

## Success stories in SSH - STEM collaboration

### The contribution of Social Sciences and Humanities to energy research

As a cross-cutting issue of broad relevance, Social Sciences and Humanities (SSH) research was not only fully integrated into each of the priorities of **Horizon 2020**, but the effective integration of Social Sciences and Humanities will also be a principle through the programme cycle in **Horizon Europe** including clusters, missions, and partnerships.

Integrating the socio-economic dimension of grand societal problems into the design, development and implementation of research itself, and of new technologies, can help find solutions to societal issues and enhance the impact of such activities for society.

SSH can provide essential contributions to **Energy research**:

- ✓ To support the design, implementation, and evaluation of effective **policies** for energy conservation and efficiency through behavioural and economic analysis
- ✓ To realise and maximise the potential gain in **energy efficiency**, because the economic, psychological, and cultural issues that drive market and individual behaviour need to be understood
- ✓ To address questions related to the economics and **governance models** for sustainable energy systems

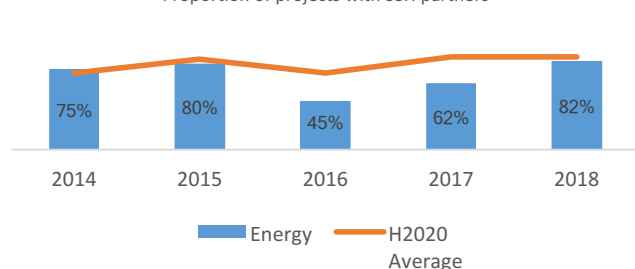
### FACTS & FIGURES

Collaboration between SSH and STEM researchers in H2020 has been gradually increasing in the period 2014–18: the proportion of projects funded under SSH-flagged topics with at least one SSH partner increased from 75% to 82% while the budget going to SSH partners slightly decreased from 22% to 18%.

In terms of SSH expertise across the 88 funded projects in 2018, the most prevalent disciplines were Economics (21%), Political Science (18%) as well as Business/Marketing (16%).

Source: Monitoring reports (2014–18) on Integration of Social Sciences and Humanities in Horizon 2020 (EC)

Proportion of projects with SSH partners



SSH: Social Science and Humanities

STEM: Science, Technology, Engineering and Mathematics



## SMARTEES: a success story of collaboration between SSH and STEM researchers

Interview with Christian A. Klöckner, Project coordinator of Smartees

### Why did you decide to integrate SSH In your project?

For SMARTEES, it was rather the other way around. The call it is funded in is an SSH call (SSH in the Energy Transition). However, we decided to add the mathematical modelling perspective to bind the activities in the project closer to the work that is going on in the Energy Systems Modelling community.

### How did the process of SSH integration go from proposal writing to project implementation?

The project started as an SSH project, but from the start there was the affinity to the modelling community due to some involved partners. As SMARTEES is an **SSH project per design which makes use of mathematical modelling**, the issues were rather not integrating SSH, but integrating modelling into the SSH framework. The main challenges in the project were defining where modelling and SSH research work well together, how they are different, developing a common understanding of what a mathematical simulation model does, and agreeing on diversity in approaches, especially between the sociological researchers in the project and the very quantitative modellers. The SSH partners developed the general theoretical framework, data input to feed the models, but also to answer other research questions not related to the modelling.

### What is the added value of integrating SSH In your project and what is the contribution from SSH partners?

The project is SSH at its core, so the question is what is the added value of the mathematical models. We see that translating SSH theory and assumptions into formalised models makes it: (a) more relatable for non-SSH researchers on the outside, and (b) forces SSH researchers to be explicit about assumptions and make them verifiable, but (c) also shows the limits of simulation models.

### Which are the factors that facilitate collaboration between different disciplines and which are the factors that hamper it?

A factor that certainly contributed to the good collaboration between STEM and SSH in SMARTEES is that we invited **teams of modellers and SSH researchers from the same institution**. This established a daily collaboration between the perspectives on the institutional level. Furthermore, it helped to have psychology as a discipline involved that is strongly dominated by quantitative research and thus relatively close to the mathematical modelling. On the other hand, psychology is close enough to sociology to be compatible with some of the assumptions in that discipline.

### What would be your main recommendation for both researchers and EC?

Projects where SSH is (a smaller) part of a larger project dominated by, e.g. STEM, are rather common now. Less common are projects where it is the other way around. It appears that SSH researchers (once they take the leading role for proposal design) do not involve other disciplines strongly enough. I would wish for more interdisciplinary/multi-perspective projects, where SSH takes the leading role, but where other non-SSH disciplines are strongly represented.

## Smartees



SMARTEES – Social Innovation Modelling Approaches to Realizing Transition to Energy Efficiency and Sustainability – is a transdisciplinary research project which aims to support the energy transition and improve policy design by developing alternative and robust policy pathways that foster citizen inclusion and take local peculiarities into account.

<https://local-social-innovation.eu/>



## Success stories in SSH - STEM collaboration

### The contribution of Social Sciences and Humanities to transport research

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Integrating the socio-economic dimension of grand societal problems into the design, development and implementation of research itself, and of new technologies, can help find solutions to societal issues and enhance the impact of such activities for society.

SSH can provide essential contributions to **Transport research**:

- ✓ **To influence citizens' behaviour** to use resource-efficient forms of transport, which respect the environment
- ✓ To make mobility not only more environmental friendly, but also **more user friendly**
- ✓ To understand if technologies or new systems of transportation will become successful, **by analysing users' habits and attitudes**

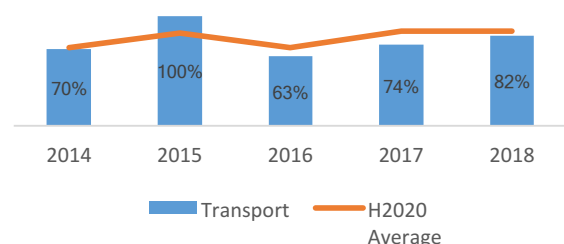
### FACTS & FIGURES

Collaboration between SSH and STEM researchers in H2020 has been gradually increasing in the period 2014-18: the proportion of projects funded under SSH-flagged topics with at least one SSH partner increased from 70% to 82% while the budget going to SSH partners went from 9% to 19%.

In terms of SSH expertise across the 33 funded projects in 2018, the most prevalent disciplines were Political Science (18%), Business/Marketing (14%) Psychology (14%).

*Source: Monitoring reports (2014-18) on Integration of Social Sciences and Humanities in Horizon 2020 (EC)*

Proportion of projects with SSH partners



SSH: Social Science and Humanities  
STEM: Science, Technology, Engineering and Mathematics



# HiReach: a success story of collaboration between SSH and STEM researchers

Interview with: Simone Bosetti, Project Coordinator HIReach

## Why did you decide to integrate SSH in your project ?

The H2020 call topic was flagged as relevant for SSH. Besides this formal requirement, its scope called for an SSH approach, and both the technical proposal and the project team was built around this need.

## How did the process of SSH integration go from proposal writing to project implementation?

To some extent, none of the project partners had an SSH-only connotation. When building the project consortium, an effort was put in toward involving the right departments/teams/researchers within each organisation. Previous contacts and a **long track-record of previous cooperation** among some of the partners were fundamental in this respect.

About the main challenges, as often happens, whenever a large multidisciplinary team of researchers with different backgrounds is involved, **strong coordination and conciliation efforts of different perspectives and attitudes** were constantly needed at both overall project and work package level.

## What is the added value of integrating SSH in your project and what is the contribution from SSH partners?

Without SSH in the multidisciplinary team, the project just would not have been feasible. The contribution of the SSH partners was relevant during all the steps of the project. In the first step, aimed at the analysis of needs, capabilities and behaviour of social groups vulnerable to exclusion, sociologists and psychologists were fundamental in organising the focus group workshops held to gain first-hand **knowledge and understanding of the specificities of the different targeted users' groups**. At a later stage, economists, business developers (together with computer scientists and engineers) were involved in assessing the existing inclusive mobility solutions, and in designing innovative ones.

## Which are the factors that facilitate collaboration between different disciplines and which are the factors that hamper it?

✓ **Facilitating factors:** The humbleness in understanding and accepting different perspectives and contributions in the project tasks.

✓ **Obstacles:** The lack of communication and coordination.

## What would be your main recommendation for both researchers and EC?

✓ **For researchers:** To never lose sight of the final goal, overall objectives for the project, and to adapt and be flexible in the ways of achieving them.

✓ **For the European Commission:** Multidisciplinary teams and a good balance of SSH and STEM should be required, and positively evaluated when awarding the H2020 projects.

## HiReach



HiReach builds on the potential of bundling and mixing dispersed, special and non-coordinated/optimised trip requests and needs from different vulnerable user groups to favour inclusive and participative mobility rather than exclusive/special and geographically-limited mobility. HiReach fosters social innovation processes through an in-depth (micro)analysis of capabilities and attitudes of different social groups and their direct involvement as co-users and co-owners of the proposed solutions.

<https://hireach-project.eu/>