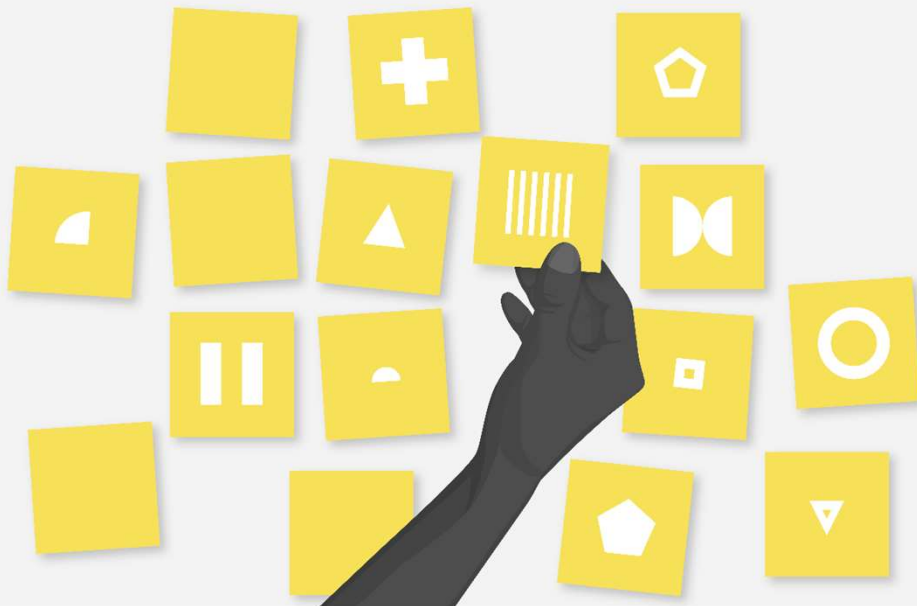




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# Societal Impact in Research Information Management Systems' Activity Data

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# Background

- Presentation is based on Master's thesis conducted in 2023  
<https://urn.fi/URN:NBN:fi:tuni-2023111710054>
- Inspiration for Master's thesis: Renewal of the activity categories in the Aalto University's CRIS-system, ACRIS (2022).  
<https://www.aalto.fi/en/news/update-your-activities-and-prizes-in-acris-for-transfer-to-national-research-information-hub>
- Updated categories align better with both the recommendations of CoARA for responsible researcher assessment and the good scientific practices outlined in the CV-model of the Finnish Advisory Board on Research Integrity (TENK). Both emphasize the diversity of research work.

Renewal of the activity categories



More activity categories to demonstrate societal impact



Open science keywords and OS/RI tagging

Open science

☐ This is related to promoting open science (63)

Research ethics and research integrity

☐ This is related to promoting research ethics and research integrity (42)

Open science keywords

☐ Wide scientific knowledge dissemination (39)

☐ Researcher evaluation (6)

☐ Open educational resources (3)

☐ Open peer-review (3)

☐ Citizen science (1)

# Research topic

## A comparative case study:

How does societal impact manifest in the activity contents of the CRIS systems of Aalto University, Finland and University of Aberdeen, UK.

## Why?

- The aim of the study was to find out how the societal impact is represented in the activity data of CRIS-systems.
- The limited previous research on the activity contents of CRIS-systems.
- Previous studies aimed to enhance CRIS-systems' ability to measure research impact on society. This study examines the nature and extent of actual research activities reported in these systems, providing fresh perspectives.

## Why these two universities?

- Both universities use Elsevier's Pure-system, so data model is similar.
- The familiarity of Aalto University's CRIS data.
- UK has a long tradition of emphasizing impact in research so British University was a good comparison.

# Research questions

1. What proportion of the activities reported by researchers in CRIS-systems reflect societal impact?
2. What are the different types of societal impact that can be found in the activity content of universities' CRIS-systems?
3. What are the differences and similarities in the reporting of societal impact between the universities under study?
4. How suitable are activity contents in CRIS-systems for measuring societal impact?

# Concepts

## **Societal impact in this presentation**

Various ways research influences areas beyond science, including social, cultural, environmental, and economic sectors of society.

(e.g. DOI: [10.1038/d41586-023-00345-1](https://doi.org/10.1038/d41586-023-00345-1)).

## **Research assessment**

The new models, such as CoARA, emphasize the diversity of research contributions. Along with publications, research assessment should also incorporate other research activities such as doctoral student supervision. Also, engagement with the society is important.

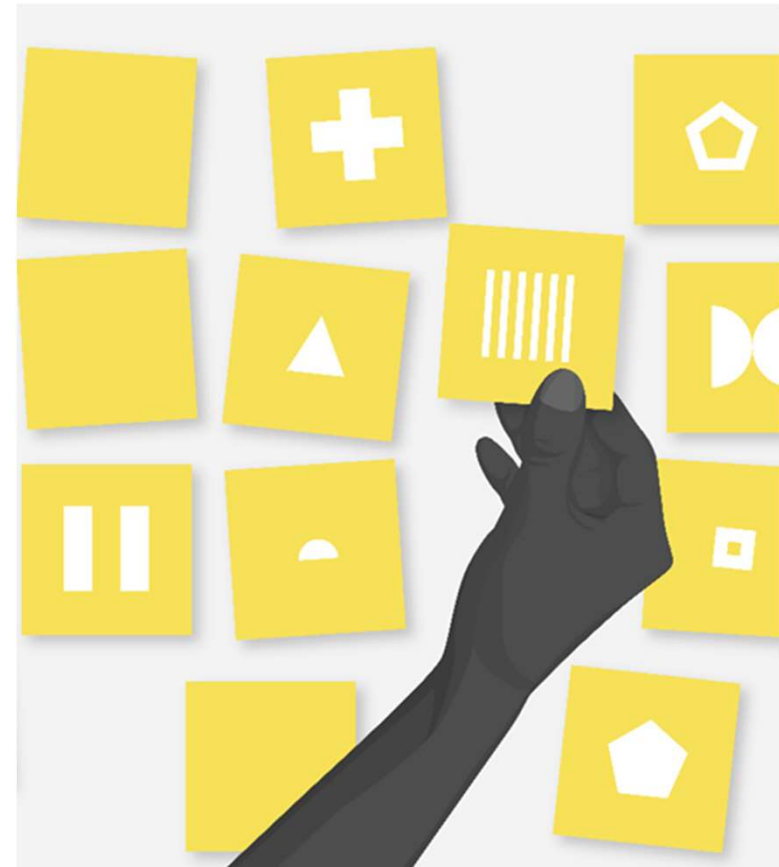
(<https://coara.eu/agreement/the-commitments/>)

## **CRIS-systems**

Have a lots of potential with research assessment. At their best, these systems manage the entire research lifecycle, from funding application to results, e.g. publications.

# Activities

- Along with publications, they are key academic merits.
- Encompass various academic endeavors carried out by researchers thanks to their expertise, e.g. supervising theses, conference presentations, editorial board memberships, peer-reviews.
- Finland has a national data model for recording research activities, ensuring a standardized method of recording, which aids in research assessment.
- The challenge: lack of systematic collection and validation compared to publication data.



# Data and research method

- Quantitative analysis (some qualitative analysis used in e.g. categorizations of data).
- Data: all activity contents available from the public portals of Aalto's and Aberdeen's CRIS-systems

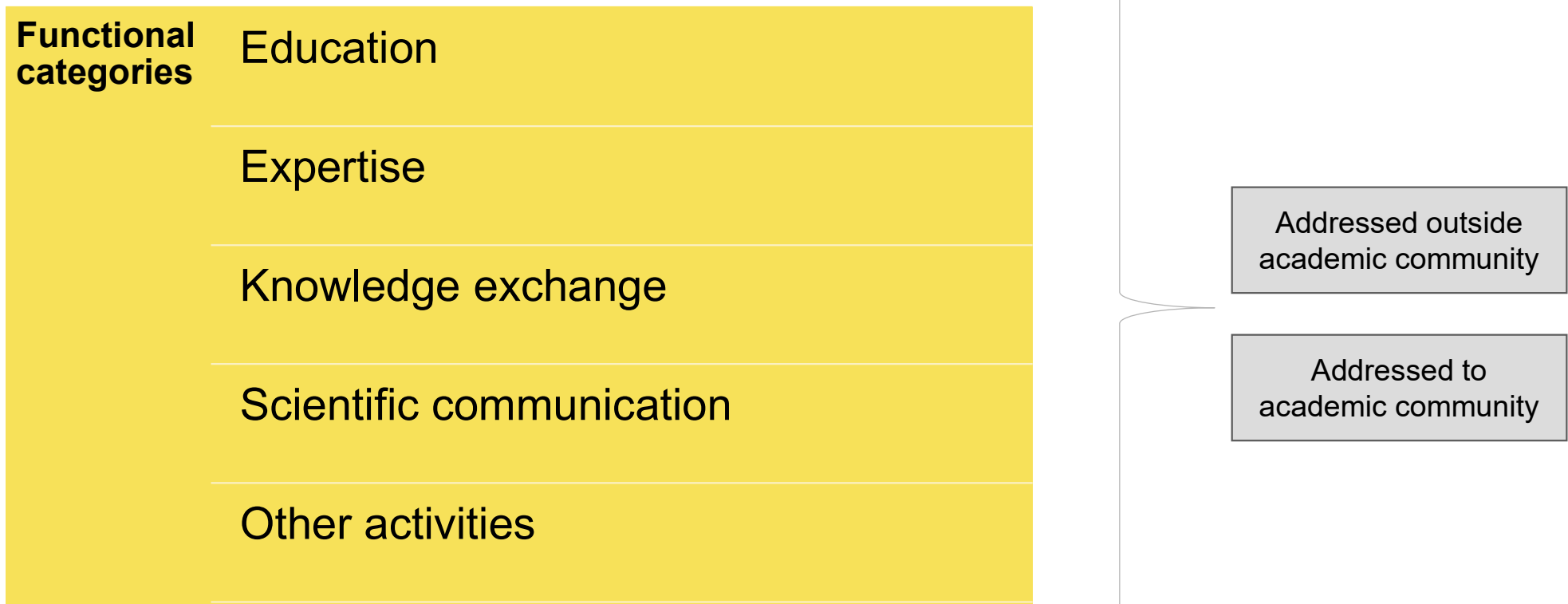
Publications and artistic outputs   Research data and software   Projects   Prizes   **Activities**   Press/Media

 Find research Activities



[Advanced search](#)

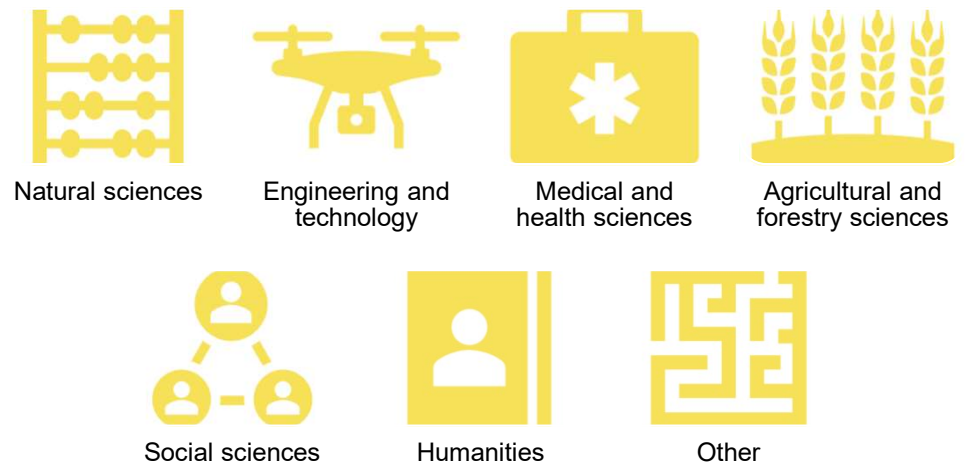
# 1/2 Data analysis: Categorization of activities





## 2/2 Data analysis: How to get the discipline-specific differences?

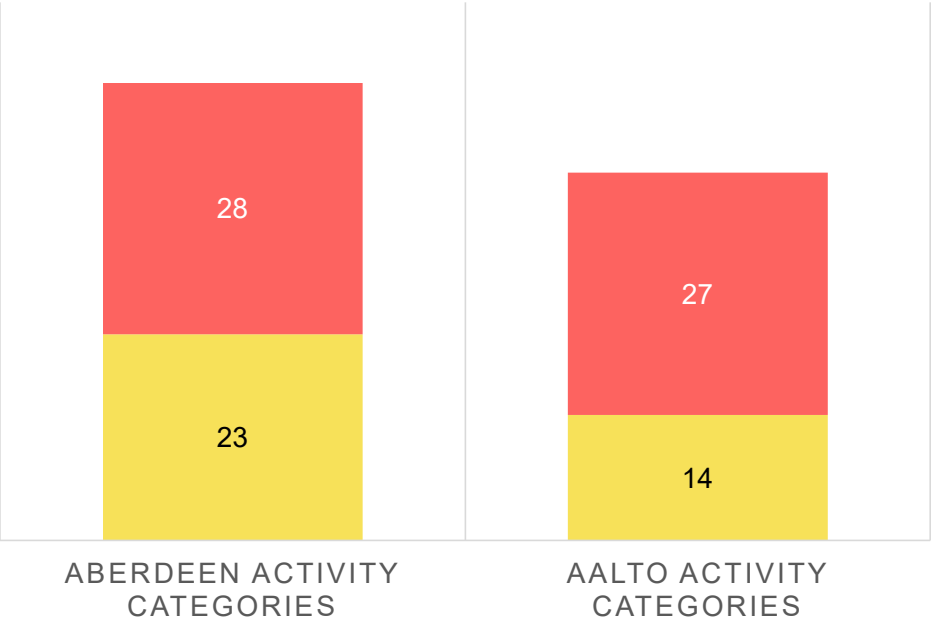
- The activities were classified into broad subject areas based on the affiliated researcher's academic unit.
- Classification is based on OECD:s Fields of Science and Technology (FOS) classification.



# Results

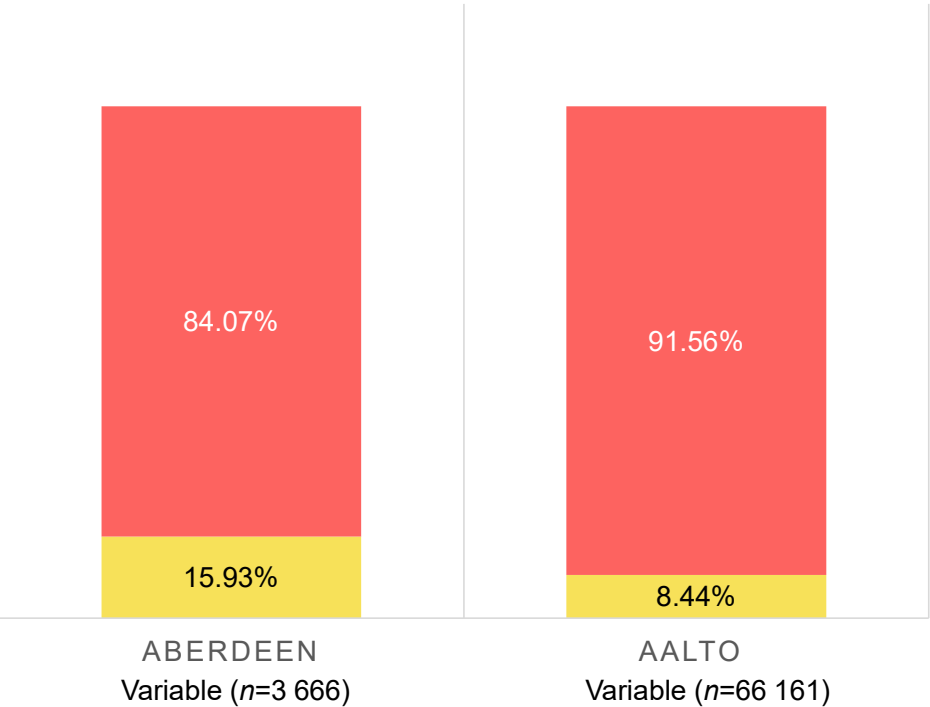
ACTIVITY CATEGORIES

■ Societal impact-related activities ■ Academia-focused categories



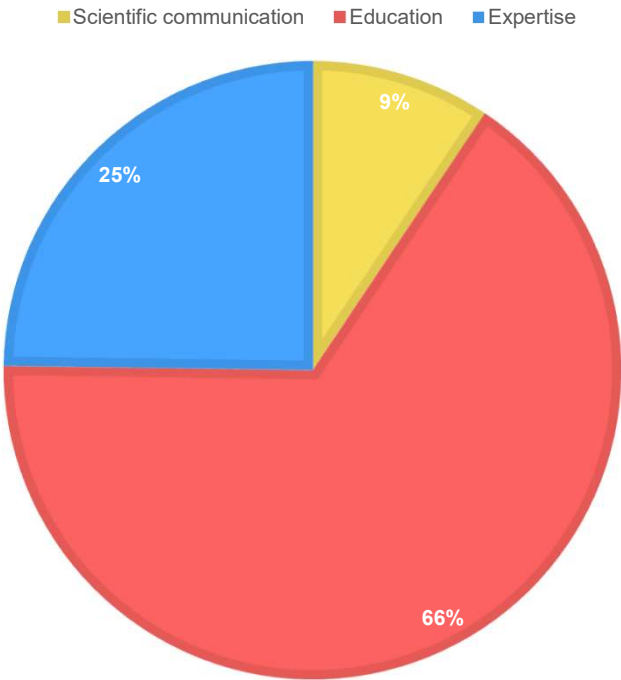
REPORTED ACTIVITIES

■ Societal impact-related activities ■ Academia-focused categories



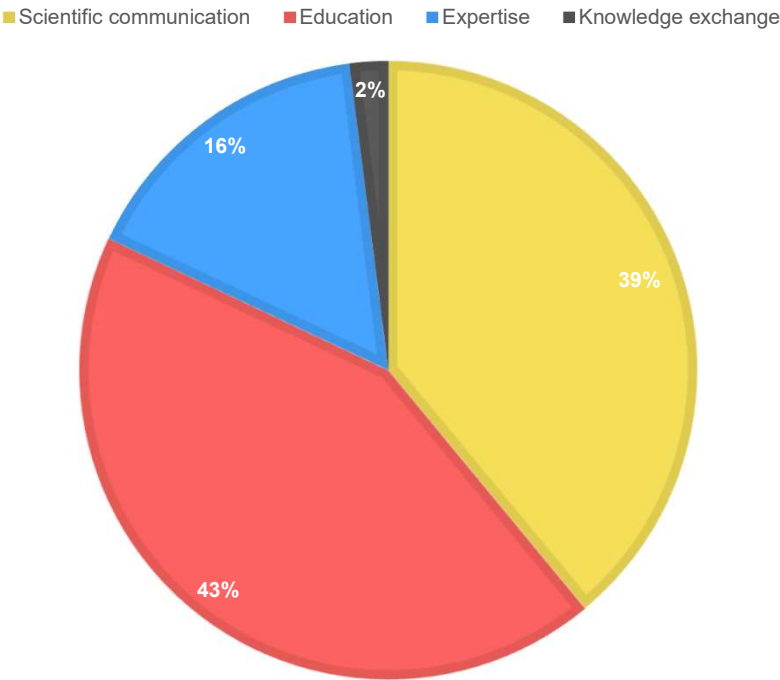
# Percentage distribution of activities reflecting societal impact

AALTO UNIVERSITY



Variable (*n*=5587)

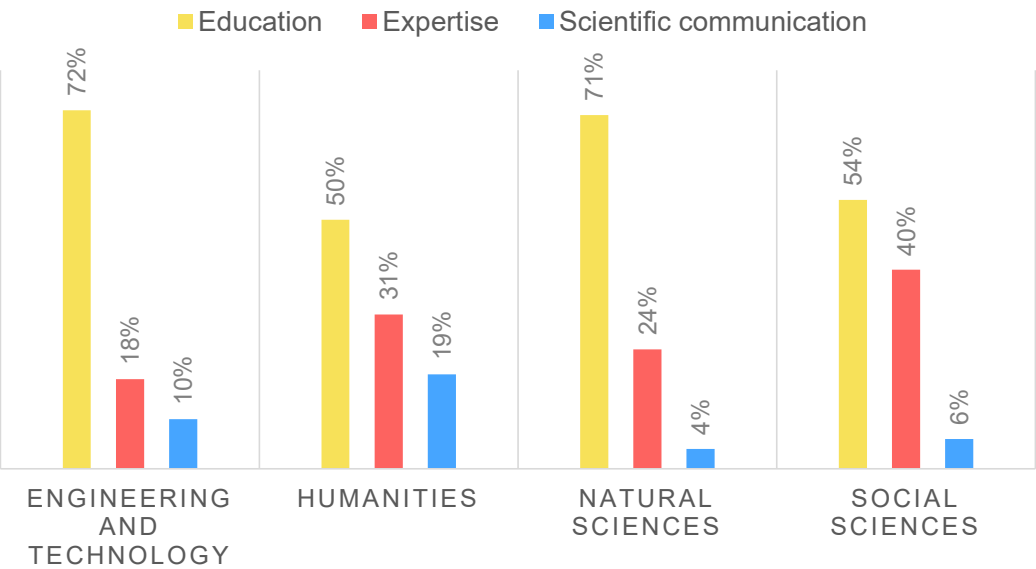
UNIVERSITY OF ABERDEEN



Variable (*n*=584)

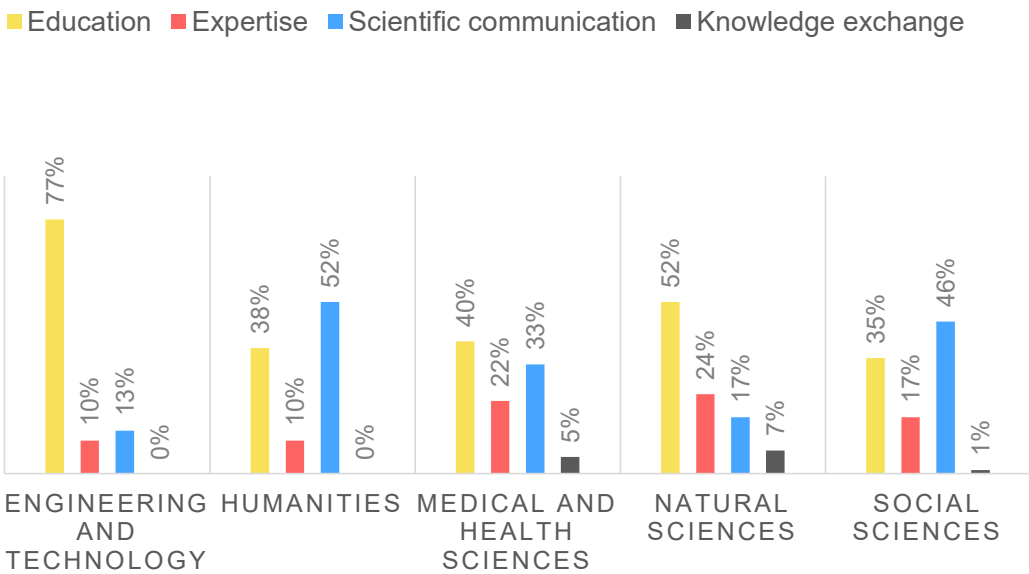
# Distribution of activities by discipline and activity category

## AALTO UNIVERSITY



Variable ( $n=5587$ )

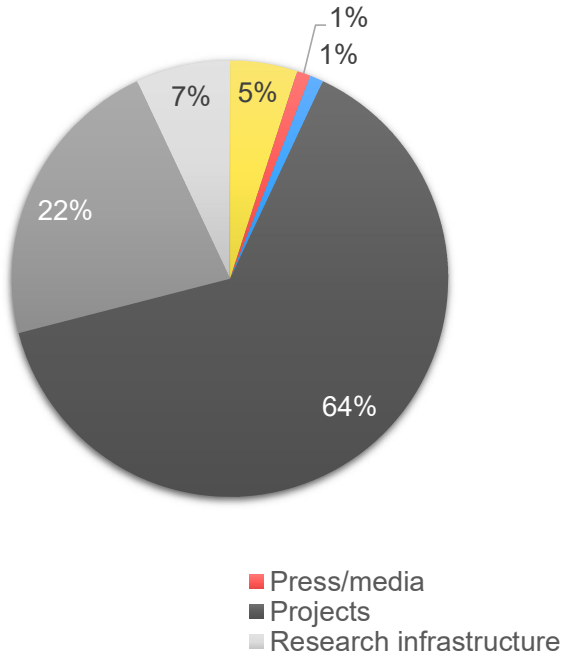
## UNIVERSITY OF ABERDEEN



Variable ( $n=584$ )

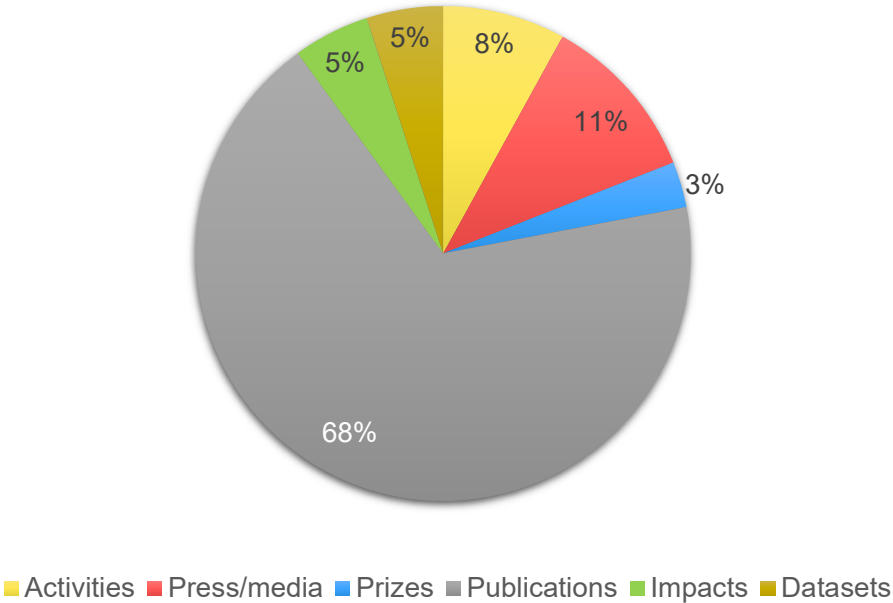
# Relations to other content types in CRIS-systems

AALTO UNIVERSITY



Variable (n=124)

UNIVERSITY OF ABERDEEN



Variable (n=37)

# Evaluation and limitations of the study

## Findings:

- **Broad overview:** The study provides a high-level view of both universities' focus areas.
- **Qualitative analysis needed:** To delve deeper, qualitative analysis of individual records would be essential.
- **Discipline classification:** A more detailed classification of data by academic disciplines would enhance clarity. Additional information about the universities' strategies and practices would also have been helpful.

## Data reliability:

- **Ambiguity:** Some categories were too general, leading to imprecise data analysis.
- **Reporting bias:** Researchers reporting activities may impact overall results.

## Limitations:

- **Aalto's revamped categories:** Recent changes in activity categories affect data reliability.
- **Focus on activities:** The study examines societal impact through reported activities, excluding publications.
- **Influence of set activity categories:** Researchers can only report defined activity categories within the system.

# Conclusions and discussion



Using activity data from CRIS-systems for accurately assessing the societal impact of research requires data quality improvement.



Data collection and validation should be organized within organizations similarly to publications. -> **Incentives to researchers to add the information.**



Activity data should be comparable across organizations -> Common criteria and standards for gathering and comparing activity data and systems interoperability, PIDs for capturing the researcher's academic footprint.



In Finland, a national activity code list has been developed, which enables the collection of comparable activity data from organizations into the national CRIS. -> **Incentives for researchers to use the national tool.** Currently, the national code list does not detail activities that depict societal impact.

# References

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- Finnish national research portal: [research.fi](https://research.fi)
- [National codes for research activity types](http://uri.suomi.fi/codelist/research/aktiviteetitjaroolit): <http://uri.suomi.fi/codelist/research/aktiviteetitjaroolit>
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**A!**

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Thank you  
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