European Commission

EU Action for

SMART VILLAGES

Foreword

In early September 2016, more than 340 rural stakeholders gathered in Cork, Ireland and developed a vision for the future of EU rural areas. Under the heading "A Better Life in Rural Areas", the Cork Declaration 2.0 sets out the expectations and aspirations of rural areas. Among the priorities to be addressed, it calls for policies to pay particular attention to overcoming the digital divide between rural and urban areas and to develop the potential offered by connectivity and digitisation of rural areas. Emphasis was given to the need for integrated approaches and the interaction between different policy fields in view of increasing complementarity and coherence.

This is the purpose of this document – to launch reflections on villages of the future. It has been established jointly by our Directorates General and it is based on a shared vision of balanced development in the European regions and the need to provide growth perspectives to rural areas and villages. Smart Villages cannot be done in isolation and should be embedded in the wider development strategies for regions and territories. Strengthening the links between rural and urban areas is key to achieving our objectives.

Many of our policies, tools and instruments are already delivering valuable building blocks for smart villages which are referred to in this document. But in order to construct something solid and future-proof, we need more than just building blocks. We need strategic approaches which will help policy makers, stakeholders and project promoters on the ground to deliver results, taking into account the comparative strengths and needs of their respective territory. This is why we envisage a number of concrete actions, currently planned or underway, which will help further developing and delivering on such strategic frameworks to improve the implementation of EU policies in rural areas in this programming period.

For many people, rural areas are simply home - a place to live, work and raise families. Our rural communities need jobs, basic services, connectivity and smart transport solutions as well as a favourable climate for entrepreneurship. We must enable new types of business models to emerge, such as portal-based services, and assist existing rural businesses to connect, integrate and cooperate better with urban based business. Location of economic activity is linked to the recognition of the 'geographical capital' and other possible comparative advantages for specialisation or diversification. Intelligent logistics networks would allow villages to provide their products and services more efficiently on urban and global markets.

EU rural areas are places of great assets and they can become even more attractive if we enable local actors to unlock their potential. They provide indispensable contributions to solve many of the big societal challenges such as climate change or the sustainable provision of food, biomass and energy. Tourism and culture can stimulate employment and investment in rural areas. We must make the most of this potential and promote prosperity for the millions of rural citizens in the Union. It is our hope that this document will be a stepping stone to connecting our villages and countryside, and we invite stakeholders and policy makers to get involved and work with us, so together we can deliver on the promise of "A Better Life in Rural Areas".

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What is a Smart Village?

Smart Villages is a relatively new concept within the realm of EU policy making. The emerging concept of Smart Villages refers to rural areas and communities which build on their existing strengths and assets as well as on developing new opportunities. In Smart Villages traditional and new networks and services are enhanced by means of digital, telecommunication technologies, innovations and the better use of knowledge, for the benefit of inhabitants and businesses. Digital technologies and innovations may support quality of life, higher standard of living, public services for citizens, better use of resources, less impact on the environment, and new opportunities for rural value chains in terms of products and improved processes. The concept of Smart Villages does not propose a one-size-fits-all solution. It is territorially sensitive, based on the needs and potentials of the respective territory and strategy-led, supported by new or existing territorial strategies.

Technology is important as are investments in infrastructure, business development, human capital, capacity and community building. Good governance and citizens involvement is also key.

A Smart Village would typically pay attention to e-literacy skills, access to e-health and other basic services, innovative solutions for environmental concerns, circular economy application to agricultural waste, promotion of local products supported by technology and ICT, implementing and taking full benefit of smart specialisation agri-food projects, tourism and cultural activities, etc.

The concept of Smart Villages covers human settlements in rural areas as well as the surrounding landscapes.

How does the EU support Smart Villages?

Several EU policy areas and funds are actively promoting aspects of the development of Smart Villages.

The Common Agricultural Policy – Rural Development

The Common Agricultural Policy continues to be the most important EU policy intervening in the EU rural economy in terms of funding and the range of instruments. An important part of farmers' income depends on the CAP (direct support, market policy, and rural development policy). This has also important effects on the rural economy and the rural population.

Rural development policy (EAFRD) provides an ample toolbox for supporting the development of smart villages in rural areas. Based on integrated strategic approaches that reflect EU priorities as well as the needs of a territory, Rural Development Programmes support a mix of measures. These measures target rural business development, including the modernisation of farms, investments in small-scale local infrastructure and connectivity projects, village renewal, knowledge development, knowledge sharing, and bottom-up initiatives. Almost € 100 billion from the EU budget has been allocated to a total of 118 Rural Development programmes in the period 2014-2020.

Rural Development policy is also home to LEADER, a bottom-up approach to local development which is a vehicle for social innovation and capacity building, empowering rural citizens to take ownership of their area's development through the design and implementation of strategy and projects. In the period 2014-2020 the LEADER method was extended in scope and to other funds and policies to support Community Lead Local Development (CLLD).

A new element in rural development policy is the European Innovation Partnership for Agriculture (EIP-AGRI) which is designed to speed up innovation on the ground. Through networking activities and projects, the EIP-AGRI supports the development and dissemination of new knowledge, practices, processes and technologies in agri-food and forestry value chains.

The European Network for Rural Development is an EU-wide network, bringing together rural development actors (Managing Authorities, stakeholders, researchers, advisors, businesses, local authorities, LAGs etc.) in view of improving the quality of Rural Development Programmes and enhancing participation. A number of work streams under the ENRD relate to smart villages.

EU Cohesion Policy

Cohesion Policy for growth and jobs is implemented across the whole EU territory, both urban and rural areas, with a budget of € 352 billion in 2014-2020.

The financial support of the European Regional Development Fund (ERDF) and the Cohesion Fund (CF) is focused on Research and Innovation, ICT, SME competitiveness and Low Carbon Economy. These Funds also deliver important investment in the fields of environment, climate action, transport, poverty reduction and administrative capacity. There is a close cooperation with the European Social Fund.

Cohesion Policy is implemented through programmes at national, regional and local level, based on thorough thematic and territorial needs analysis and using integrated approach. Specific instruments and tools such as smart specialisation strategies, integrated territorial investment (ITI) and community-led local development (CLLD) allow to further target programme resources to territorial needs and to combine support from different sources and Funds. Cohesion Policy programmes and tools could foster Smart Villages.

Significant investment opportunities exist to foster urban-rural linkages. About € 15 billion ERDF are co-managed directly by about 700+ urban authorities in the framework of "Sustainable Urban Development", required also to take into account urban-rural linkages. About 10% relates to entities of less than 20 000 inhabitants. Therefore small towns and villages play an important role in ERDF support for sustainable urban development. 20 Member States are using the ITI tool at various territorial scales (neighbourhood, urban, metropolitan, sub-regional or regional level). 18 Member States apply CLLD, targeting different types of territories (rural/urban).

The large number of small towns involved in the implementation of the ERDF generates a need to invest in administrative capacity building and knowledge exchange. The Urban Development Network is set up especially for this. EU-wide, national and thematic events are organized for cities, with topics such as the development of integrated urban strategies.

Horizon 2020 – the 8th EU Framework Programme for Research and Innovation

The 2016-2017 Work Programme of the 8th EU framework programme for research and innovation, Horizon 2020, includes several elements that are relevant for the development of smart villages. Under Societal Challenge 2, a particular call on "rural renaissance" is closely linked to the development of the knowledge base for smart villages. The Transport Work Programme also delivers elements for smart villages.

Connecting Europe Facility and Trans-European Networks for Transport

The Connecting Europe Facility (CEF) funds targets infrastructure investment at European level. It supports the development of high performing, sustainable, and efficiently interconnected trans-European networks in the fields of transport, energy and digital services. CEF investments fill the missing links in Europe's energy, transport and digital backbone.

Planned Actions to promote Smart Villages

1. Thematic working group on Smart Rural Businesses

A thematic working group bringing together experts from academia, stakeholders, project managers and managing authorities from Member States and regions has been launched. It deals with issues connected to business development in rural areas including identification of best practices, lessons learned in terms of support mechanisms.

Implementation: European Network for Rural Development
Timing: *2016-2017*

2. Thematic working group on Smart Villages

A thematic working group bringing together experts from academia, stakeholders, rural municipalities associations, project managers and managing authorities from Member States and regions will be launched in the second half of 2017. It will identify best practices and lessons learned for public support for Smart Villages. Participants will be selected through an open call for interest on the webpage of the ENRD.

Implementation: European Network for Rural Development
Timing: 2nd half *2017*

3. Workshop on access to data and data platforms

The workshop will explore different data sharing models that would allow effective sharing of data – which is necessary for the sector to develop – while at the same time safeguarding the position of farmers and other SMEs in the value chain.

Implementation: European Innovation Partnership for Agriculture (EIP-AGRI)
Timing: April *2017*

4. Seminar on new data driven business development

Universities, research technology organisations, farmers, farmer's organisations, entrepreneurs, SMEs, start-ups, incubators, investors, EU regions and member states, innovation brokers, agriculture advisory services, EU networks and platforms will work on designing and/or developing ecosystems for the collaborative development of Digital Innovation Hubs in agriculture across Europe.

Implementation: European Innovation Partnership for Agriculture (EIP-AGRI)
Timing: June *2017*

5. Conference on innovation in agriculture and rural development

The conference is organised by the Portuguese authorities with the support of DG AGRI. The content has been enlarged to include discussions on innovation in general in relation to point 7 of the Cork 2.0 declaration. The conference will bring together project holders and authorities. The political part will discuss what current rural development policy can deliver for innovation and digitisation in agriculture and how this can be reinforced in the future.

Implementation: Portuguese Ministry of Agriculture and European Commission DG AGRI
Timing: October *2017*

6. Pilot project on Smart Eco-Social Villages

This pilot project was initiated by the European Parliament. It will explore characteristics of smart eco-social villages and identify best practices upon which decision makers and rural communities can build future development strategies. A specific focus will be connectivity and digital solutions.

Implementation: European Commission – DG AGRI
Timing: *2017-2018*

7. LEADER/CLLD

LEADER local development method has been used for 20 years to engage local actors in the design and delivery of strategies, decision-making, and resource allocation for the development of their rural areas. It is currently implemented by around 2 600 Local Action Groups (LAGs) under the EAFRD. In the 2014-2020 programming period the LEADER method has been extended under the broader term Community-Led Local Development (CLLD) to other ESI Funds, now covering the EMFF, ERDF and ESF. Under EU Cohesion Policy, 18 Member States are implementing CLLD.

Implementation: Member States and regions
Timing: 2014-2020

8. Smart specialisation platform agri-food

The Smart Specialisation Platform for Agri-Food (S3P Agri-Food), which was launched in December 2016, is based on bottom-up interregional cooperation. The key objective of the S3P Agri-Food is to organise and support the efforts of EU regions committed to work together for developing a pipeline of investment projects connected to specific thematic areas of smart specialisation priorities through interregional cooperation. It is based on smart specialisation priorities defined by regional and national governments.

The Platform will promote exchange of information and mutual learning (across regions; across levels), but the focus will be on regional authorities and regional actors (clusters, businesses, academia, cities, citizens, etc.) developing their agri-food value chains through collaboration, matchmaking and aligned investment.

Implementation: European Commission – DGs REGIO, AGRI, JRC, RTD and regions
Timing: 2014-2020

9. Broadband Competence Offices (BCO)

To facilitate the spread of fast broadband, a network of Broadband Competence Offices (BCOs) is being set up in Member States at regional and/or national level. Their main task is to provide information and support on broadband roll-out to stakeholders.

The network of BCOs in the MS/regions is animated and supported by the Brussels-based Support Facility, by generating and sharing knowledge in funding, regulatory issues, project planning and good practices. The main focus is to ensure that the planned allocations, notably under the ERDF and the EAFRD are effectively spent on addressing key broadband gaps. The network and Facility will cooperate with the European Investment Advisory Hub (EIAH) to achieve their objectives.

 Implementation: European Commission – DGs AGRI, REGIO, CNECT
Timing: 2016-2020

10. Digital Innovation Hubs (DIH)

Several initiatives have been launched to shape the pan-European network of DIHs. These are existing actions that are going to be embedded in DIHs:

–   **i4ms**: It supports SMEs active in the manufacturing sector to improve their products and processes by letting them experiment with digital technologies

–   **iHub**: provides business incubation and acceleration for start-ups and SMEs that make use of FI-WARE technologies.

–   **Smart anything anywhere**: SAE consists of several "Innovation Actions" funded under FP7 and H2020 that support SMEs to improve their products through the inclusion of advanced ICT components and systems

–   **ECHORD++**: it supports different activities to enable companies, researchers to art robotic hardware, software and scientific expertise.

Implementation: European Commission – DGs CNECT and RTD
Timing: 2014-2020

11. Pilot Project 'Smart Rural Transport 'Areas' (SMARTA)

European Parliament has allocated a budget of €600 000 for this Pilot Project on sustainable shared mobility interconnected with public transport in rural areas. The project aims at giving an overview of good practices and at identifying the enabling conditions. The pilot project should be based on the forthcoming delegated regulation on the provision of EU multimodal travel information services

Implementation: European Commission – DG MOVE
Timing: from 2016

12. Internet of Things - Horizon 2020

The IoF2020 project is dedicated to accelerate adoption of Internet of Things (IoT) for securing sufficient, safe and healthy food and to strengthen competitiveness of farming and food chains in Europe. It will consolidate Europe's leading position in the global IoT industry by fostering a symbiotic ecosystem of farmers, food industry, technology providers and research institutes.

Implementation: European Commission – DGs AGRI and CNECT
Timing: 2017-2020

13. More efficient and smarter door-to-door logistics - Horizon 2020

More efficient and smarter door-to-door logistics, innovative concepts towards mobility as a service, smart next generation transport infrastructure, connected and automated transport and smart urban mobility (including transport to / from cities).

Implementation: European Commission – DG MOVE
Timing: 2016-2017 and 2016/2017

14. Business models for modern rural economies - Horizon 2020

This research project is expected to provide improved tools for entrepreneurship in rural areas, including a database of business cases and supportive environment. The project will help gaining knowledge on business models emerging in rural areas, addressing the potential for development, performance concerning economic, environmental and social issues as well as success factors or reasons for failures.

Implementation: European Commission – DG AGRI
Timing: 2016/2017

15. Future calls under the "rural renaissance" header - Horizon 2020

The Commission is currently preparing calls for the 2018-2020 work programme including calls that relate to "rural renaissance" and that are relevant to provide the knowledge base for developing smart villages.

Implementation: European Commission – DG AGRI
Timing: 2018/2020

16. Data-driven bioeconomy – Horizon 2020

DataBio project aims at using best possible raw materials from agriculture, forestry and fishery for production of food, energy and biomaterials. DataBio will demonstrate the benefits of Big Data technologies in the raw material production for the bioeconomy industry. It will build a platform suitable for different industries and user profiles, opening the possibilities for various actors to participate in bioeconomy Big Data market and to develop new bioeconomy related services.

Implementation: European Commission – DG CNECT
Timing: 2017-2019

Outlook

This document puts forward a number of concrete actions which the European Commission and Member States are committed to implement in the short term. However, the concepts linked to development of Smart Villages, including rural connectivity and the challenges and opportunities it offers, will remain an issue to be addressed over several years. This is an important step towards future-proofing our villages and rural communities. The European Commission is considering a Smart Villages inter-service group that would work on developing a strategic approach to promoting the development of Smart Villages through EU funds in the medium to long term.