



Integration of Social Sciences and Humanities in Horizon 2020: Participants, Budgets and Disciplines

5th monitoring report
on projects funded in 2018 under the Horizon 2020 programme

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Integration of Social Sciences and Humanities in Horizon 2020: Participants, Budgets and Disciplines

***5th monitoring report on projects funded in 2018
under the Horizon 2020 programme***

Krzysztof Kania and Rickard Bucksch

Data on SSH in the ERC were provided by Lino Paula at the European Research Council Executive Agency (ERCEA). Data on MSCA were provided by Przemysław Jankowski (DG EAC Maria Skłodowska-Curie Actions unit), while RI data were provided by Maria Theofilatou (DG R&I Research Infrastructures unit). The quantitative analysis of the data for societal challenges and industrial leadership (LEITs) was carried out by Natalia Morazzo et al. from the Agenzia per la Promozione della Ricerca Europea (APRE). The authors would also like to thank the Net4Society5 project consortium for their contribution to this report.

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FOREWORD

Dear reader,

Many societal challenges that need to be addressed through research and innovation are too complex to be overcome by a single scientific discipline (or even a few). One recent illustration is the COVID-19 pandemic, the effects of which include socio-economic upheaval and significant cultural and behavioural change.

Technical solutions are often preconditions for new policy outcomes, but in themselves insufficient to have a meaningful impact. The lasting societal impacts that policy-makers seek are often equally reliant on insights from social sciences and the humanities.

Therefore, the Horizon 2020 programme takes a two-pronged approach to social sciences and the humanities (SSH): a dedicated societal challenge that focuses mainly on SSH disciplines (SC6: Europe in a changing world — inclusive, innovative and reflective societies); and the cross-cutting principle of SSH integration across the whole programme.


This report assesses SSH integration in Horizon 2020 topics and projects in 2018. It covers all SSH-flagged¹ topics under calls for proposals that year, and projects awarded funding under those topics.

The results are encouraging. The number of SSH-flagged topics, the number of SSH-intensive projects, the overall budget and the funding going to the SSH community all increased significantly compared with previous years. However, what matters in the end is the societal impact that greater SSH integration may have in the future. Thus, while the findings in this report give grounds for optimism, the future will have to confirm the degree of success achieved.

The effectiveness of SSH integration must be assessed from an increasingly qualitative (rather than quantitative) perspective. To this end, DG Research and Innovation (R&I) has been working intensively on key strategic orientations and key pathways to impact for the new Horizon Europe programme.

This year we have further broadened the scope of the report, while building on the core monitoring and reporting of the Horizon 2020 societal challenges and industrial leadership priorities. In addition to findings on fundamental research through the European Research Council (ERC), Future Emerging Technologies (FETs), Marie Skłodowska-Curie actions (MSCAs) and Research Infrastructures (RIs), we have included Science with and for Society (SwafS).

I wish you an interesting and instructive read.



Jean-Eric Paquet
Director General, Directorate General for Research and Innovation (DG R&I)

¹ The aim of SSH flagging is to highlight topics where the inclusion of SSH disciplines creates clear added value.

EXECUTIVE SUMMARY

A comprehensive methodology has been developed for assessing the integration of social sciences and humanities (SSH) in the Horizon 2020 programme. The methodology aims to produce a proxy for the assessment, with a particular focus on the 'societal challenges' and 'industrial leadership' priorities. The methodology and the special indicators referred to in this executive summary, such as 'SSH integration quality' and the assessment thresholds, are described in detail in the methodology section.

Some of the most relevant findings of the report can be summarised as follows:

- The quality of SSH integration improved considerably in 2018: 65% of projects had good quality SSH integration with the 10% threshold (49% with the 20% threshold).
- The proportion of projects that failed to meet any quality criteria decreased: 11% of projects with the 10% threshold (17% with the 20% threshold).
- There were 130 SSH-flagged topics, up from 113 in 2017.
- 391 projects were funded under the flagged topics in 2018, up from 262 in 2017.
- The projects had a total budget of €1.9 billion, up from €1.2 billion in 2017.
- Of the overall budget, €415 million went to SSH partners, up from €272 million in 2017.
- Results are comparable with previous years' in terms of the proportion of projects with SSH partners (86%), the involvement of SSH partners (26%) and budget share (22%).

Some key findings and trends are shown in the summary table and graph below.

The authors would like to draw particular attention to the overall positive developments in terms of SSH presence and intensity indicated by the 2018 findings.

The indicators monitored point to increasing SSH integration over the period covered by this series of monitoring reports. In particular in the last 2 years, the budget allocated to SSH-flagged topics and to SSH partners have grown significantly (unlike the overall Horizon 2020 budget).

Other areas of Horizon 2020 covered in this year's report, such as the European Research Council (ERC), Future Emerging Technologies (FETs), Marie Skłodowska-Curie actions (MSCAs) and Research Infrastructures (RIs), also showed a fair level of SSH integration and generally positive trends over time. Science with and for Society (SwafS), a new addition this year, proved to be relatively SSH-intensive.

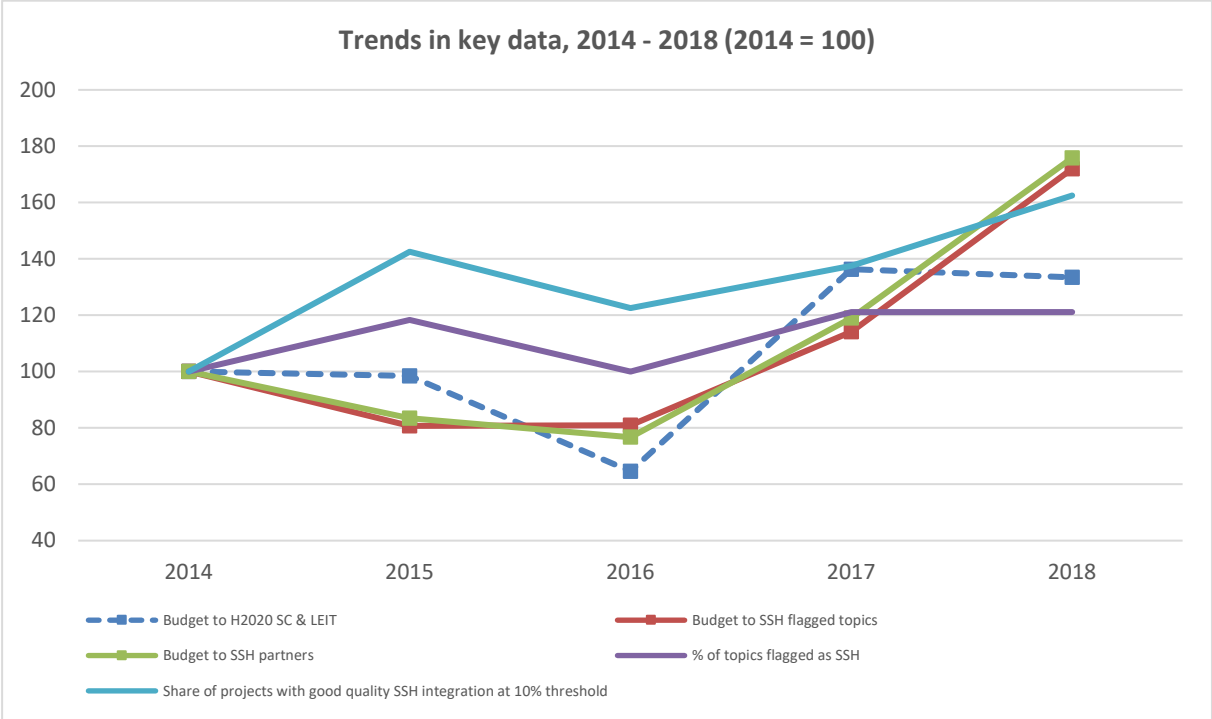
All in all the findings of this report are therefore encouraging. The monitoring data indicate strengthening SSH integration. However, levels of integration remain patchy and vary strongly between programme parts, as does the representation of different SSH disciplines. Therefore, a sustained effort to encourage further SSH integration seems called for.

Summary table: Key findings - Horizon 2020 societal challenges and industrial leadership priorities²

Year	Number of SSH-flagged topics	Proportion of projects under SSH flagged topics with at least one SSH partner	Involvement of SSH partners in projects funded under SSH-flagged topics (%of total partners)	Budget allocated to SSH partners in projects funded under SSH flagged topics (% of total budget)	Quality of SSH integration
2014	98	71% (219 of 308)	26% (19% excl. SC6)	€236 million (21%)	<u>10% threshold</u> Good: 40% None: 28%
2015	83	84% (197 of 235)	27% (29% excl. SC6)	€197 million (22%)	<u>10% threshold</u> Good: 57% None: 21% <u>20% threshold</u> Good: 39% None: 24%
2016	84	71% (169 of 239)	27% (21% excl. SC6)	€181 million (20%)	<u>10% threshold</u> Good: 49% None: 29% <u>20% threshold</u> Good: 39% None: 33%
2017	113	86% (230 of 268)	28% (21% excl. SC6)	€281 million (22%)	<u>10% threshold</u> Good: 55% None: 22% <u>20% threshold</u> Good: 41% None: 28%
2018	130	86% (338 of 391)	26% (21% excl. SC6)	€415 million (22%)	<u>10% threshold</u> Good: 65% None: 11% <u>20% threshold</u> Good: 49% None: 17%

² NB: Only Research and Innovation Actions (RIAs), Coordination and Support Actions (CSAs) and Innovation Actions (IAs) are considered in this report. Instruments such as ERA-NETs, co-funding and public procurement are disregarded, as this approach makes it easier to compare results between Work Programme parts, in particular for Societal Challenges. As a result, budget shares presented here for SSH in absolute terms may reflect a fraction of the overall picture in Horizon 2020.

Graph: Trends in key data, 2014 – 2018



METHODOLOGY

The methodology chosen is a proxy to measure SSH integration. The choice of indicators (i.e. the 10% and 20% thresholds for SSH integration quality and the 66% threshold for classification as SSH partner, as further explained below) is in a sense arbitrary, and subject to possible methodological debate. However, we decided to maintain the indicators in order to ensure the comparability of the results with previous years'.

The data in this report stem from the grant agreements for the 391 projects selected for funding in 2018 under 130 SSH-flagged topics³ within in the Societal Challenges and Industrial Leadership priorities. A separate methodology for ERC, MSCAs, RIs, FETs and SwafS is described below.

This report is not a comprehensive analysis of how SSH are performing across Horizon 2020. However, the findings (especially if compared from one year to the next) are meant to give a good indication of the role SSH plays in the programme. In this edition, we looked only at RIAs, IAs and CSAs. Under other funding instruments (e.g. ERA-Nets and joint calls with other funders), the integration of SSH is more difficult to analyse, which also makes comparisons between parts of the work programme more challenging. In the case of ERA-Nets, the national co-financing contribution for SSH is yet to be examined.

Topics were flagged for SSH relevance in the Participant Portal. The SSH-flagged topics were expected to fund projects in which contributions from SSH practitioners and experts would be integrated to varying degrees. The Societal Challenges funded 321 projects under 109 such topics, while the Industrial Leadership priority funded 70 under the 21 remaining topics.⁴

No reliable IT-based solution is yet in place for collecting data on SSH integration in Horizon 2020 projects. As a result, data for the 2018 projects were again extracted manually, project by project, according to a simple and robust methodology.

The relevant parameters are defined as follows:

SSH partners: Consortium partners (i.e. legal entities) for which 66% or more of the experts listed in the Grant Agreement (Part B) as taking part in the project have an academic and/or professional background in SSH and contribute with this expertise to project activities. This means that partners with fewer than 66% of experts with SSH expertise taking part in the project are **not** counted as SSH partners in this report, although such experts may still play an important role. (This is one of the features of the report that could be revisited in future editions).

Budget going to SSH: The total amount given to SSH partners in the 391 projects funded under the SSH-flagged topics.

³ The topics include only Research and Innovation Actions (RIAs), Innovation Actions (IAs) and Coordination and Support Actions (CSAs)

⁴ Some Societal Challenges also contributed topics to focus-area calls in other WP parts, thus making the exact contribution of each Societal Challenge sometimes difficult to evaluate.

Activity type: This is determined on basis of the legal status of consortium partners and their public, commercial, research and educational affiliation⁵. The five activity types used in this report are those used by the Common Research Data Warehouse (CORDA)⁶, as follows:

HES	Higher or secondary education establishments
REC	Research organisations
PUB	Public body (excluding research organisations and higher or secondary education establishments)
PRC	Private for-profit entities (excluding higher or secondary education establishments)
OTH	Others

Distribution by discipline: This category provides aggregated data on the distribution of SSH expertise across projects. It indicates what percentage of projects include partner-level expertise in each of the following 13 (groupings of) disciplines:

- anthropology (excluding physical anthropology) and ethnology;
- economics;
- business and marketing;
- human geography and demography (excluding physical geography);
- education;
- communication;
- history;
- humanities and the arts (archaeology, area studies, ethics, interpretation and translation, languages and cultures, literature, linguistics, philosophy, religion and theology);
- political science, public administration;
- law, legal studies;
- psychology;
- sociology;
- non-research activities (project management and project-related communication activities).

Changes introduced in previous years' reports were kept:

- in order to have more precise figures on SSH disciplines, the number of experts is counted per discipline in each project;
- SSH experts whose contribution to the projects is in the form not of research but rather communication and project management are counted separately. For instance, if an SSH partner is in charge of the work package on communication, all the experts will be counted as non-research. Also, if the coordinator is an SSH partner, one of its experts is counted as non-research;
- SSH disciplines are broken down into 13 groupings (see above).

Quality of SSH integration: This category is a composite project-level indicator that gives some indication of the degree of SSH integration. It considers the performance of each project against four criteria and associated thresholds, assessing whether:

- the proportion of SSH partners is higher than 10%;
- the proportion of the budget going to SSH is higher than 10%;
- the proportion of person-months by SSH partners are higher than 10%;
- SSH contributions came from at least two distinct SSH disciplines.

⁵ This information is collected from consortium partners through the online Unique Registration Facility and then validated at the grant agreement negotiation stage.

⁶ The five categories used by CORDA are mutually exclusive, so a project partner can fall in only one category. For example, a HES can also be a REC, but it will be classified only as a HES. Also, commercial for-profit research organisations will only appear in the PRC category.

In a second scenario, a threshold of 20% was applied for the three first criteria. In this case, the quality of integration is calculated according to the following criteria:

- the proportion of SSH partners is higher than 20%;
- the proportion of the budget going to SSH is higher than 20%;
- the proportion of person-months by SSH partners are higher than 20%;
- SSH contributions came from at least two distinct SSH disciplines.

The quality of SSH integration in each project is assessed according to the following scale:

None	No threshold met for any of the four criteria
Weak	Threshold met for one criterion only
Fair	Threshold met for two or three criteria
Good	Threshold met for all four criteria

Remarks:

In absolute terms the budget for societal challenges and industrial leadership has increased since the previous report, but this does not necessarily reflect a general trend across the programme. The most interesting gauge is probably the share of the budget going to SSH partners, i.e. as compared with the total available budget.

Since 2016, the report has included an overview of data on the ERC. In addition, since 2017, it has examined the SSH component of the MSCAs, FETs (based on the presence of the SSH dimension), and of RIs (infrastructure relating to SSH activities). From this year, the report also analyses the SSH contribution of SwafS projects.

SSH INTEGRATION IN 2018: GENERAL ASSESSMENT

1 General trends

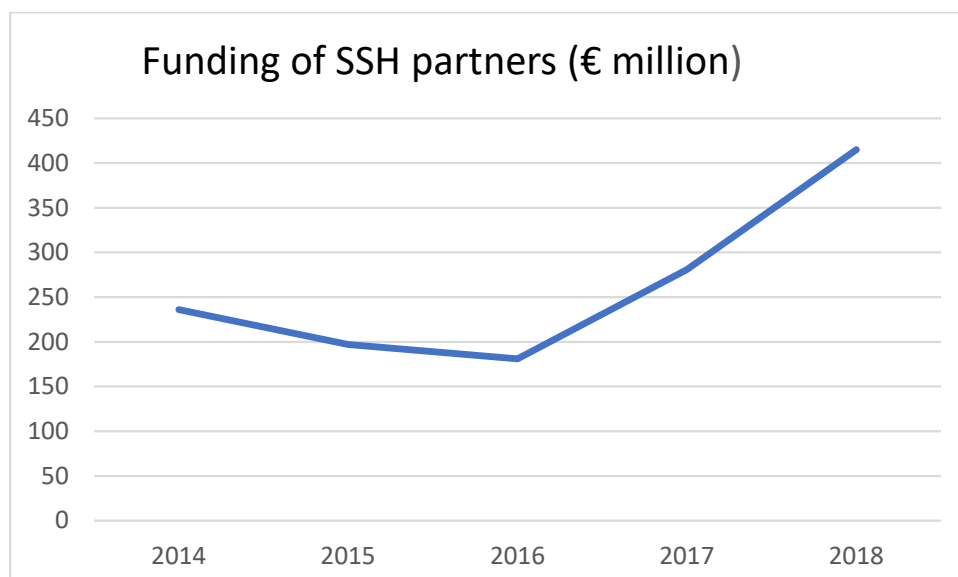
SSH integration in Horizon 2020 was significantly greater in quantitative terms in 2018 than in previous years, and to some extent also in qualitative terms.

This may be an initial indication of an enhanced role for SSH disciplines in the final period of the programme; this would of course have to be confirmed by up-coming 2019 and 2020 data.

2 Budget going to the SSH community

The total funding available for the calls for proposals in the 2018 Work Programme amounted to more than €5.3 billion; of this, almost €1.9 billion was for SSH-flagged topics. This represents a significant increase from 2017 and previous years.

Under those topics, €415 million of the €1.9 billion (i.e. 22%) went to SSH partners, considerably more than in previous years (in particular 2014-2016).

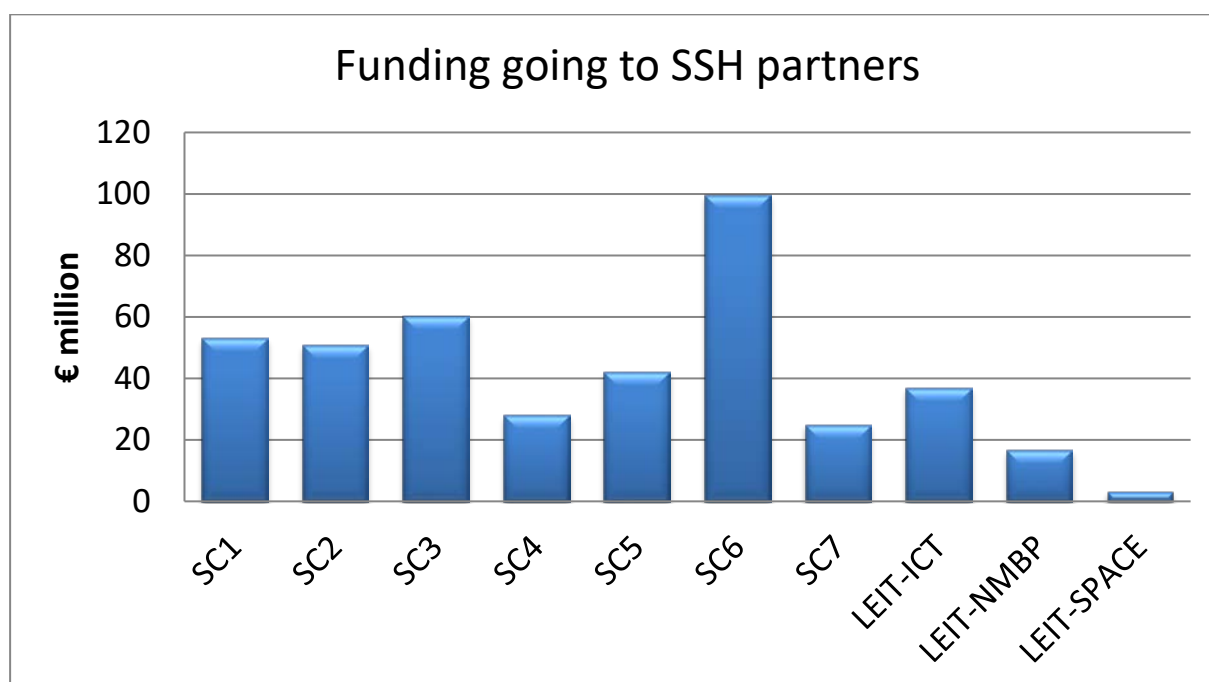


Overall, about 8% of the total 2018 budget for SCs and LEITs combined went to SSH partners, which is a stable result compared with 2017.

Budget allocated to SSH-flagged topics and to SSH partners (€ million) in 2018

Horizon 2020 parts	Total budget 2018 calls	Budget allocated to SSH-flagged topics	Budget going to SSH partners	Proportion of budget under SSH-flagged topics going to SSH partners	Proportion of total calls budget going to SSH partners
SC1	1 025	302	53	18%	5%
SC2	407	299	51	17%	12%
SC3	610	336	60	18%	10%
SC4	532	150	28	19%	5%
SC5	375	185	42	23%	11%
SC6	127	122	99	82%	78%
SC7	226	159	25	16%	11%
Total SC	3 303	1 553	358	23%	11%
LEIT-ICT	1 291	140	37	26%	3%
LEIT-NMBP	638	185	16	9%	3%
LEIT-SPACE	107	14	3	23%	3%
Total LEIT	2 036	339	56	17%	0%
Total	5 339	1 892	415	22%	8%
<i>Total excl. SC6</i>	<i>5 212</i>	<i>1 770</i>	<i>315</i>	<i>18%</i>	<i>6%</i>

Unsurprisingly, the biggest SSH budget is that for SC6 (Europe in a changing world – inclusive, innovative and reflective societies), at almost €100 million in 2018, followed by SC3 and then SC1.



3 Involvement of SSH partners in project consortia

In 2018, there were as many as 1 459 SSH partners in projects under SSH-flagged topics, out of 5 670 partners in total. This represented 26% of all consortium partner organisations, which is a slightly bigger proportion than in 2016 and previous years. Compared with 2017, the number of participating SSH partners is significantly higher

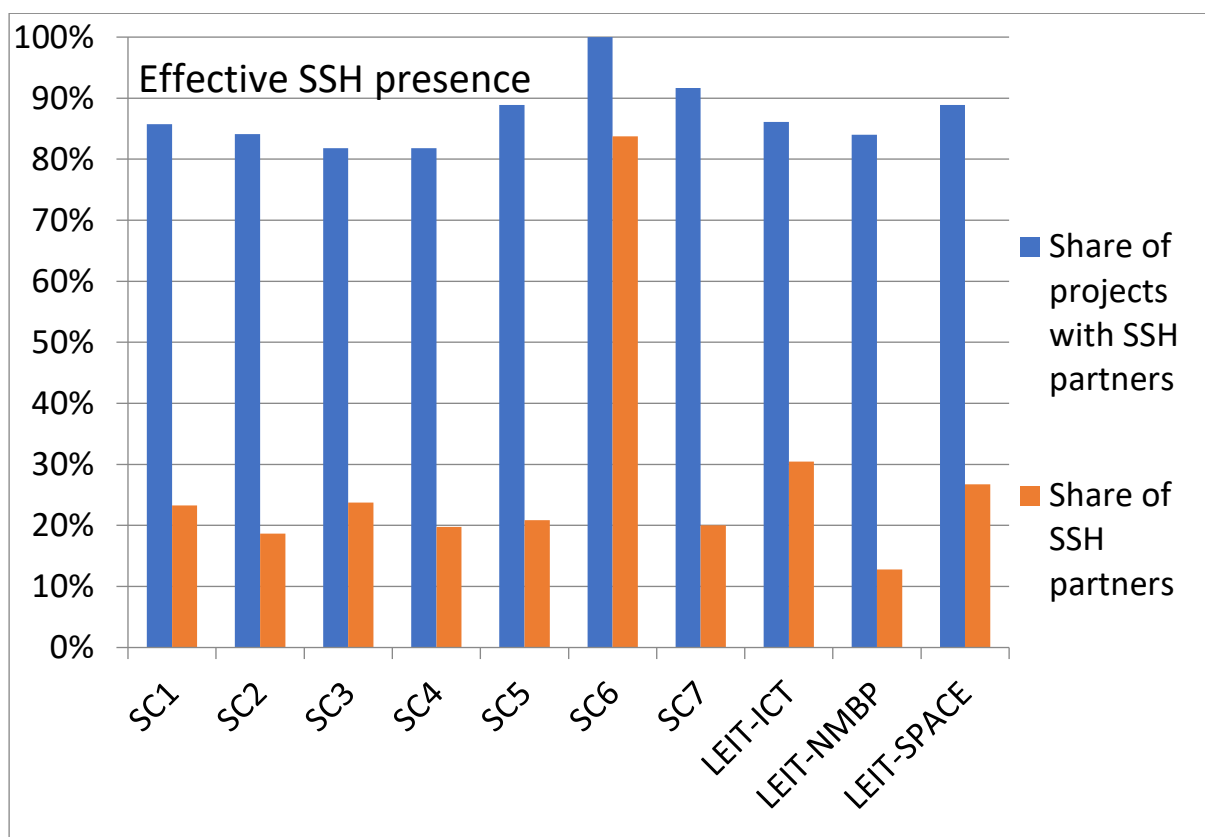
(1 459 versus 1 014), but the percentage is slightly lower (26% vs 28%). A high SSH intensity is (not surprisingly) visible in SC6, with an 84% share of SSH partners.

Involvement of SSH partners in projects funded under SSH-flagged topics								
Horizon 2020 part	Total nr. of topics	Nr. of SSH-flagged topics	Funded projs. under SSH-flagged topics	Projs. with at least one SSH partner	Prop. of projs. with SSH partners	Partners in projs. under SSH-flagged topics	SSH partners in projs. under SSH-flagged topics	Prop. of SSH partners
SC1	65	14	56	48	86%	713	166	23%
SC2	34	22	44	37	84%	943	176	19%
SC3	54	21	88	72	82%	1 091	259	24%
SC4	174	11	33	27	82%	542	107	20%
SC5	25	13	36	32	89%	613	128	21%
SC6	25	19	40	40	100%	412	345	84%
SC7	16	9	24	22	92%	459	92	20%
Total SC	393	109	321	278	87%	4 773	1 273	27%
LEIT-ICT	43	8	36	31	86%	348	106	30%
LEIT-NMBP	40	10	25	21	84%	478	61	13%
LEIT-SPACE	13	3	9	8	89%	71	19	27%
Total LEIT	96	21	70	60	86%	897	186	21%
Total	489	130	391	338	86%	5 670	1 459	26%
<i>Total ex. SC6</i>	<i>464</i>	<i>111</i>	<i>351</i>	<i>298</i>	<i>85%</i>	<i>5 258</i>	<i>1 114</i>	<i>21%</i>

As many as 86% of projects funded under SSH-flagged topics in the Societal Challenges and the LEIT parts of Horizon 2020 have at least one SSH partner. This is a similar figure to 2017 and a considerable improvement in comparison with previous years.

However, there are still some projects under SSH-flagged topics without any SSH participation (14%). There are a number of possible reasons for this, e.g. a failure to highlight SSH dimensions in the topic texts, barriers to inter-disciplinarity in certain scientific fields and/or a lack of guidance to evaluators during the evaluation process.

The actual involvement of SSH partners under SSH-flagged topics averaged 26% across all SCs and LEITs, with significant variation (e.g. 84% for SC6 and 13% for LEIT-NMBP).



3.1 SSH partners by country

The vast majority of SSH partners were established in EU Member States (90%), with the rest established in associated (5%) or associated countries (5%).

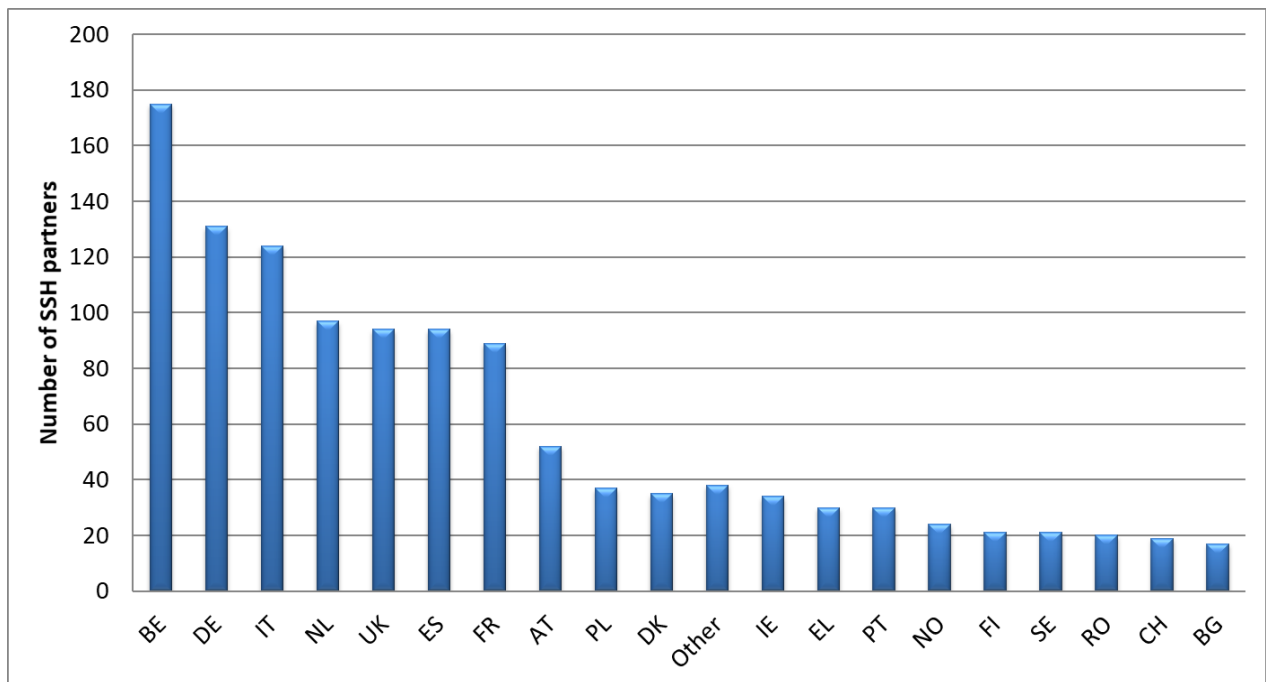
The wide gap between the EU-15 countries (77% of SSH partners) and EU-13 countries (13%) calls for more excellence spreading and widening participation activities in the Member States that joined the Union in and after 2004.

The proportion of partners from the Top 6 countries (BE, DE, IT, NL, UK, ES) was still high (53%); this contributes to a strong geographical concentration in favour of the EU-15.

Country affiliation of SSH partners: Sub-groups

	Partners	Share
Total	1 347	100%
EU-28	1 210	90%
EU-15	1 034	77%
EU-13	176	13%
Associated countries	71	5%
Third countries	66	5%
Top 6 countries	715	53%
Top 20 countries	1 182	88%

At individual country level, Belgium was the single most represented Member State; followed by Germany, Italy and the Netherlands. The UK now ranked number five in this respect.



3.2 SSH partners by type of activity

The majority of SSH partners were from the publicly funded science and research sector, including higher or secondary education establishments (HES), research organisations (REC) and public bodies (PUB). However, a significant number were from private for-profit entities (PRC) or other types of body (OTH).

This may reflect the communication, administration and outreach functions performed by many participating SSH partners.

Type of activity - SSH partners						
Horizon 2020 parts	HES	REC	PUB	PRC	OTH	Total
SC1	43	26	10	29	44	152
SC2	54	35	11	33	35	168
SC3	37	28	19	70	82	236
SC4	13	15	16	28	25	97
SC5	22	38	15	25	20	120
SC6	163	58	18	22	50	311
SC7	30	11	18	21	9	89
LEIT-ICT	30	11	4	31	21	97
LEIT-NMBP	8	4	9	27	11	59
LEIT-SPACE	1	3	0	7	7	18
Total	401	229	120	293	304	1 347
<i>Total ex. SC6</i>	<i>238</i>	<i>171</i>	<i>102</i>	<i>271</i>	<i>254</i>	<i>1 036</i>

The shares of the various activity types differ considerably depending on the programme part in question, with a clear predominance of HES, especially in SC6.

Type of activity - proportion of SSH partners					
Horizon 2020 parts	HES	REC	PUB	PRC	OTH
SC1	28%	17%	7%	19%	29%
SC2	32%	21%	7%	20%	21%
SC3	16%	12%	8%	30%	35%
SC4	13%	15%	16%	29%	26%
SC5	18%	32%	13%	21%	17%
SC6	52%	19%	6%	7%	16%
SC7	34%	12%	20%	24%	10%
LEIT-ICT	31%	11%	4%	32%	22%
LEIT-NMBP	14%	7%	15%	46%	19%
LEIT-SPACE	6%	17%	0%	39%	39%
Total	30%	17%	9%	22%	23%
<i>Total ex. SC6</i>	<i>23%</i>	<i>17%</i>	<i>10%</i>	<i>26%</i>	<i>25%</i>

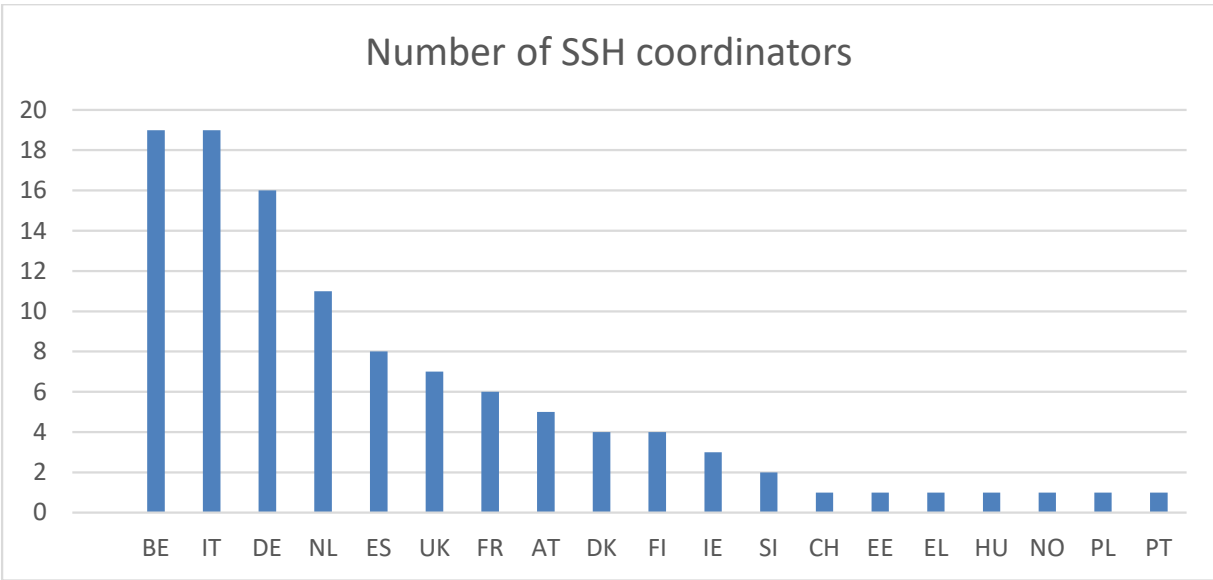
4 Project coordination

In total, 29% of projects funded under the SSH-flagged topics in the Societal Challenges and the LEIT parts of Horizon 2020 were coordinated by an SSH partner.

The highest number of SSH project coordinators was found under SC6, followed by SC3 and SC1. The proportion is growing slightly over time (though it was a higher in 2017), but there is probably room for further improvement in this important respect.

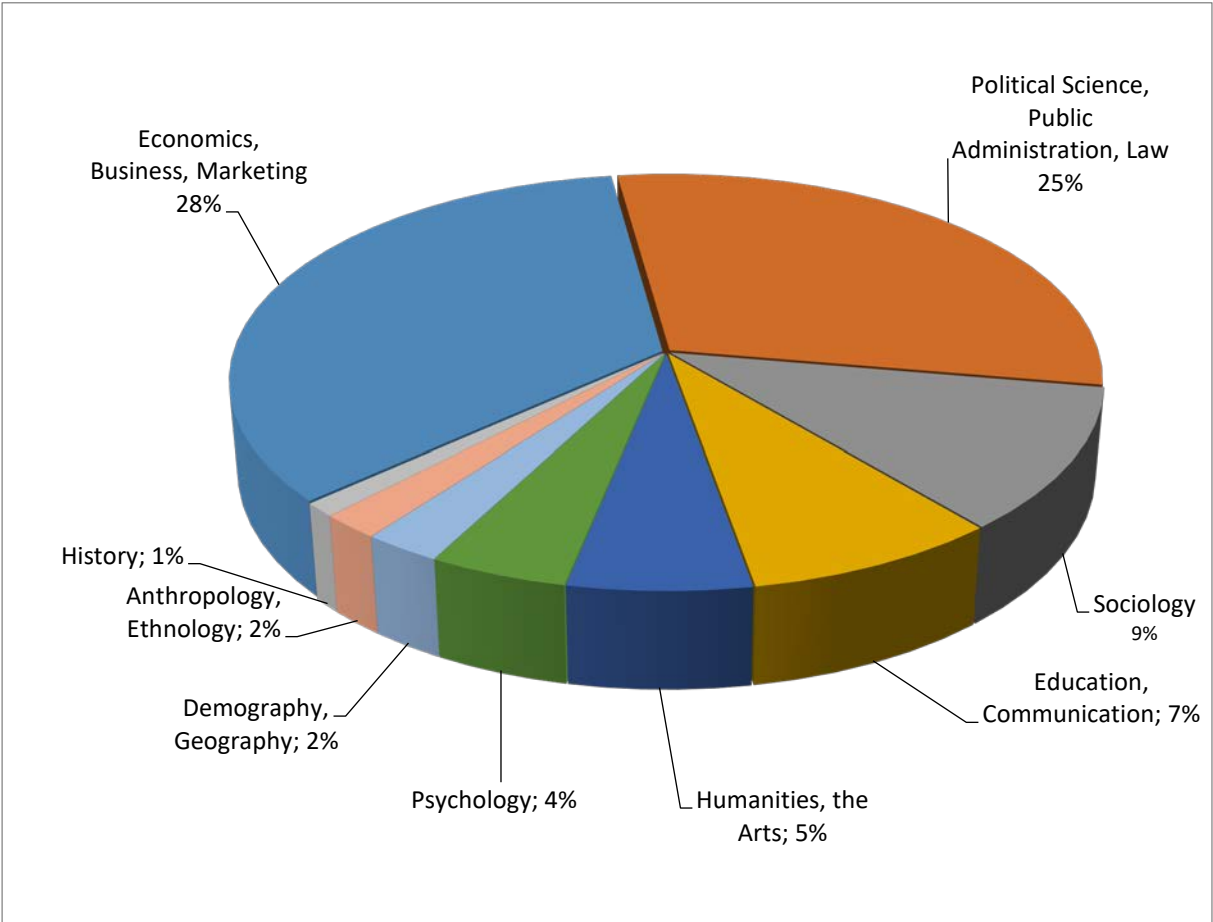
Horizon 2020 parts	Projects funded under SSH-flagged topics	Projects coordinated by SSH partners	Proportion of SSH coordinators
SC1	56	14	25%
SC2	44	8	18%
SC3	88	23	26%
SC4	33	10	30%
SC5	36	8	22%
SC6	40	34	85%
SC7	24	3	13%
Total SC	321	100	31%
LEIT-ICT	36	9	25%
LEIT-NMBP	25	2	8%
LEIT-SPACE	9	1	0%
Total LEIT	70	12	17%
Total	391	112	29%
<i>Total ex. SC6</i>	<i>351</i>	<i>78</i>	<i>22%</i>

SSH coordinators of project consortia led by an SSH partner were predominantly from Belgium, Italy and Germany.



5 Distribution by discipline

As in previous years, economics experts made up the largest proportion of experts with an SSH background, while political science and public administration experts were the second largest group. Together these two clusters of disciplines represented more than half of all SSH experts involved in projects under SSH-flagged topics. Despite of being a wide scientific field, the humanities and the arts were relatively weakly represented, with a 5% share (in line with previous years).



Of all experts with a professional SSH background, 18% performed non-research activities (such as project management and project related communication). This is actually the most numerous individual discipline group.

Discipline prevalence in projects funded under SSH-flagged topics		
Disciplines and clusters of disciplines	Number of experts	Proportion of experts
No Research activities	772	18%
Political Science, Public Administration	761	17%
Economics	761	17%
Business, Marketing	473	11%
Sociology	400	9%
Law	309	7%
Communication	230	5%
Humanities, The Arts	215	5%
Psychology	162	4%
Human Geography	85	2%
Education	70	2%
Anthropology, Ethnology	70	2%
History	39	1%
Demography	6	0%

In terms of the distribution of disciplines of SSH experts participating in projects under SSH-flagged topics, Economics and Political Science/Public Administration represented the two most prevalent disciplines across all programme parts, with equal representation. Law was strongly represented in SC7, while Business/Marketing was well represented in LEIT-ICT, Humanities/The Arts in LEIT-NMBP and Communication in LEIT-Space.

6 Quality of integration

As explained in the methodology section, we sought to analyse the quality of SSH integration more precisely by using two scenarios.

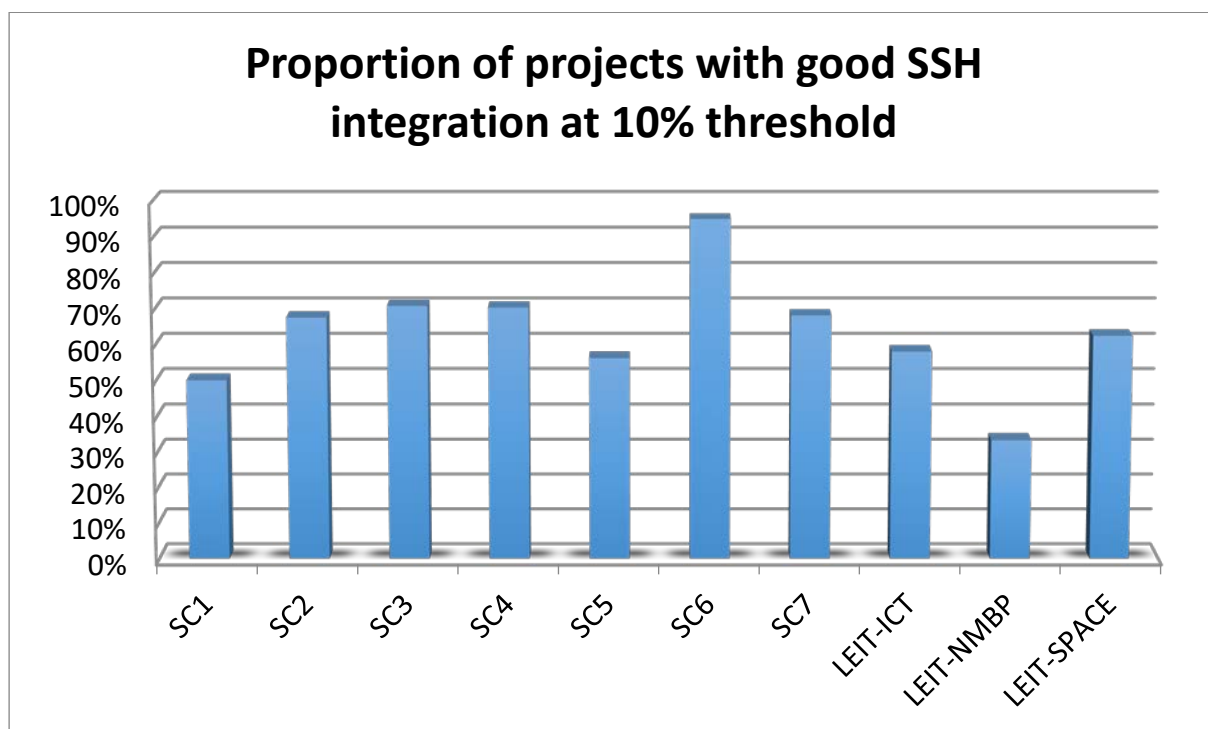
6.1 10% threshold

With a 10% threshold, 65% of projects funded under SSH-flagged topics showed good SSH integration in terms of proportion of partners, allocated budget, person-months and range of disciplines involved. This is a marked increase from previous years (e.g. +10 pp in comparison to 2017).

As many as 81% of projects under SSH-flagged topics in 2018 fall in the fair and good categories combined.

Quality of SSH integration with 10% threshold					
Horizon 2020 parts	None	Weak	Fair	Good	Fair+good
SC1	15%	10%	25%	50%	75%
SC2	14%	3%	16%	68%	84%
SC3	6%	11%	13%	71%	83%
SC4	15%	4%	11%	70%	81%
SC5	13%	6%	25%	56%	81%
SC6	0%	0%	5%	95%	100%
SC7	9%	14%	9%	68%	77%
LEIT-ICT	13%	3%	26%	58%	84%
LEIT-NMBP	29%	24%	14%	33%	48%
LEIT-SPACE	0%	13%	25%	63%	88%
Total	11%	8%	16%	65%	81%
<i>Total ex. SC6</i>	<i>12%</i>	<i>9%</i>	<i>18%</i>	<i>61%</i>	<i>79%</i>

The quality of integration differed considerably across programme parts, e.g. very high in SC6 but lower in LEIT-NMBP.



Also, there is a clear correlation between the type of action under which a project is funded and the quality of SSH integration, with coordination and support actions (CSA) featuring the highest SSH integration levels.

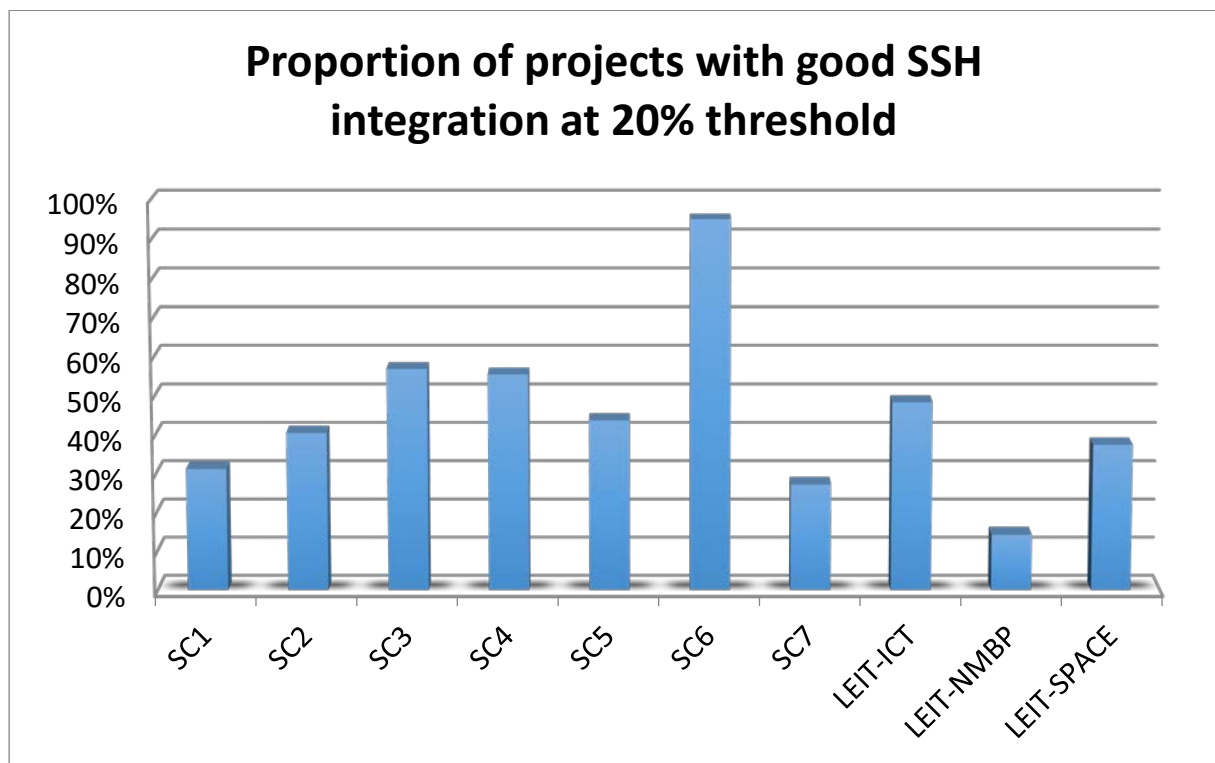
6.2 20% threshold

With a 20% threshold, 49% of projects funded under SSH flagged topics SSH showed good SSH integration in terms of proportion of partners, allocated budget, person-months and range of disciplines involved. Again, this is up from previous years.

If the fair and good categories are combined, this level rises to 60%.

Quality of SSH integration with 20% threshold					
Horizon 2020 parts	None	Weak	Fair	Good	Fair+good
SC1	25%	25%	19%	31%	50%
SC2	14%	35%	11%	41%	51%
SC3	10%	25%	8%	57%	65%
SC4	19%	19%	7%	56%	63%
SC5	16%	31%	9%	44%	53%
SC6	0%	3%	3%	95%	98%
SC7	9%	50%	14%	27%	41%
LEIT-ICT	26%	13%	13%	48%	61%
LEIT-NMBP	38%	29%	19%	14%	33%
LEIT-SPACE	50%	0%	13%	38%	50%
Total	17%	24%	11%	49%	60%
<i>Total ex. SC6</i>	19%	27%	12%	43%	55%

Not surprisingly, the quality of integration again differed considerably across programme parts, with SC6 once again showing the highest level.



SSH INTEGRATION BY WORK PROGRAMME PART

1 Societal Challenge 1: Health, Demographic Change and Wellbeing

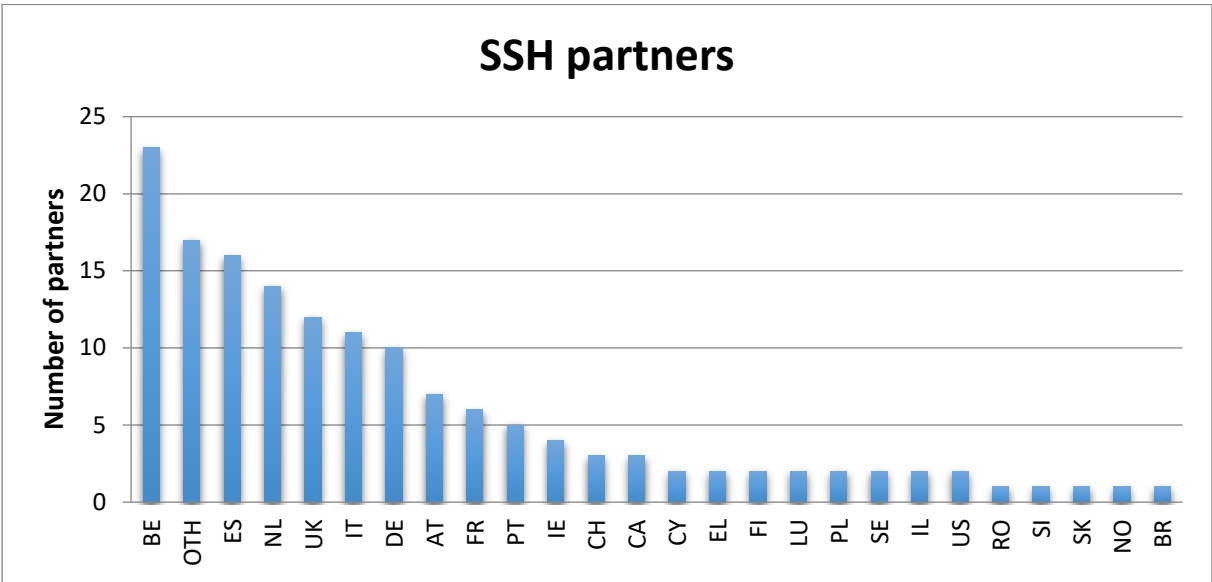
In 2018, SC1 funded a total of 65 topics. The 2018-2020 Work Programme set the budget for these topics at €1 025 billion.

Overall, 14 of the 65 topics were flagged for SSH. These topics funded 56 projects for a budget of €302 million, of which €53 million (i.e. 18%) went to SSH partners.

In terms of types of action, the 56 funded projects include:

- 44 Research and Innovation Actions, of which 6 were Lump Sum
- 3 Innovation Actions
- 9 Coordination and Support Actions

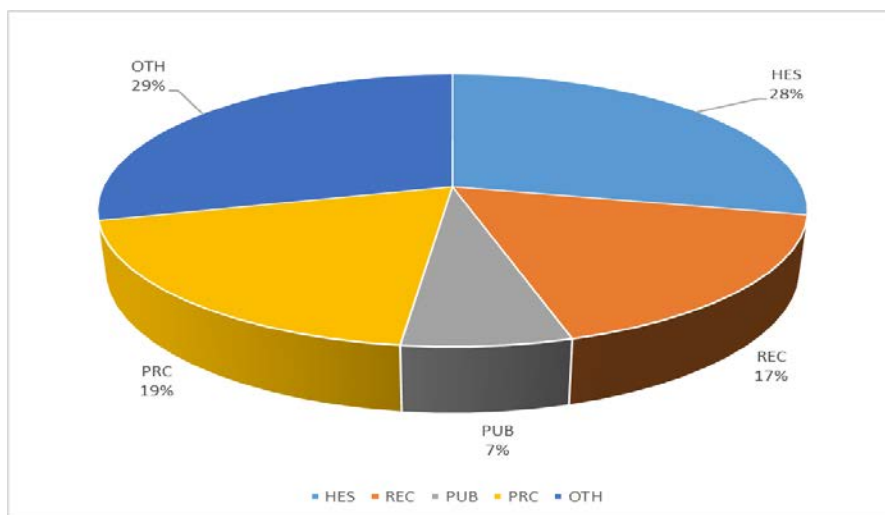
SSH partners accounted for 23% of project partners (166 out of 713) in the 56 projects. The five most represented EU countries were Belgium, Spain, the Netherlands, the UK and Italy. Switzerland and Israel (associated countries) were also relatively well represented.



SSH partners coordinated 14 of the 56 projects, with country affiliation as follows:

Country of affiliation of SSH coordinator	DE	ES	AT	BE	FR	IT	NL	
Number of projects coordinated	4	3	2	2	1	1	1	14

In terms of type of activity, 28% of the SSH partners were higher education institutions (HES), and 17% were research organisations (REC).



In terms of SSH expertise type across all 56 funded projects, Political Science and Public Administration stands out, while Economics, Sociology and Business/Marketing are also well represented. However, the largest category is no research activities, perhaps reflecting the fact that SSH experts often take on administrative roles. Demography, Human Geography and History were barely represented at all.

Discipline prevalence in projects funded under SSH-flagged topics

Disciplines and clusters of disciplines	Number of experts	Proportion of experts
No Research activities	108	24%
Political Science, Public Administration	85	19%
Economics	55	12%
Sociology	47	10%
Business, Marketing	47	10%
Law	38	8%
Psychology	31	7%
Communication	14	3%
Anthropology, Ethnology	13	3%
Humanities, The Arts	10	2%
Education	4	1%
Demography	2	0%
Human Geography	0	0%
History	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 50% of projects funded under the SC1 SSH-flagged topics show good integration of SSH and of their contributions, while 25% featured weak SSH integration.

Quality of SSH integration with 10% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC1	15%	10%	25%	50%

- With the 20% threshold: 31% of projects funded under the SC1 SSH-flagged topics show good integration of SSH and of their contributions, while 50% featured weak SSH integration.

Quality of SSH integration with 20% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC1	25%	25%	19%	31%

Best practice example:

<p>TOPIC</p> <p>SC1-HCO-06-2018 - Establishment of an International Network of Social Sciences Research Centres to help address governance and other challenges in the preparedness for and the response to infectious threats</p>	<p>Infectious diseases, in particular epidemics and antimicrobial resistance, pose significant threats to the social, economic and health security of communities and countries around the world. These diseases also transcend borders and require multi-sectoral and multi-jurisdictional co-operation and preparedness to ensure the world is safe from global threats.</p> <p>Many global infectious disease outbreaks are enabled, accelerated and allowed to spread by shortcomings in governance at all levels (national, regional as well as global). This governance challenge has been recognised and many initiatives are beginning to work in this space. However, communities would be better prepared to respond to infectious threats (public health emergencies or antimicrobial resistance) if such efforts and structures that govern the overall prevention and response were informed by research evidence from the range of social sciences and humanities disciplines.</p>
<p>PROJECT</p> <p>SoNAR-Global - A Global Social Sciences Network for Infectious Threats and Antimicrobial Resistance</p>	<p>SoNAR-Global is a global consortium led by social scientists specializing in emerging infectious diseases and antimicrobial resistance. The social sciences reveal linkages between infectious threats and political, social, economic, and ecological conditions, but are often poorly integrated into preparations for and responses to infectious threats.</p> <p>The consortium is tasked with developing a network among social scientists around the world to prepare for and respond to infectious threats. Since 2019, we have created a network of 526 individual members and 15 networks. Our platform includes a searchable directory as well as resources, including publications, blogs, research mapping for epidemics, podcasts, and webinars on COVID-19. Our regional hubs are in southeast Asia (Bangkok), eastern Europe (Kiev), and West Africa (Dakar).</p> <p>We have created accessible tools to identify hidden forms of vulnerability and will propose policy recommendations for communities to better engage excluded people. We have implemented one vulnerability assessment in Kampala (Uganda), collecting what may be the only systematic social sciences data of local vulnerability to infectious disease on the eve of the COVID-19 pandemic. SoNAR-Global is furthermore strengthening social sciences capacity, having created two curricula to train social scientists in the social, political, and economic dimensions of preparedness and response to infectious threats.</p> <p>More at https://www.sonar-global.eu/</p>

2 Societal Challenge 2: Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy

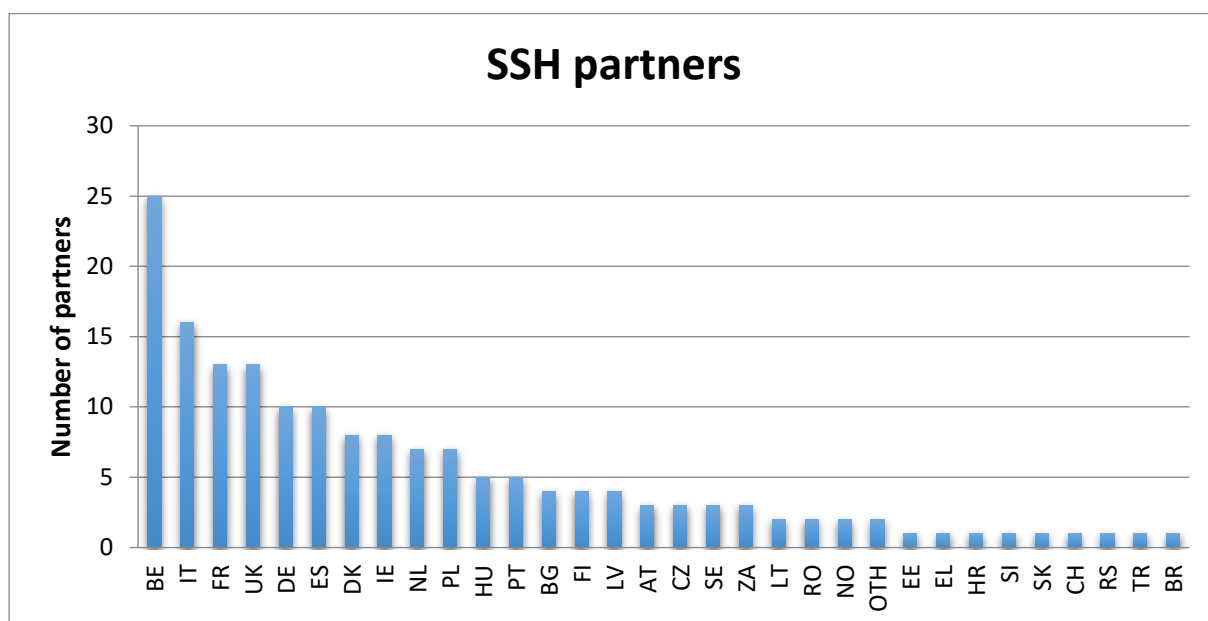
In 2018, SC2 funded a total of 34 topics. The 2018-2020 Work Programme set the budget for these topics at €407 million.

Overall, 22 of the 34 topics were flagged for SSH. These 22 topics funded 44 projects for a budget of €299 million, of which €51 million (i.e. 17%) went to SSH partners.

In terms of types of action, the 44 funded projects include:

- 23 Research and Innovation Actions
- 15 Innovation Actions
- 6 Coordination and Support Actions

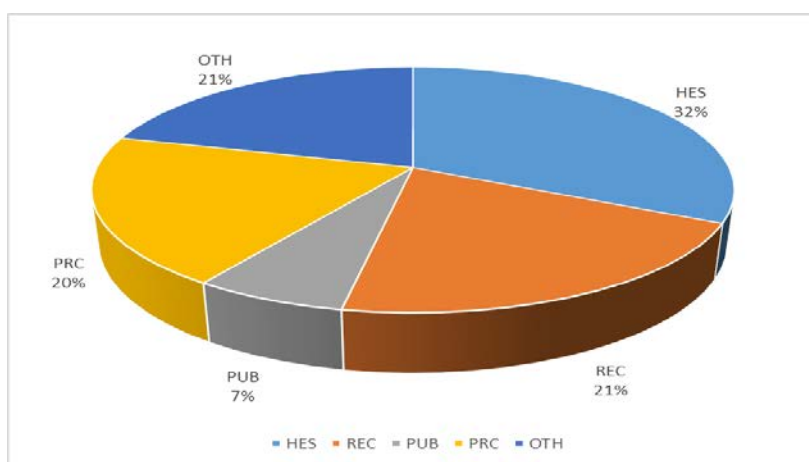
SSH partners accounted for 19% of project partners (176 out of 943) in the 44 projects. The five most represented EU countries were Belgium, Italy, France, the UK and on a shared fifth place Germany and Spain.



SSH partners coordinated 8 of the 44 projects, with country affiliation as follows:

Country of affiliation of SSH coordinator	IT	DE	DK	FI	IE	NL	
Number of projects coordinated	3	1	1	1	1	1	8

In terms of type of activity, 32% of the SSH partners were higher education institutions (HES) and 21% were research organisations (REC).



In terms of SSH expertise type across all 44 funded projects, Economic Sciences stand out, while Business/Marketing and Political Science/Public Administration were also well represented. History, Anthropology/Ethnology and Demography were barely represented at all.

Discipline prevalence in projects funded under SSH-flagged topics

Disciplines and clusters of disciplines	Number of experts	Proportion of experts
Economics	176	33%
No Research activities	81	15%
Business, Marketing	74	14%
Political Science, Public Administration	70	13%
Sociology	55	10%
Communication	27	5%
Law	16	3%
Education	9	2%
Human Geography	7	1%
Psychology	6	1%
Humanities, The Arts	5	1%
History	1	0%
Anthropology, Ethnology	0	0%
Demography	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 68% of projects funded under the SC2 SSH-flagged topics show good integration of SSH and of their contributions, while 17% featured weak SSH integration.

Quality of SSH integration with 10% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC2	14%	3%	16%	68%

- With the 20% threshold: 41% of projects funded under the SC2 SSH-flagged topics show good integration of SSH and of their contributions, while 49% featured weak SSH integration.

Quality of SSH integration with 20% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC2	14%	35%	11%	41%

Best practice example:

<p>TOPIC</p> <p>RUR-03-2018 - Contracts for effective and lasting delivery of agri-environmental public goods</p>	<p>The links between the richness of the natural environment and farming practices are complex. Many valuable habitats in Europe are maintained by extensive farming and forestry, but inappropriate agricultural practices and land uses have also had an adverse impact on natural resources, such as soil, water and air pollution, fragmentation of habitats and loss of native biodiversity in farmland landscapes, as well as on climate change adaptation and mitigation. Beyond providing food, fibre or biomass, farmers can provide environmental public goods through the land management activities necessary to grow crops and rear animals.</p> <p>Farmers often face trade-offs between sustainability and short-term profitability. Providing environmental public goods, in domains such as biodiversity, water, carbon sequestration and recreation can require collective actions for the necessary scale and scope of the action and its existence over time.</p>
<p>PROJECT</p> <p>EFFECT - Environmental public goods From Farming through Effective Contract Targeting</p>	<p>EFFECT aims to contribute to the design of agri-environmental programmes in Europe to improve their environmental performance in cost effective and durable ways. In particular EFFECT focuses on the design of voluntary agri-environmental contracts between farmers and environmental and nature agencies.</p> <p>The researchers come from different scientific fields (economics, political science, law, ecology and agricultural science) and work with national and local stakeholders to test innovative contract designs to improve the provision of public goods. The combination of research frameworks and applications to local cases enable EFFECT to provide insights on a range of factors determining the success of agri-environmental programmes. In particular</p> <ul style="list-style-type: none"> (i) farmers monetary and non-monetary motivations to participate in programmes; (ii) environmental and ecological effect and cost-effectiveness of programmes; and (iii) effectiveness of alternative governance arrangements in the various stages of programme design and implementation. <p>EFFECT will review the past experiences with the use of different contract designs and provide a catalogue of contract types to assist programme developers designing effective agri-environmental programmes.</p> <p>More at http://project-effect.eu/</p>

3 Societal Challenge 3: Secure, Clean and Efficient Energy

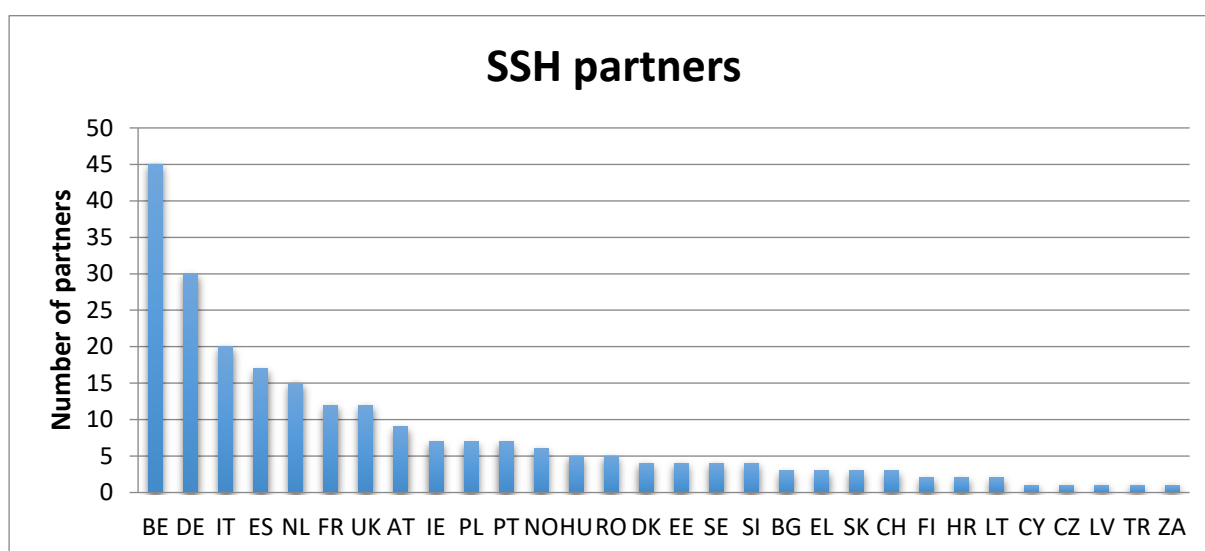
In 2018, SC3 funded a total of 54 topics. The 2018-2020 Work Programme set the budget for these topics at €610 million.

Overall, 21 of the 54 topics were flagged for SSH. These topics funded 88 projects for an overall budget of €336 million, of which €60 million (i. e. 18%) went to SSH partners.

In terms of types of action, the 88 funded projects included:

- 31 Research and Innovation Actions
- 11 Innovation Actions
- 46 Coordination and Support Actions

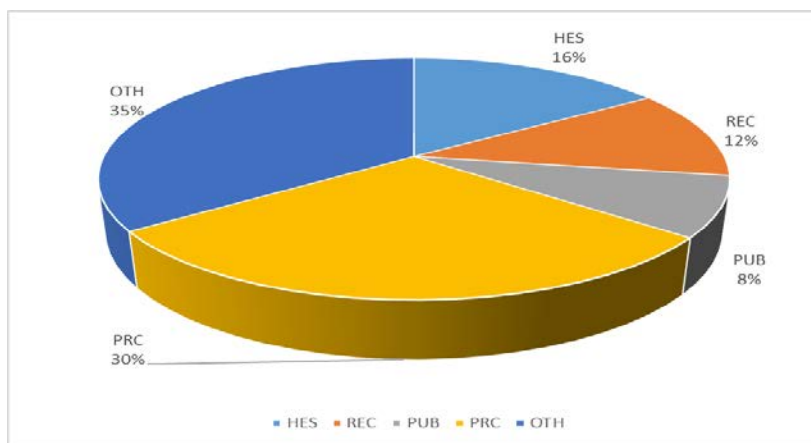
SSH partners accounted for 24% of project partners (259 out of 1091) in the 88 projects. The five most represented EU countries were Belgium, Germany, Italy, Spain and the Netherlands.



SSH partners coordinated 23 of the 88 projects, with country affiliation as follows:

Country of affiliation of SSH coordinator	BE	DE	IT	NL	FR	CH	SI	UK	
Number of projects coordinated	7	4	4	3	2	1	1	1	23

In terms of type of activity, 30% of SSH partners were from the private sector (PRC), while 16% were higher education institutions (HES). A significant number were other (OTH), i.e. neither private sector, higher education, research nor public.



In terms of SSH expertise type across all 88 funded projects, Economics, Political Science and Public Administration as well as Business/Marketing were well represented. The largest single category, however, was no research activities, possibly indicating many SSH experts taking on administrative roles. History and Demography were barely represented at all.

Discipline prevalence in projects funded under SSH-flagged topics

Disciplines and clusters of disciplines	Number of experts	Proportion of experts
No Research activities	174	24%
Economics	152	21%
Political Science, Public Administration	128	18%
Business, Marketing	117	16%
Sociology	48	7%
Communication	41	6%
Law	30	4%
Psychology	13	2%
Education	7	1%
Human Geography	6	1%
Humanities, The Arts	6	1%
Anthropology, Ethnology	4	1%
History	1	0%
Demography	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 71% of projects funded under the SC3 SSH-flagged topics show good integration of SSH and of their contributions, while 17% featured weak SSH integration.

Quality of SSH integration with 10% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC3	6%	11%	13%	71%

- With the 20% threshold: 57% of projects funded under the SC3 SSH-flagged topics show good integration of SSH and of their contributions, while 35% featured weak SSH integration.

Quality of SSH integration with 20% threshold				
Horizon 2020 parts	None	Weak	Fair	Good
SC3	10%	25%	8%	57%

Best practice example:

<p>TOPIC</p> <p>LC-SC3-CC-1-2018-2019-2020 - Social Sciences and Humanities (SSH) aspects of the Clean-Energy Transition</p>	<p>The energy transition has given rise to various forms of social innovation, such as the emergence of energy cooperatives or that of energy "prosumers" consuming but also producing energy. Urban areas have emerged as major hubs for these trends, given the close proximity between citizens, businesses and institutions, facilitating linkages between sectors and the emergence of new business and service models, as well as associated governance arrangements. These issues need to be studied in more detail, for example examining under which conditions social innovation leads to greater acceptance of the transition towards a low-carbon energy system.</p>
<p>PROJECT</p> <p>SONNET - Social Innovation in Energy Transitions</p>	<p>The Social Innovation in Energy Transitions (SONNET) project aims to better understand the role that social innovation plays in the transitions to more sustainable energy systems in Europe. 'Innovation in energy' can evoke futuristic technological images; but innovations in society are also crucial to accelerating clean energy transitions. Think, for example, of cooperatives producing their energy, or communities crowdfunding for energy retrofits.</p> <p>Social innovations in energy (SIEs) are innumerable and diverse. The SONNET team mapped 500 examples of SIEs across eight European countries, and analysed these to create a typology, which helps capture SIE diversity. The typology illuminates what characterises each type. This can now be used to analyse which conditions help them thrive, how to best foster their potential, and to come up with practical recommendations to support the different types of social innovation.</p> <p>All SONNET research is grounded in SSH disciplines ranging from social innovation and transitions research, to economics, and beyond. Knowledge is co-created among academic and city partners that represent diverse research and practical expertise, using methods like 'City Labs', citizen surveys, case studies, and more.</p> <p>More at https://sonnet-energy.eu/</p>

4 Societal Challenge 4: Smart, Green and Integrated Transport

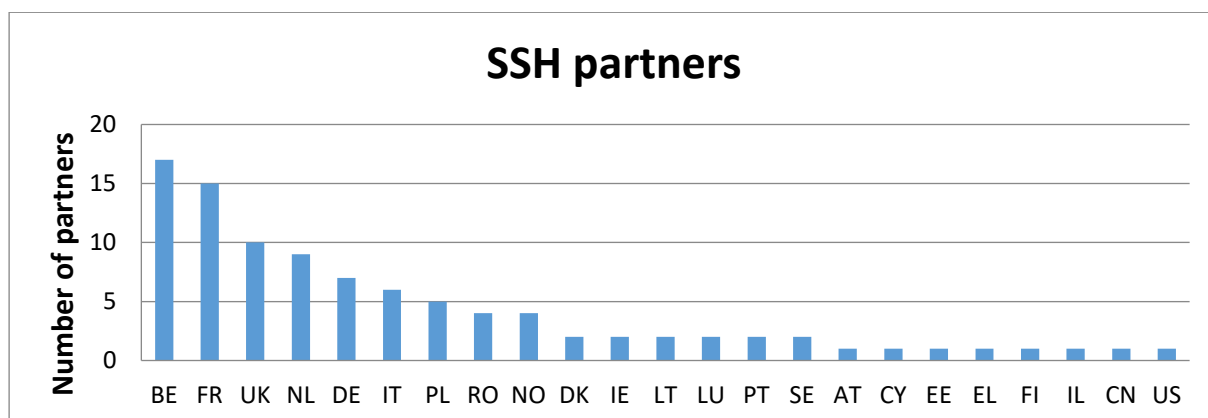
In 2018, SC4 funded a total of 174 topics. The 2018-2020 Work Programme set the budget for these topics at €532 million.

Overall 11 of the 174 topics were flagged for SSH. These topics funded 33 projects for an overall budget of €150 million, of which €28 million (i.e. 19%) went to SSH partners.

In terms of types of action, the 33 funded projects included:

- 25 Research and Innovation Actions
- 1 Innovation Action
- 7 Coordination and Support Actions

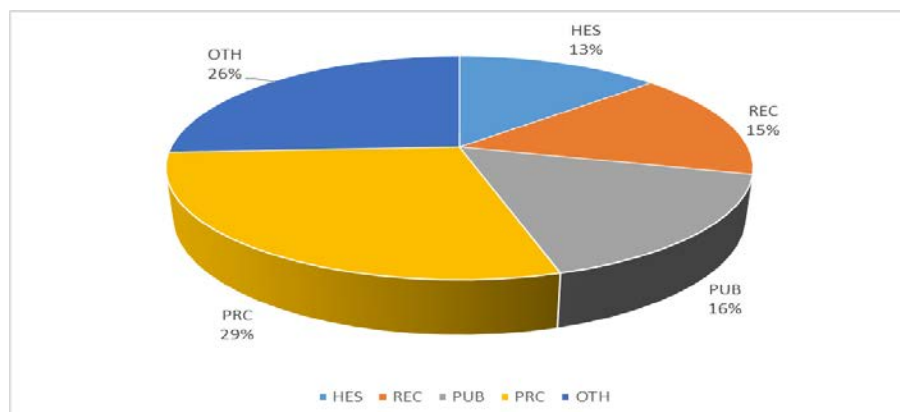
In general terms, SSH partners accounted for 20% of project partners (107 out of 542) in the 33 projects. The five most represented EU countries were Belgium, France, the UK, the Netherlands and Germany.



SSH partners coordinated 10 of the 33 projects, with country affiliation as follows:

Country of affiliation of SSH coordinator	BE	NL	DE	IT	UK	
Number of projects coordinated	5	2	1	1	1	10

In terms of type of activity, 29% of the SSH partners were from the private sector (PRC), while roughly equal proportions were from the public sector (PUB), research organisations (REC) and higher education (HES). 26% of the SSH partners belonged to other kind of organisations (OTH).



In terms of SSH expertise type across all 33 funded projects, Political Science and Public Administration, Business/Marketing as well as Psychology were well represented. Anthropology/Ethnology, Demography and History were barely represented at all.

Discipline prevalence in projects funded under SSH-flagged topics

Disciplines and clusters of disciplines	Number of experts	Proportion of experts
Political Science, Public Administration	53	18%
No Research activities	47	16%
Business, Marketing	42	14%
Psychology	41	14%
Law	27	9%
Economics	21	7%
Sociology	20	7%
Communication	19	6%
Human Geography	13	4%
Education	5	2%
Humanities, The Arts	5	2%
Anthropology, Ethnology	2	1%
Demography	0	0%
History	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 70% of projects funded under the SC4 SSH-flagged topics show good integration of SSH and of their contributions, while 19% featured weak SSH integration.

Quality of SSH integration with 10% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC4	15%	4%	11%	70%

- With the 20% threshold: 56% of projects funded under the SC4 SSH-flagged topics show good integration of SSH and of their contributions, while 38% weak SSH integration.

Quality of SSH integration with 20% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC4	19%	19%	7%	56%

Best practice example:

<p>TOPIC</p> <p>MG-3-3-2018 - Driver behaviour and acceptance of connected, cooperative and automated transport</p>	<p>Today's vehicles - in all modes of transport - are becoming increasingly connected and cooperative, as well as automated. This raises a number of issues about the role of the "driver" (or operator, rider, pilot, captain) in such vehicles (cars, trucks, powered-two-wheelers, trains, ships, planes, etc.). In particular, human-machine interaction is becoming increasingly complex in an environment with higher levels of both qualitative and quantitative information, automated data exchange (into and out of the vehicle) and increasing levels of automation (systems, operations, etc.).</p> <p>However, developments in recent years have primarily focused on "hard" technological advances and the maturity of technology-driven transport/mobility concepts, outpacing and insufficiently addressing the "soft" human component in this evolution. Therefore the challenge relates to a number of inter-related themes, ranging from public acceptance of connectivity and automation (e.g. data privacy, role of the human), to the development of user-friendly and appropriate Human-Machine Interfaces (HMI), ""driver""/vehicle interaction and ethical decision making, to ""driver"" training and certification for new technologies/levels of automation.</p>
<p>PROJECT</p> <p>PAcCAL - Enhance driver behaviour and Public Acceptance of Connected and Autonomous vehicles</p>	<p>PAcCAL aims to develop a Europe-wide multidimensional map of public acceptance of higher levels of Connected and Autonomous Vehicles (CAV). The map will indicate who accepts what, where and why (motivators and barriers to support), pointing out any critical issues. Particularly new "driver" needs will be investigated (e.g. the elderly, blind and partially-sighted people), considering different modes and mobility services. It will assess the impact of connected transport on people's well-being, quality of life, and equity.</p> <p>A strongly interdisciplinary mix of innovative tools from both human science and technology will be used, to capture the public's acceptance and attitude, analyse and assess their concerns, model and simulate realistic scenarios for hand-on practices, and validate the research innovation in a number of trials in the real world. The association of special categories of users, such as disabled persons, and of service providers with a global outreach of millions of members and several thousand customers across the EU, will ensure results consistency.</p> <p>Guidelines and recommendations will be developed on common issues, approaches and lessons learned across all transport modes for different private and public stakeholders. The consortium will develop a framework that supports public and private decision-makers in designing, deploying and regulating CAV-related services, made accessible via a Web portal.</p> <p>More at https://www.pascal-project.eu/</p>

5 Societal Challenge 5: Climate Action, Environment, Resource Efficiency and Raw Materials

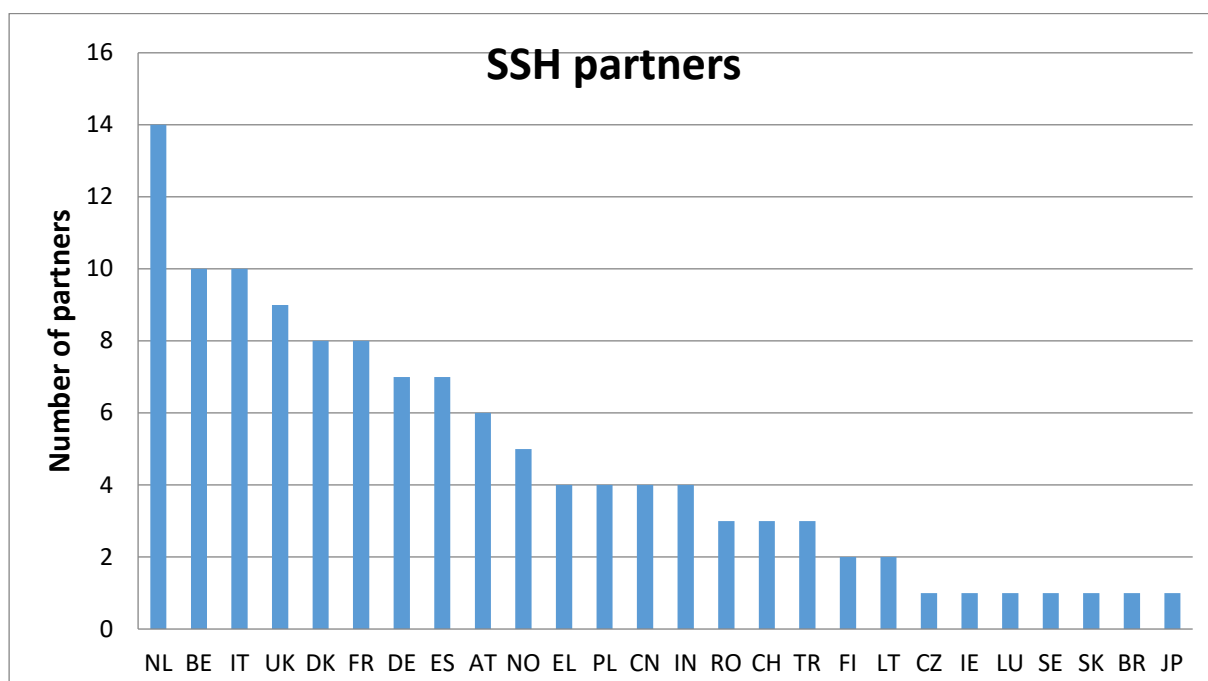
In 2018, SC5 funded a total of 25 topics. The 2018-2020 Work Programme set the budget for these topics at €375 million.

Overall, 13 of the 25 topics were flagged for SSH. These 13 topics funded 36 projects for an overall budget of €185 million, of which €42 million (i.e. 23%) went to SSH partners.

In terms of types of action, the 36 funded projects included:

- 21 Research and Innovation Actions
- 8 Innovation Actions
- 7 Coordination and Support Actions

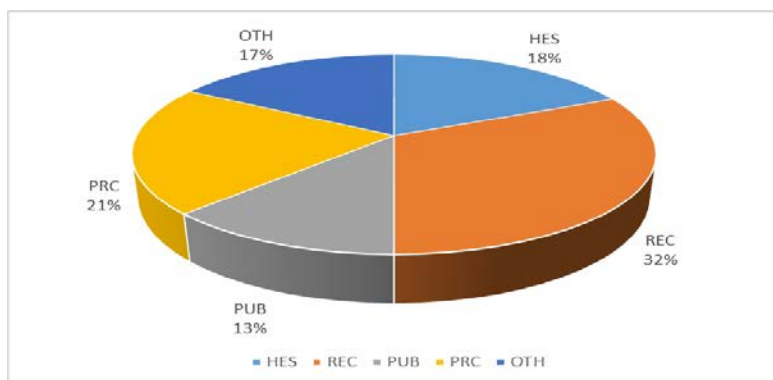
In general terms, SSH partners accounted for 21% of project partners (128 out of 613) in the 36 projects. The five most represented EU countries were the Netherlands, Belgium, Italy, the UK and on a shared fifth place Denmark and France.



SSH partners coordinated 8 out of the 36 projects, with country affiliation as follows:

Country of affiliation of SSH coordinator	DK	UK	BE	DE	FI	KE	
Number of projects coordinated	2	2	1	1	1	1	8

In terms of type of activity, 32% of SSH partners were research organisations (REC) and 21% were private companies (PRC).



In terms of SSH expertise type across all 36 funded projects, Economics, Political Science/Public Administration as well as Business/Marketing were well represented. The share of SSH experts not performing research activities was also significant. Education, History and Demography were barely represented at all.

Discipline prevalence in projects funded under SSH-flagged topics

Disciplines and clusters of disciplines	Number of experts	Proportion of experts
Economics	79	22%
No Research activities	64	18%
Political Science, Public Administration	44	12%
Business, Marketing	40	11%
Humanities, The Arts	36	10%
Sociology	27	8%
Human Geography	27	8%
Law	13	4%
Communication	13	4%
Psychology	5	1%
Anthropology, Ethnology	4	1%
Education	1	0%
History	1	0%
Demography	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 56% of projects funded under the SC5 SSH-flagged topics show good integration of SSH and of their contributions, while 19% featured weak SSH integration.

Quality of SSH integration with 10% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC5	13%	6%	25%	56%

- With the 20% threshold: 44% of projects funded under the SC5 SSH-flagged topics show good integration of SSH and of their contributions, while 47% featured weak SSH integration.

Quality of SSH integration with 20% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC5	16%	31%	9%	44%

Best practice example:

<p>TOPIC</p> <p>CE-SC5-03-2018 - Demonstrating systemic urban development for circular and regenerative cities</p>	<p>Cities struggle in their transition to implement a full circular economy model incorporating regenerative practices. There is a clear need for cities to become circular in order to alter urban consumption patterns and value chains, and to stimulate innovation, business opportunities, and job creation in both established and newly created sectors. New, more flexible systemic urban planning instruments enabling the design and implementation of circular urban processes would make urban and peri-urban areas regenerative and facilitate their adaptation to emerging economic, social and environmental challenges.</p>
<p>PROJECT</p> <p>REFLOW - Co-creating circular and regenerative resource flows in cities</p>	<p>REFLOW project aims at offering a new approach to circular economy in urban areas.</p> <p>Currently, our urban environments follow a linear ‘product in/waste out’ model. Such traditional configuration leads cities to consume more than they produce and, consequently, creates an unsustainable amount of waste. In circular and regenerative cities, waste becomes a resource that helps building wealth rather than reducing it. Active citizen involvement and systemic change are needed to re-design products, re-locate production, and re-think urban spaces, which in turn will enact this new form of managing resources.</p> <p>To ensure that circular economy principles are anchored in citizens’ vision and expectations, the project has as active partners six pilot cities: Amsterdam, Berlin, Cluj-Napoca, Milan, Paris, and Vejle. In each of the six cities there are makerspaces where citizens can prototype, develop, and test circular products, software, and business models for their cities.</p> <p>REFLOW results will offer guidelines and tools to other cities to support circularity and regeneration of resources. 27 partners from 10 European countries combine very different competences and approaches, including universities, grassroots organizations, municipalities, research institutions, designers and developers.</p> <p>More at https://reflowproject.eu/</p>

6 Societal Challenge 6: Europe in a changing world – Inclusive, Innovative, and Reflective Societies

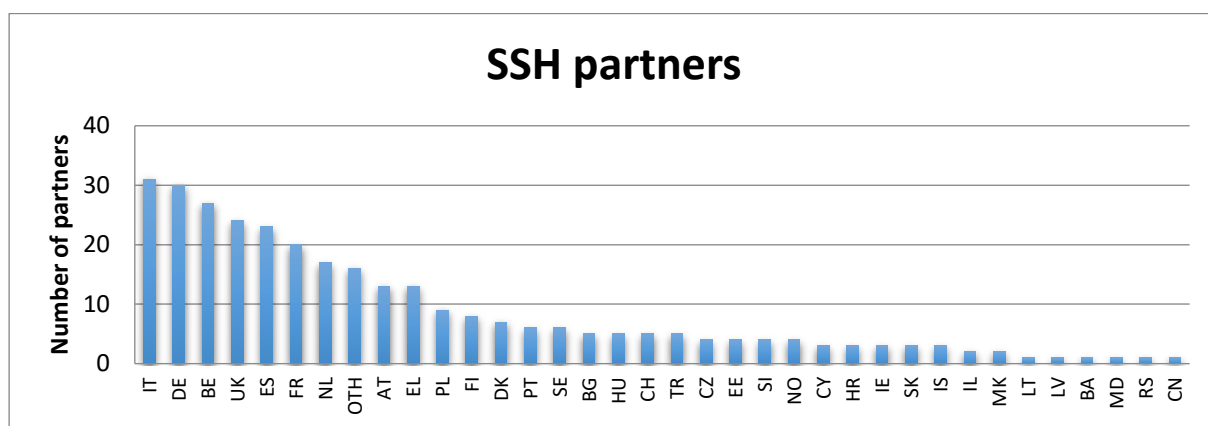
In 2018, SC6 funded a total of 25 topics. The 2018-2020 Work Programme set the budget for these 25 topics at €127 million.

Overall, 19 of the 25 topics were flagged for SSH. These topics funded 40 projects for a budget of €122 million, of which €99 million (i.e. 82%) went to SSH partners.

In terms of types of action, the 40 funded projects included:

- 27 Research and Innovation Actions
- 6 Innovation Actions
- 7 Coordination and Support Actions

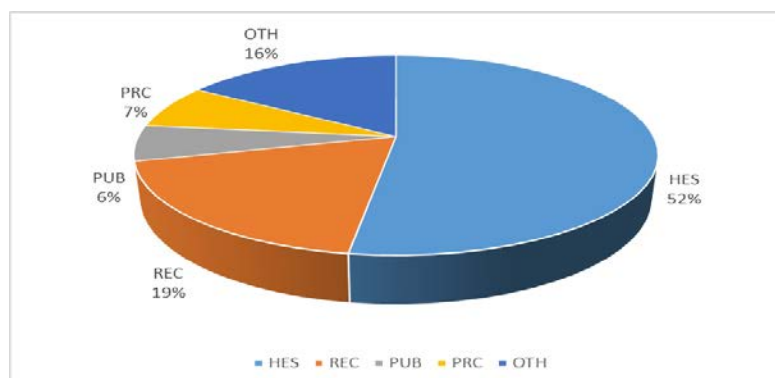
SSH partners accounted for 84% of project partners (345 out of 412) in the 40 projects. The five most represented EU countries were Italy, Germany, Belgium, the United Kingdom and Spain.



SSH partners coordinated 34 of the 40 projects, with country affiliation as follows:

Country of affiliation of SSH coordinator	IT	DE	ES	NL	BE	FI	FR	UK	AT	HU	IE	NO	SI	
Number of projects coordinated	9	4	4	4	2	2	2	2	1	1	1	1	1	34

In terms of type of activity, 52% of the SSH partners were higher education institutions (HES) and 19% research organisations (REC). 7% were private companies (PRC).



In terms of SSH expertise type across all 40 funded projects, Political Science/Public Administration stands out, while Economics and Sociology were also well represented.

The proportion of SSH experts not performing research activities was also significant, while Demography was barely represented at all.

Discipline prevalence in projects funded under SSH-flagged topics

Disciplines and clusters of disciplines	Number of experts	Proportion of experts
Political Science, Public Administration	292	25%
Economics	182	15%
No Research activities	166	14%
Sociology	156	13%
Law	70	6%
Humanities, The Arts	67	6%
Communication	55	5%
Anthropology, Ethnology	45	4%
Business, Marketing	41	3%
Psychology	28	2%
Human Geography	27	2%
History	27	2%
Education	25	2%
Demography	3	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 95% of projects funded under the SC6 SSH-flagged topics show good integration of SSH and of their contributions; no project featured weak SSH integration.

Quality of SSH integration with 10% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC6	0%	0%	5%	95%

- With the 20% threshold: 95% of projects funded under the SC6 SSH-flagged topics show good integration of SSH and of their contributions, while 3% featured weak SSH integration.

Quality of SSH integration with 20% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC6	0%	3%	3%	95%

Best practice example:

<p>TOPIC</p> <p>TRANSFORMATIONS-14-2018 - Supply and demand-oriented economic policies to boost robust growth in Europe – Addressing the social and economic challenges in Europe</p>	<p>Years after the crisis and near-zero interest rates, resilient economic growth is still low in Europe. Boosting economic growth requires concerted actions to simultaneously stimulate supply and demand side economic policies. From the supply side, the “productivity puzzle”, namely the deceleration of productivity growth despite technological advances, has regained the attention of policy and academic communities. With a view to the next decades that will bring far-reaching demographic changes, this situation will become problematic: shrinking working-age populations with fast-increasing numbers of older people and considerations on inter-generational fairness will make strong productivity gains ever more essential. Re-acceleration of productivity growth through creating a strong knowledge base is hence key for maintaining the EU’s current economic and welfare position. At the same time, the ways in which knowledge- driven economies work in their national contexts and interact internationally have also changed. Therefore, productivity and growth cannot be addressed without taking into account with greater precision the impact of globalisation on national economies. To understand productivity dynamism, one needs to study its micro foundations (intangible assets, market entry, digitalisation) and the role of public sector intangibles (culture, education, skills) to identify their role in the growth-productivity relationship in Europe.</p>
<p>PROJECT</p> <p>MICROPROD – Solving the productivity puzzle</p>	<p>Productivity measures how efficiently scarce resources are used to produce valuable goods and services. Productivity growth has slowed down atypically in the developed world, meaning that economies are not becoming more productive at the same speed as they used to. The consequences of this slow down are multiple, and of utmost importance. For instance, contrary to a long-term trend, the current generation expects that future generations may earn less than they do, raising issues about intergenerational transfers and sustainability of welfare systems across generations. At the same time, the benefits of the small productivity improvements are accruing disproportionately to capital owners over workers. The distribution of wealth is therefore becoming increasingly and very visibly unequal, which causes societal anxiety and unrest.</p> <p>MICROPROD explores the roots of the productivity slowdown by generating and applying data at the level of individual firms. MICROPROD also provides recommendations to better measure productivity in an ever-changing, and ever more digitalised world. In doing so, MICROPROD incorporates the expertise of different fields of the Social Sciences: statisticians based on several European statistical institutes and academics from various economic disciplines cooperate tightly over 3 years. Ultimately, MICROPROD will synthesise this microeconomic evidence to provide macroeconomic policy advice.</p> <p>More at https://www.microprod.eu/</p>

7 Societal Challenge 7: Secure Societies – Protecting Freedom and Security of Europe and its Citizens

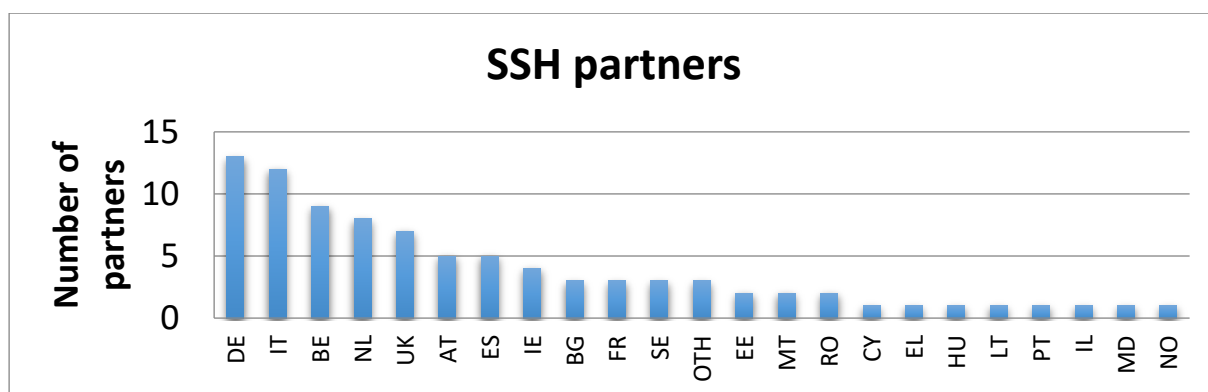
In 2018, SC7 funded a total of 16 topics. The 2018-2020 Work Programme set the budget for these topics at €226 million.

Overall, 9 of the 16 topics were flagged for SSH. These 9 topics funded 24 projects for a budget of €159 million, of which €25 million (i.e. 16%) went to SSH partners.

In terms of types of action, the 24 funded projects included:

- 15 Research and Innovation Actions
- 9 Innovation Actions

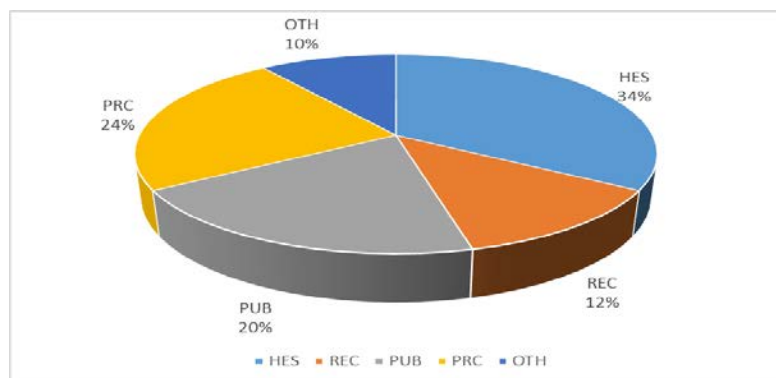
SSH partners accounted for 20% of project partners (92 out of 459) in the 24 projects. The five most represented EU countries were Germany, Italy, Belgium, the Netherlands and the UK.



SSH partners coordinated 3 of the 24 projects, with country affiliation as follows:

Country of affiliation of SSH coordinator	AT	DE	FR	
Number of projects coordinated	1	1	1	3

In terms of type of activity, 34% of the SSH partners were higher education institutions (HES), 24% were private companies (PRC) and 20% were public bodies (PUB).



In terms of SSH expertise type across all 24 funded projects, Law as well as Political Science/Public Administration stand out, while Sociology was also well represented. Anthropology/Ethnology, History and Demography were barely represented at all.

Discipline prevalence in projects funded under SSH-flagged topics

Disciplines and clusters of disciplines	Number of experts	Proportion of experts
Law	68	25%
Political Science, Public Administration	54	19%
Sociology	36	13%
No Research activities	26	9%
Psychology	24	9%
Economics	19	7%
Business, Marketing	14	5%
Humanities, The Arts	12	4%
Education	10	4%
Communication	8	3%
Human Geography	4	1%
Anthropology, Ethnology	1	0%
History	1	0%
Demography	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 68% of projects funded under the SC7 SSH-flagged topics show good integration of SSH and of their contributions, while 23% featured weak SSH integration.

Quality of SSH integration with 10% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC7	9%	14%	9%	68%

- With the 20% threshold: 27% of projects funded under the SC7 SSH-flagged topics show good integration of SSH and of their contributions, while 59% featured weak SSH integration.

Quality of SSH integration with 20% threshold

Horizon 2020 parts	None	Weak	Fair	Good
SC7	9%	50%	14%	27%

Best practice example:

<p>TOPIC</p> <p>SU-BES01-2018-2019-2020 - Human factors, and social, societal, and organisational aspects of border and external security</p>	<p>Border and external security may depend on a variety of human factors, and social and societal issues including gender. The adoption of appropriate organisational measures and the deeper understanding of how novel technologies and social media impact border control are required. One main challenge is to manage the flow of travellers and goods arriving at our external borders, while at the same time tackling irregular migration and enhancing our internal security. Any novel technology or organisational measure will need to be accepted by the European citizens.</p>
<p>PROJECT</p> <p>PERCEPTIONS – Understand the Impact of Novel Technologies, Social Media, and Perceptions in Countries Abroad on Migration Flows and the Security of the EU & Provide Validated Counter Approaches, Tools and Practices</p>	<p>Narratives of a “better life” that can become reality elsewhere have always been shaping human migration. PERCEPTIONS is an EU-funded research project with the goal to identify and understand the different narratives, images and perceptions of Europe and their influence on the decision to migrate to the EU.</p> <p>The project further aims to understand the way the different narratives, images and perceptions of the EU are distributed via different channels, including social media and traditional mass media, and how they change along the way. We also investigate who are the key actors involved in this process and who is addressed by the different stories – and what intention might be behind it.</p> <p>Finally, the project analyses how a mismatch between reality and expectation may play out. The team of researchers from 25 organisations across and beyond Europe carries out theoretical and empirical social-scientific research to investigate these questions. Based on the acquired knowledge, the project will create toolkits of creative and innovative measures to react to or even counteract on ‘false’ narratives, considering social, societal and structural aspects.</p> <p>More at https://project.perceptions.eu/</p>

8 LEIT-ICT - Information and Communication Technologies

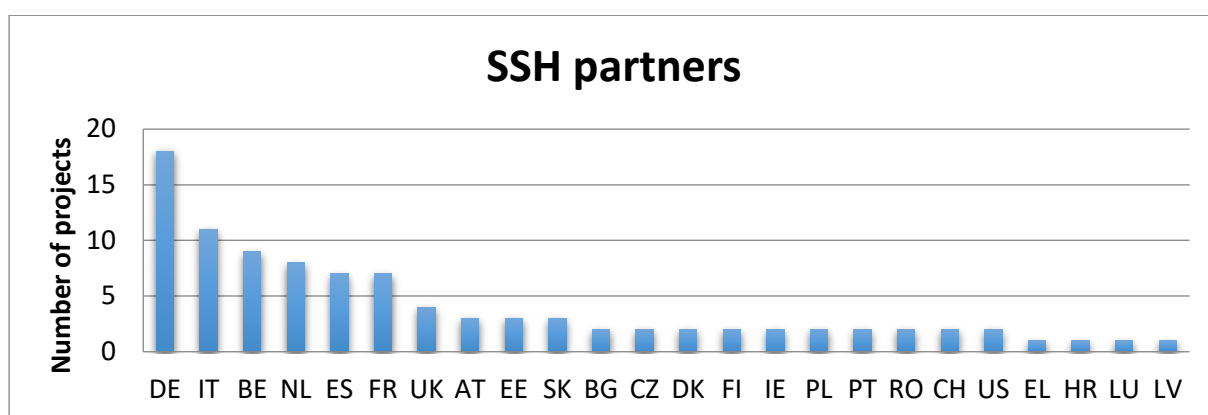
In 2018 LEIT-ICT funded a total of 43 topics. The 2018-2020 Work Programme set the budget for these topics at €1 291 billion.

Overall, 8 of the 43 topics were flagged for SSH. These topics funded 36 projects for a total budget of €140 million, of which €37 million (i.e. 26%) went to SSH partners.

In terms of types of action, the 36 funded projects included:

- 18 Research and Innovation Actions
- 12 Innovation Actions
- 6 Coordination and Support Actions

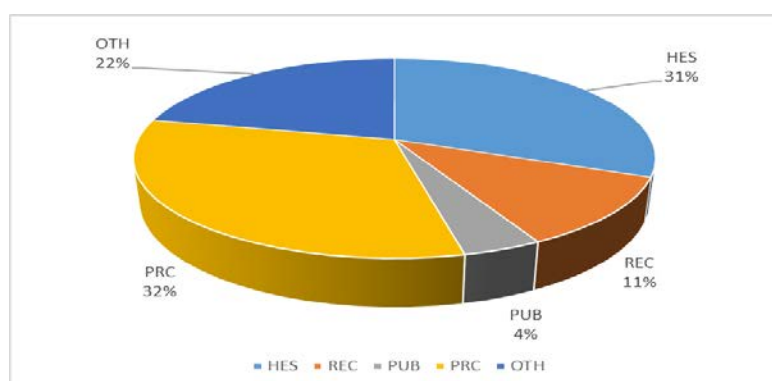
SSH partners accounted for 30% of project partners (106 out of 348) in the 36 projects. The five most represented countries were Germany, Italy, Belgium, the Netherlands and on shared fifth place Spain and France.



SSH partners coordinated 9 of the 36 projects, with country affiliation as follows:

Country of affiliation of SSH coordinator	AT	BE	EE	ES	IE	IT	PL	PT	UK	
Number of projects coordinated	1	1	1	1	1	1	1	1	1	9

In terms of activity type, 32% of SSH partners were private companies (PRC) and 31% were higher education institutions (HES).



In terms of type of SSH expertise across all 36 projects funded under the SSH-flagged topics, Business/Marketing and Economics stand out, while Humanities/Arts, Law and Communication were also well represented. Education, Human Geography, Anthropology/Ethnology, Demography and History were barely represented at all.

Discipline prevalence in projects funded under SSH-flagged topics

Disciplines and clusters of disciplines	Number of experts	Proportion of experts
Business, Marketing	60	19%
Economics	59	18%
No Research activities	54	17%
Humanities, The Arts	40	13%
Law	32	10%
Communication	31	10%
Political Science, Public Administration	23	7%
Psychology	8	3%
Sociology	7	2%
Education	2	1%
Human Geography	1	0%
Anthropology, Ethnology	1	0%
Demography	1	0%
History	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 58% of the projects funded under the LEIT-ICT SSH-flagged topics showed good integration of SSH partners and of their contributions, while 16% featured weak SSH integration.

Quality of SSH integration with 10% threshold

Horizon 2020 parts	None	Weak	Fair	Good
LEIT-ICT	13%	3%	26%	58%

- With the 20% threshold: 48% of the projects funded under the LEIT-ICT SSH-flagged topics showed good integration of SSH partners and of their contributions, while 39% featured weak SSH integration.

Quality of SSH integration with 20% threshold

Horizon 2020 parts	None	Weak	Fair	Good
LEIT-ICT	26%	13%	13%	48%

Best practice example:

<p>PROJECT</p> <p>STARTS Ecosystem - Support to STARTS Community and Lighthouse Projects through the creation of an ecosystem for hybrid talent</p>	<p>The S+T+ARTS initiative – innovation at the nexus of Science, Technology, and the ARTS - is Europe’s answer to a growing need for social and ecological innovation rooted in digital progress.</p> <p>S+T+ARTS encourages collaborations of artists and creatives with science and technology institutes and companies as a means to foster the development of human-oriented technologies. STARTS covers areas where the arts can help introduce a new unconventional perspective: artists endowing AI with empathy, artists using digital to create urban environments that trigger human emotion and senses, sustainable fashion using novel materials, and teaming up of art and digital media to help trigger behavioral changes in reaction for instance to climate challenges.</p> <p>Four S+T+ARTS Pillars:</p> <ul style="list-style-type: none"> (i) annual PRIZE honoring successful collaboration between artist and engineers. (ii) RESIDENCIES of artists in technology institutions to bring in original novel perspectives to R&D through artistic practices. (iii) LIGHTHOUSE PILOTS that support research seeking radically novel technology solutions to major challenges for industry and society in close collaboration with artists. (iv) ACADEMIES having artists and engineers jointly explain the opportunities and limits of the digital to citizens and in particular to young adults. <p>Furthermore, STARTS Regional Centers funded by the European Parliament intend to expand the STARTS initiative on a local level towards European regions.</p> <p>Through targeted services - secretariat, common collaboration methodologies, single-entry point for S+T+ARTS (digital) media presence -, organizing online and on-site events, mentoring of S+T+ARTS collaborations between artists and engineers, teams, toolkit on art-science-tech collaborations - the consortium strengthens a dynamic innovative community that pushes the boundaries of art, research and technology.</p> <p>More at https://www.starts.eu/</p>
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9 LEIT-NMBP - Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing

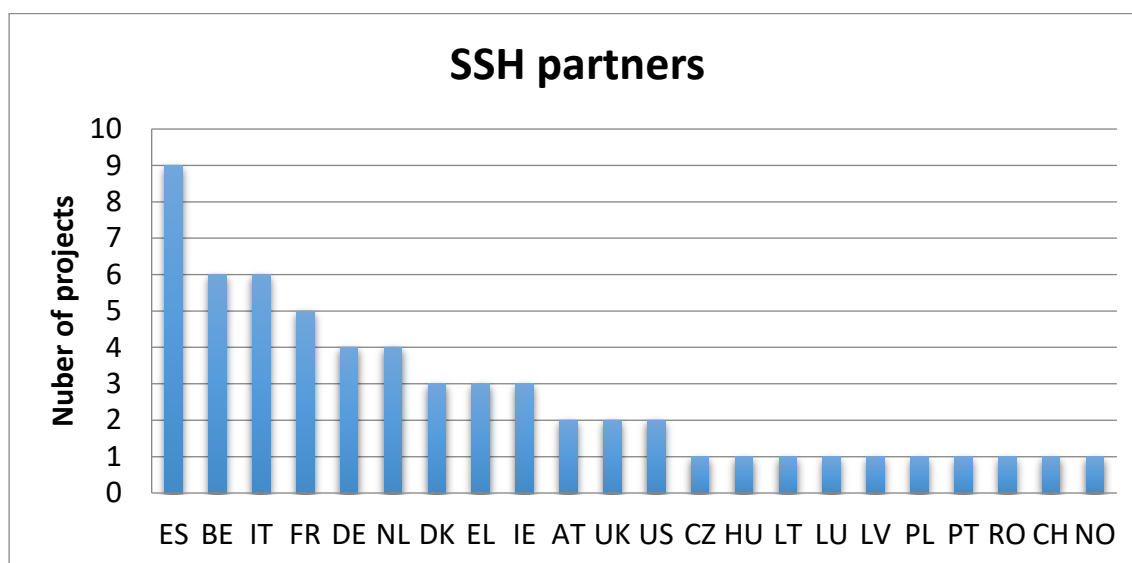
In 2018 LEIT-NMBP funded a total of 40 topics. The 2018-2020 Work Programme set the budget for these topics at €638 million.

Overall, 10 of the 40 topics were flagged for SSH. These topics funded 25 projects for a budget of €185 million, of which €16.5 million (i.e. 9%) went to SSH partners.

In terms of types of action, the 25 funded projects included:

- 10 Research and Innovation Actions
- 13 Innovation Actions, of which 2 were Lump Sum
- 2 Coordination and Support Actions

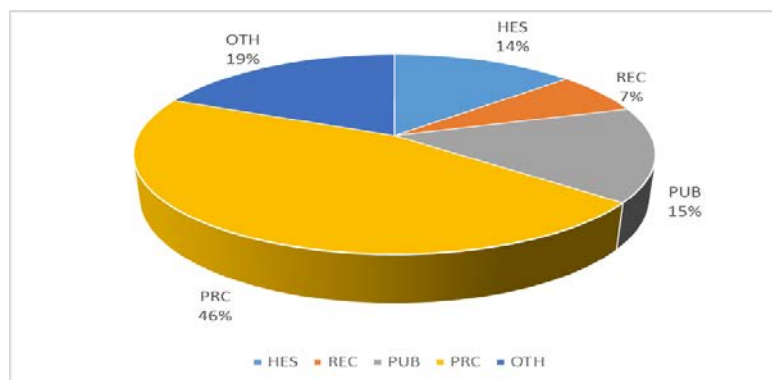
SSH partners accounted for 13% of project partners (61 out of 478) in the 25 projects. The five most represented countries were Spain, Belgium, Italy, France and on shared fifth place Germany and the Netherlands.



SSH partners coordinated 2 of the 25 projects, with country affiliation as follows:

Country of affiliation of SSH coordinator	BE	DK	
Number of projects coordinated	1	1	2

In terms of activity type, 46% of the SSH partners were private companies (PRC).



In terms of type of SSH expertise across all 25 projects funded under the SSH-flagged topics, Humanities/Arts and Business/Marketing stand out, while the proportion of SSH

experts not performing research activities is significant. Human Geography, Anthropology/Ethnology and Demography were barely represented at all.

Discipline prevalence in projects funded under SSH-flagged topics		
Disciplines and clusters of disciplines	Number of experts	Proportion of experts
No Research activities	37	23%
Humanities, The Arts	32	20%
Business, Marketing	29	18%
Law	12	7%
Economics	12	7%
Political Science, Public Administration	11	7%
Communication	8	5%
History	7	4%
Psychology	6	4%
Sociology	4	2%
Education	3	2%
Human Geography	0	0%
Anthropology, Ethnology	0	0%
Demography	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 33% of projects funded under the LEIT-NMBP SSH-flagged topics showed good integration of SSH partners and of their contributions, while 53% featured weak SSH integration.

Quality of SSH integration with 10% threshold				
Horizon 2020 parts	None	Weak	Fair	Good
LEIT-NMBP	29%	24%	14%	33%

- With the 20% threshold: 14% of projects funded under the LEIT-NMBP SSH-flagged topics showed good integration of SSH partners and of their contributions, while 67% featured weak SSH integration.

Quality of SSH integration with 20% threshold				
Horizon 2020 parts	None	Weak	Fair	Good
LEIT-NMBP	38%	29%	19%	14%

Best practice example:

<p>PROJECT</p> <p>FIT4FoF - Making our Workforce Fit for the Factory of the Future</p>	<p>Increasing use of digital technologies in manufacturing is leading to accelerated automation. Globalisation introduces new requirements in terms of team work, intercultural and language capabilities and the need to deal with shorter production cycles. At the same time, demographic changes require workers to stay active for longer.</p> <p>These trends compounded create formidable challenges for Europe's workers and industries in terms of future skills acquisition. From the perspective of the workforce issues are increasingly complex, and current training and educational solutions lack interconnections and are largely dissociated from work activities. Growing gaps in knowledge and skills make it increasingly challenging to adapt, work proactively and contribute to innovations.</p> <p>FIT4FoF is developing a new education and training framework, which places workers at the centre of a co-design process that recognises and addresses their skills needs. Working across scientific disciplines, current skills initiatives and technology trends across 6 industrial areas are analysed: robotics, additive manufacturing, mechatronics/machine automation, data analytics, cybersecurity and human machine interaction. New job profiles will be defined, clarifying educational and training requirements.</p> <p>By applying educational approaches based on Communities of Practice, workers will be empowered to be drivers of the design, development and delivery of their own upskilling programmes. Furthermore, Alliances of Communities of Practice will be established to broaden the approach across Europe, creating replication strategies for different regional communities.</p> <p>More at https://www.fit4fof.eu/</p>
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10 LEIT-SPACE – Space

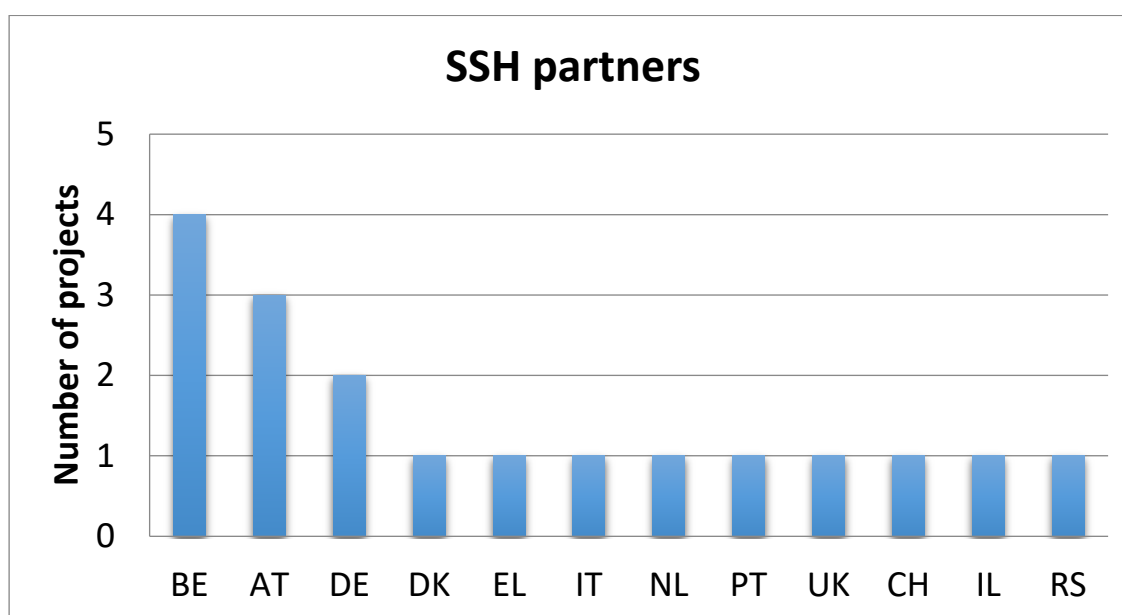
In 2018 LEIT-SPACE funded a total of 13 topics. The 2018-2020 Work Programme set the budget for these topics at €107 million.

Overall, 3 of the 13 topics were flagged for SSH. These topics funded 9 projects for a budget of €14 million, of which €3 million (i.e. 23%) went to SSH partners.

In terms of types of action, the 9 funded projects included:

- 5 Innovation Actions
- 4 Coordination and Support Actions

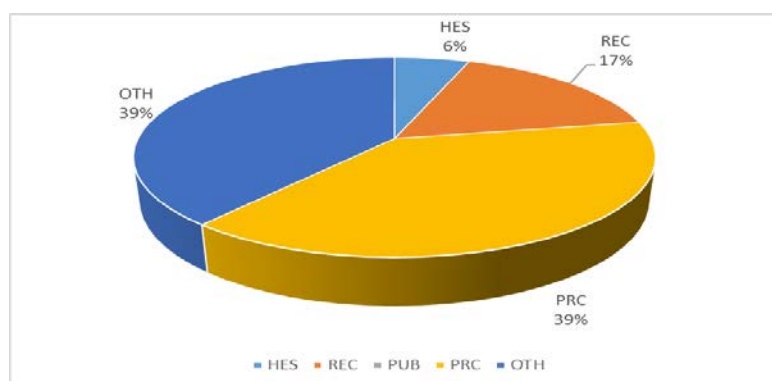
SSH partners accounted for 27% of project partners (19 out of 71) in the 9 projects. The most represented countries can be seen below.



SSH partners coordinated 1 of the 9 projects, with country affiliation as follows:

Country of affiliation of SSH coordinator	EL	
Number of projects coordinated	1	1

In terms of activity type, 39% of the SSH partners were private companies (PRC), while an equal proportion belonged to the category others (OTH).



In terms of type of SSH expertise across all 9 projects funded under the SSH-flagged topics, Communication and Business/Marketing stand out, while the proportion of SSH

experts not performing research activities was significant. Several SSH disciplines were barely represented at all.

Discipline prevalence in projects funded under SSH-flagged topics

Disciplines and clusters of disciplines	Number of experts	Proportion of experts
No Research activities	15	27%
Communication	14	25%
Business, Marketing	9	16%
Economics	6	11%
Education	4	7%
Law	3	5%
Humanities, The Arts	2	4%
Political Science, Public Administration	1	2%
History	1	2%
Sociology	0	0%
Psychology	0	0%
Human Geography	0	0%
Anthropology, Ethnology	0	0%
Demography	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 63% of projects funded under the LEIT-SPACE SSH-flagged topics showed good integration of SSH partners and of their contributions, while 13% featured weak SSH integration.

Quality of SSH integration with 10% threshold

Horizon 2020 parts	None	Weak	Fair	Good
LEIT-SPACE	0%	13%	25%	63%

- With the 20% threshold: 38% of projects funded under the LEIT-SPACE SSH-flagged topics showed good integration of SSH partners and of their contributions, while 50% featured weak SSH integration.

Quality of SSH integration with 20% threshold

Horizon 2020 parts	None	Weak	Fair	Good
LEIT-SPACE	50%	0%	13%	38%

Best practice example:

<p>PROJECT</p> <p>Our Space our Future - making careers in the space industry an inspiring reality for all</p>	<p>The vision of Our Space Our Future is a society that enables and empowers all students, regardless of gender, ethnicity, disability, or socio-economic background, to consider a career related to space science as a relevant, attainable and exciting aspiration for their future.</p> <p>The Our Space Our Future project will design and run sustainable education and outreach activities, taking these out into communities to ensure that underserved audiences are embraced and integrated into the project. A diverse project consortium of partners spanning social sciences and humanities as well as STEM disciplines ensures a diversity of perspectives and competencies are taken into account. This has proved vital for example to developing a meaningful evaluation framework to measure attitude change and issues around self-identity</p> <p>The cross-sectional and longitudinal impact evaluation, exploring improved scientific literacy, interest, and confidence in space science themes of 5 000 directly participating students across 4 delivery countries, is embedded from initial kick-off and throughout delivery. A framework has been developed that will investigate the cumulative impact of these multiple interventions on the progression of all students towards greater engagement and identity with space science and STEM-related subject choices and career aspirations.</p> <p>More at https://ourspaceourfuture.eu/</p>
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SSH IN THE EUROPEAN RESEARCH COUNCIL (ERC)

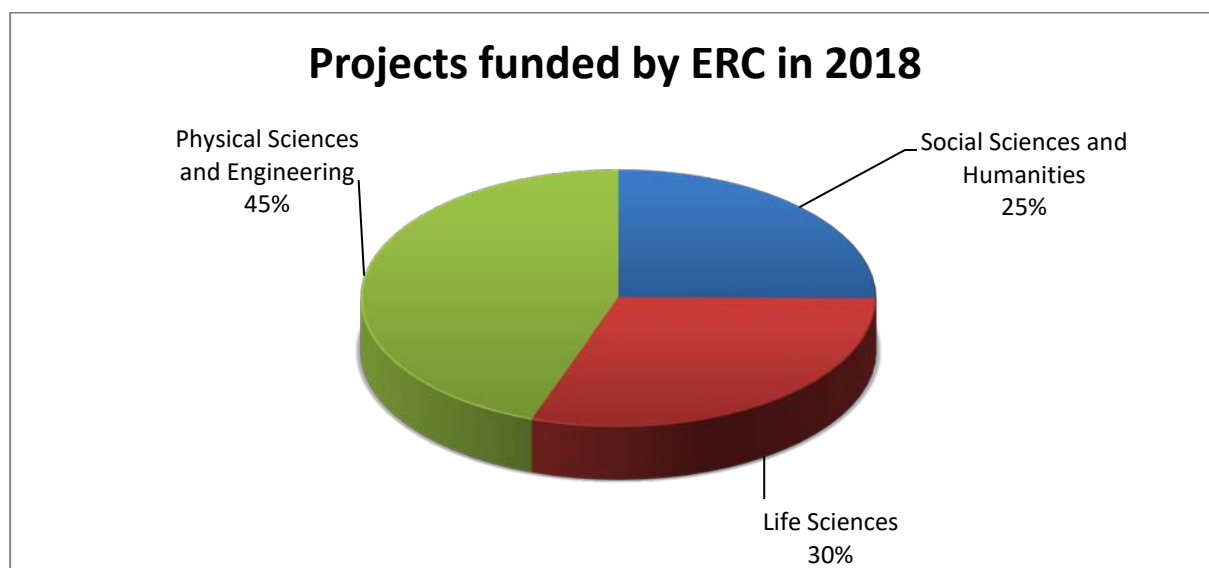
Below are some key data on the Social Sciences and Humanities (SSH) in the European Research Council. The data have been provided by the European Research Council Executive Agency (ERCEA).

1 Budget and number of projects for SSH in the ERC – 2018

1.1 Budget

Awarded budget, €	2018
Social Sciences and Humanities	429 217 703
Life Sciences	516 784 415
Physical Sciences and Engineering	760 303 743
Total	1 706 305 861

In 2018, more than €429 million was awarded via the SSH panels of the ERC. As illustrated in the graph below, this corresponds to 25% of the overall grants in 2018, which is a slightly higher proportion than the previous year (23%).



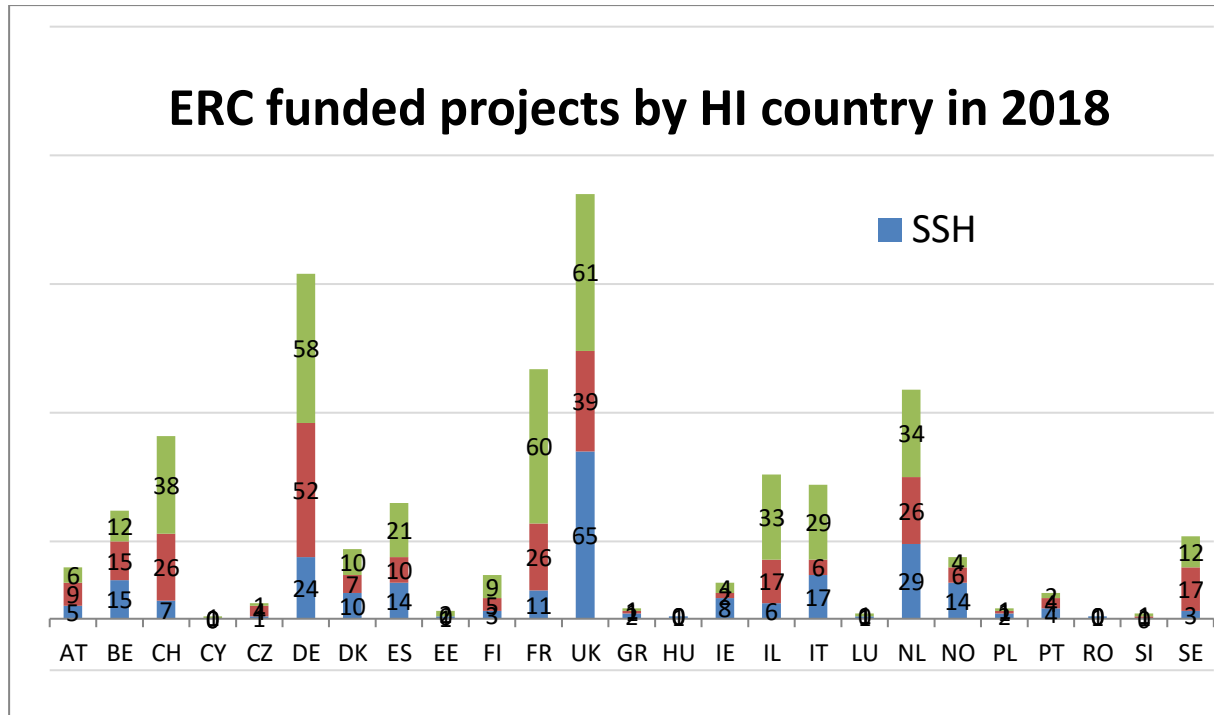
1.2 Number of projects

Of 919 grants awarded, 244 related to SSH, which represents 27% of the projects. Again, this is a slightly higher proportion than in the previous year (25%).

Projects	2018
Social Sciences and Humanities	244
Life Sciences	274
Physical Sciences and Engineering	401
Total	919

2 Country of Host Institution

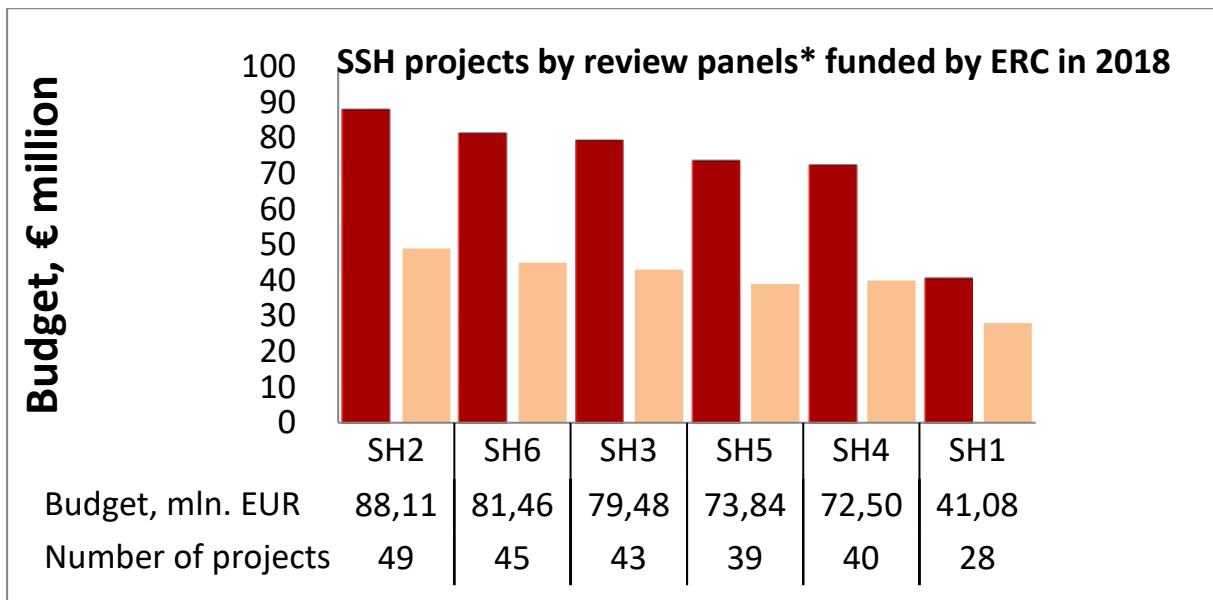
Overall, the UK, the Netherlands and Germany had the biggest proportion of SSH projects funded by the ERC. This seems to be a relatively stable phenomenon. At the other end of the spectrum, a large number of countries had only a few projects, in particular the countries covered by the widening participation and spreading excellence policy actions. It is worth noting the strong performance of non-EU countries such as Norway, Switzerland and Israel.



3 Review Panels and indications of interdisciplinarity

The ERC has six SSH-related review panels. In 2018, the following panels were the most SSH-intensive in terms of budget allocated⁷:

⁷ When asked about ERC keywords the Principal Investigators (PIs) at submission most frequently chose themes such as Legal studies/Constitutions, Diversity/Identities, Attention/Perception and Social anthropology/Religion. However if one counts sub-categories of such keywords (as chosen by the PIs related to the six panels above), disciplines such as Economics, History, Sociology, Political science and Psychology were very well represented.



* ERC Review panels:

SH2 - Institutions, Values, Environment and Space

SH6 - The Study of the Human Past

SH3 - The Social World, Diversity, Population

SH5 - Cultures and Cultural Production

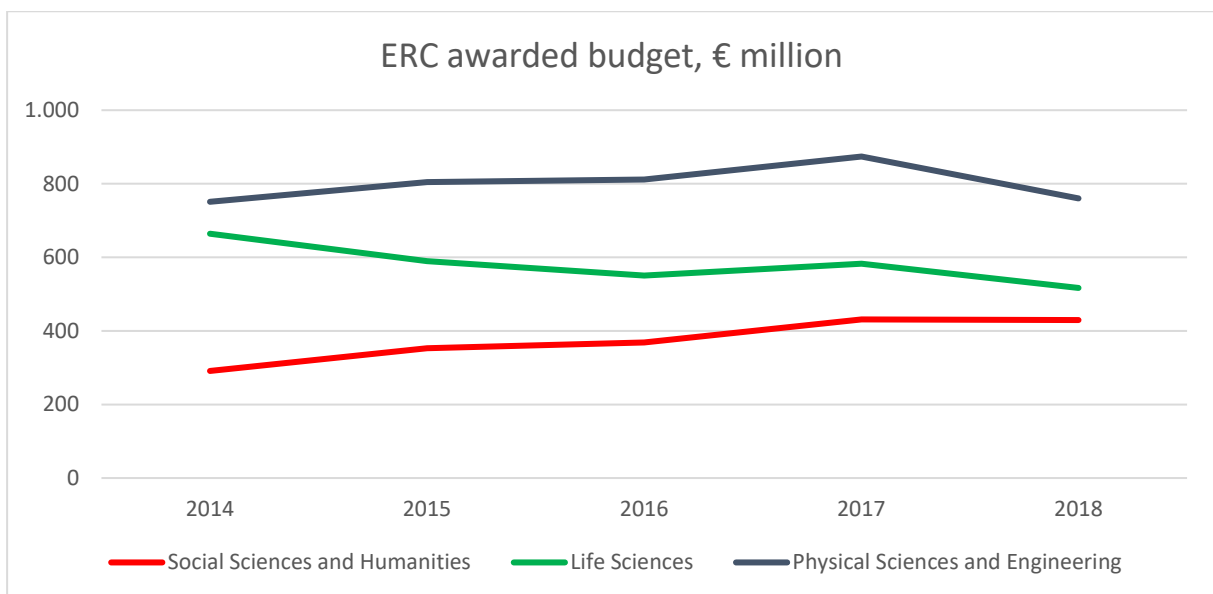
SH4 - The Human Mind and Its Complexity

SH1 - Individuals, Markets and Organisations

4 Evolution 2014 - 2018

4.1 Budget

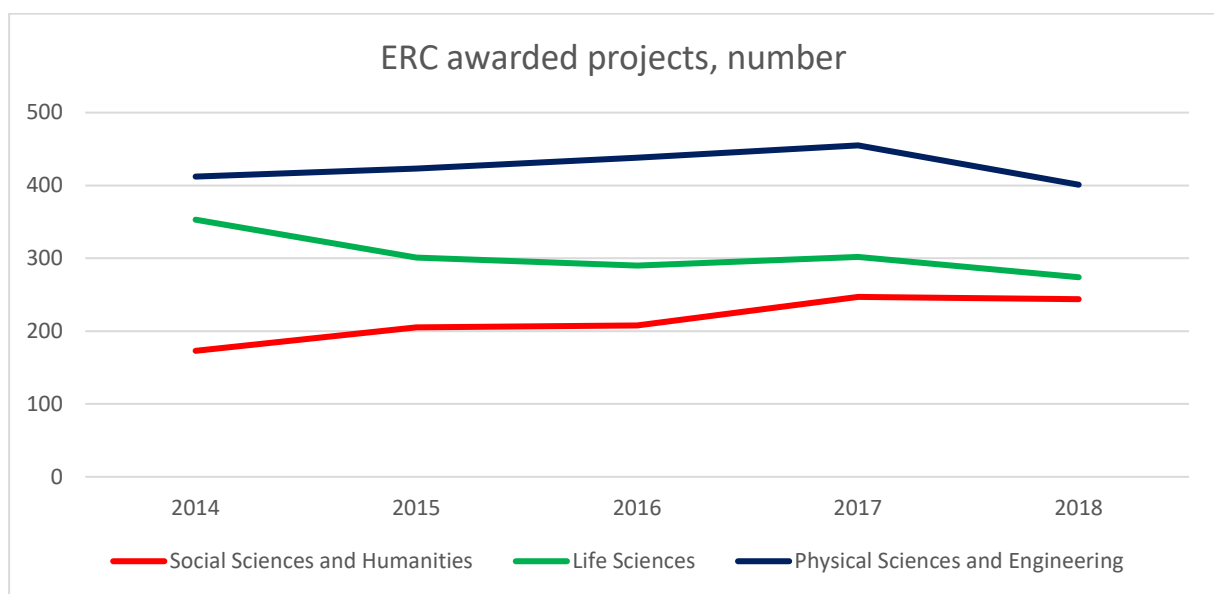
In terms of budget allocated to SSH, a growing long term trend seems to be discernible. ERC funding for SSH grew particularly strongly from 2014 to 2015 and then again from 2016 to 2017. 2018 saw a stabilisation of funding for SSH, in spite of a decline in total ERC funding.



Budget in € million	2014	2015	2016	2017	2018	Total
SSH	291.154	353.195	368.360	431.226	429.217	1 873.154
Life Sciences	664.205	589.318	550.162	582.657	516.784	2 903.129
Physical Sciences	751.049	804.931	811.478	874.057	760.303	4 001.820
Total	1 706.410	1 747.444	1 730.002	1 887.941	1 706.305	8 778.104

4.2 Number of projects

When it comes to the number of grants for SSH, there was a large increase in absolute numbers from 2014 to 2017 and then a stabilisation in 2018, confirming the steady consolidation of SSH-related areas in projects funded by the ERC.



SSH now seems to be gradually catching up with other sectors (e.g. life sciences, physical sciences and engineering), especially in the course of 2017-2018.

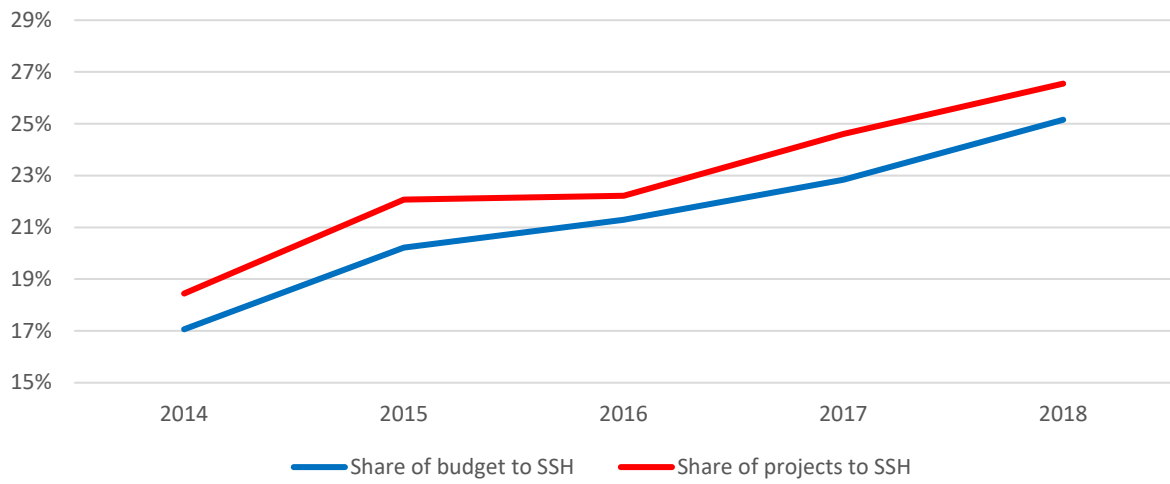
4.3 Share of total

In 2014, 17% of the total budget awarded by the ERC went to SSH. By 2018, this proportion had grown to 25%. The average budget share for SSH in the period 2014 – 2018 was 21%.

In terms of number of projects, SSH had an 18% share in 2014, which had increased to 27% by 2018. The average in 2014 – 2018 was 23%.

Overall, a strong growing trend seems to be visible over a relatively short period of time.

Evolution of SSH research supported by ERC as share of total



Best practice example:

<p>PROJECT</p> <p>ELEPHANTINE - Localizing 4000 Years of Cultural History. Texts and Scripts from Elephantine Island in Egypt</p>	<p>The aim of this project is to write a cultural history of 4 000 years, localized on Elephantine Island in Egypt.</p> <p>Elephantine was a militarily and strategically very important island in the river Nile on the southern border of Egypt. No other settlement in Egypt is so well attested over such a long period of time. Its inhabitants form a multi-ethnic, multicultural and multi-religious community that left us vast amounts of written sources detailing their everyday lives from the Old Kingdom to beyond the Arab Conquest.</p> <p>Today, several thousand papyri and other manuscripts from Elephantine are scattered in more than 60 institutions across Europe and beyond. Their texts are written in different languages and scripts, including Hieroglyphs, Hieratic, Demotic, Aramaic, Greek, Coptic and Arabic. 80% of these manuscripts are still unpublished and unstudied.</p> <p>The great challenge of this project is to use this material to answer three key questions covering:</p> <ol style="list-style-type: none">1) Multiculturalism and identity between assimilation and segregation,2) Organization of family and society,3) Development of religions (Polytheism, Judaism, Christianity and Islam). <p>Thus, access needs to be gained to these texts, making them publicly available in an open access online database. Links are to be identified between papyrus fragments from different collections and an international 'papyrus puzzle' will be undertaken, incorporating cutting-edge methods from digital humanities, physics and mathematics (e.g. for the virtual unfolding of papyri).</p> <p>Using this database with medical, religious, legal, administrative, even literary texts, the micro-history of the everyday life of the local and global (i.e. 'glocal') community of Elephantine will be studied within its socio-cultural setting in Egypt and beyond. It will be linked back to macro-historical questions and benefit from newly-introduced methodologies of global history: Elephantine can thus be used as a case study and a model for the past, present and future.</p> <p>More at: https://www.smb.museum/en/museums-institutions/aegyptisches-museum-und-papyrussammlung/collection-research/research/erc-project-elephantine-localizing-4000-years-of-cultural-history-texts-and-scripts-from-elephantine-island-in-egypt.html</p>
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SSH IN THE FUTURE EMERGING TECHNOLOGIES (FET)⁸

The perceived competition between 'soft' and 'hard' sciences sometimes switches into cooperation, especially when the two get inspiration from each other.

A number of projects supported by the Future and Emerging Technologies (FET) programme demonstrate this synergy. FET-Open and FET Proactive are now part of the enhanced European Innovation Council (EIC) Pilot (specifically the Pathfinder), the new home for deep-tech R&I in Horizon 2020.

As disciplines devoted to the study of human societies and relationships in a broad sense, SSH can provide us with deeper understanding and new insights into contemporary socio-political challenges. Science, Technology, Engineering and Mathematics (STEM) disciplines can contribute with insights into how to resolve, or even prevent them.

The topics covered by the FET projects span the entire spectra of human knowledge, including biotechnology, green technology, nanotechnology, robotics, and social sciences. This approach boosts the integration of SSH into technological and other innovative projects.

Innovations in social media and interactive technologies are great examples of multi-disciplinary collaboration. Social sciences inspire technologies and vice versa. SSH disciplines are often key for innovation, since developing an innovative product involves making it ready for use by society at large.

Since the sixth Framework Programme, FETs have encouraged cooperation between technology and social sciences, with projects such as:

- EMIL - a project simulating the two way dynamics of norm innovation
- FP7's SocialNets – geared to analysing social networks in the context of the exploitation of content, including issues of security and trust
- Socionical - specialised in prediction and simulation methods for large-scale socio-technical systems
- CyberEmotions - focused on the role of collective emotions in creating, forming and breaking-up e-communities

More recently (under the 2016-2017 Work Programme), more than 40% of topics explicitly involved SSH disciplines. For instance, Horizon 2020 supports SSH-related projects such as:

- IBSEN - developing a human behaviour simulator
- TimeMachine - working on a simulator mapping 2000 years of European History
- POTION - research on olfactory treatment for depression and anxiety
- WeNet - helping to overcome the persisting communication barriers in social networking.

Current FET calls (e.g. on Artificial Intelligence for extended social interaction and Environmental Intelligence) also include an important SSH component.

⁸ More at: <http://www.fetfx.eu/wp-content/uploads/2019/11/SSH-Integration-under-FET-EIC-Pathfinder.pdf>

Best practice example:

<p>PROJECT</p> <p>TimeMachine - Big Data of the Past for the Future of Europe</p>	<p>TimeMachine allows Europe to restore its engagement with its past and use it as a vital resource for a common future. Working across scientific disciplines and with multiple stakeholders, Europe’s history and cultural heritage will be turned into a living resource for co-creating its future.</p> <p>A large-scale digitisation and computing infrastructure will be developed, mapping millennia of European historical and geographical evolution, thus transforming kilometres of archives, large collections from museums and libraries, and geohistorical datasets into a distributed digital information system. To succeed, a series of fundamental breakthroughs are targeted in Artificial Intelligence and ICT, making Europe the leader in the extraction and analysis of Big Data of the Past.</p> <p>TimeMachine will thus provide new tools to Social Sciences and Humanities, allowing new interpretative models to be built on a superior scale and new challenges to be addressed. It will bring a new era of open access to sources, where past and on-going research are open science. This constant flux of knowledge is expected to have a profound impact on education, encouraging reflection on long trends and sharpening critical thinking, and will act as an economic motor for new professions, services and products, impacting key sectors of European economy, including ICT, creative industries and tourism, the development of Smart Cities and land use.</p> <p>More at https://www.timemachine.eu/</p>
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SSH IN MARIE SKŁODOWSKA-CURIE ACTIONS (MSCA)

This section discusses SSH integration in the Marie Skłodowska-Curie Actions (MSCA). The data were provided by DG EAC unit C2.

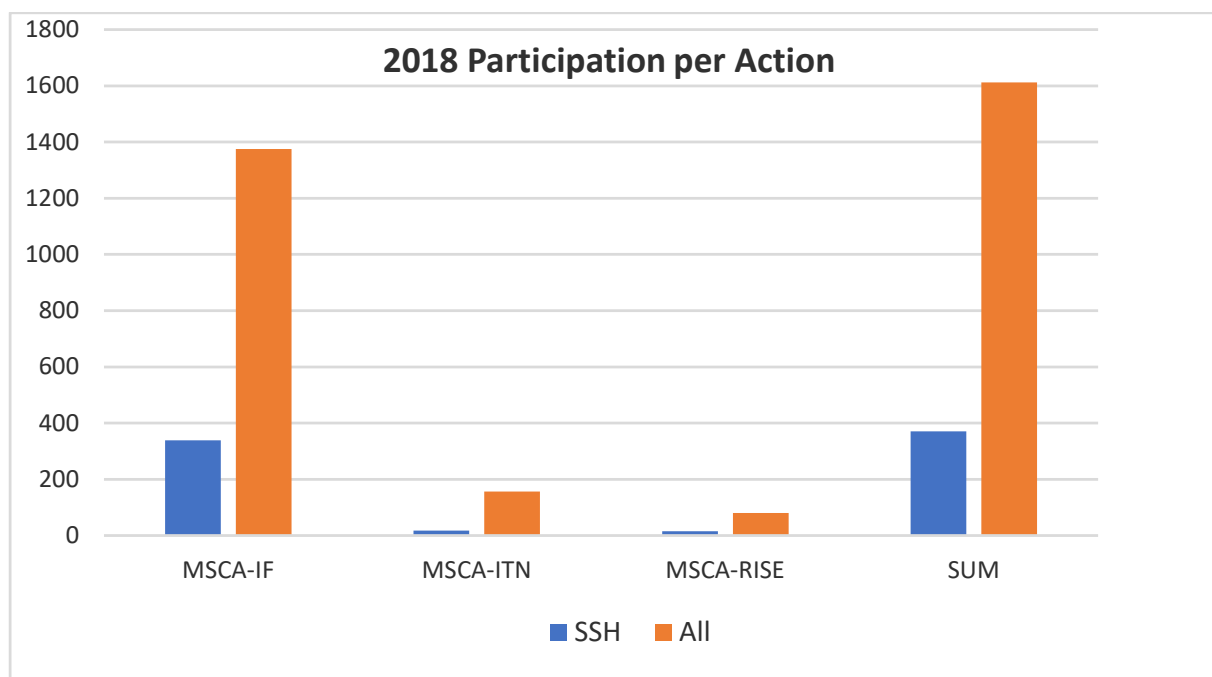
1 Types of actions funded under Horizon 2020

MSCA is a fellowship programme for research, supporting researchers at all stages of their career. It funds research across all disciplines and fosters cooperation between academia, industry and innovative training. It involves three⁹ types of funding action: Individual Fellowships¹⁰ (MSCA-IF), Innovative Training Networks (MSCA-ITN), and Research and Innovation Staff Exchange (MSCA-RISE), on the basis of participations¹¹ and projects. In the MSCA context, 'SSH' relate to participants or projects in economic sciences or social sciences and humanities, which are outlined separately.

2 SSH integration in 2018

Action	SSH	All	Proportion of SSH
MSCA-IF	339	1 375	25%
MSCA-ITN	17	157	11%
MSCA-RISE	15	80	19%
TOTAL	371	1 612	23%

In 2018, SSH was involved in 23% of all MSCA projects in the various actions under consideration, with a particular intensity for MSCA-IF academic mobility actions. Almost one in four MSCA fellows were involved in SSH-related activities.



⁹ MSCA-COFUND projects are disregarded as there is no possible differentiation per subject, so the level of SSH integration cannot be assessed. 'NIGHT' is not discussed, because it is an event rather than a project.

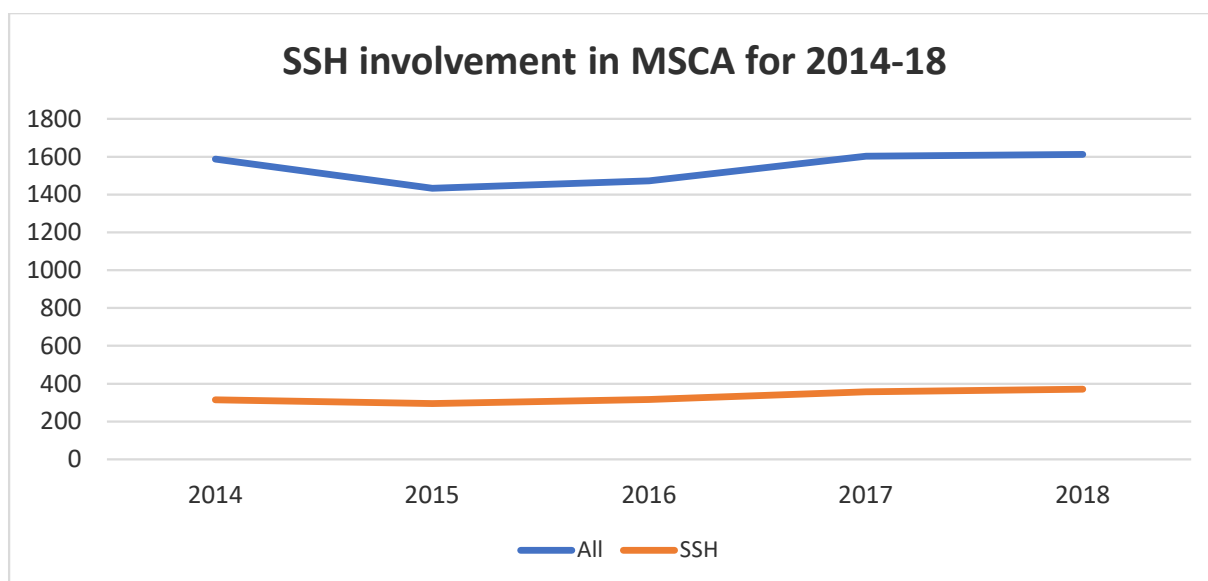
¹⁰ Each Fellow is also considered a project.

¹¹ Participations are the number of times an organisation participates in a project; there may be multiple participating organisations per project.

3 Evolution of SSH integration 2014-2018

Year	2014	2015	2016	2017	2018
All	1 588	1 433	1 473	1 603	1 612
SSH	314	295	317	357	371
Share	20%	21%	22%	22%	23%

In the 2014 - 2018 period, SSH involvement in different MSCA actions increased overall from 20% to 23%.



As regards SSH participation in various thematic areas of MSCA, it is worth noting that SSH-related disciplines are usually most strongly represented in the SSH and Economics panels.

	2014	2015	2016	2017	2018	Total	Proportion
LIFE SCIENCES	426	392	377	427	427	2 049	27%
SOCIAL SCIENCES AND HUMANITIES	276	261	277	318	340	1 472	19%
INFORMATION SCIENCES AND ENGINEERING	231	209	224	230	230	1 124	15%
ENVIRONMENT AND GEOSCIENCES	217	180	201	206	205	1 009	13%
CHEMISTRY	183	165	178	202	189	917	12%
PHYSICS	177	161	147	148	156	789	10%
ECONOMIC SCIENCES	38	34	40	39	31	182	2%
MATHEMATICS	40	31	29	33	34	167	2%
TOTAL	1 588	1 433	1 473	1 603	1 612	7 709	100%

Best practice example:

<p>PROJECT</p> <p>Humanities Rock! - Humans and Research</p>	<p>The aim of the HUMANITIES ROCK! project is to increase public recognition of researchers and encourage young people to embark on research careers. It will increase insight into research and innovation activities, promote public understanding of researchers' achievements and impact and demystify stereotypes related to researchers' profession.</p> <p>Project activities comprise a wide range of events such as direct visits to research institutions, exhibitions, lab visits, competitions and discussions with scientists. The activities focus on the social, cultural, philosophical, biological and technological aspects of human life and the research fields studying it, paying close attention to the social dimensions of scientific knowledge.</p> <p>As humankind is facing large-scale cultural and global challenges, social sciences and humanities research is becoming more important and relevant than ever, but is still often neglected and poorly utilized. The HUMANITIES ROCK! activities therefore promote and stimulate interdisciplinary collaborations between SSH and the natural sciences, and present the humanities as an integral part of science in general.</p> <p>The HUMANITIES ROCK! 2020 European Researchers' Night builds on the successful 2018-2019 edition organised by the University of Ljubljana. It revolves around the theme "HUMANS AND RESEARCH", presenting humans as subjects of research and as beings affected by research.</p> <p>More at https://cordis.europa.eu/project/id/954337</p>
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SSH IN RESEARCH INFRASTRUCTURES (RIS)

This section presents some key data on SSH in Research Infrastructures (RIs). The RI unit in DG R&I provided the data.

1 Definitions and types of infrastructure

We use the term 'research infrastructures' (RIs) to refer to facilities, resources or services of a unique nature that European research communities have identified to conduct top-level research activities in all fields of science.

This definition, including the associated human resources, covers major equipment or sets of instruments, as well as knowledge-containing resources such as collections, archives and data banks.

RIs of European (and international) interest may be:

- "single-sited" - geographically localised unique facilities whose governance is fundamentally European (or international) in character,
- "distributed" – formed by national and/or institutional nodes that are part of a European (or global) network of distributed resources and whose governance is fundamentally European (or international) in character, or
- "national RIs", with unique capabilities, that attract wide interest from researchers outside the host nation.

The European Research Infrastructure landscape encompasses the following:

- Intergovernmental RIs: well established RIs supported by the Member States,
- New Pan-European RIs: RIs listed in the European Strategy Forum on Research Infrastructures (ESFRI) Roadmap¹², and
- Networks of National RIs: Networks of national and regional RIs open to all European researchers from academia and industry. The Commission promotes the networks through Integrating Activity (IA) projects.

2 RIs funded under Horizon 2020

A key aim of the Horizon 2020 programme is to develop the European RIs for 2020 and beyond by:

- developing new world-class RIs,
- integrating and opening national and regional RIs of European interest,
- deploying and operating ICT-based e-Infrastructures,
- fostering the innovation potential of RIs and their human resources, and
- reinforcing European RI policy and international cooperation.

Below is a summary of the contribution of RIs to SSH in 2018, with a total amount of nearly €29 million.

¹² More at www.esfri.eu

Project nr.	Project name	Project title	Type ¹³	Start and end date	Duration (months)	EC contribution (€)
823782	SSHOC	Social Sciences & Humanities Open Cloud	Cluster	01.01.2019 - 30.04.2022	40	14 455 596
871034	IPERION HS	Integrating Platforms for the European Research Infrastructure ON Heritage Science	IA	01.04.2020 - 31.03.2023	36	6 162 711
871060	EHRI-PP	European Holocaust Research Infrastructure Preparatory Phase	PP	01.12.2019 - 30.11.2022	36	3 989 023
871069	OPERAS-P	Preparing open access in the European research area through scholarly communication	EP	01.07.2019 - 30.06.2021	24	2 010 539
871127	RESILIENCE	REligious Studies Infrastructure: tooLs, Experts, conNectiOns and CEnters	EP	01.09.2019 - 31.08.2021	24	2 179 161
TOTAL						28 797 030

3 RIs under the ESFRI roadmap and European RI consortia (ERICs)

The European Strategy Forum on Research Infrastructures (ESFRI) was set up by the EU Council of Research Ministers in 2002. It comprises representatives of Member States, Associated States, and the European Commission. Its aim is to support the development of a European policy for Research Infrastructure and discuss a long-term vision at European level. In November 2004, the EU Council of Research Ministers called on it to develop by 2006, and to update in 2008, 2010, 2016 and 2018, a strategic roadmap to identify new pan-European RIs or major up-upgrades to existing ones¹⁴.

The European Research Infrastructure Consortium (ERIC) concept was established by Council Regulation (EC) No 723/2009, amended by Council Regulation No 1261/2013. It is a legal instrument at EU level to facilitate the joint establishment and operation of RIs of European interest. It has legal personality recognised in all Member States and works with lighter procedures than a treaty-based international organisation. It qualifies as an international organisation for VAT (exemption under certain limits and conditions from VAT and excise duties) and public procurement directives.

The Commission has awarded ERIC status to 19 groups: SHARE, CLARIN, EATRIS, BBMRI, ECRIN, ESS, EURO-ARGO, CERIC, DARIAH, JIV, European Spallation Source, ICOS, EMSO, LifeWatch, CESSDA, ECCSEL, INSTRUCT, EMBRC and EU-OPENSREEN. The Commission presented its second report on the implementation of the ERIC Regulation to the Parliament and the Council in 2018.

¹³ Various types of action are supported: Cluster, Integrating Activity (IA), Preparatory Phase (PP), Integrated Project (IP), Design Study (DS), and Emerging Project (EP).

¹⁴ More at <http://roadmap2018.esfri.eu/media/1060/esfri-roadmap-2018.pdf>
<https://www.esfri.eu/esfri-roadmap-2021>

ESFRI's 2018 roadmap update comprises the following infrastructure relating to SSH under Social and Cultural Innovation:

- Two ESFRI Projects:
European Research Infrastructure for Heritage Science (E-RIHS) and European Holocaust Research Infrastructure (EHRI).
- Five ESFRI Landmarks (ERICs):
Consortium of European Social Science Data Archives (CESSDA ERIC), Common Language Resources and Technology Infrastructure (CLARIN ERIC), Digital Research Infrastructure for the Arts and Humanities (DARIAH ERIC), European Social Survey (ESS ERIC), and Survey of Health, Ageing and Retirement in Europe (SHARE ERIC).

Best practice example:

<p>PROJECT</p> <p>IPERION HS - Integrating Platforms for the European Research Infrastructure ON Heritage Science</p>	<p>Heritage science is an umbrella term used to encompass the multidisciplinary research domain stemming from conservation science, archaeological science and building science, for which the EU Research Infrastructure E-RIHS (an ESFRI project) is being created.</p> <p>The goal of the IPERION HS project is to promote heritage science. It will establish an Integrating Activity for a distributed pan-European research infrastructure, opening up key national research facilities of recognised excellence in heritage science. The project is a further step towards a unified scientific approach to the most advanced European instruments for the analysis, interpretation, preservation, documentation and management of heritage objects.</p> <p>With 67 partners from 23 countries, 52 access providers and more than 180 services, IPERION HS will offer cross-border access to an impressively wide range of high-level scientific instruments, methodologies, data and tools for advancing knowledge and innovation in the study and preservation of heritage.</p> <p>More at http://www.iperionhs.eu/</p>
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SSH IN SCIENCE FOR AND WITH SOCIETY (SWAFS)¹⁵

This section summarises some key data on SSH participation in the SwafS programme.

SwafS contributed to SSH with a number of key topical calls in 2018. These concerned:

- Involving society in science and innovation issues, policies and activities in order to take account of citizens' interests and values, and to increase the quality, relevance, social acceptability and sustainability of R&I outcomes in various fields of activity from social innovation to areas such as biotechnology and nanotechnology.
Budget €5 053 820
- Developing governance for the advancement of responsible R&I by all stakeholders, which is sensitive to society needs and demands, and promoting an ethics framework for R&I.
Budget €2 968 375
- Taking due and proportional precautions in R&I activities by anticipating and assessing potential environmental, health and safety impacts.
Budget €1 999 831
- Improving knowledge on science communication in order to improve the quality and effectiveness of interaction between scientists, general media and the public.
Budget €2 692 161

The total SwafS contribution to SSH therefore amounted to €13 714 188.

¹⁵ See https://www.net4society.eu/files/SSH_Opportunities_Document_2018-2020_update_final.pdf

Best practice example:

<p>PROJECT</p> <p>InSPIRES - Ingenious Science shops to promote Participatory Innovation, Research and Equity in Science</p>	<p>InSPIRES brings together practitioners from across and beyond Europe to co-design, jointly pilot, and implement innovative models for Science Shops.</p> <p>The InSPIRES models integrate Responsible Research and Innovation, Open Science and Impact Evaluation as part of their DNA, in order to open the research process up in a more strategic way to civil society and other stakeholders. The main research topic is health, giving special attention to gender parity and vulnerable groups (women, the elderly, adolescents, migrants and refugees).</p> <p>InSPIRES promotes Science Cafés with a “glocal” international focus. An open call to award participatory research projects focusing on health and environment received 43 proposals, from which 6 were selected in Uganda, Benin, Bolivia, Ecuador, Greece, Turkey and Romania. They all engage civil society in the whole science process.</p> <p>The project has also developed a crowd-sourced online repository of structures promoting Science Shops. It is a useful tool for civil society, practitioners and other stakeholders, as examples of projects are open to contributions by the community at large.</p> <p>InSPIRES outcomes will give evidence and support decision-makers to propose changes in local, regional, national and international policies. It will nurture the debate about the place and role of society in science, encouraging the systematic and ethical involvement of civil society actors and their societal concerns in the research and innovation processes.</p> <p>More at https://inspiresproject.com/</p>
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CONCLUSION AND WAY FORWARD

Effective SSH integration is a key determinant of sustainable societal impact. The findings of this report indicate that the work on SSH integration under Horizon 2020 has produced encouraging results.

However, the effective integration of SSH under Horizon 2020 has reached the limits of what is possible under the present rules for participation. DG R&I is keen on improving the quality of SSH integration further in the forthcoming Horizon Europe programme. The work on SSH integration under Horizon 2020 should be seen as a precursor for a deeper cross-sectoral approach in Horizon Europe.

The integration of SSH across Horizon Europe responds to the programme imperative that it be treated as a key cross-cutting issue¹⁶. Building on the experience from Horizon 2020, SSH will be fully integrated across all clusters under the new programme, including specific and dedicated activities such as missions and partnerships. Deeper integration will be based on a holistic approach to SSH. SSH integration should cover the entire cycle in a meaningful and more binding way, from the co-creation of the topics of calls for proposals to the selection and implementation of projects.

SSH integration will need to be reframed in clearer and more concrete terms, with a view to achieving greater tangible impact. For SSH-flagged topics, SSH expertise should be integrated in a more comprehensive process all the way through, from the drafting of calls and topics, through the preparation of conceptual proposals, the composition of project consortia, to the selection and evaluation of projects by evaluators with clear SSH expertise. In addition, the goals in terms of societal impact should be explicitly set out in the topics, in project proposals and in their implementation reports.

In order to ensure effective cross-cutting SSH integration we have made a number of proposals, which are currently under negotiation.

- A revisited evaluation process under the excellence as well as impact criteria.
- A novel category of inter-disciplinary experts for panel evaluations of SSH flagged projects.
- New cross-cluster complementarities and synergies in terms of SSH presence across the entire new programme.
- A new key deliverable in the form of a societal development plan (SDP), outlining the contribution of SSH fields to the project in question. In SSH-relevant projects, an SDP should set out how the consortium wants to achieve the societal goals of the project, in particular by the strategic deployment of SSH knowledge and expertise. Such an SDP could become a key deliverable, and thus have financial implications for the project. This and other matters are currently under discussion in relation to the future evaluation and implementation of projects in Horizon Europe.

This new approach will doubtless influence and improve SSH involvement in Horizon Europe. As it is currently under preparation and may be operational only for the new programme, it will not affect the reporting of SSH integration in Horizon 2020. Therefore, while Horizon 2020 and its approach lay the foundations for the future, the more significant improvements will be visible only in the new programme.

¹⁶ The integration of SSH in all clusters, including all mission and partnerships, is a programme principle (in particular under Art. 6a). SSH is also one of the issues covered by the new monitoring and reporting obligations of Art. 45.

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The integration of Social Sciences and Humanities (SSH) in Horizon 2020 is an important feature of the programme. To monitor the development of this cross-cutting issue is an EU commitment. Various dimensions are examined, such as the budget going to SSH partners (overall and in each part of the programme), qualitative aspects, performance of disciplines and sectors involved, as well as which countries are represented as participants and coordinators.

The scope of this monitoring report on the integration of SSH across Horizon 2020 has gradually been extended to cover the European Research Council, Future Emerging Technologies, Marie Skłodowska-Curie actions and Research Infrastructures. This year we also look at the topical Science with and for Society (SwafS) part of the programme.

This fifth edition of the report shows that substantial quantitative progress has been made in many areas since the start of the programme. However, it also illustrates that more effort is needed to improve the quality of SSH integration.

The quantitative data presented here indicate how well the policy of SSH integration is put into practice. However, this by no means tells the full story of SSH integration in the overall framework programme.

Studies and reports

