

University Alliance Stockholm Trio



# **How to achieve real integration of social sciences and humanities into transdisciplinary research for a competitive, green, and fair Europe?**

A report from the seminar on 25 June 2024

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## Introduction

### The Need for a Transdisciplinary Approach

In addressing global challenges such as pandemics and climate change, it is evident that no single scientific discipline can provide comprehensive solutions on its own. The interconnected and complex nature of today's challenges demands a transdisciplinary approach, including the integration of Social Sciences and Humanities (SSH). SSH provide valuable insights into human, societal, and cultural dimensions, complementing STEM. Innovation is not solely driven by technological advances but also by societal expectations, values, and demands. Making use of the wide range of knowledge, capabilities, skills and experiences readily available in SSH will enable innovation to become embedded in society and is necessary to realise the policy aim of Pillar II, "Global Challenges and European Industrial Competitiveness", in Horizon Europe.

### The Role of the EU Framework Programme

The European Union stands at a pivotal juncture in its pursuit of innovation, sustainability, and societal well-being. The EU Framework Programme (FP) for Research and Innovation is a policy instrument designed to achieve EU goals, such as the Green Deal, aimed at fostering sustainable development, enhancing public health, and promoting social cohesion. Despite these goals with clear societal focus, the integration of SSH has often been insufficient, resulting in fragmented approaches that fail the full potential of interdisciplinary collaboration. A robust integration of SSH is vital to fully realise the programme's objectives and effectively address global challenges.

### Legal Support for SSH Integration

The legal Horizon Europe Regulation<sup>1</sup> states in the introduction: "In order to maximise the impact of the Programme, particular consideration should be given to multidisciplinary, interdisciplinary and transdisciplinary approaches as key elements for major scientific progress". Further, in article 7: "SSH shall be fully integrated across all clusters, including specific and dedicated activities". Hence there is a full legal support and requirement to include SSH.

### Elevating SSH in EU Research

In order to foster innovation and address multifaceted challenges, it is crucial for the EU to elevate SSH within transdisciplinary research and integrate it as a core component of the Framework Programme. This approach not only enhances the relevance and impact of research outcomes but also ensures they are ethically grounded and socially accepted. It is therefore essential to involve different stakeholders, including policymakers, researchers across disciplines, and the public, in order to develop comprehensive solutions. The integration of SSH perspectives enables the European Commission to develop more effective and sustainable responses to global challenges.

## Background

### Progress in Horizon 2020

The Horizon 2020 Ex Post Evaluation<sup>2</sup> acknowledged significant progress in the embedding of SSH across the Framework Programme, with a marked increase in interdisciplinary collaborations harnessing diverse SSH insights. The number of SSH-flagged topics increased significantly, increasing from 98 in 2014 to 130 by 2018<sup>3</sup>. Moreover, Horizon 2020 allocated 20% of its budget to SSH-related topics. The European Commission noted that while some of the outcomes are promising, a

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<sup>1</sup> <https://eur-lex.europa.eu/eli/reg/2021/695/oj>

<sup>2</sup> [eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52024DC0049](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52024DC0049)

<sup>3</sup> <https://op.europa.eu/en/publication-detail/-/publication/4f198f8e-4599-11eb-b59f-01aa75ed71a1/>

comprehensive evaluation of the societal impact of these initiatives requires a framework that better track impact over time.

### **Challenges in Horizon 2020**

Despite these advances, both the Horizon 2020 Ex Post Evaluation and the Interim Evaluation of Horizon 2020<sup>4</sup> identified ongoing challenges, such as the inconsistent recognition of SSH contributions, and limited and uneven integration across parts of the programme. Furthermore, inadequate monitoring tools and project designs failed to adequately recognise the value of SSH. The outcome of both evaluations underscored the need for a more strategic integration of SSH, particularly in the context of project design, enhanced training for project coordinators and evaluators to recognise the value of SSH, and more transparent guidelines to ensure consistent and meaningful integration of SSH across all research areas.

### **Shortcomings in Implementation**

The Horizon 2020 programme's intentions with SSH integration were sometimes undermined by shortcomings in implementation, particularly in the proposal evaluation process. A preliminary analysis by the European Alliance for Social Science and Humanities (EASSH)<sup>5</sup> revealed that the proportion of evaluators with backgrounds in SSH was notably low in all societal challenges except SC6. In some cases, fewer than 3% of evaluators had an SSH background, which made it challenging to assess SSH-flagged topics. Furthermore, EASSH discovered that in challenges where a reasonable proportion of SSH experts were included among the reviewers, the integration of SSH research in the projects increased.

### **Enhancements in Horizon Europe Regulation**

In response to the insights gained from the Interim Evaluation of Horizon 2020, the European Commission implemented adjustments in The Regulation of Horizon Europe, to enhance the integration of SSH and foster transdisciplinary research. Horizon Europe aims to fully integrate SSH in each pillar and all clusters, particular in Pillar II “Global Challenges and European Industrial Competitiveness” and Cluster 2<sup>6</sup>.

### **New Measures in Horizon Europe**

To achieve this objective, several new measurements have been introduced in Horizon Europe. These include specific calls for SSH-related topics, further evaluation criteria for proposals with integration of SSH (proposals now receive lower evaluation scores if they fail to sufficiently incorporate SSH where it was identified relevant), and the requirement for applicants to submit proposals and form consortia that transcend disciplinary boundaries. Moreover, the European Commission has improved monitoring and evaluation tools to track and assess the integration and impact of SSH in funded projects. These tools are designed to ensure that SSH contributions are recognised, to identify obstacles that hinder full integration and to measure societal impacts effectively.

### **Persistent Challenges**

Despite these improvements, challenges persist in the integration of SSH within Horizon Europe. There are still inconsistencies in how SSH is valued across different thematic areas, and the depth of integration can vary significantly between projects and different parts of the programmes. SSH contributions are occasionally seen as supplementary rather than an integral part to research with focus on STEM. Furthermore, the monitoring and evaluation of SSH integration still require

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<sup>4</sup> <https://op.europa.eu/en/publication-detail/-/publication/33dc9472-d8c9-11e8-afb3-01aa75ed71a1>

<sup>5</sup> <https://eassh.eu/Position-Papers/easshsshintegration4threportfnl.pdf>

<sup>6</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021R0695>

refinement to ensure that the societal impact is thoroughly assessed. These ongoing issues underscore the necessity for sustained efforts to fully realise the potential of SSH in transdisciplinary research.

## The seminar

### Seminar Overview

On 25<sup>th</sup> of June 2024, the University Alliance Stockholm Trio hosted a seminar on the topic of “How to achieve real integration of social sciences and humanities into transdisciplinary research for a competitive, green, and fair Europe?”. The assembled panel and audience engaged in a constructive exchange of ideas on the best ways to enhance the integration of SSH and the design of calls for transdisciplinary research.

### Programme

Welcome note by the University Alliance Stockholm Trio’s initiative for Sustainable Actions, presented by Prof. Karin Dahlman-Wright, Karolinska Institutet.

Panel, moderated by Prof. Magnus Breitholtz, Stockholm University:

- Prof. Line Gordon, Director, Stockholm Resilience Centre, Stockholm University
- Dr. Gabi Lombardo, The European Alliance for Social Sciences and Humanities (EASSH), Director, Secretariat
- Prof. Cecilia Magnusson, Professor of Public Health Epidemiology at Karolinska Institutet, Director, Centre for Epidemiology and Community Medicine
- Prof. Maria Mancilla Garcia, Chair in Environmental Humanities at Université Libre de Bruxelles (ULB)
- Ms. Mina Stareva, deputy Head of Unit of DG RTD D3, Health and Societal Transitions
- Dr. Marc Vanholsbeeck, General councillor – Head of department, Federaal Wetenschapsbeleid (BELSPO)

### Importance of Integrating SSH in Framework Programmes

The general discussion centred on the importance of integrating SSH into the forthcoming Framework Programmes. A number of key insights were highlighted, such as the need to make calls attractive and clear to social scientists, and to ensure that SSH is a full part of the Framework Programme (in terms of resources, attention, and power). It was emphasised that there is a need to encourage social scientists to lead joint proposals and to introduce additional incentives for social science to engage in transdisciplinary projects. Moreover, it is vital to further develop evaluation tools to assess the success of integrating SSH in the Framework Programme. There is also a shortage of SSH experts and evaluators within the Commission. It is therefore essential that additional SSH experts and evaluators are recruited within the Commission to achieve a more balanced workforce and to further integrate SSH more fully.

### Funding for Transdisciplinary Projects

Another important aspect highlighted was to ensure sufficient funding for long-term projects with a transdisciplinary approach. It should be noted that transdisciplinary collaborations can have a long and rigorous process, as it requires a comprehensive understanding of the different cultures and the building of trust and mutual respect. It is also crucial to recognise the existence of a multitude of

ontological and epistemological traditions within each different discipline. As a consequence, the EU needs to provide sufficient funding for long-term projects to enable researchers from different disciplines to interact, build trust and engage in collaborative projects.

### **Need for a Fundamental Change in the Funding System**

In addition, a fundamental change to the funding system is required, given that it has remained unchanged since the 1960s. To achieve significant integration of SSH in the Framework Programme, a fundamental shift in approach is required from the outset to ensure that SSH is fully embedded in FP10. It is evident that the financial resources allocated to SSH often are smaller in comparison to those allocated to other academic disciplines. It is therefore clear that a transformation of the system is required, and that this will necessitate comprehensive data collection on the most effective means of achieving integration.

### **Examples of Effective SSH Integration**

#### **Stockholm Resilience Centre (SRC)**

The Stockholm Resilience Centre (SRC) is a transdisciplinary research hub with a mission to advance “Science for a liveable planet”. Such centre can serve as an important mechanism for complementing existing structures and universities to facilitate inter- and transdisciplinary research. The SRC provides an excellent example of how SSH can be integrated more effectively through the development of a positive research culture (trust and companionship), commitment to joint challenges and the development of transdisciplinary skills.

#### **Université Libre de Bruxelles (ULB)**

The practice of single authorship may unintentionally prompt researchers to pursue careers outside of their original field. This issue was identified by the panel as a challenge that requires resolution through the adoption of co-authorship. Moreover, the organisational structures of universities are not always aligned, which presents a challenge in terms of collectively publicising. At the Université Libre de Bruxelles (ULB), researchers from different faculties and institutions are brought together to engage in collaborative research, showing a great example of interdisciplinary research. Additionally, the institution offers master’s programmes that are interdisciplinary in nature.

#### **Karolinska Institutet (KI)**

Another example presented at the seminar was the Rainbow Model of Health, which is utilised in research projects at Karolinska Institutet to facilitate a comprehensive understanding of public health. The model is a systematic framework that places individuals at the centre, with various layers of influences on health surrounding them. These layers include individual lifestyle factors, community influences, living and working conditions, and more general social conditions. The model demonstrates the value of transdisciplinary research and the integration of SSH in understanding the evolving nature of health in today’s society.

### **Expanding the Concept of SSH**

The concept of SSH was also discussed during the seminar with particular emphasis placed on the importance of adopting a more expansive perspective. The concept of SSH (Social Science and Humanities) should be broadened to encompass arts research, thereby forming the concept of Social Science, Arts, and Humanities (SSAH). It is evident that enhanced SSAH research plays a pivotal role in enabling transdisciplinary research, thereby indicating that policymakers can engage in collaborative efforts to address complex issues and diverse perspectives.

### Challenging Existing Norms

Furthermore, the panel highlighted the value of challenging existing norms within disciplines and SSH to foster more interdisciplinary collaborations. SSH is often perceived as primarily offering a critical perspective on challenges, rather than proposing solutions. SSH research can provide insights and contribute to the development of solutions, in addition to offering a constructive critique. The revision of norms requires the creation of forums in which these norms can be discussed, and collective resources can be developed.

### More Examples of Effective SSH Integration

#### Example I

##### Introduction to Digital Futures

Digital Futures is a cross-disciplinary research centre with the vision to shape an economically, environmental and socially sustainable society through digital transformation. It was established in 2020 by KTH Royal Institute of Technology, Stockholm University and RISE -Research Institutes of Sweden, based on EUR 11 million per year long-term support by the Swedish Government. Since 2020, the centre has funded more than 150 projects.

##### Strategic Research Programme Overview

The Digital Futures Strategic Research Programme is illustrated by the matrix below. The programme is structured around four societal contexts, which are the rows of the matrix. These contexts are areas in which industry and society see opportunities and face challenges at the same time. The columns indicate the three main scientific and technological research themes forming the foundation of the digital transformation. At a societal scale, it is necessary to simultaneously consider multiple factors, e.g., the citizens' wellbeing, the environmental footprint, public safety, economic growth. This means that the societal contexts imply an interdisciplinary research programme by nature, and it will be necessary to involve several research groups and stakeholders so that the needs of each societal context are successfully addressed.

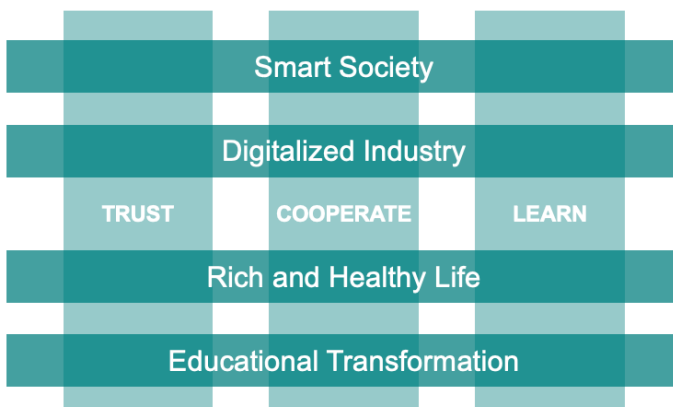


Fig 1 Digital Futures Research Matrix

## Core Principles of the Strategic Research Programme

The Strategic Research Programme is at the core of Digital Futures and it must be marked by scientific excellence to successfully lead towards the vision. The initiative employs a number of strategic measures to its research calls, thereby making them attractive and impactful.

### Prioritizing SSH Expertise

Firstly, the initiative designs calls that prioritise themes where SSH expertise can provide valuable insights, such as the ethical implications of technology, societal acceptance of digital innovations, and cultural dimensions of digital transformation. By emphasising these themes, the initiative encourages interdisciplinary collaboration between SSH scholars and STEM (Science, Technology, Engineering, Mathematics) disciplines, fostering a holistic approach to addressing complex societal challenges.

### Dedicated Funding Streams

Secondly, the Initiative allocates specific funding streams or quotas dedicated to SSH contributions within its calls. This proactive step ensures that proposals incorporating SSH perspectives are not only welcomed but also competitively evaluated alongside technical proposals. Applicants are provided with clear and transparent guidelines outlining the expected roles and contributions of SSH in addressing ethical considerations, engaging with stakeholders, and ensuring broader societal impacts and consortium constellations. This in turn creates opportunities to discover synergies and patterns, that allows for research addressing a range of societal challenges.

### Fostering Collaboration

The calls are design to foster collaboration between researchers that should belong to either i) two different KTH schools, ii) KTH school and RISE/SU, or iii) RISE and SU. Several of the Digital Futures instruments is aimed to identify new research collaborations that have potential to develop into a leading scientific activity over the next 3- 5 years. Speed dating events are systematically arranged for matchmaking of researchers

### Criteria for All Calls

- The proposals shall address subject areas at an intersection of the Digital Futures Research matrix.
- All project proposals will be evaluated by an external international expert panel totally on-line.

### Examples of Projects Including SSH Pis

- Collaborative project [Learning and Sharing under Privacy constraints](#)
- Collaborative project [Humanizing the Sustainable Smart City](#)
- Research pairs project [Using Neuroimaging Data for Exploring Conversational Engagement in Human-Robot Interaction](#)
- Research pairs project [Artificial Actors: Directable digital humans based on psychological models of relational reasoning](#)

### International Comparisons

Digital Futures builds on strong traditions of internationally leading research environments at KTH, Stockholm University and RISE. Internationally, Digital Futures finds inspiration in and compares with Center for Information Technology Research in the Interest of Society (CITRIS) and Berkeley Artificial Intelligence Research (BAIR) at UC Berkeley, Institute of Data, Systems, and Society (IDSS) and Schwarzman College of Computing at MIT, Stanford Institute for Human-Centered Artificial Intelligence, Einstein Center Digital Future in Berlin, Digital Futures at the University of Manchester, the Swiss NCCR Dependable Ubiquitous Automation with ETH Zurich and EPFL, and finally the C3.ai

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Digital Transformation Institute with UC Berkeley, UIUC, MIT, CMU, Princeton, University of Chicago and Stanford.

### Learn more

Learn more about Digital Futures instruments and calls at [Digital Futures](#).

## Example II

### The Swedish Foundation for Strategic Environmental Research (Mistra)

The Swedish Foundation for Strategic Environmental Research (Mistra) effectively attracts Social Sciences and Humanities (SSH) researchers by designing research calls that prioritise interdisciplinarity and societal impact.

#### Prioritising Interdisciplinarity and Societal Impact

These calls emphasise the integration of SSH perspectives in addressing critical issues such as climate change, sustainable urban development, and biodiversity conservation. This approach ensures that SSH insights on socio-economic impacts, governance, and cultural values are an integral part to the research. Proposals are evaluated based on their potential for societal impact and the rigor of their interdisciplinary methods, with equal importance placed on SSH and natural sciences.

#### Encouraging Stakeholder Engagement

Furthermore, Mistra fosters extensive stakeholder engagement, encouraging collaboration with policymakers, industry partners, and community organisations. The foundation provides significant funding and support for transdisciplinary teams, including resources for capacity building and knowledge exchange.

#### Providing Clear Guidelines and Examples

Clear guidelines and examples of successful transdisciplinary projects provide researchers with a clear understanding of how to integrate SSH perspectives, ensuring their contributions are essential to solving complex environmental challenges.

### Learn more

Read more about their calls [here](#).

## Example III

### Forte, the Swedish Research Council for Health, Working Life and Welfare

Forte, the Swedish Research Council for Health, Working Life and Welfare, has implemented several strategies to attract SSH researchers and foster transdisciplinary research. By emphasising the integration of SSH perspectives in its calls for proposals, Forte ensures that research addresses complex societal issues such as public health, social inequalities, and labour market dynamics. The council's calls frequently address broad themes such as health and well-being, working life, and welfare, requiring genuine interdisciplinary collaboration.

#### Facilitating Integration through Expert Panels and Evaluation Criteria

To facilitate this integration, Forte includes SSH experts in its evaluation panels and prioritises the integration of SSH perspectives in its evaluation criteria. The allocation of dedicated funding for interdisciplinary projects and capacity-building initiatives serves to further encourage SSH



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participation. Clear communication and detailed guidelines help researchers develop successful interdisciplinary proposals.

### Examples of Interdisciplinary Calls

For example, Forte's "Health Inequalities" call addressed health disparities by combining medical research with social science insights, while the "Future of Work" programme explored labour market changes through a multidisciplinary lens. These practices guarantee that research funded by Forte is comprehensive, innovative, and impactful.

Learn more

Read more about their calls [here](#).