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

3rd Monitoring report on SSH flagged projects funded in 2016 under the Societal Challenges and Industrial Leadership priorities

Research and Innovation

Integration of Social Sciences and Humanities in Horizon 2020: Participants, Budget and Disciplines – 3rd Monitoring report on SSH flagged projects funded in 2016 under the Societal Challenges and Industrial Leadership priorities

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

3rd Monitoring report on SSH flagged projects funded in 2016 under the Societal Challenges and Industrial Leadership priorities

Edited by Tobias Bade Strom, Catherine Lemaire, Jolanta Zacna, Jimena Arango Montanez and Bogdan Iustin Birnbaum

Data regarding SSH in the ERC have been provided by Angela Liberatore and Laura Kasnauskaite at the European Research Council Executive Agency (ERCEA)

This report is dedicated to the memory of Philippe Keraudren who tragically passed away in September 2017, at the age of 54. He had worked for the European Commission since 1996 and was for many years Deputy Head of Unit in DG RTD. Philippe was a strong believer in the role and contributions of the Social Sciences and Humanities (SSH) to create a better world. Moreover, he worked continuously to make SSH expertise more intertwined with other sciences to jointly address global challenges – and to increase impact. Philippe had a large network in Europe and inspired many to explore interdisciplinary paths. It was he who took the initiative to produce these regular reports on SSH Integration in Horizon 2020 - and his ideas and great enthusiasm will always be remembered.

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Introduction

The research and innovation questions addressed by a majority of the calls in Horizon 2020 are so complex that contributions from several scientific disciplines are needed. In some cases a combination of disciplines within Science, Technology, Engineering and Mathematics (STEM) might be appropriate to tackle the questions to be addressed. When it is expected that expertise coming from the Social Sciences and Humanities (SSH) is needed to tackle the challenges then topics are flagged to inform the applicants of the need to combine STEM and SSH.

Within both these two broad categories of disciplines there are large differences in for example methodology or language used when doing research – or creating and developing innovative solutions. Naturally, combining SSH and STEM partners in large consortiums may constitute an even larger barrier, but often many find it enriching to work together in real interdisciplinary teams – and in some cases intangible outcomes are created that otherwise would not have occurred.

To recall in H2020 the European Commission follows a twofold approach on Social Sciences and Humanities (SSH) in an EU R&I programme: A focus on a societal challenge ('Inclusive, Innovative and Reflective Societies', SC6) where topics are predominantly SSH centred and, in addition, the integration of SSH research across all societal challenges and priorities of the programme. By this, H2020 pays tribute to the findings that, although research in technologies can provide technical solutions to major challenges, Social Sciences and Humanities (SSH) can help making them accepted, understood and appropriated by the general public.

Since the start of Horizon 2020 many researchers, advisers, managers, policy makers and evaluators have become more familiar with the opportunities and challenges of interdisciplinary cooperation. Still, it is fair to say that many researchers and innovators are not part of an academic or business oriented environment where multidisciplinary cooperation is the obvious way of tackling societal and scientific challenges. To open up for further concrete interdisciplinary approaches in European research and innovation more efforts are needed and this is a gradual process. Horizon 2020 is an important instrument in this regard, but it is important that initiatives on regional, national and international level continue to contribute as well. We hope that this report helps to raise awareness of the need of such combined efforts.

In the two previous reports we have only presented results based on the Societal challenges and Leadership in Enabling Technologies (LEITs) pillars. A novelty in this year's report is that we have included some key data on SSH in the calls of the European Research Council in 2016; in order to get a better indication of the overall performance of SSH in Horizon 2020. Accordingly this report does not aspire to capture how SSH is integrated in all parts of the programme, but a large majority of H2020 is taken into account.

1. Executive Summary

Table with key findings:

	Number of SSH-flagged topics	Share of projects with at least one SSH partner	Involvement of SSH partners in projects funded under SSH-flagged topics	Amount and share of budget allocated to SSH partners in SSH-flagged topics	Quality of SSH integration [1]
2014	**98**	**71%** 219 out of 308 projects funded under SSH-flagged topics have at least one SSH partner in the project	**26%** of the total number of consortia partners in projects funded under 2014 SSH flagged topics (19% when excluding SC6) are SSH partners	**EUR 236 million** (from which more than 70 million came from SC6), amounted to **21%** of the estimated total budget for 2014 SSH flagged topics (EURO 1,1 billion)	**With 10% threshold** Good: 40% None: 28%
2015	**83**	**84%** 197 out of 235 projects funded under SSH-flagged topics have at least one SSH partner in the project	**27%** of the total number of consortia partners in projects funded under 2015 SSH flagged topics (20% when excluding SC6) are SSH partners	**EUR 197 million** (from which more than 60 million came from SC6), amounted to **22%** of the estimated total budget for 2015 SSH flagged topics (EURO 888 million)	**With 10% threshold** Good: 57% None: 21% **With 20% threshold** Good: 39% None: 24%
2016	**84**	**71%** 169 out of 239 projects funded under SSH-flagged topics have at least one SSH partner in the project	**27%** of the total number of consortia partners in projects funded under 2016 SSH flagged topics (21% when excluding SC6) are SSH partners	**EUR 181 million*** (from which almost 60 million came from SC6), amounted to **20%** of the estimated total budget for 2016 SSH flagged topics (EURO 891 million)	**With 10% threshold** Good: 49% None: 29% **With 20% threshold** Good: 39% None: 33%

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1 See Section 2 on Methodology

* It is important to underline that we have chosen to disregard instruments such as ERA-NETs, co-fund and public procurement in this year's report – and only looked at RIAs, CSAs and IAs – as this makes it easier to compare results between Work programme parts. Accordingly the share of budget to SSH in absolute terms does not reflect the total picture in pillars 2 and 3 of Horizon 2020. On the contrary our data show that as a percentage of overall funding the share of SSH has increased from 2015 to 2016, see below and in chapter 3 under the general assessment.

The quantitative integration of SSH is satisfactory, but has decreased since 2014-15

- This third report on SSH integration in H2020 is based on 239 projects funded in 2016, under 84 SSH flagged topics.

- In 2016 these 84 SSH flagged topics had a budget of 891 million.

- In terms of budget, €181 million out of the €891 million allocated in 2016 to the SSH flagged topics were awarded to SSH partners, with €155 million under the Societal Challenges pillar and €26 million under the LEIT pillar. Compared with 2015 there is a decrease in absolute terms (€197 million in 2015), but this is due to the fact that we have chosen to limit the type of instruments we are analysing. Towards the final phase of Horizon 2020 this figure is expected to increase.

- In terms of the share of budget going to SSH partners under SSH flagged topics there is a slight decrease (20% in 2016 compared with 22% in 2015).

- Perhaps even more interesting is the share of the budget going to SSH partners as a percentage of the overall budget (flagged and non-flagged). Here we see a very positive trend where the share went up from 5% in 2015 to 7% in 2016.

- Societal Challenge 6 accounts for €59 million, i.e. 33% of the overall amount of the €179 million awarded to SSH partners. This represents a slight increase compared with 2015 (30%).

- 27% of consortia partners in projects funded under topics flagged for SSH have SSH expertise (27% in 2015). When excluding Societal Challenge 6, the share of SSH partners amounts to 21% (20% in 2015).

- In 2016 70 projects out of 239 projects funded under the SSH flagged topics had no SSH partners (29%). This is a negative trend since 2015 when as little as 16% of the projects financed under the SSH flagged topics had no SSH partners.

SSH partners by type of activity.

- Higher education establishments (HES) account for 36% of SSH partners, research organisations (REC) 18% while public sector institutions (such as ministries) account for 12%. In addition, 19% of SSH partners come from the private sector (for-profit

research organisations, SMEs, consulting agencies, etc.) while the remaining 16% are categorised as 'others' and mainly include civil society organisations. These results are fairly similar to 2015 findings.

- When comparing data for individual work programme parts, the types of institutional actors involved vary depending on the societal challenge or LEIT part in question. For instance, higher education establishments and non-profit research organisations account for 65% of SSH partners in Societal Challenge 6 as compared to only 32% in Societal Challenge 7. The private sector accounts for 29% of SSH partners in LEIT ICT and 27% in Societal Challenge 1, but only for 12% in Societal Challenge 6. These percentages are also fairly close to the 2015 figures.

SSH partners and coordinators by country affiliation.

- In terms of countries represented, the SSH partners come predominantly from the following seven EU Member States: United Kingdom (11%), Italy (11%), Germany (11%), Belgium (8%), Spain (7%) and France plus the Netherlands (both with 6%). Combined, these top seven countries account for 60% of the SSH partners. Overall it seems that the country affiliation of SSH partners is a bit more concentrated than in 2015. Non-EU countries (associated and third countries) participation is also relevant accounting for 11% of the SSH partners.

- 32% of projects financed under SSH flagged topics are coordinated by a SSH partner. In particular, the SSH coordinators come from Germany (18%), Italy (14%), the UK (12%) and Belgium (11%). Together, the top seven countries account for 78% of SSH coordinators. These are the same countries which have the most partners as indicated above.

Distribution by disciplines.

- Regarding the variety of SSH disciplines in the funded projects, contributions from the fields of economics (34%) and political science and public administration (13%) are well integrated. Sociology and Business/Marketing do fairly well with 8% each. Some disciplines are practically not involved such as History (2%) and anthropology/ ethnology (1%). One should keep in mind that the non-research activities (Project management and project related communication activities) account for 11% of all activities performed by staff with an SSH background. As in 2015, we observe that the Humanities/Arts remain underrepresented. Also Law/legal studies had modest results with only 3% of the involved SSH partners in 2016, compared with 5% in 2015.

The quality of SSH integration is highly uneven across H2020.

This third report on SSH integration in H2020 applies the same methodology as was used last year with the four indicators (share of SSH partners, budget of SSH partners, contribution from SSH disciplines and person months performed by SSH) and includes two scenarios of quality based on the calculation of two thresholds 10% and 20% for the three criteria out of four (see the methodology section below).

I.   When applying the 10% threshold

- 49% of projects funded under topics flagged for SSH show good integration of SSH in terms of share of partners, budget allocated to them, person-months, and variety of disciplines involved. However, at the other end of the spectrum, 29% of the projects funded under topics flagged for SSH do not integrate any contributions from SSH. When excluding Societal Challenge 6, the share of projects that fail to integrate contributions from the SSH increases from 29% to 33% while the share of projects with good SSH integration decreases from 49% to 42%.

- The quality of integration differs considerably depending on the Societal Challenge or LEIT part. For Societal Challenge 6, 97% of funded projects show a good integration of SSH. This is a very high number but naturally it is the Work programme part with most topics dedicated to SSH questions. Societal Challenge 5 and LEIT ICT also perform well with 82% and 56% of the projects, respectively, showing a good integration of SSH. In contrast, 59% and 51% of the projects funded under Societal Challenge 3 and Societal Challenge 1 do not integrate any contributions from the SSH in the SSH flagged topics.

Compared with 2015, these figures show a percentage decrease in terms of good integration (49% compared to 57% in 2015) and an increase in the percentage of projects with no SSH (29% compared to 21% in 2015). This also shows that results will vary during the programme period since the results for 2016 in this respect is more similar to those that were seen in 2014.

II.   When applying the 20% threshold

- 39% of projects funded under topics flagged for SSH show good integration of SSH in terms of share of partners, budget allocated to them, person-months, and variety of disciplines involved. However, at the other end of the spectrum, 33% of the projects funded under topics flagged for SSH do not integrate any contributions from the SSH. When excluding Societal Challenge 6, the share of projects that fail to integrate contributions from the SSH increases from 33% to 37% while the share of projects with good SSH integration decreases from 39% to 32%.

- The quality of integration differs considerably depending on the Societal Challenge or LEIT part. For Societal Challenge 6, 97% of funded projects show a good integration of SSH. Societal Challenge 5 and LEIT ICT + SC7 also perform well with 73% and 42% of the projects, respectively, showing a good integration of SSH. In contrast, 71% and 55% of the projects funded under Societal Challenge 1 and Societal Challenge 3 do not integrate any contributions from the SSH.

Compared with 2015, these figures show a similar level of good integration (39% compared to 39% in 2015) and an increase in the percentage of projects with no SSH (33% compared to 24% in 2015).

Overall tendencies

In the third year (2016) of the implementation of SSH integration in Horizon 2020 overall the results are satisfactory. However, when moving from the first to the second

Work programme we see a bit more varied results. There were fewer projects under SSH flagged topics in 2015 without SSH content than in 2014 which was positive. This trend was reversed in 2016 when many more funded projects had practically no SSH aspects/disciplines incorporated.
At the same time the share of projects with so-called good integration – meeting all four criteria – has gone down.

The three first reports covering the three first years of Horizon 2020 indicate that results per WP part will vary quite considerably. 2016 was a very good year for Societal challenge 5. LEIT ICT, SC2 and SC4 also do well. LEIT NMBP has good results on some indicators but there were quite few topics that were flagged. Societal challenges 1, 3 and 7 had a drop from 2015 to 2016.

In terms of disciplines the trend continues with economics being by far the most well represented, and others like political science, business and sociology have a strong presence. Based on the results in 2016 the Humanities/Arts still perform poorly, but also many of the Social Sciences are hardly involved so it is not accurate to say that only Humanities/Arts are underrepresented.

Budget wise Societal challenge 6 is still the largest source of funding for SSH partners. In 2015 SC1, SC4 and LEIT followed next. In 2016 LEIT ICT and SC4 have similar results, while SC1 experiences a big drop. Both in terms of budget and quality of integration – following the four indicators of our methodology – SC5 has the highest improvement from 2015 to 2016.

2. Methodology

The data in this report was extracted from the grant agreements of the 239 projects selected for funding in 2016 under 84 topics in the Societal Challenges and Industrial Leadership priorities combined.

All 84 topics were flagged for SSH in the Participant Portal. As such, they were expected to fund projects in which contributions from SSH practitioners and experts would be integrated to varying degrees. The Societal Challenges priority funded 183 projects under 73 of these topics while the Industrial Leadership priority funded 52 projects under the remaining 52 topics.

No reliable IT-based solution is yet in place for collecting data on the integration of SSH in Horizon 2020 projects. As a result, like previously, data extraction for the 2016 projects was performed manually, project by project, according to a methodology that is both simple and robust. This methodology is based on the following categories:

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 professional background in SSH and contribute with this expertise to project activities. This means that consortium partners that have less than 66% of experts with SSH expertise taking part in the project are not accounted for in this report although they may still play an important role in their projects.

Budget going to SSH
The total amount of budget given to SSH partners as defined above, in the 239 projects funded under the SSH flagged topics in 2016.

Activity type
This category is based on the legal status of consortium partners and on their public, commercial, research and educational affiliation. The five activity types used in this report are the ones used by the Common Research Data Warehouse (CORDA).

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 disciplines
This category provides aggregated data on the distribution of SSH expertise across projects. It indicates what percentage of projects includes partner-level expertise in each of the following 13 disciplines or clusters 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).

We have kept the novelties introduced in the 2015-report:
- in order to have more precise figures on SSH disciplines, we have counted the number of experts per discipline in each project;
- we have counted separately the SSH experts whose contribution to the projects is not research but only communication and project management. For instance if a partner is an SSH partner and is in charge of the work package on communication all the experts will be counted as non-research. Besides, if the coordinator is an SSH partner, automatically one of its experts is counted as non-research.
- we have disaggregated the SSH disciplines into 13 clusters

Quality of SSH integration

This category is a composite project-level indicator. It aggregates the performance of each project along four criteria and associated thresholds, assessing whether:
- the share of SSH partners is higher than 10%;
- the budget going to SSH is higher than 10%;
- person-months by SSH partners are higher than 10%;
- contributions from the SSH came from at least two distinct SSH disciplines.

In a second scenario we have applied a threshold of 20% for the three criteria. In this case the quality of integration is calculated according to the following criteria:
- the share of SSH partners is higher than 20%;
- the budget going to SSH is higher than 20%;
- person-months by SSH partners are higher than 20%;
- contributions from the SSH 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 is 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

Novelties in 2016:

In this report we have only looked at RIAs, IAs and CSAs. Under other funding instruments such as ERA-Nets and joint calls with other funders the percentage and part of SSH is more random, and this will make it difficult to compare the different Work Programme parts. The absolute figure when it comes to budget has therefore gone down since the previous report,

but this does not represent a trend overall. The most interesting correlation remains the percentage of the budget going to SSH partners – as compared with the total available budget.

At the same time pillar 1 is not either examined in the same way as the other two pillars, but we have included some data on the European Research Council for the first time. Accordingly this report is by no means supposed to capture a complete analysis of how the SSH are performing across the Horizon 2020 programme.

In order to do that one would have had to examine the academic profiles in all consortiums under the non-flagged topics as well, which would require revising yet another 5000 CVs or so. However, the findings in the report – especially when comparing from one year to the next – are supposed to give a good indication of the role SSH plays in Horizon 2020.

3. Integration of SSH in the 2016 Calls of the Societal Challenges and Industrial Leadership Priorities: General Assessment

3.1 Budget going to SSH

The total funding available for the calls for proposals in the Work Programme 2016 amount to nearly €2,5 billion, out of which €891 million are dedicated to topics flagged for SSH. Under these topics €181 million out of the €891 million (i.e. 20%) go to SSH partners. Overall, the share of budget going to SSH partners amounts to 7% of the total 2016 budget of almost €2,5 billion for SCs and LEITs. This is an increase from 5% in 2015.

Budget allocated to SSH-flagged topics and to SSH partners (million €)					
Horizon 2020 parts	Total budget 2016 calls	Budget allocated to SSH-flagged topics	Budget going to SSH partners	Share of budget going to SSH partners under SSH-flagged topics	Share of budget going to SSH partners out of the total call budget
SC1	265	208	9	5%	4%
SC2	267	69	15	22%	6%
SC3	403	148	17	12%	4%
SC4	343	141	24	17%	7%
SC5	135	43	23	53%	17%
SC6	93	86	59	68%	63%
SC7	147	86	8	9%	5%
Total SC	1651	779	155	20%	15%
LEIT-ICT	460	109	24	23%	5%
LEIT-NMBP	249	3	1	37%	0.46%
LEIT-SPACE	92	0	0	0%	0%
Total LEIT	801	112	26	23%	3%
Total	**2452**	**891**	**181**	**20%**	**7%**
Total ex. SC6	2359	805	122	18%	5%

The budget share for SSH is highest in SC6 with €59 million (68%) out of the €86 million allocated to the SSH-flagged topics, followed by SC5 (€23 million, 53%) and LEIT ICT (€24 million, 23%). The lowest shares are to be found in SC1 (€9 million, 5%) and LEIT-SPACE (no SSH flagged topics in 2016).

However, when focussing on budget size instead of budget share, the picture is different. With €59 million, SC6 is still top of the list. However, LEIT-ICT and SC4 come next with €24 million going to SSH partners, followed by SC5 (€23 million) and SC3 (€17 million). The lowest budget numbers are found in the LEIT-NMBP and LEIT-SPACE parts.

Budget going to SSH partners
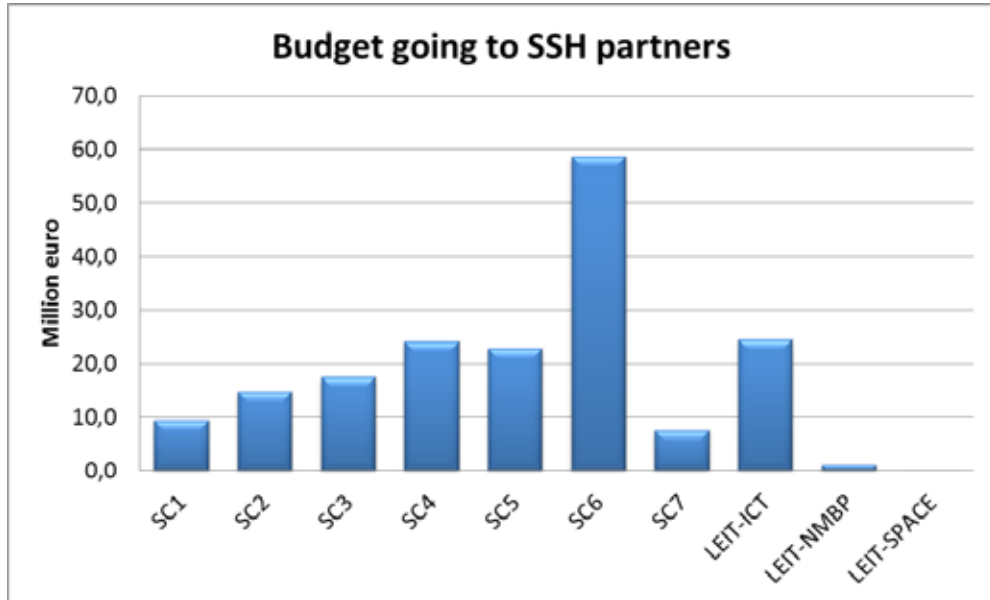
3.2 Involvement of SSH partners

Overall, 27% of consortium partners (i.e. 762 partners) in projects funded under SSH-flagged topics in the Societal Challenges and the LEIT parts of Horizon 2020 have and contribute with SSH expertise (21% of partners when excluding SC6). Their share is highest in SC6 (77%), LEIT ICT (26%) and SC3/SC7 (22%) while being lowest in LEIT-SPACE (0%) and SC1 (9%).

Involvement of SSH partners in projects funded under SSH-flagged topics								
Horizon 2020 parts	Total number of topics	Number of SSH-flagged topics	Funded projects under SSH-flagged topics	Projects with at least one SSH partner	Share of projects with SSH partners	Partners in projects under SSH-flagged topics	SSH partners in projects under SSH-flagged topics	Share of SSH partners
SC1	23	11	35	20	57%	494	46	9%
SC2	41	11	30	26	87%	625	126	20%
SC3	34	7	29	13	45%	283	61	22%
SC4	27	12	30	19	63%	395	80	20%
SC5	19	7	11	10	91%	172	80	47%
SC6	18	16	26	26	100%	293	225	77%
SC7	19	9	24	13	54%	198	43	22%
Total SC	181	73	185	127	70%	2460	661	27%
LEIT-ICT	27	7	50	39	78%	380	100	26%
LEIT-NMBP	21	4	4	3	75%	27	7	26%
LEIT-SPACE	0	0	0	0	0%	0	0	0%
Total LEIT	48	11	54	42	78%	407	107	26%
Total	**229**	**84**	**239**	**169**	**71%**	**2867**	**768**	**27%**
Total ex. SC6	211	68	213	143	67%	2574	543	21%

169 out of 239 (71%) projects funded under SSH-flagged topics in the Societal Challenges and the LEIT parts of Horizon 2020 have at least one SSH partner in the project. All projects funded under the SSH flagged topics in SC6 – and a vast majority in SC5 and SC2 – have at least one SSH partner. The share of projects with SSH partners is also very high for LEIT ICT with 78%.

Conversely, 70 projects (29%) funded under the SSH-flagged topics do not have SSH partners. This may point to several causes such as low quality of the topic texts, barriers to

inter-disciplinarity in given scientific fields and/or insufficient guidance to evaluators during the evaluation process.
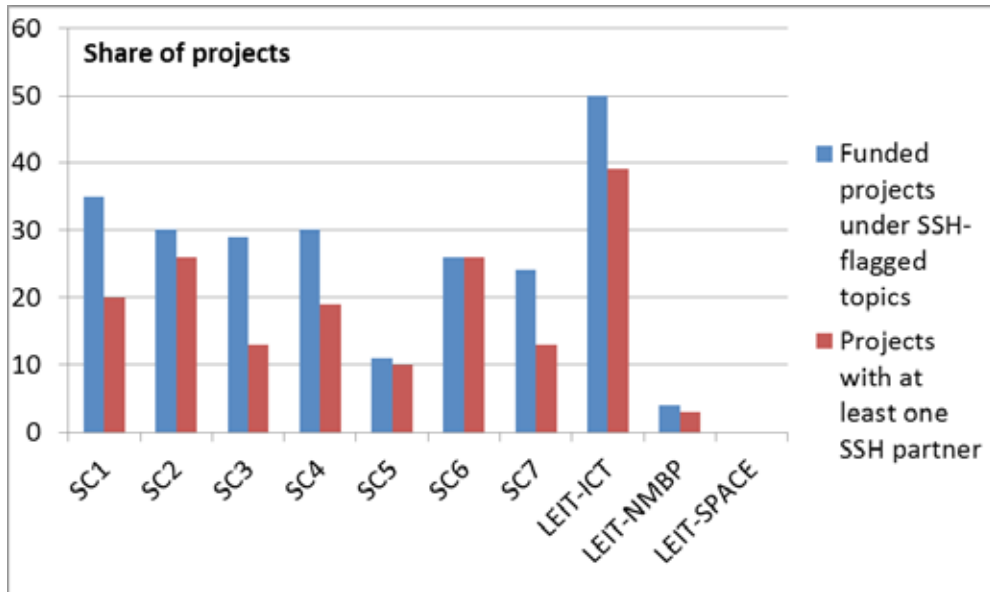
3.2.1 SSH partners by country

The vast majority of SSH partners are established in EU Member States (89%), with the remaining established in associated countries (7%) or third countries (4%). These figures represent an aggregate and within the sub-groups disparities can be found. The share of partners from Top 20 countries has increased while that of third countries has dropped from 6 to 4%.

Country affiliation of SSH partners: Sub-groups		
	Partners	Share
Total	716	100%
EU28	636	89%
EU15	554	77%
EU13	82	11%
Associated countries	52	7%
Third countries	28	4%
Top 7	389	54%
Top 20	628	88%

The 20 most represented countries listed below account for 88% of all SSH partners. The top 5 countries (DE, UK, IT, BE and ES) account for almost half of the total SSH partners.

Country affiliation of SSH partners – top 20 countries																			
Country	DE	UK	IT	BE	ES	FR	NL	EL	AT	PT	SE	HU	PL	IE	FI	RO	DK	BG	TR	Other
Partners	80	78	78	59	51	46	45	24	22	21	18	16	12	12	11	10	8	8	6	6
Share	11%	11%	11%	8%	7%	6%	6%	3%	3%	3%	2%	2%	2%	2%	2%	1%	1%	1%	1%	1%

At individual country level, Germany is best represented with 80 partners accounting for 11% of total SSH partners. Italy and the UK come second, with 78 partners and a share of close to 11%, followed by Belgium (59 partners and a share of 8%), Spain with 7% while France and the Netherlands each account for 6% of SSH partners. As a result, 62% of the SSH partners are established in only seven EU countries.

3.2.2 SSH partners by type of activity

The majority of SSH partners belong to the realm of publicly funded science and research. 66% of them are affiliated with higher or secondary education establishments (HES, with an individual share of 36%), research organisations (REC, 18%), or public bodies (PUB, 12%). 19% of all SSH partners come from private for profit entities (PRC), such as for-profit research organisations, SMEs or consultancies.

The shares of the various activity types differ considerably depending on the Horizon 2020 part in question.

Type of activity – share of SSH partners					
Horizon 2020 parts	**HES**	**REC**	**PUB**	**PRC**	**OTH**
SC1	13%	21%	15%	27%	23%
SC2	33%	20%	6%	19%	22%
SC3	45%	25%	0%	23%	7%
SC4	18%	20%	22%	22%	19%
SC5	26%	29%	18%	13%	14%
SC6	53%	12%	8%	12%	15%
SC7	16%	16%	41%	19%	8%
LEIT-ICT	43%	9%	7%	29%	13%
LEIT-NMBP	0%	0%	0%	100%	0%
LEIT-SPACE	0%	0%	0%	0%	0%
Total	**36%**	**18%**	**12%**	**19%**	**16%**
Total ex. SC6	29%	20%	13%	21%	16%

The share of SSH partners from higher education establishments (HES) is highest in SC6 (53%), SC3 (45%) and LEIT ICT (43%). It is lowest in SC1, SC7 and LEIT-SPACE. Research organisations fare best in LEIT-NMBP (33%), SC6 and SC2 (23%). Private-for-profit entities are best represented in LEIT-NMBP (100%) and LEIT ICT (29%), but their share is significantly lower in SC6 (12%), and SC5 (13%).

3.3 Project coordination

In total, 76 of 239 (32%) projects funded under the SSH-flagged topics in the Societal Challenges and the LEIT parts of Horizon 2020 are coordinated by an SSH partner. The highest number of SSH project coordinators can be found under SC6 with 30 SSH-coordinated projects followed by LEIT-ICT with 11 SSH-coordinated projects.

If one excludes the high number of SSH coordinated projects under SC6, on average 22% of the projects are coordinated by an SSH partner. This rather low share of SSH coordinated projects indicates that the potential for SSH integration remains underused. This is particularly the case for Societal Challenge 1 where only 3 of 35 projects are coordinated by an SSH partner.
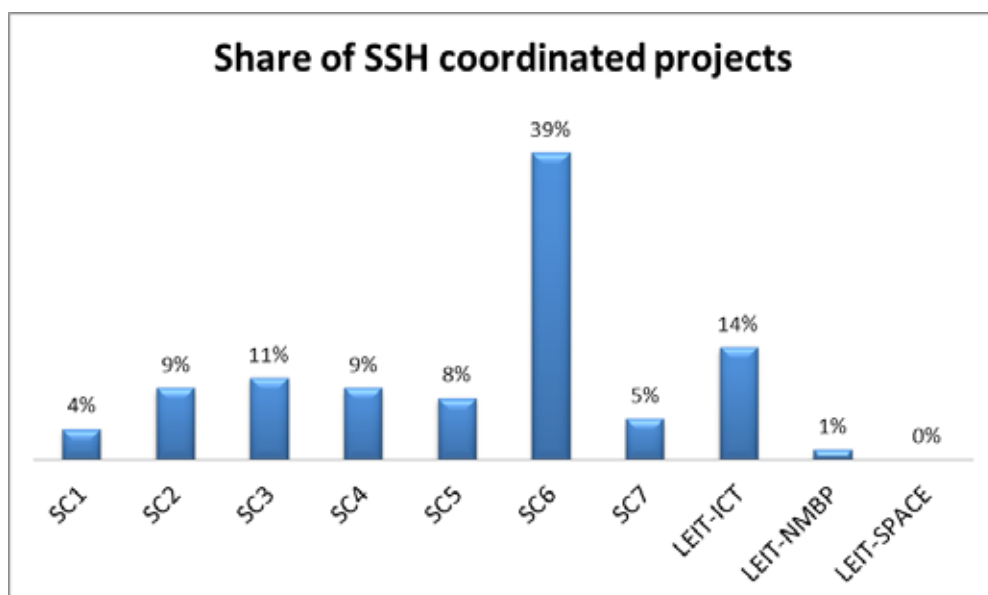
3.3.1 SSH coordinators by country

For project consortia led by an SSH partner, the SSH coordinators come predominantly from the following countries: Germany (14 projects – 18%), Italy (11 projects - 14%), the UK (9 projects – 12%), Belgium (8 projects – 11%), and France and Spain (both 6 projects – 8%).

Together, these six countries account for 71% of the SSH coordinators and 5% of the SSH coordinators come from the associated countries. Efforts should be made in order to reduce the concentration of SSH coordinators in only a few countries.

Country affiliation of SSH project coordinators														
H2020 parts	DE	IT	UK	BE	FR	ES	NL	AT	NO	DK	PT	EL	FI	HU	Total
Coordinators	14	11	9	8	6	6	5	4	4	3	1	1	1	1	76
Share	18%	14%	12%	11%	8%	8%	7%	5%	5%	4%	3%	1%	1%	1%	100%

3.4 Distribution by discipline

Projects funded under the SSH-flagged topics of the Societal Challenges and LEIT parts of Horizon 2020 include a broad range of SSH disciplines. In particular, experts in the field of economics represent 34% of the total number of experts with an SSH background while experts in the fields of political science and public administration account for 13% of the experts. These two clusters of disciplines are the best represented in projects. In addition, some disciplines that are integrated fairly well in projects are business/ marketing and sociology (both 8% of experts). However, a number of other SSH disciplines are underrepresented. This is especially the case for demography (practically 0% of the projects), anthropology/ethnology (1% of the projects) and history at 2%. This confirms that the integration of several disciplines remains a serious challenge in H2020.

Besides, as in 2015, in order not to inflate SSH integration artificially we have counted separately those experts with an SSH background that do not however perform research but do only non-research activities such as communication and management. In total as much as 11% of experts that have an SSH background perform non-research activities (Project Management and project related communication activities).

Discipline prevalence in projects funded under SSH flagged topics		
Disciplines and clusters of disciplines	Number of projects that include partner-level expertise	Share of projects that include partner-level expertise
Economics	904	34%
Political Science, Public Administration	344	13%
Non research activities	293	11%
Sociology	222	8%
Business/Marketing	216	8%
Human geography	159	6%
Communication	108	4%
Psychology	96	4%
Humanities/Arts	95	4%
Law	91	3%
Education	84	3%
History	46	2%
Anthropology/ Ethnology	17	1%
Demography	1	0,04%

In terms of the distribution of SSH disciplines across the Societal challenges and LEITs, Economics represent the most prevalent discipline across all Work Programme parts. Political science/public administration performs very well in Societal Challenges 1, 2, 5, 6 and 7. Human geography is very much present in SC5, while Psychology does very well in SC4. Both Humanities/Arts and Education are by far most integrated in projects related to ICT.

3.5 Quality of integration

As stated above in the methodology section this report attempts to make the analysis of the quality of SSH integration more precise by presenting two scenarios.

3.5.1 With the 10% threshold:

49% of projects funded under topics flagged for SSH show good integration of SSH in terms of share of partners, budget allocated to them, person-months, and variety of disciplines involved. However, at the other end of the spectrum, 29% of the projects funded under topics flagged for SSH do not integrate any contributions from the SSH. When excluding Societal Challenge 6, the share of projects that fail to integrate contributions from the SSH increases from 29% to 33% while the share of projects with good SSH integration decreases from 49% to 42%.

Quality of SSH integration with 10% treshold				
Horizon 2020 parts	None	Weak	Fair	Good
SC1	51%	17%	26%	6%
SC2	17%	10%	20%	53%
SC3	59%	10%	7%	24%
SC4	38%	7%	14%	41%
SC5	9%	0%	9%	82%
SC6	0%	3%	0%	97%
SC7	21%	4%	25%	50%
LEIT–ICT	22%	0%	22%	56%
LEIT–NMBP	25%	0%	0%	75%
LEIT–SPACE	0%	0%	0%	0%
Total	**29%**	**7%**	**16%**	**49%**
Total ex. SC6	33%	7%	18%	42%

The quality of integration differs considerably across the various Societal Challenges and LEIT parts. In Societal Challenge 6, 97% of funded projects show a good integration of SSH. Societal Challenge 5 and LEIT ICT also perform well with respectively 82% and 56% of the projects showing a good integration of SSH. LEIT-NMBP also does well, but here we are only talking about 4 projects. In contrast, only 32% and 31% of the projects funded under Societal Challenges 1 and 3 show a fair or good integration of SSH.

Share of projects with good SSH integration with 10 % threshold

The type of action under which a project is funded strongly correlates with the quality of SSH integration in that project. Projects with good integration of SSH account for 64% of Coordination and Support Actions (CSA), 43% for Research and Innovation Actions (RIA) and 41% of Innovation Actions (IA).

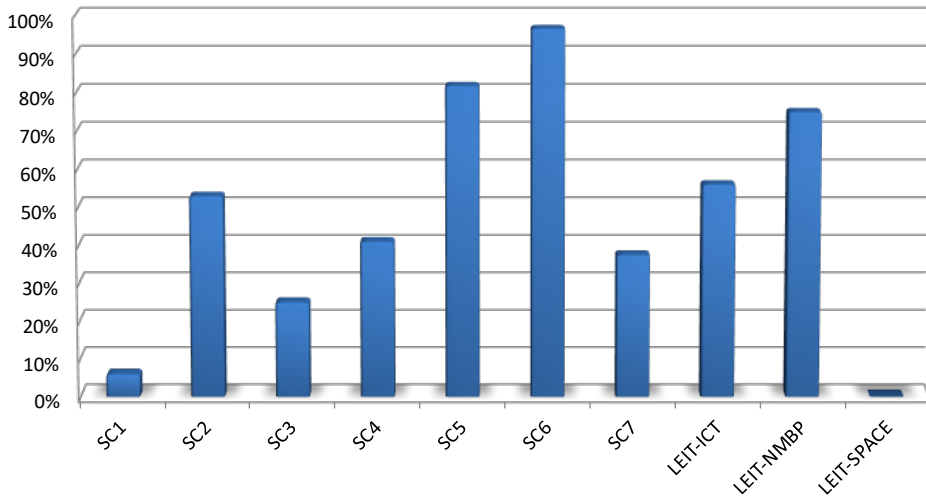**Quality of SSH integration**
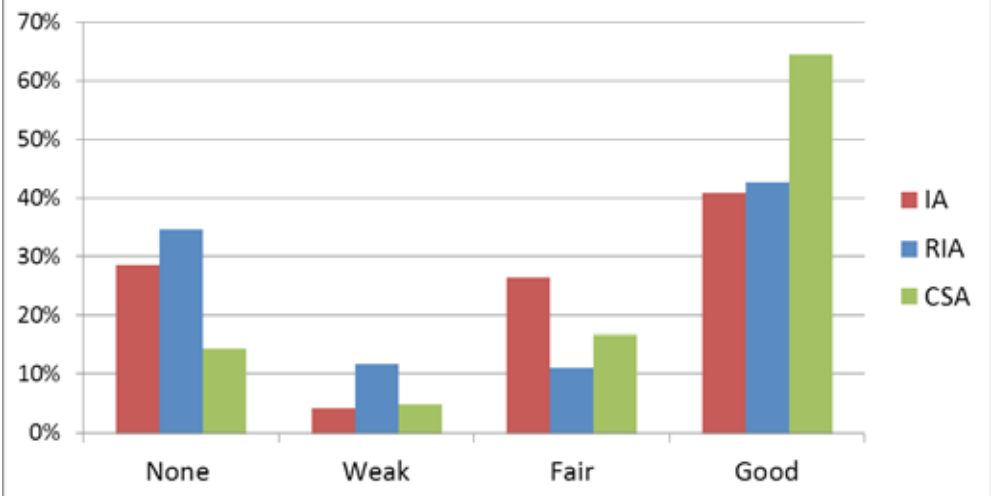
3.5.2 With the 20% threshold:

39% of projects funded under topics flagged for SSH show good integration of SSH in terms of share of partners, budget allocated to them, person-months, and variety of disciplines involved. However, at the other end of the spectrum, 33% of the projects funded under topics flagged for SSH do not integrate any contributions from the SSH. When excluding Societal Challenge 6, the share of projects that fail to integrate contributions from the SSH increases from 33% to 37% while the share of projects with good SSH integration decreases from 39% to 32%.

| Quality of SSH integration with 20% treshold				
Horizon 2020 parts	None	Weak	Fair	Good
SC1	71%	17%	6%	6%
SC2	20%	33%	20%	27%
SC3	55%	10%	14%	21%
SC4	38%	17%	14%	31%
SC5	9%	9%	9%	73%
SC6	0%	3%	0%	97%
SC7	21%	29%	8%	42%
LEIT-ICT	28%	14%	16%	42%
LEIT-NMBP	25%	0%	0%	75%
LEIT-SPACE	0%	0%	0%	0%
Total	**33%**	**17%**	**11%**	**39%**
Total ex. SC6	37%	18%	13%	32%

The quality of integration differs considerably across the various Societal Challenges and LEIT parts. In Societal Challenge 6 as much as 97% of funded projects show a good integration of SSH. Societal Challenges 5 performs very well with 73%. Societal Challenge 7 and LEIT-ICT also do well with 42%. In contrast, only 6% and 21% of the projects funded under Societal Challenges 1 and 3 show a good integration of SSH.

Share of projects with good SSH integration with 20% threshold
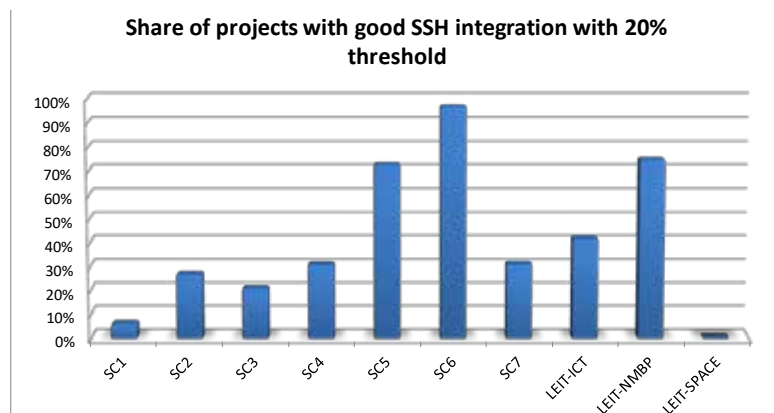
4. Detailed Assessment: Integration of SSH by Work Programme Part

4.1 Societal Challenge 1 'Health, Demographic Change and Well-being'

In 2016, SC1 funded a total of 23 topics under 1 call for proposals: Personalised Medicine (PM). The 2016-17 Work Programme set the budget for these 23 topics at €292 million.
11 out of the 23 topics were flagged for SSH:
•   11 topics under the call PM.

These 11 topics funded 35 projects for a budget of €208 million, out of which €9 million (i.e. 4,5%) went to SSH partners.
In terms of types of action, the 35 funded projects include:
•   30 Research and Innovation Actions
•   5 Coordination and Support Actions

SSH partners account for 9% of project partners (46 out of 494) in the 35 projects. The four most represented countries are Germany, Spain, Netherlands and Switzerland.

Country affiliation of SSH partners																		
Country	DE	ES	NL	CH	FR	IT	BE	UK	IE	PT	NO	DK	EE	EL	SI	TR	CA	US
Partners	8	7	5	5	4	4	3	3	2	2	2	1	1	1	1	1	1	1
Share	15%	13%	10%	10%	8%	8%	6%	6%	4%	4%	4%	2%	2%	2%	2%	2%	2%	2%

Project coordination is done by an SSH partner in 3 out of the 35 projects. The 3 SSH project coordinators are affiliated with the 3 countries listed below.

Country of affiliation of SSH partners	UK	DK	DE
Number of projects coordinated	1	1	1

In terms of type of activity, 35% of the SSH partners are either HES or REC.
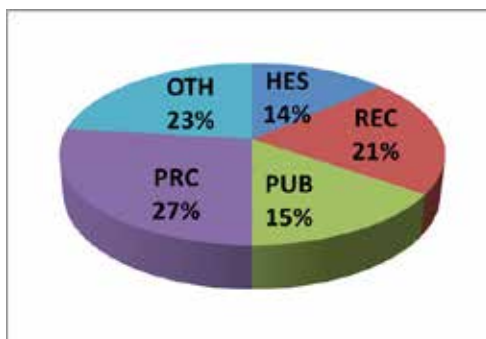
In terms of type of SSH expertise across all 35 funded projects, two clusters of disciplines are prevalent: 20% of projects include partners with expertise in communication while 11% of projects include partners with expertise in economics – and the same for political science.

Discipline prevalence in projects funded under SSH flagged topics		
Disciplines and clusters of disciplines	Number of experts per discipline	Share of experts that include partner-level expertise
Non research activities (Communication and Project Management)	39	32%
Communication	24	20%
Economics	14	11%
Political Sciences, Public Administration	14	11%
Sociology	7	6%
Law	7	6%
Education	5	4%
Business, Marketing	4	3%
Humanities, the Arts	4	3%
Anthropology, Ethnology	2	2%
Human Geography	2	1%
Psychology	1	1%
Demography	0	0%
History	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 6% of projects funded under the SC1 topics flagged for SSH show good integration of SSH and of their contributions while 51% of projects fail to integrate the SSH.

Quality of SSH integration	Number of projects	Share of projects
With the 10% treshold		
None	18	51%
Weak	6	17%
Fair	9	26%
Good	2	6%
Total	35	100%

- With the 20% threshold: 6% of projects funded under the SC1 topics flagged for SSH show good integration of SSH and of their contributions while 71% of projects fail to integrate the SSH.

Quality of SSH integration	Number of projects	Share of projects
With the 10% treshold		
None	25	71%
Weak	6	17%
Fair	2	6%
Good	2	6%
Total	35	100%

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

In 2016 SC2 funded a total of 41 topics under four calls for proposals: Sustainable Food Security (SFS), Blue Growth (BG), Bio-based innovation for sustainable goods and services (BB) and Rural Renaissance – Fostering Innovation and business opportunities (RUR). The 2016-17 Work Programme set the budget for these 41 topics at €267 million.

11 out of the 41 topics were flagged for SSH:

- 1 topic under the call SFS
- 1 topic under the call BG
- 8 topics under the call RUR
- 1 topic under the call BB

These 11 topics funded 30 projects for a budget of €69 million, out of which €15 million (i.e. 22%) went to SSH partners.

In terms of types of action, the 30 funded projects include:
- 19 Research and Innovation Actions
- 10 Coordination and Support Actions.
- 1 Innovation Action

SSH partners account for 20% of project partners (126 out of 626) in the 30 projects. The three most represented countries are Italy, Germany and the UK.

Country affiliation of SSH partners																								
Country	IT	DE	UK	BE	FR	ES	NL	EL	HU	PT	BG	LV	PL	RO	OTHER	AT	CZ	IE	SE	CH	UA	FI	HR	SK	CN
Partners	15	12	10	7	7	6	5	4	4	4	3	3	3	3	3	2	2	2	2	2	2	1	1	1	1
Share	12%	10%	8%	6%	6%	5%	4%	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	1%	1%	1%	1%

Project coordination is done by an SSH partner in 7 out of the 30 projects. The SSH project coordinators are affiliated with the countries listed below.

Country of affiliation of SSH partners	IT	NL	DE	ES	FR
Number of projects coordinated	2	2	1	1	1

In terms of type of activity, more than 50% of all 116 SSH partners are either HES or REC.
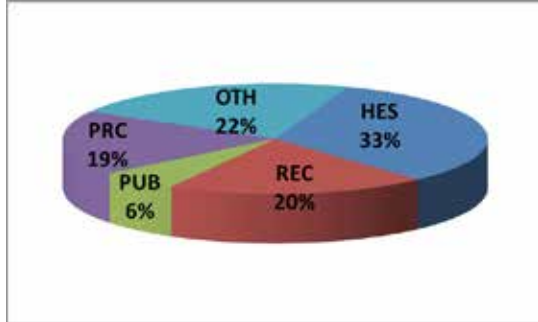
In terms of type of SSH expertise across all 30 funded projects, three clusters of disciplines are prevalent: economics; business and marketing and political science and public administration.

Discipline prevalence in projects funded under SSH flagged topics		
Disciplines and clusters of disciplines	Number of experts per discipline	Share of experts that include partner-level expertise
Economics	114	30%
Political Sciences, Public Administration	77	20%
Non research activities (Communication and Project Management)	64	17%
Business, Marketing	51	14%
Sociology	41	11%
Communication	10	3%
Human Geography, Demography	7	2%
Humanities, the Arts	6	2%
Law	3	1%
History	3	1%
Education	1	0%
Psychology	0	0%
Anthropology, Ethnology	0	0%

When it comes to the quality of SSH integration:

- <u>With the 10% threshold:</u> 53% of projects funded under the SC2 topics flagged for SSH show good integration of SSH partners and of their contributions while 17% of projects do not include any SSH partner.

Quality of SSH integration	Number of projects	Share of projects
With the 10% treshold		
None	5	17%
Weak	3	10%
Fair	6	20%
Good	16	53%
Total	30	100%

- <u>With the 20% threshold:</u> 25% of projects funded under the SC2 topics flagged for SSH show good integration of SSH partners and of their contributions while 25% of projects do not include any SSH partner.

Quality of SSH integration	Number of projects	Share of projects
With the 20% treshold		
None	6	20%
Weak	10	33%
Fair	6	20%
Good	8	27%
Total	30	100%

4.3 Societal Challenge 3 'Secure, clean and efficient energy'

In 2016 SC3 funded a total of 34 topics under two calls for proposals: Efficient Energy (EE) and Competitive Low-Carbon Energy (LCE). The 2016-17 Work Programme set the budget for these 34 topics at €403 million.

7 out of the 34 topics were flagged for SSH:
- 7 topics under the call EE

These 7 topics funded 29 projects for a budget of €148 million, out of which €17 million (i.e. 12%) went to SSH partners: €12 million under the call EE.
In terms of types of action, the 29 funded projects include:
- 23 Research and Innovation Actions

- •   5 Innovation Actions
- •   1 Coordination and Support Actions.

SSH partners account for 22% of project partners (61 out of 283) in the 29 projects. The three most represented countries are Germany, Spain and France.

Country affiliation of SSH partners																					
Country	DE	ES	FR	IT	NL	UK	HU	NO	BG	FI	CH	TR	AT	BE	CZ	DK	EL	PL	SE	SI	RS	UA
Partners	7	6	6	4	4	4	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1
Share	11%	10%	10%	7%	7%	7%	5%	5%	3%	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%

Project coordination is done by an SSH partner in 7 out of the 29 projects. The 7 SSH project coordinators are affiliated with the six countries listed below.

Country of affiliation of SSH partners	DE	IT	PT	ES	FR	AT
Number of projects coordinated	2	1	1	1	1	1

In terms of type of activity, 69% of all 60 SSH partners are either HES or REC while 23% are PRC.
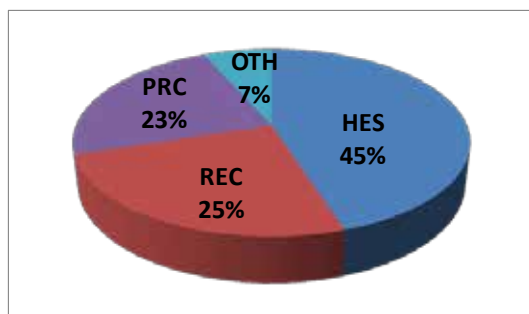
In terms of type of SSH expertise across all 29 funded projects, three clusters of disciplines are prevalent: economics; political science, public administration and sociology.

Discipline prevalence in projects funded under SSH flagged topics		
Disciplines and clusters of disciplines	Number of experts per discipline	Share of experts that include partner-level expertise
Economics	52	31%
Non research activities (Communication and Project Management)	27	16%
Political Science, Public Administration	25	15%
Sociology	18	11%
Business, Marketing	12	7%
Psychology	10	6%
History	8	5%
Law	4	2%
Humanities, the Arts	4	2%
Anthropology, Ethnology	4	2%
Communication	3	2%
Human Geography, Demography	1	1%
Education	1	1%

When it comes to the quality of SSH integration:

- With the 10% threshold: 24% of projects funded under the SC3 topics flagged for SSH show good integration of SSH partners and of their contributions while 59% of projects do not include any SSH partner.

Quality of SSH integration	Number of projects	Share of projects
With the 10% treshold		
None	17	59%
Weak	3	10%
Fair	2	7%
Good	7	24%
Total	29	100%

- With the 20% threshold: 22% of projects funded under the SC3 topics flagged for SSH show good integration of SSH partners and of their contributions while 59% of projects do not include any SSH partner.

Quality of SSH integration	Number of projects	Share of projects
With the 20% treshold		
None	16	55%
Weak	3	10%
Fair	4	14%
Good	6	21%
Total	29	100%

4.4 Societal Challenge 4 'Smart, green and integrated transport'

In 2016 SC4 funded a total of 27 topics under three calls for proposals: Mobility for Growth (MG), Automated Road Transport (Art) and Green Vehicles (GV). The 2016-17 Work Programme set the budget for these 27 topics at €343 million.
12 out of the 27 topics were flagged for SSH:
- 12 topics under the call MG

These 12 topics funded 29 projects for a budget of €141 million, out of which €24 million (i.e. 17%) went to SSH partners: €24 million under the call MG.
In terms of types of action, the 29 funded projects include:
- 24 Research and Innovation Actions
- 1 Innovation Action
- 4 Coordination and Support Actions.

SSH partners account for 20% of project partners (82 out of 404) in the 29 projects. The three most represented countries are Germany, Belgium and the UK.

Country affiliation of SSH partners																
Country	DE	DE	UK	FR	IT	ES	NL	SE	HU	AT	SI	IL	PL	PT	RO	CH	NO
Partners	11	10	8	7	7	5	5	5	4	3	3	3	1	1	1	1	1
Share	14%	12%	10%	9%	9%	6%	6%	6%	5%	4%	4%	4%	1%	1%	1%	1%	1%

Project coordination is done by an SSH partner in 7 out of the 29 projects. The 7 SSH project coordinators are affiliated with the five countries listed below

Country of affiliation of SSH partners	BE	DE	AT	FR	DK
Number of projects coordinated	2	2	1	1	1

In terms of type of activity, 37% of all 74 SSH partners are either HES or REC.
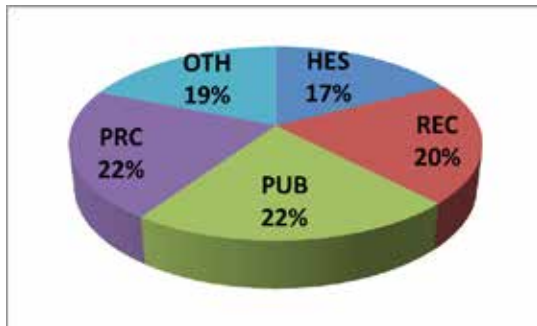
In terms of type of SSH expertise across all 29 funded projects, three clusters of disciplines are prevalent: economics, psychology and sociology.

Discipline prevalence in projects funded under SSH flagged topics		
Disciplines and clusters of disciplines	Number of experts per discipline	Share of experts that include partner-level expertise
Economics	35	20%
Psychology	29	17%
Sociology	25	14%
Business, Marketing	17	10%
Political Science, Public Administration	15	9%
Non research activities (Communication and Project Management)	14	8%
Law	11	6%
Humanities, the Arts	10	6%
Communication	7	4%
Education	4	2%
Anthropology, Ethnology	4	2%
History	3	2%
Human Geography, Demography	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 41% of projects funded under the SC4 topics flagged for SSH show good integration of SSH partners and of their contributions while 38% of projects have no integration of SSH.

Quality of SSH integration	Number of projects	Share of projects
With the 10% treshold		
None	11	38%
Weak	2	7%
Fair	4	14%
Good	12	41%
Total	29	100%

With the 20% threshold: 31% of projects funded under the SC4 topics flagged for SSH show good integration of SSH partners and of their contributions while 38% of projects have no SSH partners.

Quality of SSH integration	Number of projects	Share of projects
With the 20% treshold		
None	11	38%
Weak	5	17%
Fair	4	14%
Good	9	31%
Total	29	100%

4.5 Societal Challenge 5 'Climate action, environment, resource efficiency and raw materials'

In 2016 SC5 funded a total of 19 topics under one call for proposal; Greening the Economy (GE): The 2016–17 Work Programme set the budget for these 19 topics at €135 million.

7 out of the 19 topics were flagged for SSH:

•   7 topics under the call GE

These 7 topics funded 11 projects for a budget of €43 million, out of which €23 million (i.e. 53%) went to SSH partners.

In terms of types of action, the 11 funded projects include:

•   7 Research and Innovation Actions
•   1 Innovation Action
•   3 Coordination and Support Actions.

SSH partners account for 47% of project partners (80 out of 172) in the 11 projects. The three most represented countries are Italy, the UK and Germany.

Country affiliation of SSH partners																
Country	IT	UK	DE	BE	FR	NL	ES	RO	EL	FI	CH	AT	DK	LT	PT	MK	BG
Partners	15	12	9	8	7	6	4	4	3	3	3	2	2	2	2	2	1
Share	17%	13%	10%	9%	8%	7%	4%	4%	3%	3%	3%	2%	2%	2%	2%	2%	1%

Project coordination is done by an SSH partner in 5 out of the 11 projects. The 5 SSH project coordinators are affiliated with the five countries listed below.

Country of affiliation of SSH partners	UK	FR	DE	NL	IT
Number of projects coordinated	1	1	1	1	1

In terms of type of activity, 59% of all 80 SSH partners are either HES or REC.
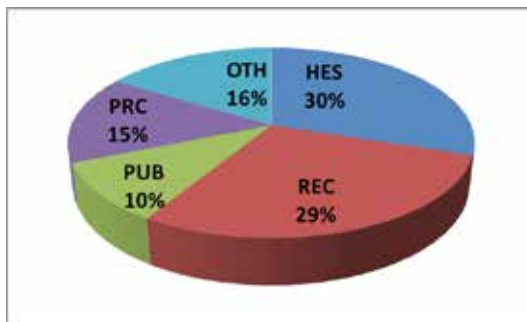
In terms of type of SSH expertise across all 11 funded projects, three clusters of disciplines are prevalent: economics, demography/geography and political science.

Discipline prevalence in projects funded under SSH flagged topics		
Disciplines and clusters of disciplines	Number of experts per discipline	Share of experts that include partner-level expertise
Economics	80	31%
Human Geography, Demography	59	23%
Political Science, Public Administration	45	18%
Non research activities (Communication and Project Management)	17	7%
Sociology	15	6%
Communication	12	5%

Business, Marketing	11	4%
Law	8	3%
Anthropology, Ethnology	4	2%
History	4	2%
Education	1	0%
Psychology	0	0%
Humanities, the Arts	0	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 82% of projects funded under the SC5 topics flagged for SSH show good integration of SSH partners and of their contributions while 9% of projects do not include any SSH partner.

Quality of SSH integration	Number of projects	Share of projects
With the 10% treshold		
None	1	9%
Weak	0	0%
Fair	1	9%
Good	9	82%
Total	11	100%

- With the 20% threshold: 73% of projects funded under the SC5 topics flagged for SSH show good integration of SSH partners and of their contributions while 9% of projects do not include any SSH partner.

Quality of SSH integration	Number of projects	Share of projects
With the 20% treshold		
None	1	9%
Weak	1	9%
Fair	1	9%
Good	8	73%
Total	11	100%

4.6 Societal Challenge 6 'Europe in a changing world – Inclusive, innovative and reflective Societies'

In 2016 SC6 funded a total of 18 topics under four calls for proposals: Co-Creation for Growth and Inclusion (CO-CREATION), Understanding Europe – Promoting the European Public and Cultural Space (CULT-COOP), Engaging Together Globally (ENG-GLOBALLY), Revearsing Inequalities and Promoting Fairness (REV-INEQUAL). The 2016-17 Work Programme set the budget for these 18 topics at €93 million.

16 out of the 18 topics were flagged for SSH:
- 2 topics under the call CO-CREATION
- 2 topics under the call CULT-COOP
- 7 topics under the call ENG-GLOBALLY
- 10 topics under the call REV-INEQUAL

These 16 topics funded 29 projects for a budget of €86 million, out of which €59 million (i.e. 68%) went to SSH partners.

In terms of types of action, the 29 funded projects include:
- 18 Research and Innovation Actions
- 2 Innovation Actions
- 9 Coordination and Support Actions

SSH partners account for 77% of project partners (225 out of 293) in the 29 projects. The three most represented countries are the UK, Germany and Belgium.

Country affiliation of SSH partners																				
Country	UK	DE	BE	IT	NL	ES	AT	EL	FR	PL	PT	SE	IE	CN	HU	NO	FI	CH	CZ	DK	TR
Partners	27	18	17	13	13	12	11	11	9	8	8	8	6	6	5	5	4	4	3	3	3
Share	12%	8%	8%	6%	6%	5%	5%	5%	4%	4%	4%	4%	3%	3%	2%	2%	2%	2%	1%	1%	1%

LT	LU	LV	RO	US	BG	CY	EE	HR	MT	SK	IL	IS	RS	BR	RU	OTHER
2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1
1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%

Project coordination is done by an SSH partner in 28 out of the 29 projects. The 28 SSH project coordinators are affiliated with the eleven countries listed below.

Country of affiliation of SSH partners	UK	DE	ES	BE	NO	IT	NL	AT	HU	FI	EL
Number of projects coordinated	6	6	4	3	3	2	1	1	1	1	1

In terms of type of activity, as much as 65% of all SSH partners are either HES or REC.
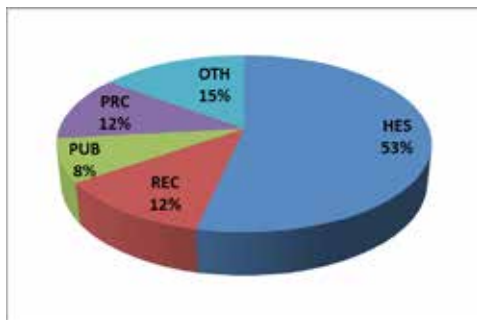
In terms of type of SSH expertise across all 29 funded projects, three clusters of disciplines are prevalent: political science and public administration; economics and sociology.

Discipline prevalence in projects funded under SSH flagged topics		
Disciplines and clusters of disciplines	Number of experts per discipline	Share of experts that include partner-level expertise
Political Science, Public Administration	133	20%
Economics	124	18%
Sociology	95	14%
Non research activities (Communication and Project Management)	74	11%
Business, Marketing	54	8%
Human Geography, Demography	50	7%
Education	35	5%
Psychology	29	4%
Humanities, the Arts	28	4%
History	19	3%
Communication	18	3%
Law	15	2%
Anthropology, Ethnology	2	0%

When it comes to the quality of SSH integration:

- With the 10% threshold: 97% of projects funded under the SC6 topics flagged for SSH show good integration of SSH partners and of their contributions while 3% of projects show weak integration.

Quality of SSH integration	Number of projects	Share of projects
With the 10% treshold		
None	0	0%
Weak	1	3%
Fair	0	0%
Good	28	97%
Total	29	100%

- With the 20% threshold: 97% of projects funded under the SC6 topics flagged for SSH show good integration of SSH partners and of their contributions while 3% of projects show weak integration.

Quality of SSH integration	Number of projects	Share of projects
With the 20% treshold		
None	0	0%
Weak	1	3%
Fair	0	0%
Good	28	97%
Total	29	100%

4.7 Societal Challenge 7 'Secure Societies – Protecting freedom and security of Europe and its citizens'

In 2016 SC7 funded a total of 19 topics under three calls for proposals: Critical Infrastructure Protection (CIP), Security (SEC) and Digital Security Focus Area (DS). The 2016-17 Work Programme set the budget for these 19 topics at €147 million.
9 out of the 19 topics were flagged for SSH:

- 1 topic under the call CIP
- 4 topics under the call SEC
- 4 topics under the call DS

These 9 topics funded 24 projects for a budget of €86 million, out of which €8 million (i.e. 9%) went to SSH partners.

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

- 10 Research and Innovation Actions
- 10 Innovation Action
- 4 Coordination and Support Actions.

SSH partners account for 22% of project partners (43 out of 198) in the 24 projects. The three most represented countries are Italy, Belgium and Germany.

Country affiliation of SSH partners													
Country	IT	BE	DE	ES	PL	PT	UK	FR	LV	SI	AL	CH	IL	US
Partners	11	6	4	3	2	2	2	1	1	1	1	1	1	1
Share	27%	15%	10%	7%	5%	5%	5%	2%	2%	2%	2%	2%	2%	2%

Project coordination is done by an SSH partner in 4 out of the 24 projects. The 4 SSH project coordinators are affiliated with the two countries listed below.

Country of affiliation of SSH partners	IT	UK
Number of projects coordinated	3	1

In terms of type of activity, 60% of all 37 SSH partners are either PRC or PUB.
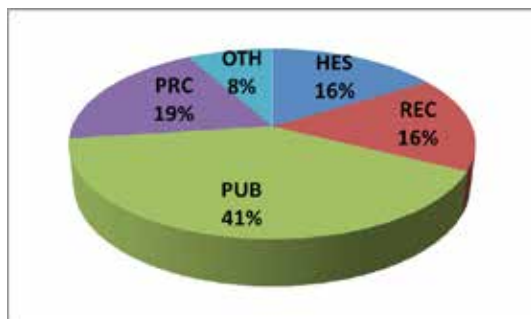
In terms of type of SSH expertise across all 24 funded projects, two clusters of disciplines are prevalent: Business/marketing and political science/public administration.

Discipline prevalence in projects funded under SSH flagged topics		
Disciplines and clusters of disciplines	Number of experts per discipline	Share of experts that include partner-level expertise
Business, Marketing	24	22%
Political Science, Public Administration	17	16%
Law	14	13%
Economics	14	13%
Non research activities (Communication and Project Management)	12	11%
Sociology	10	9%

Psychology	9	8%
Humanities, the Arts	3	3%
Communication	3	3%
Education	2	2%
History	0	0%
Anthropology, Ethnology	0	0%
Human Geography, Demography	0	0%

When it comes to the quality of SSH integration:

- <u>With the 10% threshold:</u> 50% of projects funded under the SC7 topics flagged for SSH show good integration of SSH partners and of their contributions while 21% of projects have no SSH partners.

Quality of SSH integration	Number of projects	Share of projects
With the 10% treshold		
None	5	21%
Weak	1	4%
Fair	6	25%
Good	12	50%
Total	24	100%

- <u>With the 20% threshold:</u> 42% of projects funded under the SC7 topics flagged for SSH show good integration of SSH partners and of their contributions while 21% of projects have no SSH partners.

Quality of SSH integration	Number of projects	Share of projects
With the 20% treshold		
None	5	21%
Weak	7	29%
Fair	2	8%
Good	10	42%
Total	24	100%

4.8 LEIT-ICT 'Leadership in enabling and industrial technologies – Information and Communication Technologies'

In 2016 LEIT-ICT funded a total of 27 topics under three calls for proposals: Information and Communication Technologies (ICT), EU-Brazil Research and Development Cooperation in Advanced Cyber Infrastructure (EUB) and EU-Japan Research and Development Cooperation in Net Futures (EUJ). The 2016-17 Work Programme set the budget for these 27 topics at €460 million.

7 out of the 27 topics were flagged for SSH:
- 7 topics under the call ICT

These 7 topics funded 50 projects for a budget of €109 million, out of which €24 million (i.e. 23%) went to SSH partners.
In terms of types of action, the 50 funded projects include:
- 15 Research and Innovation Actions
- 30 Innovation Actions
- 5 Coordination and Support Actions.

SSH partners account for 26% of project partners (100 out of 380) in the 50 projects. The four most represented countries are the UK, Germany, Italy and Spain.

Country affiliation of SSH partners																							
Country	UK	DE	IT	ES	BE	NL	FR	EL	AT	SE	IE	PT	CH	OTHER	BG	CY	DK	EE	FI	HR	SI	NO	US	ZA
Partners	12	11	9	8	7	7	5	4	3	3	2	2	2	2	1	1	1	1	1	1	1	1	1	1
Share	12%	11%	9%	8%	7%	7%	5%	4%	3%	3%	2%	2%	2%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%

Project coordination is done by an SSH partner in 10 out of the 50 projects. The SSH project coordinators are affiliated with the seven countries listed below.

Country of affiliation of SSH partners	BE	IT	NL	DK	NO	AT	FR
Number of projects coordinated	3	2	1	1	1	1	1

In terms of type of activity, 71% of all SSH partners are either HES or PRC.
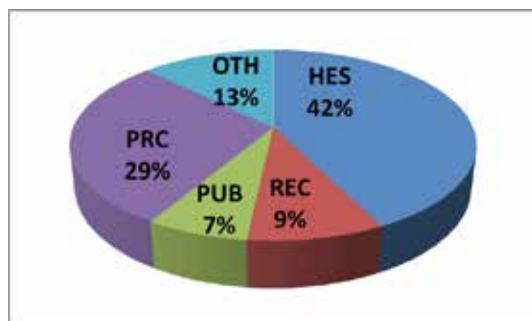
In terms of type of SSH expertise across all 50 projects funded under the SSH-flagged topics, three clusters of disciplines are prevalent: Business/Marketing, Education and Humanities/Arts.

Discipline prevalence in projects funded under SSH flagged topics		
Disciplines and clusters of disciplines	Number of experts per discipline	Share of experts that include partner-level expertise
Non research activities (Communication and Project Management)	46	17%
Education	35	13%
Business / Marketing	34	13%
Humanities, the Arts	32	12%
Communication	30	11%
Law	27	10%
Psychology	18	7%
Economics	14	5%
Political Science, Public Administration	11	4%
Sociology	11	4%
History	9	3%
Anthropology, Ethnology	1	0%
Human Geography, Demography	0	0%

When it comes to the quality of SSH integration:

- <u>With the 10% threshold:</u> 56% of projects funded under the LEIT-ICT topics flagged for SSH show good integration of SSH partners and of their contributions while 22% of projects do not include any SSH partner.

Quality of SSH integration	Number of projects	Share of projects
With the 10% treshold		
None	11	22%
Weak	0	0%
Fair	11	22%
Good	28	56%
Total	50	100%

- With the 20% threshold: 42% of projects funded under the LEIT-ICT topics flagged for SSH show good integration of SSH partners and of their contributions while 28% do not include any SSH partner.

Quality of SSH integration	Number of projects	Share of projects
With the 20% treshold		
None	14	28%
Weak	7	14%
Fair	8	16%
Good	21	42%
Total	50	100%

4.9 LEIT-NMBP 'Leadership in enabling and industrial technologies – Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing'

In 2016 LEIT-NMBP funded a total of 20 topics under two calls for proposals: Nanotechnologies, Advanced Materials, Biotechnology and Production (NMBP) and Energy-efficient Buildings (EeB). The 2016-17 Work Programme set the budget for these 20 topics at €249 million.
4 out of the 20 topics were flagged for SSH:
- 4 topics under the call NMBP

These 4 topics funded 4 projects for a budget of €3,1 million, out of which €1,2 million (i.e. 37%) went to SSH partners.
In terms of types of action, the 4 funded projects include:
- 4 Coordination and Support Actions.

SSH partners account for 26% of project partners (7 out of 27) in the 4 projects. The three most represented countries are France, Belgium and Germany.

Country affiliation of SSH partners				
Country	FR	BE	DE	NL
Partners	2	2	2	1
Share	29%	29%	29%	14%

In one of the four projects the coordinator has SSH expertise and this partner comes from Germany.

In terms of type of activity, this is the distribution.
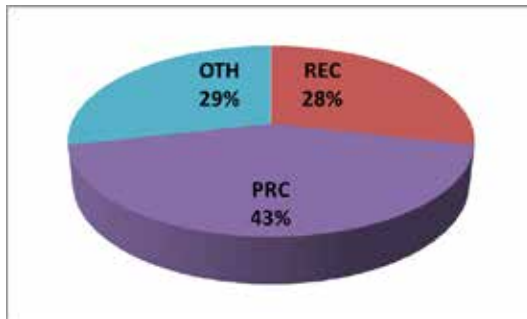
In terms of type of SSH expertise across all 4 projects funded under the SSH-flagged topics, three clusters of disciplines are by far most represented: business/marketing, economics and political science.

Discipline prevalence in projects funded under SSH flagged topics		
Disciplines and clusters of disciplines	Number of experts per discipline	Share of experts that include partner-level expertise
Business / Marketing	9	32%
Economics	7	28%
Political Science, Public Administration	7	25%
Law	2	7%
Non research activities (Communication and Project Management)	1	4%
Human Geography, Demography	1	4%
Communication	1	4%
Humanities, the Arts	0	0%
Education	0	0%
History	0	0%
Psychology	0	0%
Anthropology, Ethnology	0	0%
Sociology	0	0%

When it comes to the quality of SSH integration (With both the 10% and 20% threshold): 75% of projects funded under the LEIT-NMBP topics flagged for SSH show good integration of SSH partners and of their contributions while 25% of projects do not include any SSH partner.

Quality of SSH integration	Number of projects	Share of projects
With the 10% and 20% treshold		
None	1	25%
Weak	0	0%
Fair	0	0%
Good	3	75%
Total	4	100%

4.10 LEIT-SPACE 'Leadership in enabling and industrial technologies – Space'

In 2016 LEIT-SPACE funded a total of 8 topics under 2 calls for proposals: Earth Observation (EO) and Competitiveness of European Space sector: Technology and Science (COMPET). The 2016-17 Work Programme set the budget for these 8 topics at €92 million.
0 out of the 8 topics were flagged for SSH in 2016.

5. Selected findings; SSH in the European Research Council (ERC)

Below are some key data on the Social Sciences and Humanities in the European Research Council. The data have been provided by the European Research Council Executive Agency and this chapter is meant to complement the information on SSH based on the Societal Challenges and LEITs pillars.

5.1 Budget and number of grants for SSH in the ERC – 2016

Awarded budget	2016
Social Sciences and Humanities	368.360.890
Life Sciences	550.162.949
Physical Sciences and Engineering	811.478.292

In 2016 more than 368 million euros were awarded via the SSH panels of the ERC. As illustrated in the table below this constituted 21% of the overall grants that year.

ERC funded projects in 2016
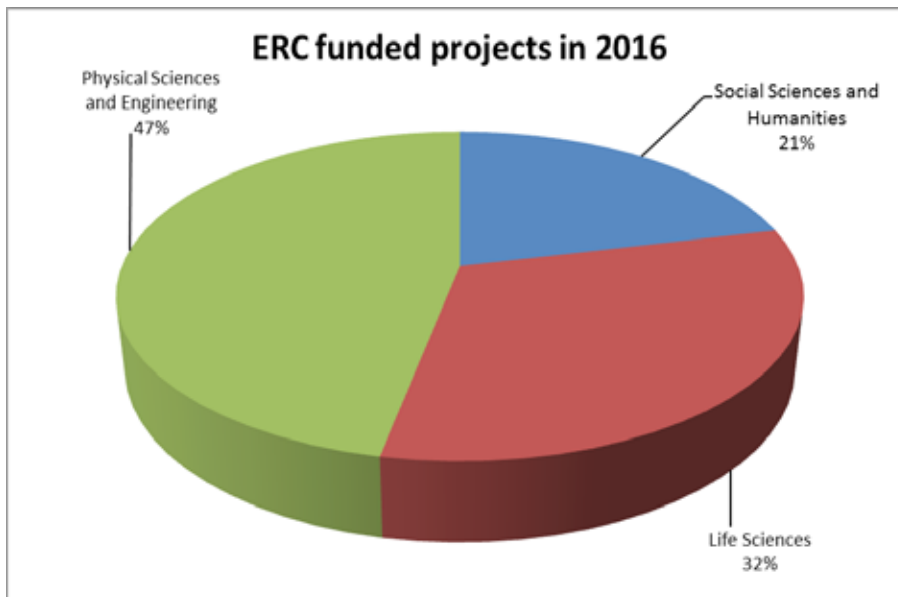
Number of projects	2016
Social Sciences and Humanities	208
Life Sciences	290
Physical Sciences and Engineering	438
Total	936

In terms of the number of grants 208 out of 936 grants were related to SSH, and the share then becomes around 22%.

5.2 Country of Host Institution (HI)

Overall in ERC for the three panels UK, Germany and France have the largest share of projects. But if one looks only at the SSH projects then the top three countries are UK, Netherlands and Germany. When regards the share of SSH as part of total number of grants per country Austria, Belgium, Denmark, Norway and Portugal perform well.

ERC funded projects by country of HI, 2016
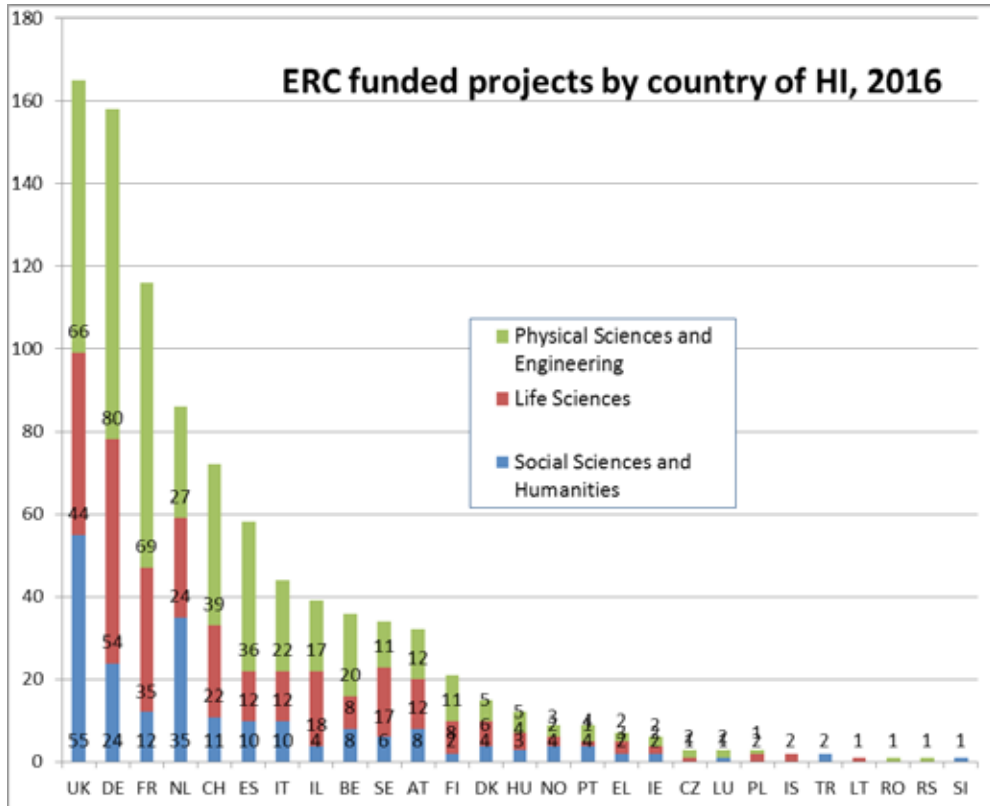
5.3 Panels and indications of interdisciplinarity

In ERC there are six SSH related review panels. In 2016 SH4 which is «The Human mind and its complexity» had by far the biggest share both in terms of budget and number of grants. However, as the table below shows the grants are divided fairly equally within the six domains.

SH Grants	Number of grants	Budget, EUR
Total	208	368.360.890
SH4	43	80.091.946
SH2	36	66.128.782
SH6	35	65.217.460
SH5	36	64.916.717
SH3	31	52.991.783
SH1	27	39.014.202

*Review panels (as in 2016):

SH1 Individuals, Markets and Organisations

SH2 Institutions, Values, Environment and Space

SH3 The Social World, Diversity, Population

SH4 The Human Mind and Its Complexity

SH5 Cultures and Cultural Production

SH6 The Human Past

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

5.4 Trends since 2014

When it comes to the number of grants for SSH especially from 2014 to 2015 there was a large increase from 173 to 205 grants. If one compares SSH with the other two domains in 2014 SSH had a share of 18,5% and in 2016 the figure increased to approximately 22%.

Number of ERC funded projects in 2014-2016 by domain
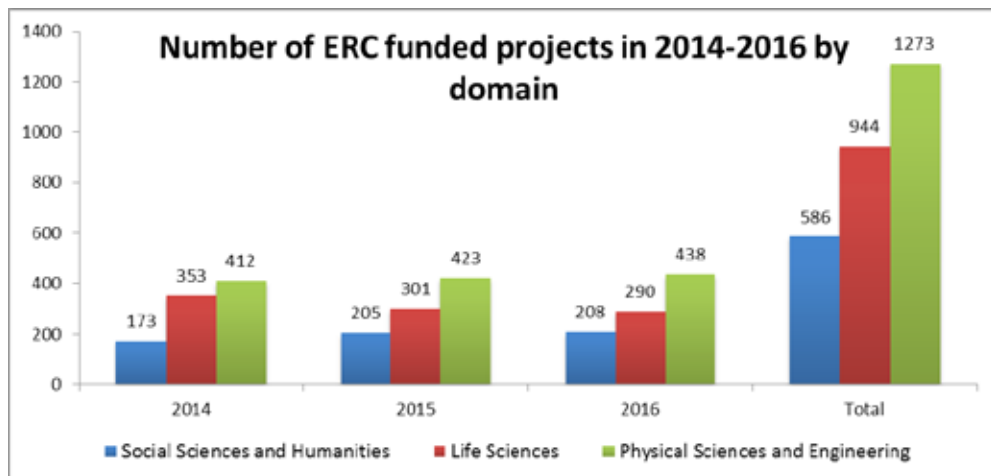
Budget wise we can see a similar trend. SSH had a particular positive development from 2014 to 2015. In 2014 the share of SSH was 17,1% while in 2016 the number is 21,3%. Overall for the period 2014-16 the share of SSH is around 19,5%.
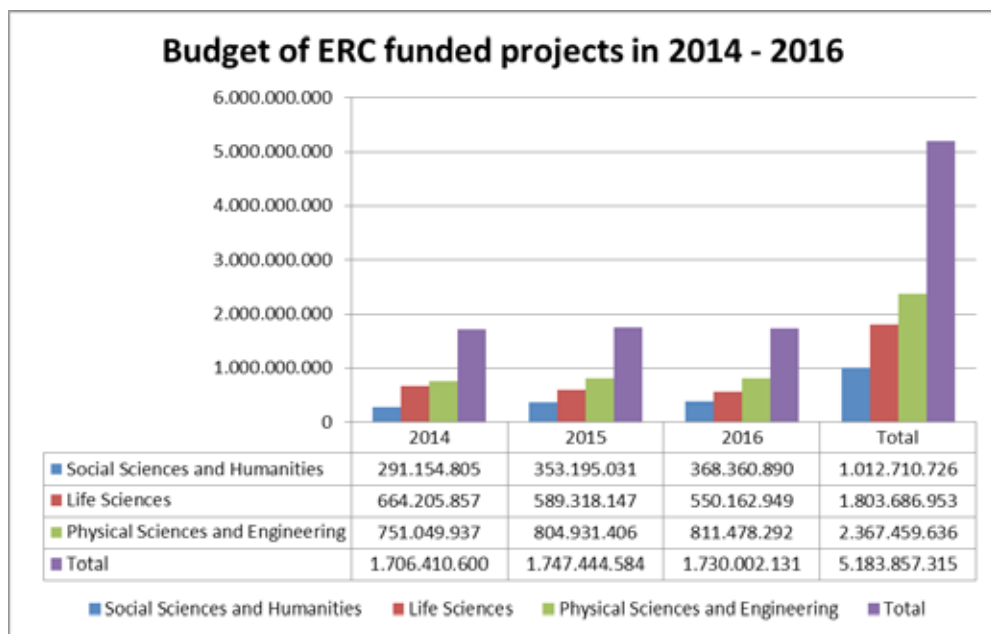
Budget of ERC funded projects in 2014 - 2016

	2014	2015	2016	Total
Social Sciences and Humanities	291.154.805	353.195.031	368.360.890	1.012.710.726
Life Sciences	664.205.857	589.318.147	550.162.949	1.803.686.953
Physical Sciences and Engineering	751.049.937	804.931.406	811.478.292	2.367.459.636
Total	1.706.410.600	1.747.444.584	1.730.002.131	5.183.857.315

6. Best practice examples – topics and projects in WP 2016-17 (Societal challenges and LEITs)

In 2016, 41% of topics have been flagged for SSH. In practical terms, this meant that they aimed at including SSH research as integral part of the expertise needed to properly address the issue outlined in the topic: When truly integrated, the SSH are not relegated to an add-on status. The integration of SSH encompasses a broad variety of disciplines, and contributions from the SSH cover a broad range of conceptual schemes. Below are a few examples of good practice for funded projects and SSH-flagged topics.

PROJECTS	
Project: IN-PREP **An Integrated next generation preparedness programme for improving effective inter-organisational response capacity in complex environments of disasters and causes of crises** Type of Action: **RIA** WP Part: **Societal Challenge 7**	European countries confront the rising specter of transboundary crises, which cross national borders as well as policy boundaries with speed and ease, threatening the continuing functioning of critical infrastructures and the well-being of many citizens. Transboundary crises pose a specific set of complex challenges for which Europe is – despite recent policy initiatives (e.g. Decision No 1313/2013/EU) – still ill prepared. We recognize three challenges that need urgent attention. First, member states need to develop shared response planning. Second, countries need to share information in real time. This sense-making challenge requires a way to have multiple countries and agencies create a shared picture of an emerging crisis based on multiple sources (different countries, many agencies). Third, countries need to coordinate the use of critical resources to ensure a timely response and to avoid waste and misspending.
Project: PROGRESS **Priorities for Addressing Opportunities and Gaps of Industrial Biotechnology for an efficient use of funding resources** Type of Action: **CSA** WP Part: **LEIT NMBP**	To achieve a high deployment and to realize its full socio-economic potential, Industrial Biotechnology (IB) has to the address market demand and societal needs. Accordingly, it is essential to shift from a solutions-looking-for-problems (technology-push) view to a perspective that takes market demand and the grand challenges (e.g. climate change, food security, energy security) into the focus. Thus specific attention must be paid to the needs of the application sector, consumers and society as well as the acceptance and potential risk of IB technologies. The European economy relies heavily on fossil resources. Worldwide demand for this resource will grow in the future, while supply will hardly keep place and climate change is demanding for alternatives.

TOPICS	
Topic: ICT 22 – 2016 **«Technologies for Learning and Skills»** Type of action: **RIA/IA** WP Part: **LEIT ICT**	The challenge is to create an innovation ecosystem that will facilitate open, more effective and efficient co-design, co-creation, and use of digital content, tools and services for personalised learning and teaching. It requires co-creation and co-evolution of knowledge and partnerships between business actors and research players, communities of users, educational and training organisations to develop the appropriate components and services and leading edge learning technologies, which in turn will empower teachers and learners and facilitate (social) innovation in education and training.
Topic: SC5-09 - 2016 **«Operationalising insurance value of ecosystems»** Type of action: **RIA** WP Part: **Societal Challenge 5**	Ecosystems, through the provision of their services, can provide more holistic solutions to disaster risk reduction and to the mitigation of the effects of climate change, while serving multiple purposes. For instance, they can simultaneously mitigate the impacts of hazards, enhance social, economic and environmental resilience, and reduce the exposure and vulnerability of communities, businesses, properties and other economic assets. The insurance value of ecosystems has so far been overlooked in research and practice: e.g. socio-economic approaches to estimating insurance value are poorly developed, methodologies for quantifying and qualifying the insurance value of ecosystems are still in their infancy, and relevant institutional and economic incentives to protect, enhance or restore this insurance potential are lacking.

7. Conclusion and way forward

The results of the third monitoring report of the SSH-flagged topics in 2016 remain stable compared to 2015. In some domains, however, there are large differences from 2015 to 2016. This clearly illustrates that more efforts on interdisciplinarity are needed. There are obvious concerns regarding the integration of SSH in some Societal Challenges and the LEIT parts of the programme. Some disciplines are well represented but others are not. This is particularly the case for the humanities and the arts, and some selected social sciences. The SSH partners and coordinators in the 2016 projects are concentrated in a few countries (60% of the SSH partners and nearly 80% of SSH coordinators are established in only 7 EU countries).

Based on the results of the three reports published so far – as well as informal feedback since the start of Horizon 2020 – these are some key aspects in order to further strengthen SSH Integration:

1. How to draft topics to attract SSH participation and encourage a broad range of disciplines

It is evident that only a few SSH disciplines are frequently represented in large consortiums responding to calls across Horizon 2020. The thematic services have to keep this in mind when drafting topics – and those responding to calls in Horizon 2020 should be encouraged to widen the range of disciplines and sectors they want their proposal to include. Where SSH partners have a clear role to play in implementation and to increase impact, topic texts should reflect this and it should be clearly stated.

2. Maintain the interest of established participants, while attracting newcomers

There are many excellent institutions which have a long experience in taking part in projects both as partners and coordinators, and this is of high importance for European research and innovation. At the same time to spread excellence and broaden networks more countries should be involved in interdisciplinary projects. Reaching out to a wider range of institutions while at the same time covering more regions in Europe would bring new dimensions to the proposal that otherwise will not be addressed. In other words a better balance between established and new institutions representing many countries would be beneficial for the programme, and European research and innovation as a whole. As documented in the Interim Evaluation of Horizon 2020 established networks are sometimes discouraging new entries.

3. Further strengthen communication activities and promote success stories

One of the reasons why only a limited number of partners with SSH expertise get involved in large consortiums under Horizon 2020 is that they do not know about many of the topics – and what is expected to ensure real impact. The role and combined efforts of the European Commission, NCPs and NCP networks and everyone involved such as advisers in academia and other sectors remain central in this respect.

4. Ensure that flagging of a topic triggers interdisciplinary responses

Even though progress has been made since the start of the programme SSH elements may have a prominent place under some flagged topics, while in others the concrete SSH contribution expected is more difficult to grasp. Naturally, some topics are dedicated to concrete SSH related questions, while in others a more limited role for the SSH is foreseen. To ensure and maintain interest in applying for funding it is essential that both STEM and SSH partners see a potential when reading through the topic text – and accordingly as far as possible the language used should remain open and neutral and place STEM and SSH on an equal footing from the start.

5. Make interdisciplinarity happen from the outset of the project

Naturally in most cases it would be essential that already when the consortium is being prepared responding to a SSH flagged topic a clear division of tasks is being made between predominantly STEM and SSH partners. In spite of positive developments in recent years there are many projects in which SSH partners are asked to take part when a lot of the planning has already taken place.

To conclude progress has been made since the start of the programme and the monitoring reports have helped in this regard. Experiences, both good and bad, have helped us to adjust the methods we are using when writing topics and how we communicate with applicants and the stakeholder community. A higher share of the topics are now being flagged as relevant for SSH – and the language used in the calls and topics in the current Work programme 2018-20 is more open and seems to attract more interdisciplinary proposals. However the results show that more efforts are needed in all phases of the implementation – from topic definition to the evaluation phase. A well designed topic where interdisciplinary contributions are clearly defined does not automatically lead to the funding of consortiums with a broad spectre of expertise from the most relevant disciplines. We will continue to strive for this to be the case when regards flagged topics under Societal Challenges and LEITs in Horizon 2020.

The integration of Social Sciences and Humanities (SSH) in Horizon 2020 is an important feature of the programme. This third monitoring report assesses in a thorough and detailed manner how the different SSH disciplines have been integrated into the projects funded in 2016 under the Societal Challenges and the Industrial Leadership priorities. Results based on 2016 data are presented showing to what extent the SSH is involved when it comes to for example budget, disciplines, countries and sectors.

Results in the two previous reports were fairy similar as they were both part of the same Strategic Programme 2014-15. This report using 2016 data is the first covering the second Strategic Programme of 2016-17. Overall results are fairly stable, but in quantitative terms along some dimensions SSH Integration in 2016 dropped since the year before. However, results vary depending on the Work Programme part in question and for example in Societal Challenge 5 (Climate action, environment, resource efficiency and raw materials) and LEIT ICT the level of SSH Integration increased substantially from 2015 to 2016.

A novelty in this year's report is that data on the European Research Council (ERC) have been included. This has been done to get a broader understanding of how the SSH feature throughout Horizon 2020. Non-flagged topics in the above mentioned pillars are not looked at and there are still other parts of Horizon 2020 that are not included. Therefore, this report is not intended to capture the whole picture, but rather it aims at presenting an indication on how SSH is integrated in the programme – based on a selection of indicators and parameters.

Studies and reports