

H2020 Partnership Landscape and its relevance for Horizon Europe – Cluster ‘Inclusive and Secure Societies’

Description and Analysis

Information

Project no.	811171
Project acronym	ERA-LEARN
Project full title	Strengthening partnership programmes in Europe
Funding scheme	CSA
Start date of project	1. July 2018
Duration	48 months
Background	<p>The description and analysis of networks follow the recommendation of the ERAC ad hoc Working Group on Partnerships to provide an analysis on the status-quo of partnerships in prospective areas of Horizon Europe. The individual Cluster Reports will inform a Synthesis Report which is based on the partnership analyses that have been performed in relation to the clusters under Pillar II “Global Challenges and Industrial Competitiveness” of Horizon Europe (Commission proposal).</p>

Disclaimer

The Cluster Reports were elaborated by ERA-LEARN to support the coordination and cooperation among networks. They are work in progress and should be seen as a basis for starting discussions among the networks about the potential to adjust and streamline the partnership landscape in view of the challenges addressed by Horizon Europe. They are based on:

- a listing of networks provided by DG RTD, reviewed and partly modified by ERA-LEARN experts
- the ERA-LEARN database and
- desktop research and professional background knowledge of the ERA-LEARN authors of the individual Cluster Reports.

While due diligence was applied there are certain limitations that readers should bear in mind:

- The papers display and discuss existing partnerships, serving current framework priorities, and apply educated guesses about their relevance for the thematic clusters and (groups of) intervention areas sketched for Horizon Europe. They do not take into account the gradual thematic flexibility of networks or parts thereof, or the changes of research priorities that national ministries and funding initiatives may undertake. Nor do they consider the invaluable capacity of ministries to design and implement MS-based transnational funding initiatives across Europe across all innovation phases and aspects, and beyond their mere match with future thematic intervention areas of the clusters under Pillar II “Global Challenges and Industrial Competitiveness” of Horizon Europe (Commission proposal).
- The clustering of intervention areas to sub-clusters has been determined by the authors by means of expert assessment, for greater clarity of the connections displayed.
- The displayed connections are limited to formal connections and existing collaborations among partnerships.

Taking these limitations into account the parties involved in creating the databases and drafting the Cluster Reports would like to emphasize that references to networks and/or their relevance and/or their connections are not meant to be exhaustive nor judgemental but a preliminary input to the discussion process on the rationalisation and reform of the partnership landscape.

Background

This report is part of a series of reports addressing the five suggested Clusters of Horizon Europe (EC Proposal from June 2018). General information about the scope and methodology applied as well as on the description of the network types, etc. is provided in the so-called “Synthesis Report” to avoid duplication. All reports focus on R&I related partnerships in the areas suggested for Horizon Europe. Other networks are not considered. The Synthesis Report also includes the definition of the different partnership types that are considered in the individual reports.

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1. Overview of Cluster, Actors and Activities

1.1. Overview

A: Description of Cluster

Within the EC proposal for Horizon Europe, the cluster Inclusive and Secure Society will address two main streams of activities:

- The **promotion of a model of inclusive and sustainable growth** while reaping the benefits of technological advancements, enhancing trust in and promoting innovation of democratic governance, combatting inequalities, unemployment, marginalisation, discrimination and radicalisation, guaranteeing human rights, fostering cultural diversity and European cultural heritage and empowering citizens through social innovation.
- The need of European citizens **to be protected from different types of threats** including: organised crime (firearms trafficking, drug trafficking and trafficking in human beings), better border management, cybercrime, cybersecurity, digital privacy, personal data protection, as well as natural disaster prevention caused by climate change such as floods, storms or fires caused by droughts.

The cluster has a proposed budget of 2.800 million € as provided in the proposal of the European Commission on Horizon Europe¹ and is a continuation of the Horizon 2020 Societal challenges (SC) “Europe in a changing world - Inclusive, innovative and reflective societies²” and “Secure societies” – protecting freedom and security of Europe and its citizens³. Total funding for 2014-2020 in Horizon 2020 for the first theme is 1.310 million € and for the second 1.695 million €. Whereas DG Research and Innovation is responsible for the management of the SC “Europe in a changing world”, since 2015 DG Migration and Home Affairs manages the funding for research and innovation activities for “Secure Societies”. For this part, the budget is divided between DG HOME (75% of the budget), and DG CNECT (25% of the budget).

¹ https://ec.europa.eu/commission/sites/beta-political/files/budget-may2018-horizon-europe-regulation_en.pdf (p.31)

² <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/europe-changing-world-inclusive-innovative-and-reflective-societies>

³ <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/secure-societies-%E2%80%93-protecting-freedom-and-security-europe-and-its-citizens>

Within Horizon Europe six broad areas of intervention have been proposed by the European Commission⁴ for structuring the work programme. Within these six intervention areas, a number of relevant topics have been identified (see Table 1).

Table 1: Intervention areas and relevant sub-topics of the Cluster ‘Inclusive and Secure Societies’ in Horizon Europe

		Intervention Areas					
		Democracy	Cultural Heritage	Social and Economic Transformations	Disaster-Resilient Societies	Protection and Security	Cybersecurity
Relevant Sub-Topics	History, evolution and efficacy of democracies	Heritage studies including digital ones	Knowledge base for advice	Technologies for first responders	Innovative approaches and technologies for security practitioners incl. police but also health operators	Technologies across the digital value chain	
	Innovative approaches to support democratic governance	Access to and sharing of cultural heritage	Social sustainability beyond GPD: new business models, new technologies	Management and reduction of disaster risk	Human and social dimensions of criminality	Technologies to address cybersecurity threats and needs of comp. industry	
	Strategies to address populism, extremism, radicalisation, terrorism	Connection of cultural heritage with creative sectors	Trends and changes in labour markets	Interoperability of equipment and procedures	mind-set of citizens, public authorities and industry	European cybersecurity competence network	
	Role of journalistic standards and user-generated content	Contribution to sustainable growth: lab for innovation and cultural tourism	Tax and benefits systems		Combat disinformation and fake news		
	Role of multi-cultural citizenship and identities	Conservation, restoration and enhancement	Human mobility and migration governance		Interoperability of equipment and procedures		
	Impact of techn. and scientific advancement	Influence of traditions etc. on values	Education and training for digital transformation		Protection of personal data		
	Deliberative and participatory democracy		Efficiency of justice systems				
	impact of economic and social inequalities on political participation						

Source: COM(2018) 436 final Annexes: https://eur-lex.europa.eu/resource.html?uri=cellar:7cc790e8-6a33-11e8-9483-01aa75ed71a1.0002.01/DOC_2&format=DOC

⁴ https://ec.europa.eu/commission/sites/beta-political/files/budget-may2018-horizon-europe-decision-annexes_en.pdf

B: Description of partnership programmes related to the intervention areas⁵

Against the outline of the intervention areas we provide an overview of the partnerships to the six broad areas outlined above in order to allow for an analysis of synergies between them. The figure below provides an overview of those partnerships that are considered to be **fully relevant** for the intervention areas in the cluster “Inclusive and Secure societies”⁶. Please note:

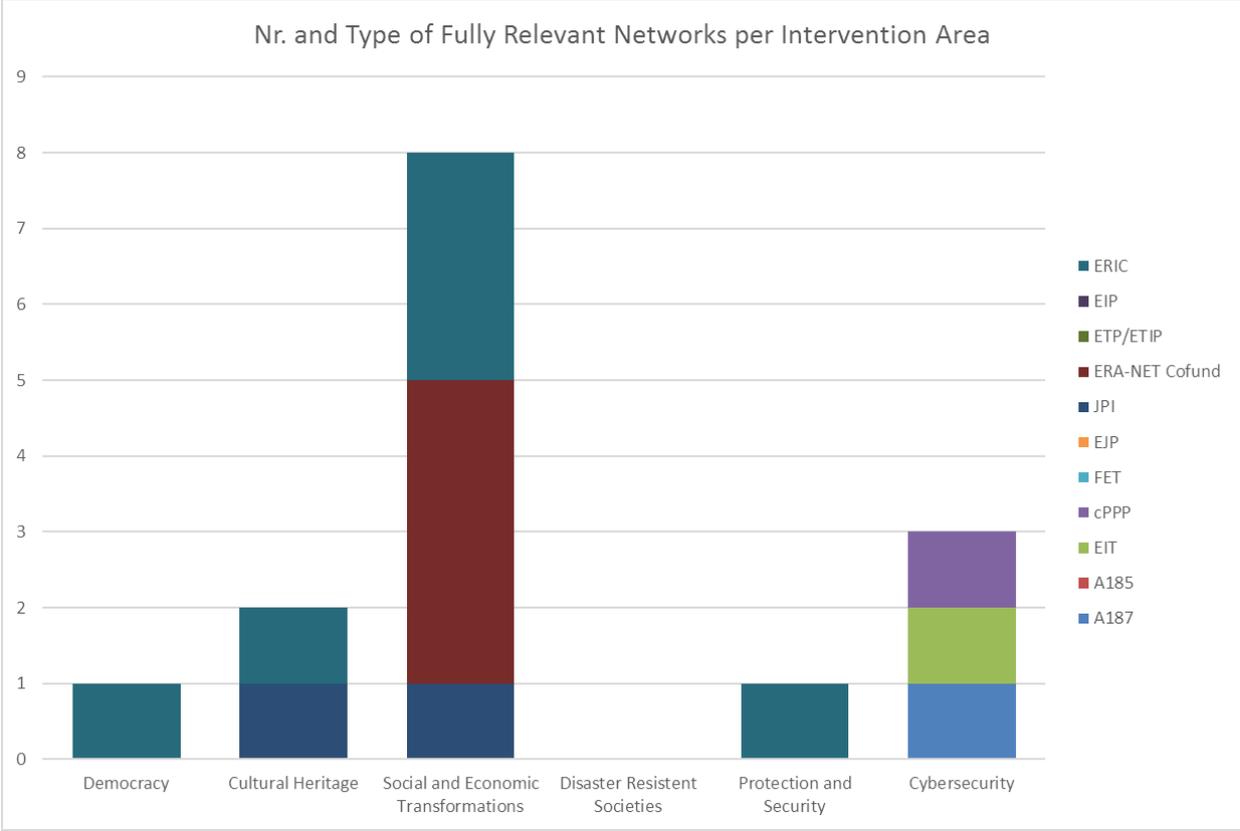
- We consider initiatives as fully relevant if the initiative and its research and innovation programme and/or activities deals with the thematic content of the specific intervention area to a large extent. For example, Electronics in Health is one of the top priorities of large PPP ECSEL, it is therefore considered to be fully relevant for the intervention area “Tools, Technologies and Digital Solutions for Health and Care” in the Cluster Health.
- We consider initiatives as partly relevant, if certain parts of the research and innovation programme and/or activities of a partnership initiative are relevant for the intervention area. For example, the JPI MYBL launched a call on “Welfare, Wellbeing and Demographic Change: Understanding Welfare Models” in 2016. It is therefore deemed to be partly relevant for the intervention area “Social and Economic Transformation” as the results of this action could provide some knowledge base for “policy advice” and related studies concerning “changes in the labour market”.
- A network can also be partly relevant to a specific area of intervention in case the focus of the network serves as the application area for the respective technologies or services to be developed in the intervention area. For instance, EIP on Active and Health Ageing is partly relevant to the intervention area of 'Digital Technologies' as digital technologies can be applied to improve healthy ageing of people. In a similar line, EIP on Smart Cities and Communities is partly relevant for the areas "Next Generation Internet" or "High-performance Computing and Big Data" as the respective technologies or services can find various application opportunities in the framework of smart cities.

Figure 1 shows that the cluster comprises only a limited number of 6 partnership types out of the 11 studied in this thematic analysis. The most common types of partnerships are ERA-NET CoFunds, followed by ERICs. These partnerships are dominant in the intervention areas Democracy, Cultural Heritage and Social and Economic Transformation. The intervention area Cybersecurity is addressed by three different partnership types, all of them are PPPs. The intervention area Disaster Resistant Society is not represented by any partnership.

⁵ Please note that the list of partnership considered in this analysis does not include proposals for the clusters “culture, creativity and inclusive society” and “civil security for society”.

⁶ A number of partnerships are only considered to be partly relevant. An overview table on these is provided in the Appendix (Section 6.1).

Figure 1: Number of current networks that are considered fully relevant for Cluster ‘Inclusive and Secure Societies’⁷



Source: ERA-LEARN

In addition to those partnerships that are fully relevant, Cluster Inclusive and Secure Societies includes many partnerships that are partly relevant. We consider initiatives as partly relevant, if certain aspects of a partnership initiative are relevant for the intervention area and its research and innovation programme and/or activities: For example, the JPI MYBL launched a call on “Welfare, Wellbeing and Demographic Change: Understanding Welfare Models” in 2016. It is therefore deemed to be partly relevant for the intervention area “Social and Economic Transformation” as the results of this action could provide some knowledge base for “policy advice” and related studies concerning “changes in the labour market”.

In particular the intervention areas Disaster Resistant Societies and Social and Economic Transformations exhibit a comparatively large number of partnerships that are partly relevant for these areas.

⁷ A specific note is pertinent here. Some ERA-NET Cofund Actions may be serving the needs of JPIs or FET Flagships in terms of implementing the joint calls and possibly other joint activities. In these cases the ERA-NET Cofunds can be regarded as integral parts of the wider initiatives (the respective JPIs or FET Flagships). However, they are considered as individual partnerships as they consist of separate H2020 contracts with their own scope, objectives, timeline and expected impacts. More details in section C below.

In the intervention area **Democracy**, two European Research Infrastructure Consortia (ERICs) are fully relevant: the European Social Survey - ESS ERIC⁸, 2013 and the European Research Infrastructure Consortium - 'CESSDA ERIC', 2017⁹.

ESS ERIC, recognised as ESFRI Landmark by the European Strategy Forum on Research Infrastructures (ESFRI) in 2016, is an academically driven cross-national survey that has been conducted across Europe since its establishment in 2001. The survey measures the attitudes, beliefs and behaviour patterns of diverse populations in more than thirty nations. In addition, three other ERICS are partly relevant for this intervention area.

CESSDA ERIC, recognised as an ESFRI landmark by the European Strategy Forum on Research Infrastructures (ESFRI) in 2016 roadmap on Research Infrastructures, provides large scale, integrated and sustainable data services to the social sciences (and beyond) by supporting high-quality, national and international research and cooperation.

It brings together social science data archives across Europe, with the aim of facilitating social, economic and political research and by doing so allows researchers to gain a better understanding of the challenges facing society today and to help solve them.

In the intervention area **Cultural Heritage**, the JPI Cultural Heritage (JPICH) and DARIAH ERIC, a research infrastructure aiming at enhancing and support digitally enabled research and teaching across the Arts and Humanities¹⁰, thematically fit the intervention area completely. The JPI Cultural Heritage¹¹ aims to promote the safeguarding of cultural heritage in its broader meaning including tangible, intangible and digital assets. DARIAH ERIC develops, maintains and operates a digital infrastructure in support of ICT-based research practices and assists researchers in using them to build, analyse and interpret digital resources. DARIAH ERIC integrates digital arts and humanities, research and activities from across Europe, enabling transnational and transdisciplinary approaches. In particular, it provides value to its members and stakeholders through the validation and sharing of data, services and tools by providing training and education opportunities. EHRI and E-RIHS. Within this area two Research Infrastructures - European Research Infrastructure for Heritage Science - EHRI¹² and European Holocaust Research Infrastructure - E-RIHS¹³ must be mentioned. E-RIHS is the European Research Infrastructure for Heritage Science that supports research on heritage interpretation, preservation, documentation and management., providing provide access to a wide range of cutting-edge scientific infrastructure, methodologies, data and tools, training in the use of these tools, public engagement, access to repositories for standardized data storage, analysis and interpretation. Particularly it provides access services through four integrated platforms: E-RIHS ARCHLAB (archives), E-RIHS DIGILAB (virtual facilities), E-RIHS FIXLAB (fixed facilities) and E-RIHS MOLAB (mobile facilities). It entered the ESFRI roadmap and is currently leading a

⁸ <https://www.europeansocialsurvey.org/about/>

⁹ <https://www.cessda.eu/About/>

¹⁰ <https://www.dariah.eu/>

¹¹ <http://www.jpi-culturalheritage.eu/about-us-2/>

¹² <https://ehri-project.eu>

¹³ <http://www.e-rihs.eu>

Preparatory Phase with the aim to establish the European Research Infrastructures Consortium (ERIC), towards the Implementation Phase that is foreseen to start in 2021.

The European Holocaust Research Infrastructure (EHRI) project is an on-going EU-funded project (2015-2019) seeking to transform archival research on the Holocaust. The vision of EHRI is to integrate the data, services and expertise of existing Holocaust infrastructures on an unprecedented scale. The EHRI project has officially been adopted by the ESFRI Roadmap 2018 (European Strategy Forum on Research Infrastructures) to enter the ESFRI ecosystem. This is a first important step in a sustainable future for EHRI after the project ends in 2019.

In this context, **Time Machine: Big Data of the Past for the Future of Europe - Time Machine**¹⁴ is a CSA under Horizon 2020 conceived as preparatory for new **FET Flagships**. The Time Machine Project aims at using Big Data of the Past to create a new way to experience European history and culture by building a map of European history that spans thousands of years.

Also worthy of note is **Europeana**¹⁵, an initiative of the European Union, financed by the European Union's Connecting Europe Facility and European Union Member States. The Europeana services, including this website, are operated by a consortium led by the Europeana Foundation under a service contract with the European Commission. Europeana provides access to over 50 million digitised items – books, music, artworks and more – with sophisticated search and filter tools to help users finding digital resources.

The European Parliament is heavily promoting the building of a **European Cultural Heritage Cloud**, that will be supported from Horizon Europe. It will provide infrastructure and services for cultural heritage, in particular museums.¹⁶

In the intervention area **Social and Economic Transformations** four ERA-NET Cofund actions, one JPI and three ERICs directly relate to topics of interest within this area:

- **NORFACE: Dynamics of Inequality Across the Life-course: structures and processes**¹⁷ (DIAL), 2016-2021, is a transnational research initiative focusing on research on the complex and highly intertwined sources of inequalities in contemporary societies, and their consequences. **GENDER NET Plus**¹⁸ (2017-2022) starts from the challenges in achieving gender equality and gender mainstreaming in research and innovation. Furthermore, Norface launched one call on Democratic Governance and the call T2S – Transformations to Sustainability.

¹⁴ <https://timemachine.eu/csa-information/>

¹⁵ <https://www.europeana.eu>

¹⁶ <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//NONSGML+COMPARL+PE-625.306+01+DOC+PDF+V0//EN&language=EN> (p.39), <https://sciencebusiness.net/framework-programmes/news/leading-legislator-horizon-europe-sets-out-his-vision-programme>

¹⁷ <https://www.norface.net/program/dial/>

¹⁸ <http://gender-net-plus.eu/>

- HERA - The Humanities in the European Research Area network¹⁹ is currently pursuing two types of ERA-NET Cofunds:
 - a. The HERA Joint Research Programme *European Public Space, Culture and Integration* (HERA JRP PS), 2017-2022, investigates the problems and challenges of integration with specific reference to the roles of culture and of public space in processes of integration.
 - b. The HERA Joint Research Programme *Uses of the Past* (HERA JRP UP), 2017-2022, focuses on multi-disciplinary research on culture and integration in Europe.
- The Joint Programming Initiative “More Years, Better Lives – The Potential and Challenges of Demographic Change”²⁰, seeks to enhance coordination and collaboration between European and national research programmes related to demographic change.
- Three ERICs provide activities related to Social and Economic Transformations:
 - a. The European Social Service ERIC (see above) is also relevant for this intervention area.
 - b. CESSDA²¹ provides a database of social science research datasets and a full scale sustainable research infrastructure enabling the research community to conduct high-quality research in the social sciences contributing to the production of effective solutions to the major challenges facing society today and to facilitate teaching and learning in the social sciences.
 - c. CLARIN²² makes digital language resources available to scholars, researchers, students and citizen-scientists from all disciplines, especially in the humanities and social sciences, through single sign-on access.
 - d. OPERAS²³ is a European research infrastructure for the development of open scholarly communication in the social sciences and humanities. The OPERAS design project OPERAS-D prepared a design study that defines governance models, scientific and technical concepts for future services that the infrastructure will provide. It has established a roadmap to achieve these goals according to the requirements for long term sustainability and was concluded in June 2018 preparing the OPERAS infrastructure.

¹⁹ <http://heranet.info/>

²⁰ <http://www.jp-demographic.eu/about-us/>

²¹ <https://www.cessda.eu/>

²² <https://www.clarin.eu/>

²³ <https://operas.hypotheses.org/aboutoperas>

In the intervention areas **disaster resistant societies** and **Protection and Security** there are **no fully relevant** European partnership initiatives active, except from the European Social Survey (ESS), which also charts stability and change in social structure, conditions and attitudes in Europe and interprets how Europe's social, political and moral fabric is changing. However, a number of partnerships provide access to stakeholder communities and practitioners relevant for the topic and might thus be considered partly relevant to this cluster:

- For disaster resistant societies the EIT Climate-KIC of the European Institute of Technology is working to accelerate the transition to a zero-carbon economy and seeks to identify and support innovation that helps society mitigate and adapt to climate change. JPI Urban Europe activities might offer relevant synergies due to the focus on low carbon cities, and urban climate change: resilience and adaptive capacity, urban ecosystem services, and urban mobility and accessibility. The Innovative Medicines initiative and the European & Developing Countries Clinical Trial might be partly relevant due to the focus on infectious diseases. The ECSEL Joint Undertaking may come up with innovative solutions for first responders (e.g. Public Police, Red Cross etc.) and the JPI Water along with the related ERA-NET CoFund Water and potentially also the Art. 185 PRIMA initiative might be relevant for practitioners in the field.
- The area Protection and Security includes the European Joint Programme HBM4EU (2017-2021) aiming at advancing human biomonitoring in Europe in order to provide better evidence of the actual exposure of citizens to chemicals and the possible health effects to support policy making. ECSEL and KIC Digital, which might be most relevant for the intervention area cyber security (see below) may also provide security practitioners with innovative technological solutions.

In the intervention area **Cybersecurity** the following public-private partnerships are currently active. **JTI ECSEL**²⁴ supports research and innovation that also relates to cybersecurity and the **Knowledge and Innovation Community EIT Digital**²⁵ seeks to foster digital technology innovation and entrepreneurial talent for economic growth and quality of life in Europe. Furthermore, the **Cyber cPPP** (2016)²⁶ is aimed at fostering cooperation between public and private actors at early stages of the research and innovation process aiming to respond at European level to the need for a comprehensive, pan-European approach on cybersecurity for the development of a secure and trusted digital market (e.g. technology and solution suppliers and service providers, public and private sector customers and users, policy makers and public administrations) building a strong, resilient and globally competitive European cybersecurity industry with a strong European-based offering. In addition to these, the EC is planning to set up an Art.187 initiative, which shall constitute a network of cybersecurity centres of expertise with a European Research and Competence Centre at its heart. The major aims are to pool

²⁴ <https://www.ecsel.eu/>

²⁵ <https://eit.europa.eu/eit-community/eit-digital>

²⁶ <https://ecs-org.eu/cppp>

resources, overcome fragmentation of efforts across the EU and stimulate development and deployment of technology in cybersecurity.

Table 2: Intervention areas of the ‘Inclusive and Secure Societies’ Cluster and number of relevant ongoing partnerships and networks (a partnership/ network may be relevant to a number of different intervention areas)

<i>Intervention areas in Horizon Europe</i>	<i>Fully relevant</i>	<i>Partially relevant</i>	<i>P2P</i>	<i>PPP</i>
Democracy	1	3	0	4
Cultural Heritage	2	0	1	1
Social and Economic Transformations	8	8	10	6
Disaster resistant societies	0	13	7	6
Protection and Security	1	6	1	6
Cybersecurity	3	2	0	5

Source: ERA-LEARN

There are several observations that can be made from the above overview:

- Within the intervention areas **democracy** and **cultural heritage**, only a very limited number of partnerships are partly or fully relevant. Partnerships mainly address research actors in the fields of humanities and social sciences. The existing JPI Cultural Heritage tries reaching out to relevant stakeholder communities and citizens as well as governmental authorities and municipalities dealing with civic engagement and the role of culture for society. A number of ERICs collect research datasets for studies dealing with topics related do democracy and cultural heritage.
- Within the mostly populated intervention area, **social and economic transformations**, research that is planned to be performed in Horizon Europe is by large limited to social sciences research dealing with topics of social sustainability measurement, trends and changes in labour markets, the role of tax and benefits systems, human mobility and migration governance and training for digital transformation. Hence, the intervention area currently seems to be a bit distant from practitioners of social transformation, i.e. the digital science research and innovation community as well as energy, mobility and urban planning related to system transformation which are addressed by Joint Programming Initiatives as well as European Innovation Partnerships. As far as social sciences and humanities research are concerned, a number of ERA-NET CoFunds deal with dynamics of inequality, gender research, humanities research and transition towards smart cities and communities. In addition, partnership initiatives deal with major system transformations related to ICT, energy and climate and mobility. A number of ERICs also exist that collect and provide data infrastructures for related work in the field.
- Within the intervention area **disaster resistant societies** there are no direct and obvious linkages but some partnerships might provide access to relevant

stakeholder communities for building joint R&I projects. Three broad focus areas can be identified: climate, energy and urban related matters (EIT Climate, Energy, Mobility and JPI Urban Europe – which also bundles initiatives of related ERA-NETs), disaster relevant health initiatives (IMI2, EDCTP, JPI AMR) and disaster relevant initiatives dealing with Water (JPI Water, ERA-NET CoFund Water and Art. 185 Prima).

- The areas **protection and security** as well as **cyber-security** are by large untapped by the community of public-public partnerships but there are a number of Public-Private-Partnerships that involve public authorities and industry, which also engage on a Member State level (e.g. ECSEL and its national mirror groups).

Against this overall picture, which clearly suggests only a small number of partnerships that are directly relevant to this cluster of Horizon Europe, there is a number of partnership initiatives that partly deal with social and economic transformation processes and security aspects. The transformative innovation policy agendas and activities of initiatives like JPI Urban Europe, JPI Water, and JPI FACCE, to mention some examples, show clear linkages towards the topic of social and economic transformation, inclusiveness and disaster resilience. However, they do this in a broad sense while the focus of the cluster seems to focus on a limited number of specific social sciences and humanities topics. These partnerships pursue a wider challenge and transdisciplinary approach in which actors from different research and user communities are brought together for developing novel R&I approaches with a transformative impact.

1.2. Actors and activities

Within the intervention areas democracy, cultural heritage, and social and economic transformation, the main active partnership programmes are public-public partnerships. The represented ERA-NETs (HERA, GenderNetPlus etc.) and Joint Programming Initiatives form network type organisations in which the main partners are national ministries and national funding agencies. As a network they represent a wealth of knowledge concerning the capacity and state-of-the-art of R&I activities in the respective fields.

Through the existence of **advisory boards**, in particular the Joint Programming Initiatives active in the intervention area reach out to R&I communities (partly) societal actors and policy makers. In the intervention area cultural heritage also representation of international bodies is considered via the advisory board (e.g. UNESCO, Council of Europe, European Construction Technology Platform (ECTP) – Focus Area on Cultural Heritage) of JPI Cultural Heritage.

The existing Joint Programming Initiatives active in the intervention areas democracy, cultural heritage, and social and economic transformation also **serve as a roof for bundling the efforts and facilitating exchange** between the different ERA-NETs existing in their focus of work:

- For example, the Joint Programming Initiative JPI Urban Europe serves as a vehicle for the work conducted by related ERA-NETs ENSUF, SUGI and ENSCC.
- Similarly, JPI Cultural Heritage has put forward ERA-NETs (i.e. Heritage Plus) and CSAs (i.e. JHEP – Joint Heritage European Programme and JHEP2) with support of the EC that proposes concrete solutions for pooling national expertise and resources and establishing closer and robust collaboration among the participating States in the field of cultural heritage.

Public and private research performing organisations in the **public-public partnerships** of ERA-Nets and JPIs mentioned above are mainly involved in their role as research actors. In all networks mentioned above, some representation in advisory structures is given. In addition to that, JPI Urban Europe has established the Urban Europe Research Alliance (UERA) that brings together around thirty European research organisations from thirteen different countries, building a community of researchers, professors, and PhD students with the aim to advance scientific excellence in the field of urban research. The inclusion of relevant public stakeholders (e.g. owners of critical infrastructures, mobility providers, health-care providers, etc.) and non-governmental organisations is sometimes possible within projects of the P2Ps, while other means of engagement are also being sought.

The partnerships that are partly relevant for the intervention areas Disaster Resilient Societies, Protection and Security and Cybersecurity comprise **various types of public-private partnerships**. Within all the public-private partnerships, research performing organisations

seem to be more strongly engaged and have more influence on the actual design of the R&I agendas of the programme as well as the strategic orientation of performed activities due to their clear representation in decision making bodies. While P2Ps currently have a major focus on R&I activities, the scope of EIT KICs, EJPs and EIPs is broader in scope, including in particular educational activities, innovations and creation of start-ups.

Apart from this observation, which most likely holds true for all PPPs as compared with P2Ps, a key observation to be made stems from **the dominance of public-private partnerships** in the intervention area Cybersecurity and a comparatively small presence of partnerships in the areas of Disaster-Resilient Societies, Protection and Security.

As opposed to other areas of Horizon Europe, there seems to be neither a strong co-ordination of national funding agencies, nor of ministries concerning their related R&I activities. This might reflect the fact that security related R&I matters are still predominantly national matters, whereas a Pan-European approach in R&I remains in an infant stage.

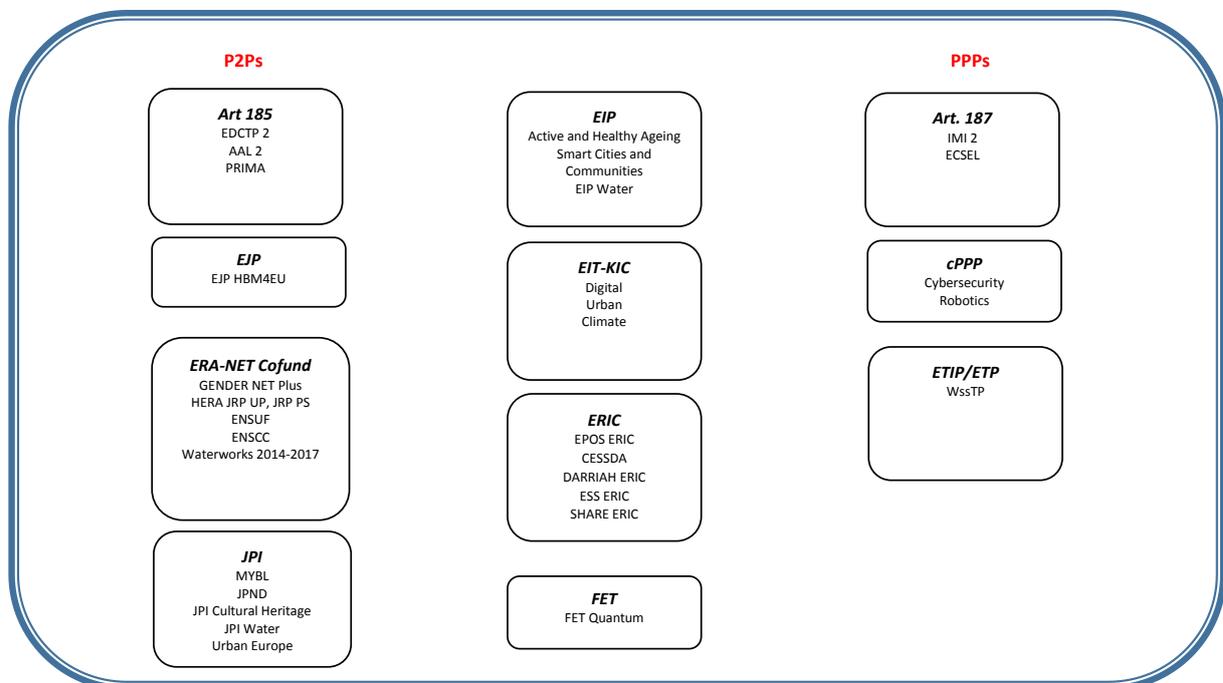
A number of Research Infrastructures (CESSDA, ESS, CLARIN, SHARE) are partly or fully relevant for various intervention areas located in the cluster inclusive and secure societies. All these infrastructures provide relevant sources for research and activities in social sciences and humanities that range from provision and analysis of new data to the provision of studies and trainings. They contribute to the building up of the European Open Science Cloud (EOSC). The research infrastructures (ERICs) are consortia involving participants mainly from research performing organisations in several countries around Europe.

2. Connections between partnerships and networks

2.1. Partnerships and networks

The analysis below is an attempt to highlight the main connections that are apparent from desk research across the six main thematic areas of the Cluster 'Inclusive and Secure Societies'.

Figure 2: Partnerships and networks related to the Cluster 'Inclusive and Secure Societies' of Horizon Europe



Source: ERA-LEARN

Overall, the review on connections between the partnership initiatives shows the following results for the intervention areas dealing with inclusiveness:

- Network interactions between P2Ps and PPPs are actually non-existent.
- Within the P2Ps there are strong formal linkages and involvement of similar actors between the Joint Programming Initiatives and ERA-NET CoFunds. Network interactions between networks like HERA, Norface, JPI Cultural Heritage, and JPI Urban Europe exist along the main broad topics: urban policies, cultural heritage, demographic change etc. Collaboration within these P2Ps comprise joint activities of

SRIA planning, reaching out to stakeholder communities and operational programme management activities.

- There exist some informal connections between the European Innovation Partnerships Smart Cities and Communities with the JPI Urban Europe and respective ERA-Nets as well as the EIP Active and Healthy Ageing, the Art. 185 Active and Assisted Living and the JPI More Years better Lives.

So far, no structured collaborations between ERICs and partnership Initiatives have become visible, except for the ongoing Research and Innovation Action – RIA "Synergies for Europe's Research Infrastructures in the Social Sciences" – SERISS²⁷, a four-year collaborative project 2015-2019, coordinated by the European Social Survey European Research Infrastructure Consortium and aimed at strengthening and harmonising social science research across Europe.

The main SERISS Consortium comprises the three leading European Research Infrastructures in the social sciences: the European Social Survey (ESS ERIC), the Survey of Health, Ageing and Retirement in Europe (SHARE ERIC) and Consortium of European Social Science Data Archives (CESSDA ERIC), together with three developing research infrastructures the Generations and Gender Programme (GGP)²⁸, European Values Study (EVS)²⁹ and the WageIndicator Survey³⁰.

SERISS aims to exploit potential synergies and overcome existing fragmentation across infrastructures in order to enhance the key role played by these infrastructures, which form the bedrock of empirical social science in Europe.

For connections between networks in the intervention areas dealing with 'secure societies' the following conclusions can be made:

- What becomes obvious in the first instance is that public-public partnerships are by large missing. Except from JPI Urban Europe and JPI Water, which also put some emphasis on aspects of resilience, there are no P2Ps active in this area.
- The Art. 185 initiatives PRIMA - The Partnership for Research and Innovation in the Mediterranean Area - will devise new R&I approaches to improve water availability and sustainable agriculture production in the region that is heavily distressed by climate change, urbanisation and population. In this regard, it has thematic similarities with JPI Water and also FACCE JPI.

²⁷ <https://seriss.eu/>

²⁸ www.ggp-i.org

²⁹ <https://europeanvaluesstudy.eu>

³⁰ <https://wageindicator.org>; <https://wageindicator.org/Wageindicatorfoundation/researchlab/wageindicator-survey-and-data>

- There are evident thematic connections concerning disaster resilience in the actions of JPI Water, WsssTP and EIP water which also lead to joint actions (see below) among participating entities.
- Although there are some joint thematic areas tapped by the Knowledge and Innovation Communities (KICs), the cPPP on Robotics and the Joint Undertaking ECSEL, no formal or informal relationships are evident. For example, the 2017 Annual report of ECSEL does not highlight any co-operation with other Public-Private or Public-Public Networks. External institutional communication focuses on a) the European Commission (DG CNECT, DG Research and Innovation), b) the European Parliament, c) the European Council and d) the Committee of Regions. At national level, several ECSEL MiRROR GROUPS have been set up. Concerning synergies, two workshops were co-organized by IMI JU and the ECSEL, bringing together the respective communities to discuss and identify areas of common interest for future collaboration.
- Also for the Innovative Medicine Initiative IMI 2 and the Art. 185 initiative European & Developing Countries Clinical Trials Partnership (EDCTP) no formal linkages or joint activities could be identified, but there have been some joint workshops between IMI 2 and ECSEL Joint undertaking.
- So far, no structured collaborations between ERICs and partnership Initiatives have become visible in the intervention areas dealing with ‘secure societies’.

2.2. Examples of different types of interactions

Formal connections (e.g. one serves as continuation or implementation of the other’s work-programme)

- The ERA-NET Cofund instrument is used in some JPIs to support the implementation of the SRA/SRIA of Joint Programming Initiatives. For example, JPI Urban Europe has spawned ENSCC, ENSUF and EN-SUGI and JPI Cultural Heritage spans an integral working area with the respective ERA-NET and the H2020 work programmes.
- The collaboration between JPIs and ERA-NETs comprises not only the provision of joint calls but also reaches out to building stakeholder communities and operational alignment of joint procedures for calls, monitoring and evaluation. For example, the HERITAGE PLUS Call used the JPI Cultural Heritage communication platform for stakeholders in the field of research applied to cultural heritage and the JPI Cultural Heritage web site as the main tool for the HERITAGE PLUS Call dissemination. Detailed communication plans were drafted giving guidance for the promotion and

marketing of HERITAGE PLUS, distribution of the tasks and exploring cooperation with other relevant initiatives (conferences, ETPs, EC, etc.)

Existing collaborations (e.g. joint activities, some joint decision making through common membership in boards)

- JPI Cultural Heritage planned to strengthen its links with existing infrastructures and infrastructure projects in the Scope of the European Research Infrastructure (ESFRI) which will be reinforced in the period 2018 - 2020.
- Regarding the aspects of disaster resistance, JPI Water deals with aspects of droughts, floods etc. In this regard, the most directly related ETP is the Water Supply and Sanitation Technology Platform (WssTP). Cooperation between the Water JPI and the WssTP is intense and is facilitated by the activities planned and executed under WaterWorks2014³¹.

Other informal connections (e.g. sharing information, considering each other's priorities)

- European Innovation Partnership Smart Cities and Communities: in the High Level Group of SMART cities and communities 22 Members were invited „ad personam“, representing stakeholder groups. Among these stakeholders, also members from Member States networks (JPI Urban Europe, Smart Cities MSI) were present.
- Ageing and Technology, MYBL-COST-AAL joint workshop in 2017: the ageing of the European population is creating many new challenges and opportunities for individuals, organisations and governments. Many of these challenges are being addressed by information and communication technologies, which form an integral part of everyday life for everyone. Sometimes technologies are targeted at particular needs or age groups, but often they are generic, addressing many issues and kinds of people. These new technologies create new opportunities and sometimes challenges. Three relevant European initiatives have agreed to collaborate and to jointly address some of the key issues in their fields which are of interest to the research and innovation community.

³¹ <http://www.waterjpi.eu/implementation/supporting-projects/waterworks2014>

2.3. Summary on overall connectivity between the networks

The cluster ‘inclusive and secure society’ is highly populated with P2Ps and a number of ERICs. The world of PPPs is prominently represented in some specific intervention areas. The existing P2Ps mainly cover the intervention areas Social and Economic Transformations, Cultural Heritage and Disaster Resilient Societies, whereas the areas Protection and Security and Cybersecurity are more represented by PPPs. It has to be noted however, that the majority of P2P initiatives is only partly relevant for the intervention areas Social and Economic Transformations and also Protection and Security.

Concerning interactions between the various types of networks, the emerging picture from the analysis shows that there are virtually no interactions between the P2P community and the PPP community. In addition, interactions between P2Ps and EIT-KICs and ERICS are limited, although some co-operations exist between the EIPs, ERA-NETs and Art. 158 initiatives in this intervention area.

For further developing the partnership initiatives in this cluster, relevant questions of concern are:

- How can transformation oriented partnerships in the area Social and Economic Transformation and Democracy better connect with the specific social sciences and humanities research being performed in these intervention areas?
- What is the role of the Knowledge and Innovation Communities for the intervention areas and how can they better integrate with existing P2Ps in this cluster?

In this regard, the workshop on the future of partnerships in May 2019 showed, that the wide range of actual and potential connection between HERA, NORFACE, JPI CH and a range of other networks (JPIs, infrastructures) highlighted the need for further discussion amongst them.

The workshop further highlighted that a lot of potential in the networks in humanities and social sciences exists, for collaborating on the identification of the areas where human factor aspects are integrated in other clusters and partnerships. This includes initiatives like the EIT-KIC but also Art. 187 and Art. 185 initiatives. It was reinforced that society needs partnerships addressing the human factor in the research areas covered by these networks, and that these need to be included in the present provisional list of partnerships which is labelled to be “under construction”.

3. Appendix

Summary of the various partnerships and networks that are relevant to the Cluster ‘Inclusive and Secure Societies’

The black dots indicate ‘full relevance’ to the specific intervention area, whilst the white dots indicate ‘partial relevance’.

Name	Focus Area	Democracy	Cultural Heritage	Social and Economic Transformations	Disaster Resistant Societies	Protection and Security	Cybersecurity
A187							
1. IMI 2	Manufacturing for				○		
2. ECSEL	Electronic components & systems					○	●
A185							
3. EDCTP 2	Poverty-related infectious diseases in sub-Saharan Africa				○		
4. AAL 2	Health related policies			○			
5. PRIMA	Food Systems, Water				○		
EIT-KIC							
6. Digital	Digital Entrepreneurship					○	●
7. Urban Mobility	Urban, Mobility				○		
8. Climate	Climate Entrepreneurship				○		
cPPP							
9. Robotics	Robotics						○
10. Cybersecurity	Cybersecurity						●
FET Flagships							
11. FET Quantum Flagship	Quantum Computing						○
EJP							
12. EJP HBM4EU	Biomonitoring, Chemistry					○	
JPI							
13. MYBL	Demographic Change and Wellbeing			●			
14. JPND	Medicine, Neurodegenerative Diseases			○			
15. Cultural Heritage	Cultural History		●				
16. Water	Water Supply				○		
17. Urban Europe					○		

Name	Focus Area	Democracy	Cultural Heritage	Social and Economic Transformations	Disaster Resistant Societies	Protection and Security	Cybersecurity
ERA-NET Cofund							
18. Jpco-fuND	Neurodegenerative Diseases			○			
19. DIAL (NORFACE)				●			
20. GENDER NET Plus	Gender Research			●			
21. HERA JRP UP	History			●			
22. HERA JRP PS	History			●			
23. ENSUF	Smart Cities			○			
24. ENSCC	Smart Cities			○			
25. Waterworks2014	Water				○		
26. Waterworks2015	Water				○		
27. Waterworks2017	Water				○		
EIP							
28. Active and Healthy Aging	Ageing			○			
29. Smart Cities and Communities	Smart Cities			○			
30. EIP Water	Water				○		
ERIC							
31. EPOS ERIC	Earth Sciences				○		
32. CESSDA ERIC	Social Science Data	○		●		○	
33. DARIAH ERIC	Arts, Digital Humanities		●				
34. ESS ERIC	Social Survey	●		●		●	
35. CLARIN ERIC	Digital language resources	○		●		○	
36. SHARE-ERIC	Health, Ageing, Demography	○		○		○	

Imprint

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