexity of the synergistic process, they appear to represent rather unique cases, hence hardly replicable in different contexts.

Box 5. Adequate absorption of funds: a necessary but not sufficient condition to create synergies

The level of absorption of ESIF and H2020 funds for R&I activities indicates whether there are the necessary conditions for seeking synergies, i.e. the availability of a critical mass of funds. The overview of the absorption level of ESIF and H2020 funds at NUTS2 level is given in the maps below. The maps are from the S2E project, in particular from the 'R&I Regional Viewer' tool containing data both on the planned allocation of ESIF to R&I in the current MFF, and on the captured H2020 funds by stakeholders in the regions. Denmark is an example of a MS having low per capita allocation of ESIF funds for R&I (light green, in the map on the left) and high per capita funds captured from H2020 (dark red, in the map on the right). Danish LRAs are theoretically representing the case where the lack of a critical mass of structural funds prevents the fostering of synergies. Poland is in the opposite situation, with high per capita allocation of ESIF funds for R&I (dark green, map on the left) and low or very low per capita funds captured from H2020 (light red, in the map on the right). In this case, even if not all the forms of synergies are apparently possible, structural funds could theoretically be used to create synergies in sequential projects, i.e. use the ESIF upstream to facilitate participation in H2020.



On the complexity of the synergistic process, other findings from the interviews point to the fact that the seeking of synergies is usually avoided if alternative types of funds for R&I (e.g. national, private) are easily available and of an adequate size. One respondent underlined the fact that where the structural funds' allocation does not reach a sufficient critical mass, it is not worth fostering synergies. Additional evidence from recent literature reveals that those regions which capture a relevant amount of H2020 funds (actually higher than

the amounts available through the ESIF) are rarely interested in fostering synergies (EP, 2016). In general, it seems that when easier or ampler access to a type of funding is available, synergies and the complexity they imply are not fostered by LRAs. Box 5 visualises the level of absorption of ESIF and H2020 funds at the regional level (NUTS2).

Part 4: Recommendations

According to the evidence collected and analysed in the previous parts of the study, there are several factors influencing the participation of LRAs in H2020, and aspects which are important but still immature in regards to the optimal way to address them (this is the case, for example, of the fostering of synergies between H2020 and ESIF). Because of this multiplicity of variables, we considered it appropriate to outline two main best-practice scenarios (Box 6), one for the ideal profile of a LRA applying to H2020 programme, and one for the ideal profile of a LRAs participating in a H2020 project (in fact both scenarios may also apply to the next EU programme for R&I)

Box 6. Best practice scenarios for enhancing the participation of LRAs in H2020

application rate to H2020 programme

- 1. The LRA has in-house expertise for project proposal preparation (i.e. an ad-hoc department) or has put in place mechanisms for the mobilisation of external expertise (e.g. experts selected further to a public call for expression of interest, or agencies/bodies acting on behalf of the LRA).
- 2. The LRA is aware of the existence of opportunities within H2020 and of the programme's functioning modalities.
- 3. H2020 calls/topics are of interest to the LRA (e.g. coincide with the priorities of the RIS3).
- 4. The LRA belongs to formal/informal networks which may provide the necessary scientific excellence and/or industrial partnership and/or aggregation opportunities.
- 5. Proposed types of action in H2020 suit the LRA capacity to contribute in R&I projects.
- 6. The LRA has benefits deriving from the participation in H2020 and a general strategy of direct exploitation of such benefits (e.g. funding part of a larger and on-going initiative).

Ideal LRA's profile for enhancing **LRAs'** Ideal LRA's profile for enhancing the quality of LRAs' involvement in H2020 projects

- 1. There are **dedicated resources** within the public authority (staff/department) for the management of the different aspects of the H2020 project, and these resources liaise as necessary with the in-house people who have the technical expertise in the domain of the project.
- 2. The LRA holds the legal power and the administrative competences field(s) addressed by the H2020 project.
- 3. The topic of the project is among the priorities fostered by the authority (e.g. through the RIS3, in case of a region), or fits within its working agenda (e.g. in case of a municipality).
- 4. The LRA has well-established relationship with the project's partners, for example due to belonging to shared networks.
- 5. The LRA's role in the project is coherent to its needs and implies an active participation.
- 6. The LRA is motivated (e.g. because of its institutional responsibilities) and capable because of previous project (e.g. experience) to have a key or even leading role (e.g. performing as coordinator) in the project in order to multiply benefits.

Source: Elaborated by the Contractor

Recommendations on the enhancement of R&I programmes' accessibility to LRAs are given versus the two best practice scenarios outlined above. Consequently, they distinguish between a **macro perspective** (i.e. overcoming the **reasons for not applying** to the H2020 **programme**) and a **micro perspective** (i.e. overcoming the **reasons hampering an effective contribution** to H2020 **projects**). Each recommendation further distinguishes, among other aspects, the target type of LRA, the concerned themes or parts of H2020, the stakeholders involved, the justification versus the evidence collected throughout the research, and the resulting policy suggestion or practical proposal. When suggestions or proposals suit particularly well those LRAs having legal powers in key policy areas, this is underlined under the thematic focus heading. In practice, recommendations are meant to define the conditions for applicants to be more successful and for implementers to be more effective, not only in H2020 but also in the future framework programme for R&I.

4.1 Overcoming the reasons for LRAs for not applying to the H2020 programme

REC 01 – Recognition of the value LRAs may add in specific H2020 topics

Required action to: NCPs (especially those of the newer MS) and LRAs (especially those of the newer MS).

Target LRAs: municipalities and regions and their agencies/bodies in the newer MS; municipalities and regions and their agencies/bodies already having experience in other EU-funded programmes (including FP7 and territorial cooperation).

Other stakeholders to be involved: universities, industry, cross-border entities.

Thematic focus: energy, transport, climate actions, health and those themes of interest for LRAs as a consequence of having the legal power to follow up on project's results within their territories (i.e. more likely to be LRAs from AT, BE, DE, ES, FI, IT, PT and UK – Division of Powers website) and/or have project experience in.

Expected benefits: increase the inclusion of LRAs in projects' consortia as invited partners (i.e. pulling effect); increase the number of LRAs' participations from the newer Member States.

Background

LRAs may contribute importantly to the quality of the proposal offering within the consortium unique features such as the capacity to function as real test-beds or labs during implementation or to exploit results with their practical application (e.g. adoption of a sensor network developed and applied during an innovation action). In fact, there is evidence that LRAs having previous experience in R&I programmes are commonly contacted by those interested in presenting a proposal and invited to join the consortium. In particular, even though the geographical balance is no longer an eligibility criterion as it was in FP7, the search for partners (usually made by coordinators) is *de facto* addressed to organisations from the newer MS as this is still considered to add value to the scope of the research and to the innovation idea. According to the interviewed Romanian NCP, Romanian territorial authorities are aware of this situation and are often in the position to select which consortium to join. Against this 'potential demand' by consortia there is a 'limited offer' from territorial authorities, as on average and with respect to university and research institutions, LRAs, in line with their institutional role, network less and do not necessarily develop a 'global' mindset which involves regularly opening up to new opportunities, developments, and contacts.

Practical proposal

NCPs shall create informal (i.e. direct contact/involvement by topic of interest) and formal (e.g. specific sessions for LRAs in the info days by theme organised at the European level) networking opportunities aimed at information sharing between LRAs and potential partners/coordinators of consortia. This would tackle the twofold aim of: i) increasing LRAs' awareness of their added value in H2020 projects, as perceived by the other stakeholders; and ii) coupling LRAs with active players in H2020, hence facilitating the matching of the demand by consortia.

REC 02 - Set up of in-house 'participation in H2020 strategy' by LRAs

Required action to: LRAs.

Target LRAs: all, of any size, and, in particular, municipalities and regions already having experience in other EU-funded programmes (including FP7 and territorial cooperation).

Other stakeholders to be involved: external expertise, agencies/bodies acting on behalf of LRAs, regional or national authorities.

Thematic focus: all themes, independent from the legal and administrative power of the LRA.

Expected benefits: LRAs put forward more H2020 proposals hence increasing the possibility of participating in the programme as a result of an increased awareness regarding interesting themes/opportunities within H2020, and of an increased capacity of partners' search and of proposals' writing (i.e. pushing effect).

Background

There is evidence that participation by LRAs in H2020 is often achieved as a consequence of one or more of the following: 1) a strong political will to exploit the benefits deriving from H2020, including the ones related to visibility and reputation; 2) the presence of staff/structures (e.g. departments) within the LRAs dedicated to the screening of H2020 opportunities and the preparation of the application, including looking for partners and (contributing to the) writing the proposal; and 3) the expertise gained in other EU-funded programmes. However, the political will or ambition of the concerned LRA is the leading driver which is, importantly, independent from the size of the authority.

Policy suggestion

Regardless of the size, if there is a clear political will within a LRA to participate in H2020, a strategy which fits the LRA's structure and resources needs to be designed and implemented. As a starting point, the strategy may foster participation as a partner, hence implying the creation of relevant contacts and the initiation of networking with entities potentially having a 'pull effect' or fostering the same or similar scope on common thematic priorities. The sharing of thematic commonalities has the potential to establish a bulk of partners over a period of time which keep on cooperating on new proposals (i.e. the so-called "chain of projects", Idea Consult, 2009).

REC 03 – Provision of administrative assistance to LRAs

Required action to: EC services.

Target LRAs: all.

Other stakeholders to be involved: agencies/bodies acting on behalf of LRAs.

Thematic focus: all themes, independent from the legal and administrative power of the LRA.

Expected benefits: higher quality of submitted proposals with an increased success rate of LRAs in applying to H2020.

Background

There is evidence of the crucial role advising services at the EC level may have in avoiding mistakes in the administrative sections of the proposal and in enhancing, overall, the quality of the proposed project, for example in terms of conceptualisation of the fostering of synergies between H2020 and other funds.

Policy suggestion

The informal consultations with EC officers in charge of specific topics which were taking place in FP7 at the time calls were open have been stopped with H2020. Advice services related to administrative issues and the most appropriate procedures should be made available not only before calls are published but also during the application stage. Mechanisms which do not affect competition should be thought of by the Commission. These mechanisms, for example, could imply that the office/personnel providing advice within the EC services are totally disentangled from the office/personnel who are involved in the assessment of proposals in order to avoid any conflict of interest, while leaving open the possibility for applicants to get advice when it is practically needed.

REC 04 – Giving NCPs a clear mandate to target LRAs

Required action to: national authorities, NCPs

Target LRAs: all.

Other stakeholders to be involved: representatives of LRAs, networks or associations.

Thematic focus: those themes the NCPs focus upon.

Expected benefits: increased national scope of LRAs participation in H2020; increased awareness by LRAs of implicit and explicit opportunities for participation.

Background

Each country has its own organisational structure for NCPs. In fact, the way NCPs are organised and operate is a prerogative of the national level. Notwithstanding these differences, the interviews with a Dutch NCP and with a Romanian NCP provided some common evidence: both NCPs had little awareness of the level of participation and success in H2020 of the LRAs of their countries, and both had no actions specifically targeted to LRAs.

Policy suggestion

National authorities shall consider assessing the organisational structure of H2020 NCPs to understand if such a structure allows an even access by all stakeholders to the contact points or if a 'silo effect' occurs somewhere (i.e. the information from the contact points reach only some categories of stakeholders). In addition, if formally required, the mandate of NCPs should clearly include a reach out task with respect to all stakeholders potentially having an interest in applying to H2020, including territorial public authorities and in particular local authorities. To this regard, a reach out activity tailored to the needs of LRAs could be the identification by each NCP, within their WPs of thematic

competence, of those topics where the implicit and explicit participation of LRAs is requested.

REC 05 – Creation of shared knowledge and expertise environments at the territorial level

Required action to: regional or national authorities/entities.

Target LRAs: small-sized LRAs.

Other stakeholders to be involved: university, research entities, networks, platforms which may help in the aggregation task (e.g. EGTCs), industrial players, large-sized LRAs.

Thematic focus: themes which are of broad interest and may respond to common challenges faced by LRAs (e.g. energy, transport, climate change, health), independently from their legal and/or administrative power in the said themes.

Expected benefits: increased number of small-sized LRAs applying to H2020. LRAs not having the in-house capacity to apply to H2020 may rely on shared resources.

Background

Within small administrations (e.g. some municipalities), limited human resources and skills (e.g. language) may imply a lack of capacity to participate in H2020. To this regard, H2020 seems to be addressed only to large and articulated entities (e.g. regions, agencies, ministries). The example of the *Diputació de Girona* indicates that regional/provincial authorities may have an aggregating role with respect to local authorities.

Practical proposal

A modified form of the 'mentoring role' as envisaged by the CoR is suggested. If in the original version the driver of aggregation between two public authorities is 'scientific excellence' or 'experience in H2020' (i.e. renowned or experienced stakeholders bring in qualified but unknown/inexperienced partners from research-lagging territories), in the proposed version of mentoring/coaching the driver is the 'reaching of economies of scale', i.e. structured entities at the regional or national level create consortia of small entities so that these small entities have capacities and skills available within the consortia which may not exist in-house for size and/or budget constraints.

REC 06 – Extending to more topics those H2020 actions which better tailor the needs of LRAs: the case of the Coordination and Support Actions (CSA)

Required action to: 1) Directorate-Generals leading the preparation stage of H2020 WPs and all those stakeholders participating to the process and to the selection of the topics to be prioritised in the WPs; 2) Institutional actors contributing to the design of the future FP for R&I (e.g. national delegates of the H2020 Committees).

Target LRAs: all.

Other stakeholders to be involved: formal and informal networks at the European level.

Thematic focus: themes which are of broad interest and may respond to common challenges faced by LRAs (e.g. energy, transport, climate change, health), independently from their legal and/or administrative power in the said themes.

Expected benefits: increased number of LRAs applying to one or more specific types of action in H2020.

Background

According to the R&I results expected, one or more types of action are envisaged for each topic. The involvement of LRAs has natural constraints when most of the activities for a topic are essentially related to scientific research of frontier (i.e. Research and Innovation Actions - RIA) or to the creation of products/services for the market uptake (e.g. Innovation Actions - IA). Instead, actions aimed, for example, at exchanging practices for their harmonisation at the EU level, at disseminating and promoting knowledge transfer, and at favouring the policy dialogue, fit better with the 'core' needs of a LRA. The evidence collected in the qualitative and quantitative analyses of this study confirms the preference of LRAs for CSA. Such preference is outweighed by RIA only when LRAs are represented in projects by external agencies/bodies.

Policy suggestion

As stated by the Regione Lazio "a larger number of CSAs, that de facto are horizontal actions aimed at reinforcing ecosystem exploiting R&I activities through knowledge transfer, will surely increase the interest of a LRA in participating in H2020". At the same time, in order to avoid misuse of these actions, they should be designed to achieve more ambitious results. In addition, an effective approach to assess their impact would be necessary. This approach could, for example, be based on an indicator of implementation/impact to be proposed and demonstrated in the proposal by the applicants, mirroring the experience of IA of the Technology Readiness Level - TRL.

REC 07 – The coverage of thematic domains of evident interest to LRAs is effectively communicated: the case of agriculture and rural development

Required action to: 1) Directorate-Generals leading the preparation stage of H2020 WPs and all those stakeholders participating to the process and to the selection of the topics to be prioritised in the WPs; 2) Institutional actors contributing to the design of the future FP for R&I (e.g. national delegates of the H2020 Committees); 3) NCPs for communicating to relevant stakeholders, including LRAs in rural areas, the existence of opportunities in H2020.

Target LRAs: LRAs of predominantly rural areas; regional authorities having included the so called Operational Groups for the introduction of innovation in agriculture in their EAFRD Operational Programmes.

Other stakeholders to be involved: SMEs in the field of agriculture; research and academic institutions.

Thematic focus: food security, sustainable agriculture and forestry, marine, maritime and inland water research and the bioeconomy. It is the rurality of a LRA in this case that determines participation.

Expected benefits: quantitative increase of the participation in H2020 of those LRAs committed to the development of an agricultural knowledge and innovation system.

Background

According to the data from CORDIS analysed within this study, agriculture and rural development appear to be neglected as thematic areas addressed by LRAs while participating in H2020. Nonetheless, there is evidence of an interest at the territorial level to innovate in agriculture, as the European Innovation Partnership for Agricultural Productivity and Sustainability (EIP-AGRI) has been taken up in 26 Member States and by the majority (95 out of 118) of the Rural Development Programmes for 2014-2020 (EP, 2016). The recent evaluation of the EIP-AGRI was very positive on the future of this partnership mechanism and highlighted the importance of linking the EIP-AGRI with H2020 for the achievement of synergies and economies of scale (Coffey et al., 2016). Such linkage may in fact result, among other side-effects, in the mobilisation of funds for R&I through the EAFRD; in the provision of a follow up funding possibility to the Operational Group projects once the EIP-AGRI support is completed; and in the scaling up to the EU level and across borders of the practices fine-tuned at the territorial level within the EIP-AGRI. The H2020 WP 2016-2017 on 'Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy' reflects the importance of linking up to the EIP-AGRI. Nevertheless, this importance has apparently not been captured by territorial stakeholders.

Policy suggestion

Relevant stakeholders at the institutional level shall consider the introduction in the H2020 WPs, as well as in future FPs, of themes which are of proven interest to LRAs and build upon initiatives which are evidently successful as in the case of the EIP-AGRI. The EIP-AGRI is considered a bridge between research and practice and represents a strong vehicle towards the creation of agricultural knowledge and innovation systems. The same level of attention, at the institutional level, shall be paid in passing the message of the existence of these opportunities in H2020 to relevant stakeholders, i.e. LRAs in predominantly rural areas in this specific case.

4.2 Overcoming the reasons hampering an effective contribution of LRAs in H2020 projects

REC 08 – Identification within LRAs of the appropriate organisational and cultural model for managing H2020 projects

Required action to: LRAs.

Target LRAs: all LRAs with different organisational structures.

Other stakeholders to be involved: agencies/bodies acting on the behalf of LRAs in H2020 projects.

Thematic focus: not applicable.

Expected benefits: improvement of the efficiency of the project management function.

Background

Different organisational models can be adopted by LRAs to participate in/manage H2020 projects. These may range from one-person structures to larger offices with articulated organisational charts. Delegating the management to publicly owned agencies/bodies acting on behalf of the LRAs in specific areas of intervention such as energy (i.e. outsourcing of the management phase), especially in the case of regions, is also a viable alternative. The quantitative analysis of the LRAs' participations in H2020 has demonstrated that these 'external entities' are a common practice in Spain, Italy, and the UK.

Practical proposal

As in every organisation, LRAs which participate in a H2020 project shall define a management plan outlining the human resources to be dedicated to administrative and scientific/technical activities. An essential condition for the

effective management of a H2020 project is the joint involvement of the staff in charge of administrative and scientific/technical issues. In addition, LRAs face cultural and financial challenges. In order to avoid the project tasks being considered a burden, since they are out of the core activities normally performed, incentives and the creation of a new mindset about the need to gain knowledge and raise funds for the benefit of the administered territory, are essential conditions. The experience from different LRAs (e.g. *Stadt Frankfurt am Main der Magistrat, Roma Capitale*) demonstrates that overloaded human resources, even only in the application phase, easily get discouraged when dealing with activities connected to H2020, especially if some of the previous applications failed.

REC 09 – Assessment and valorisation of the contribution in research of the LRAs in H2020 projects: the case of 'big data'

Required action to: LRAs.

Target LRAs: all LRAs (especially regions).

Other stakeholders to be involved: agencies/bodies acting on behalf of the concerned LRAs, universities, research centres, industrial partners, SMEs.

Thematic focus: all themes, independently from the legal and administrative power of the LRA.

Expected benefits: improvement of the effectiveness of the contribution of the LRAs to the research activities of the consortium.

Background

Regions are requested to define S3 in order to boost the socio-economic growth of their territories through R&I. Cities are called to address the new challenges of the urbanisation process following the concept of Smart Cities. In both cases, public authorities collect a large amount of information on society and on the lives of citizens, as well as on socio-economic activities. These 'big data' may determine in very clear and crucial terms an adding value contribution from the concerned LRA to the R&I activities to be performed in a H2020 project.

Practical proposal

The assessment and valorisation of the strategic information as LRA's 'assets' that may potentially be used in H2020 projects are crucial in determining a proper allocation of effort and budget to the public authority. In addition, making these 'big data' available through the involvement of the LRA in H2020 projects may generate benefits in terms of positive externalities and economies of scale. For example, the information shared by the *Stadt Frankfurt am Main der Magistrat* (as project partner) with the HotMaps (RIA) research partners allows the city authorities of Frankfurt to map the heating and cooling energy

situation, including renewable and waste heat, and to take measures for improving energy efficiency. Since most of the outcomes of H2020 projects are available to the general public, data collection and mining for research purposes within the project also contribute to make Open Science a reality.

REC 10 – Valorisation of the function of exploitation of innovation results of the H2020 project at the territorial level

Required action to: 1) Directorate-Generals leading the preparation stage of H2020 WPs and all those stakeholders participating to the process and to the definition of selection criteria for the topics; 2) Institutional actors contributing to the design of the future FP for R&I (e.g. national delegates of the H2020 Committees).

Target LRAs: all LRAs (especially cities) having the legal and administrative power to concretely follow up within their territories on H2020 results.

Other stakeholders to be involved: agencies/bodies acting on behalf of the concerned LRAs, universities, research centres, industrial partners, SMEs.

Thematic focus: any theme which is of interest to the concerned LRA, provided that the LRA has the legal and administrative power to follow up the exploitation of innovation outcomes (i.e. more likely to be LRAs from AT, BE, DE, ES, FI, IT, PT and UK – Division of Powers website).

Expected benefits: improvement of the effectiveness of the exploitation of innovation outcomes of the project by the LRAs.

Background

Cities are the natural test-beds for validating innovative solutions addressing societal challenges or for testing new technologies aimed at improving the quality of life of citizens. There are examples of projects where the exploitation of an innovation output is not necessarily linked to the presence of business partners within the consortium which are given the task of bringing the results of the research to the market in the form of a product with an economic value.

Practical proposal

Exploitation of innovation output should move from the concept of a product with an economic value on the market to the concept of a service with a social value for citizens. The valorisation of the function LRAs may take up in exploiting the innovation results of a H2020 project is an aspect which may enhance the role and contribution of the concerned LRA to a H2020 project.

4.3 Cross-cutting proposals

The below proposals have a cross-cutting nature because they target both an increased number of applications of LRAs to the H2020 programme and an enhanced participation of LRAs in H2020 projects.

REC 11– Enhancing the facilitator function of LRAs

Required action to: regional authorities, associations - or similar - of LRAs, networks/platforms participated by LRAs.

Target LRAs: all those LRAs suffering from low visibility but having either the competence or the assets (e.g. big data) to concretely contribute to a H2020 project.

Other stakeholders to be involved: industry, SMEs.

Thematic focus: all themes, independently from the legal and administrative power of the LRA.

Expected benefits: less visible LRAs are supported to access the H2020 programme; improvement of the impact of the participation of LRAs in H2020 projects.

Background

According to the evidence collected through the interviews, there are no systematic behaviours across LRAs with regard to the functions of facilitators. This is indeed an indication that there is room for improvement in this sense. There are two key areas where efforts should be focused: the implementation of a coaching/mentoring role on the part of some LRAs with respect to lesser-known but competent LRAs from research-lagging regions; and the facilitation of the transfer to, or adoption by, SMEs of R&I results achieved within a H2020 project.

Policy suggestion

The set-up by networks and/or associations of LRAs of a sort of coalition working towards a numerical target of participation of LRAs in H2020 could prove useful in creating a pulling effect from renowned LRAs towards less visible but eager (and competent) to participate LRAs. On the other hand, the pulling effect of LRAs with respect to SMEs is a direct consequence of the implementation of innovative partnerships and/or collaboration models such as the 4Ps or TH/QH approaches.

REC 12 – A shared EU capacity building initiative in H2020 for LRAs

Required action to: European institutions (in particular the European Commission, the Research Executive Agency, the European Committee of the Regions), European networks/associations of LRAs.

Target LRAs: all.

Other stakeholders to be involved: NCPs, national authorities.

Thematic focus: all themes, independently from the legal and administrative power of the LRA.

Expected benefits: improved LRAs' capacity to access the H2020 programme; improved LRAs' capacity to manage H2020 projects.

Background

There is evidence for the need of capacity building for LRAs to improve their ability to both apply to the H2020 programme and enhance their contribution to the H2020 projects in which they participate. Info days on H2020 are already organised by theme, but they are not specifically addressed to LRAs. The lack of this focus implies that LRAs are hardly attending these events. As specified by the representative of the REA during the interview, LRAs lack awareness about their potential opportunities in H2020. To ensure participation and reach out of a shared capacity building initiative, tailored mechanisms need to be found. The on-going initiative of the CoR 'EU budget and funding for regions and cities - a free open online course (MOOC)' (started on October 31, 2016) is an example of suitable training targeted to LRAs. The MOOC allows participants to take part in networking activities on social media, in thematic groups on the online eLearning platform, as well as in person by attending live debates in Brussels. The CoR has also co-promoted initiatives aimed at sharing information between LRAs and R&I actors in a structured way. These include the Knowledge Exchange Platform (KEP), organised with DG RTD and focusing on specific themes each year (energy and public sector innovation in 2017); the pilot conference 'Science meets Regions' aimed at bringing together European regional authorities and scientists; and the 'Innovation camps', organised together with JRC and aimed at finding solutions to societal challenges in a creative and innovative way.

Policy suggestion

In order to implement a shared capacity building initiative at the EU level, it would be advisable to rely on the reach out capacity of already established networks of LRAs (e.g. Eurocities) and/or on European institutions (e.g. JRC). Structured information sharing and training should be tailored to needs, as derived from the analysis of the factors hampering and fostering application by LRAs to H2020 programme and participation of LRAs in H2020 projects.

Examples of reach out approaches and initiatives tailored to the needs of LRAs are available and should be used and/or replicated as necessary.

Annex 1 – Interviews: summary of the main findings

Interviews with LRAs and their agencies/bodies acting as coordinators in H2020 projects

Regione Lazio (Lazio Region)(IT)

NUTS code: ITI4

Type of LRA: Region

Position of the respondent: Director of the Area for Research, Innovation, Economic Development Infrastructures and Green Economy

Project acronym, title and period: SCREEN - Synergic Circular Economy across European Regions (01/11/2016-31/10/2018)

Budget: Total cost: EUR 1 771 865; EU contribution: EUR 1 742 747,50

Keywords of the project (max 7): Circular economy; Common rules; Operational synergies

Project website: -

Part of the H2020, call and topic: Societal Challenges - H2020-CIRC-2016 OneStage - CIRC-03-2016 - Smart Specialisation for systemic ecoinnovation/circular economy

Type of action: CSA - Coordination and Support Action

Role of the LRA in the project: Coordinator

- Participation in EU-funded projects is guaranteed through a **dual approach** in terms of organisation strategy: i) there is an **internal office** within the Regione Lazio in charge of application to and management of EU-funded projects, and ii) there are **agencies/bodies** (i.e. Lazio Innova, BIC Lazio) mainly owned by the *Regione Lazio* whose aim is to support the Region in exploiting the opportunities provided for by European funds.
- Difficulties in combining rules applying to H2020 and ESIF have to be considered the main barrier (at the governance/programming level) for the implementation of synergies. The certification of quality given by the 'Seal of Excellence' is formally not enough to directly assign funds to SMEs given the transparency procedures needed to be respected by public administrations in allocating structural funds.
- The key factor fostering *Regione Lazio* to participate to H2020 is the "*Presence of areas/topics which are relevant to the needs of my LRA*". For H2020 a "*prudent*" **approach** to participation is followed and only project ideas with strategic relevance for the Region are tackled. *Regione Lazio*

focuses its effort mainly on programmes more directly addressed to territorial cooperation (e.g. INTERREG). The coordination role in the SCREEN project was a direct consequence of the strategy of the Region to gain a strong position in Europe in the emerging topic of the circular economy.

• An increase of Coordination and Support Actions (CSA) across topics may contribute to foster participation of LRAs in H2020 and in future R&I Framework Programmes.

Source: Minutes of the phone interview carried out by the Contractor on 22/02/2017. Validated.

Regione Liguria (Liguria Region)(IT)

NUTS code: ITC3

Type of LRA: Region

Position of the respondent: The respondent opted for not disclosing his/her position

Project acronym, title and period: EnerSHIFT - Energy Social Housing Innovative Financing Tender (01/02/2016-31/01/2019)

Budget: Total cost: EUR 967 687,50; EU contribution: EUR 967 687,50

Keywords of the project (max 7): Social housing buildings; Energy consumption; Innovative financial schemes

Project website: https://enershift.eu/

Part of the H2020, call and topic: Societal Challenges - H2020-EE-2015-4-PDA - EE-20-2015 - Project development assistance for innovative bankable and aggregated sustainable energy investment schemes and projects

Type of action: CSA - Coordination and Support Action

Role of the LRA in the project: Coordinator

- Being in charge of managing a **Project Development Assistance and of guaranteeing the leverage of the investment on the territory** (1:15) synergies between different programmes are essential. **Incompatibilities in terms of timing, procedures and reporting** are the main obstacles to their implementation.
- Application period (when a call is open) is quite short to take decisions about project application for a regional authority, given the complexity of the decision-making process. Additionally, support from the Contracting Authority is no longer available.
- The role of coordinator was taken by the *Regione Liguria* because the scope of the project to improve the quality of social housing buildings was matching one of its institutional responsibilities, i.e. **social housing policy.**

In addition, the coordinating experience improved project management skills, set the basis for involvement in other European projects and created multilevel collaboration structures able to function beyond the project.

- Administrative obligations of a public body such as the rules for procurement (e.g. publication of different kind of tenders for the selection of suppliers) are sometimes an excessive burden compared to the benefits implied by participating to projects.
- The **complexity of H2020** is a hampering factor for smaller LRAs because of the effort required in understanding/choosing the topics. Actually, H2020 seems to be more suitable for entities of large size such as agencies, regions, ministries etc. which have at their disposal more resources than, for example, municipalities.

Source: Minutes of the phone interview carried out by the Contractor on 08/02/2017. Validated.

Diputacion de Girona (Province of Girona) (ES)

NUTS code: ES512

Type of LRA: Province

Position of the respondent: Project manager

Project acronym, title and period: BEenerGI - Bundling sustainable energy investments for GIrona's municipalities (01/04/2015 – 31/03/2018)

Budget: Total cost: EUR 1 024 887,50; EU contribution: EUR 922 398,75

Keywords of the project (max 7): Sustainable energy investments; New funding scheme; Capacity building; Municipalities

Project website: http://beenergi.ddgi.cat

Part of the H2020, call and topic: Societal Challenges - H2020-EE-2014-4-PDA - EE-20-2014 - Project development assistance for innovative bankable and aggregated sustainable energy investment schemes and projects

Type of action: CSA - Coordination and Support Action

Role of the LRA in the project: Coordinator

- Attempts to create **synergies** between H2020 and ESIF (i.e. ERDF) are ongoing in the BEenerGI project. Difficulties arose for the **incompatibility** concerning some specific conditions of the two types of funds (e.g. difficult to adapt contract models for accessing financing investments by third parties).
- Girona decided to coordinate the project because **the municipalities which signed the Covenant of Mayors needed a coordinator on the territory** able to support them to improve energy efficiency. The project currently

- involves 72 municipalities out of the 205 that signed the Covenant of Mayors.
- Horizon 2020 is a good opportunity for the public administrations but information coming from the National Contact Points is not enough to create the awareness in the LRAs concerning the role they could play in H2020.

Source: Minutes of phone interview carried out by the Contractor on 06/02/2017. Validated.

Stockholms Stad (City of Stockholm) (SE)

NUTS code: SE010

Type of LRA: Municipality

Position of the respondent: The respondent opted for not disclosing his/her position

Project acronym, title and period: GrowSmarter - GrowSmarter (01/01/2015 – 31/12/2019)

Budget: Total cost: EUR 34 635 912,51; EU contribution: EUR 24 820 974,38

Keywords of the project (max 7): Quality of life; Efficient renewal; Integrated infrastructures; Sustainable urban mobility

Project website: www.grow-smarter.eu

Part of the H2020, call and topic: Societal Challenges - H2020-SCC-2014 - SCC-01-2014 - Smart Cities and Communities solutions integrating energy, transport, ICT sectors through lighthouse (large scale demonstration - first of the kind) projects

Type of action: IA - Innovation Action

Role of the LRA in the project: Coordinator

- There are different departments of the municipality which autonomously apply for EU-funded projects and there is also a person in a 'central' office whom is given the role of reference person for the municipality (i.e. the LEAR Legal Entity Appointed Representative in the case of H2020) and who is in charge to provide support for administrative aspects.
- **Synergies** were not targeted because of complexity of integrate structural funds with H2020. Stockholm City is "financially strong" and benefits of **cooperation with/support of private actors**.
- "Gains of valuable knowledge from the project partners" is the key factor fostering the participation of the City of Stockholm in H2020. Pilot projects are important for cities because they have concrete examples to take into consideration for potential application/usage.
- "Horizon 2020 project implementation rules are cumbersome for a LRA" is the factor mentioned as hampering the participation in H2020. The main

- problem concerns the bureaucracy and the related effort needed at the submission/application stage of H2020.
- A negative aspect of H2020 projects in general is related to **the lack of direct contact with the policy side of the DG of reference**. The main point of contact is the project officer and sometimes policy actions and concrete activities (i.e. those carried out in H2020 projects) are not connected.

Source: Minutes of the phone interview carried out by the Contractor on 07/02/2017. Validated.

EUROCITIES ASBL (BE)

NUTS code: BE100

Type of LRA: Network of Cities

Position of the respondent: Senior project coordinator

Project acronym, title and period: GuiDanCe - Support the coordination of cities' activities via the Green Digital Charter (01/03/2015 – 28/02/2018)

Budget: Total cost: EUR 603 687,50; EU contribution: EUR 499 750

Keywords of the project (max 7): Support cities' activities; Green Digital charter; Club of cities

Project website: www.greendigitalcharter.eu

Part of the H2020, call and topic: Societal Challenges - H2020-Adhoc-2014-20

- Energy - Energy

Type of action: CSA - Coordination and Support Action

Role of the LRA in the project: Coordinator

Main evidence collected through the interview

- The nature of the organisation (i.e. a network of cities) adds value to projects for the number of stakeholders involved. In fact, the GuiDanCe project is composed by a **single partner** where the role of coordinator was assumed by EUROCITIES.
- LRAs have still to change their mindset in order to participate in such a programme which is considered too much research-oriented.
- From the operational point of view, in H2020 the **submission procedure** can be entirely managed electronically, making the coordination effort during the proposal phase easier.

Source: Minutes of the phone interview carried out by the Contractor on 14/02/2017. Validated.

Interviews with LRAs and their agencies/bodies participating as partners in H2020 projects.

Budapest Fovaros Onkormanyzata (City of Budapest) (HU)

NUTS code: HU101

Type of LRA: Municipality

Position of the respondent: Head of Unit

Project acronym, title and period: CEPPI2 – Coordinated energy-related PPis actions for cities (CEPPI) (01/04/2015-31/03/2018)

Budget: Total cost: EUR 1 294 808; EU contribution: 1 294 808

Keywords of the project (max 7): Procurement approach; Build capacity;

Cities; Action learning process; Sustainable energy outcome

Project website: www.ceppi.eu

Part of the H2020, call and topic: Societal Challenges – H2020-EE-2014-3-MarketUptake - EE-08-2014 - Public procurement of innovative sustainable energy solutions

Type of action: CSA - Coordination and Support Action

Role of the LRA in the project: Partner

Main evidence collected through the interview

- The CEPPI2 project is built on a well-established **relationship developed between the five participating cities** (Birmingham, Budapest, Castellon, Valencia, and Wroclaw) through the **Climate KIC**.
- The city exploits mainly ERDF and CF. H2020 projects provide opportunities to demonstrate (innovative) solutions or methodologies and to leverage different types of funding such as private investments.
- The project idea was in line with the city's targets (i.e. to achieve energy efficiency, to reduce GHG emission etc.). Results of the project will serve in the decision-making process and will influence the future goals and working methods of the municipality.
- The CEPPI2 project was a good opportunity for capacity building and awareness raising.
- Administrative barriers were faced regarding the procedures for approving contracts. The approval procedure of the General Assembly of the City for each contract requires time that sometimes is not in line with the deadlines of a H2020 project.

Source: Minutes of the phone interview carried out by the Contractor on 17/03/2017. Validated.

Magistrat der Stadt Wien (City of Vienna) (AT)

NUTS code: AT130

Type of LRA: Municipality

Position of the respondent: The respondent opted for not disclosing his/her position

Project acronym, title and period: The respondent opted for not disclosing project information

Budget: The respondent opted for not disclosing project information

Keywords of the project (max 7): -

Project website: The respondent opted for not disclosing project information

Part of the H2020, call and topic: Societal Challenges - H2020-SCC-2015 SCC-01-2015 - Smart Cities and Communities solutions integrating energy,
transport, ICT sectors through lighthouse (large scale demonstration - first of
the kind) projects

Type of action: IA - Innovation Action Role of the LRA in the project: Partner

Main evidence collected through the interview

- One of the main factors hampering participation of the City to H2020 is "Success rates in Horizon 2020 are too low to be worth applying".
- **Interaction** with **NCPs** is usual for getting information on H2020 opportunities but support is not provided for the preparation of proposals.
- Involvement in the project was **by invitation**. The main expected benefit for the city is the **acquisition of knowledge** directly from the partners of the consortium and through lessons learned in other cities.

Source: Minutes of the phone interview carried out by the Contractor on 17/02/2017. Validated.

Municipio de Cascais (Municipality of Cascais) (PT)

NUTS code: PT170

Type of LRA: Municipality

Position of the respondent: Head of funding office; Project manager

Project acronym, title and period: THERMOS - THERMOS (Thermal Energy Resource Modelling and Optimisation System) (01/10/2016 – 30/09/2019)

Budget: Total cost: EUR 2 902 480; EU contribution: EUR 2 902 480

Keywords of the project (max 7): Tools; Energy system planning; Open-source software; Pilot Cities; Replicating partners

Project website: -

Part of the H2020, call and topic: Societal Challenges - H2020-EE-2016-RIA-IA - EE-05-2016 - Models and tools for heating and cooling mapping and

planning

Type of action: RIA - Research and Innovation Action

Role of the LRA in the project: Partner

Main evidence collected through the interview

- The municipality lacks **human resources to coordinate EU projects**. Such internal issue affects especially the proper exploitation of the project outcomes and continuity of the activities after the project closure.
- Participation in the THERMOS project was definitely considered as an added value for the municipality because it allows **transfer of innovative knowledge in operational solutions for energy efficiency** and it fits with the **working agenda** in terms of key actions of the municipality.
- Horizon 2020 is definitely a good opportunity for LRAs to get funds for the exploitation of innovative outcomes but something should be done to facilitate the participants (and among them LRAs) especially in the application process. For example, organisation of **training courses at local and at regional level** could be useful to arise both the awareness about the Horizon 2020 and knowledge on the rules on which are based both application and management of projects.

Source: Minutes of the phone interview carried out by the Contractor on 21/02/2017. Validated.

Roma Capitale (City of Rome)(IT)

NUTS code: ITI43

Type of LRA: Municipality

Position of the respondent: Head of the Funding Department of EU projects

Project acronym, title and period: CYTYLAB – City Logistics in Living Laboratories (01/05/2015-30/04/2018)

Budget: Total cost: EUR 3 979 998,13; EU contribution: EUR 3 979 998,13

Keywords of the project (max 7): Urban areas; Living laboratories; Urban waste; Logistic facilities

Project website: www.citylab-project.eu

Part of the H2020, call and topic: Societal Challenges - H2020-MG-2014_TwoStages - MG-5.2-2014 - Reducing impacts and costs of freight and service trips in urban areas

Type of action: RIA - Research and Innovation Action

Role of the LRA in the project: partner

Main evidence collected through the interview

- Roma Capitale is trying to target synergies but taking into account the **limited structural funds** available for the municipality, the effort is in **trying to seek for** synergies in Urban Mobility and Digital Agenda, both funded by the ERDF through the National Operational Programme Metropolitan Cities (PON, where the municipality of Rome is an Intermediate Body) and the Regional Operational Programme (POR) of Lazio Region.
- The participation in H2020 is considered a great opportunity for two reasons: i) it allows municipalities to work in a European competitive environment and "a gym in which reinforcing expertise", and ii) to remain at close contact with innovators and to directly benefit from them. Participation in H2020 for LRAs is favoured by the increasing number of opportunities addressed to cities (e.g. smart cities funding).
- The **administrative complexity** related to the different funds (e.g. LIFE+, H2020) is still high. Although there is a clear convergence in terms of the objectives and outcomes, the sets of rules for applying and managing projects are totally different, increasing difficulties for smaller LRAs.

Source: Minutes of the phone interview carried out by the Contractor on 23/02/2017. Validated.

Stadt Frankfurt am Main (City of Frankfurt am Main) (DE)

NUTS code: DE403

Type of LRA: Municipality

Position of the respondent: Deputy head

Project acronym, title and period: HotMaps - Heating and Cooling: Open Source Tool for Mapping and Planning of Energy Systems (01/10/2016 – 30/09/2020)

Budget: Total cost: EUR 2 996 870; EU contribution: EUR 2 332 803,75

Keywords of the project (max 7): Mapping heating and cooling energy; Software; Pilot

Project website: -

Part of the H2020, call and topic: Societal Challenges - H2020-EE-2016-RIA-IA - EE-05-2016 - Models and tools for heating and cooling mapping and planning

Type of action: RIA - Research and Innovation Action

Role of the LRA in the project: Partner

Main evidence collected through the interview

- Synergies are not exploited. Presence of national initiatives providing funds to municipalities for projects connected to environment and climate change and financial opportunities of the National Bank of Reconstruction (KfW) and of the NKI initiative of the Federal Government of Germany actually limit the need to seek for funds in huge research and innovation programmes such H2020 is.
- Interaction with the National Contact Points never occurred. The city has a large and long-lasting experience in EU-funds (e.g. Intelligent Energy).
- Applications to H2020 require effort and time. Limited budget usually allocated to municipalities and low success rate of the H2020 proposals pose at risk the convenience to participate for the LRAs.
- The general objective of the City is to increase energy efficiency and **different types of funds** are used to achieve it. For example, a project funded by the NKI is running in parallel to HotMaps.

Source: Minutes of the phone interview carried out by the Contractor on 16/02/2017. Validated.

Agency acting on behalf of a Spanish region (Spanish agency) (ES)

NUTS code: -

Type of LRA: Agency acting on behalf of a region (NUT2 level)

Position of the respondent: The respondent opted for not disclosing his/her position

Project acronym, title and period: The respondent opted for not disclosing project information

Budget: The respondent opted for not disclosing project information

Keywords of the project (max 7): -

Project website: The respondent opted for not disclosing project information

Part of the H2020, call and topic: Industrial Leadership - H2020-NMP-ERA-NET-2015 - NMP-14-2015 - ERA-NET on Materials (including Materials for Energy)

Type of action: ERA-NET Cofund

Role of the LRA in the project: Partner

Main evidence collected through the interview

• The application to ERA-NET is in line with the S3 and the agency acts as facilitator for the private companies of the territory allowing them to be part of an international competitive environment. Private companies in the region have facilitated access to European funds through calls for

- proposal at the local level. Competition is thus shifted from the application to the implementation phase.
- ERA-NET is considered to have a **higher success rate** than other types of funding opportunities where regional actors are competing as any other applicant.

Source: Minutes of the phone interview carried out by the Contractor on 09/03/2017. Validated.

JIC, Zajmove Sdruzeni Pravnickych Osob (South Moravian Innovation Centre)(CZ)

NUTS code: CZ064

Type of LRA: Agency acting on behalf of a region (NUT3 level)

Position of the respondent: -

Project acronym, title and period: BISONet PLUS ENH-Business Innovation Support Network for the Czech Republic – Enhancing the innovation management capacities of SMEs by EEN in 2015-2016 (01/01/2015-31/12/2016)

Budget: Total cost: EUR 319 330; EU contribution: 319 330

Keywords of the project (max 7): Innovation management capacity; SMEs; Internationalisation

Project website: http://www.enterprise-europe-network.cz/cs/informacni-servis/kam-eimc

Part of the H2020, call and topic: Industrial Leadership - H2020-Adhoc-2014-20 - INNOVATION - Enhancing the innovation management capacity of SMEs

Type of action: EEN-SGA

Role of the LRA in the project: Partner

- The agency **experimented synergies** with a scheme for SMEs related to the 'Seal of Excellence' under the SME-Instrument programme. In 2015, the agency launched the regional scheme 'SME-Instrument Brno' for SoE holders which received funding from the City of Brno.
- The agency is clearly pursuing a more holistic governance as facilitator, trying to achieve the best trade-off in terms of alignment with the RIS3 of the region, selection of proper calls in Horizon 2020 and assistance for SMEs containing both coaching and mentoring activities. Synergies have been implemented in practice through the establishment of four incubators funded with structural funds in which start-ups are now pursuing innovation activities carried out in H2020 projects

• The decision to participate in BISONet PLUS ENH project came as the natural consequence of the agency's activities within framework of the **Enterprise Europe Network (EEN)** and the agency's strategies which were perfectly in line with the call. The opportunity to widen experience on the same domain at the European level has positively affected the decision to participate. The project was considered also a way to receive funds to provide services for a larger number of SMEs in the region.

Source: Minutes of the phone interview carried out by the Contractor on 16/03/2017. Validated.

Interviews with Horizon 2020 National Contact Points

H2020 National Contact Point Netherlands (NL)

Specific Horizon 2020 NCP theme(s) of competence: Climate action, environment, resource efficiency and raw materials

Main evidence collected through the interview

- Participation of LRAs in Horizon 2020 is undoubtedly considered an added value for a consortium and for the project itself.
- No indications of the success rate of LRAs are available. In general, being LRAs mostly partners, their success rate depends on the quality of the coordinators and on the project idea itself.
- One of the main hampering factors concerning the LRAs participation in Horizon 2020 does not depend on parts/themes to which apply for, but on the lack of awareness about the opportunities offered by the programme. This is connected with the lack of the "right skilled-staff" within LRAs. De facto, this is the case of small municipalities. Especially in the Dutch case, participation of municipalities is fostered by: 1. the size of the municipality (e.g. Rotterdam and Amsterdam are active participants to H2020); 2. the presence of universities which support/involve them in the participation process.
- The involvement of LRAs in Horizon 2020 should be stimulated through dissemination of information and knowledge raising. The connection between H2020 National Contact Points, ESIF Managing Authorities and LRAs should be enhanced not only with regard to synergies but also to increase the awareness of territories about H2020 opportunities.

Source: Minutes of the phone interview carried out by the Contractor on 17/02/2017. Not Validated.

H2020 National Contact Point Romania (RO)

Specific Horizon 2020 NCP theme(s) of competence: Nanotechnologies, advanced materials and advanced manufacturing and processing

Main evidence collected through the interview

- No official statistical data are available to effectively have a perception of the **percentage of the LRAs** asking for NCPs support. A rough estimation for the field of 'Nanotechnologies, advanced materials and advanced manufacturing and processing', is around 3% of all the organisations addressing questions to the NCP.
- The Romanian LRAs success rate seems to be higher than the one of the other types of participants in H2020 in Romania. LRAs are considered partners adding value to the project and those with the capabilities to participate to H2020 projects are aware of it. This gives to the LRAs the opportunity to select for the best consortia and to reduce the risk of failure. On the other hand, the perception is that the application's success rate of Romanian LRAs is lower if compared with other Member States probably because of the lack of experience and awareness in H2020 (still) characterising Romanian LRAs.
- At the moment, **no specific strategies aiming at increasing the participation of the LRAs** in Horizon 2020 are implemented. This is because the Ministry of Research and Innovation, which is in charge to coordinate NCP assistance and guidance to H2020 treats all types of organisations (Public bodies, Private Companies, Research Institutes etc.) equally.
- In Romania, a key element of the dissemination of information on H2020 is **the network of the NCPs**. NCPs are referent persons/departments in the Ministry of Research and Innovation and are supported by experts (in universities and research centres) who are working on a voluntary basis. Additionally, the NCPs network is **integrated with the information points of the ESIF**. NCPs provide information on the ESIF and authorities in charge of managing structural funds inform also about the opportunities in H2020.

Source: Minutes of the phone interview carried out by the Contractor on 17/02/2017. **Validated.**

Interviews with officials of the <u>European Commission and other</u> European institutions

European Commission DG Joint Research Centre (JRC)

Name of the institution: European Commission, DG Joint Research Centre (JRC) - Growth and Innovation Directorate; Territorial Development Unit (B3)

Position of the respondent: Project Leader

Website of the institution: https://ec.europa.eu/jrc

Topic of interest: Synergies between H2020 and ESIF

Activities related to the topic of interest: Stairway to Excellence (S2E) project

Main evidence collected through the interview

- The so-called **Stairway to Excellence (S2E) project** (of the Territorial Development Unit JRC/B3 of the Growth and Innovation Directorate) focused its analytical and policy support during 2015/2016 on those **13 Member States who joined the European Union in 2004 and subsequent years** with tailored analyses at regional level and policy initiatives to mobilise R&I stakeholders in these countries. Starting from March 2017, activities of the S2E will be extended to all EU28 MS.
- Another project of the same JRC Unit RIS3 Support in Lagging Regions project targets Romania and low-growth and less developed regions in Greece, Italy, Portugal, Spain, Bulgaria, Hungary, and Poland. The main goal of this project is to provide concrete support to the implementation of RIS3 and to develop a cross-cutting approach to key issues regarding growth and governance in these regions.
- Synergies with ESIF are considered an important component also in the initiative 'Spreading Excellence & Widening Participation in Horizon 2020' addressed to Bulgaria, Croatia, Cyprus, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Luxembourg, Malta, Poland, Portugal, Romania, Slovakia and Slovenia, and Associated Countries.
- Given the legal novelties on synergies under the current MFF, there is no wide evidence of previous cases of synergies during the period 2007-2013. A selection of case studies is being/has been compiled by the S2E team.

Source: Minutes of the phone interview carried out by the Contractor on 16/02/2017. Validated.

European Commission – Research Executive Agency (REA)

Name of the institution: European Commission – Research Executive Agency (REA) - Safeguarding Secure Society Unit B4

Position of the respondent: Head of Unit

Website of the institution: https://ec.europa.eu/info/departments/research-executive-agency_en

Topic of interest: Administrative obstacles during H2020 project implementation and management

Activities related to the topic of interest: Responsibilities related to the theme 'Secure societies – Protecting freedom and security of Europe and its citizens' within *Societal Challenges* (SC7)

- The main obstacle hampering participation of municipalities and regions is the lack of the awareness of the roles that LRAs can have in research and innovation oriented projects. Internal staff of the LRAs is not usually skilled for applying and managing H2020 projects. In the application phase, for example, one of the first obstacle concerns the registration on the H2020 Participant Portal for the acquisition of the PIC number. In some cases of successful selection and awarding of the proposal, there is still a lack of knowledge of the process concerning the signature of the Grant Agreement.
- The misunderstanding of the potential role of LRAs in a specific call or in a specific topic is also due to the fact that **H2020 is promoted as a wide-scope research and innovation programme** and this "reputation" may scare smaller authorities such as LRAs.
- Within work programme 2016-2017 Secure societies Protecting freedom and security of Europe and its citizens topics related to issues of 'Disaster-resilience: safeguarding and securing society' (e.g. SEC-01-DRS-2016, SEC-02-DRS-2016) can be of a certain interest to LRAs. In many countries majors are the main authority for civil protection within the municipality. Municipalities have for sure to be included among the actors to be involved in crisis management issues and projects. Topics related to 'Fight against crime and Terrorism', 'Border Security and external security' and 'Critical infrastructure protection' may be addressed by LRAs as well, as they can be included in the **concept of practitioners**.
- The coordinator role itself is a challenge for LRAs. In general, they have not enough capacity (intended as endowment of human resources) to coordinate most of the funded H2020 projects. Usually, they participate as partners and are involved in the consortium by the coordinators that invite LRAs as practitioners/end-users. In most of the cases, coordinators themselves are taking care of directly solving issues related to LRAs'

- **involvement in a H2020 project** (even if this is not made explicit to REA). Such issues may include language barriers as well administrative burden.
- LRAs employ civil servants and aspects related to **double funding/payments** should be kept in mind when seeking the participation of LRAs in H2020. For example, formal issues arise when co-funding (also in kind) is requested.
- Information campaigns are crucial and should be tailored to the addressed stakeholders. In the case of the LRAs, such campaigns should be focused on the possible roles that can be covered by LRAs (e.g. providers of indications on needs and on requirements, validators) and on ways to seek for synergies between direct and indirect funds, matching the European perspective with local needs.
- Having direct contacts with potential consortia is not allowed. REA has the role to continuously inform about the research programmes and organise public events/occasions especially, but not only, at the European level to inform potential stakeholders of the opportunities of H2020 projects. A key role in this awareness raising action at national level is formally assigned to the National Contact Points.

Source: Minutes of the phone interview carried out by the Contractor on 09/03/2017. Validated.

Annex 2 – References

Committee of the Regions (2011a), Opinion CdR 230/2010 on 'Simplifying the implementation of the research framework programmes', adopted at the 88th plenary session, 27 and 28 January 2011, EDUC-V-006.

Committee of the Regions (2011b), Opinion CdR 67/2011 on 'Common Strategic Framework for EU Research and Innovation Funding', adopted at the 91st plenary session, 30 June-1 July 2011, EDUC-V-014.

Committee of the Regions (2012), Opinion CdR 402/2011 on 'Horizon 2020', adopted at the 96th plenary session, 18-19 July 2012, EDUC-V-021.

Committee of the Regions (2013), Opinion CdR 2414/2012 on 'Closing the innovation divide', adopted at the 101st plenary session, 30 May 2013, EDUC-V-031.

Coffey et al. (2016), Evaluation study of the implementation of the European Innovation Partnership for Agricultural Productivity and Sustainability – <u>summary leaflet</u>.

CORDIS data, downloadable from the EC website http://cordis.europa.eu/

European Commission (2012), Guide to Research and Innovation Strategies for Smart Specialisation (RIS 3), May 2012.

European Commission (2016), <u>Horizon 2020 Work Programme 2016 – 2017</u>. 20. General Annexes (European Commission Decision C(2016)4614 of 25 July 2016).

European Commission, Directorate-General for Regional and Urban policy (2014), Enabling synergies between European Structural and Investment Funds, Horizon 2020 and other research, innovation and competitiveness-related Union programmes - Guidance for policy-makers and implementing bodies, Luxembourg: Publications Office of the European Union.

European Commission, Directorate-General for Research and Innovation (2013), *Innovation Union - A pocket guide on a Europe 2020 initiative*

European Commission, Directorate-General for Research and Innovation (2016), <u>Horizon 2020 Monitoring Report 2015</u>, Publications Office of the European Union.

European Commission, Directorate-General for Research and Innovation (2016), <u>HORIZON 2020-Two years on</u>

European Commission, Directorate-General for Research and Innovation (2016), *EU Funds working together for jobs and growth: Synergies between the R&I Framework Programmes and the European Structural & Investment Funds*, Luxembourg: Publications Office of the European Union, 2016.

European Commission, Joint Research Centre-Institute for Prospective Technological Studies (2014), Synergies between EU R&I Funding Programmes. Policy Suggestions from the Launching Event of the Stairway to Excellence Project, S3 Policy Brief Series, No. 12/2014.

European Parliament (2016), <u>Research for REGI Committee – Maximisation of synergies between European Structural and Investment Funds and other EU instruments to attain Europe 2020 goals</u>, Directorate General for Internal Policies, Policy Department B: Structural and Cohesion Policies, Regional Development, Authors: Ferry M., Kah S., and Bachtler J.

Horizon 2020 website, https://ec.europa.eu/programmes/horizon2020/en

Horizon 2020 (2016), Questionnaire for the 'Public stakeholder consultation - Interim evaluation of Horizon 2020'

Idea Consult (2009), <u>Does Europe change R&D-behaviour? Assessing the behavioural additionality of the Sixth Framework Programme</u>

Regulation (EU) No 1291/2013 of the European Parliament and of the Council of 11 December 2013 establishing Horizon 2020 - the Framework Programme for Research and Innovation (2014-2020) and repealing Decision No 1982/2006/EC.