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Wir leben Fundraising – mit Freude und im Dialog.

# Herzlich willkommen

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# Prof. Giuseppe Ugazio,

Edmond de Rothschild Foundations Chaired Assistant Professor in Behavioral Philanthropy
Geneva Finance Research Institute, University of Geneva

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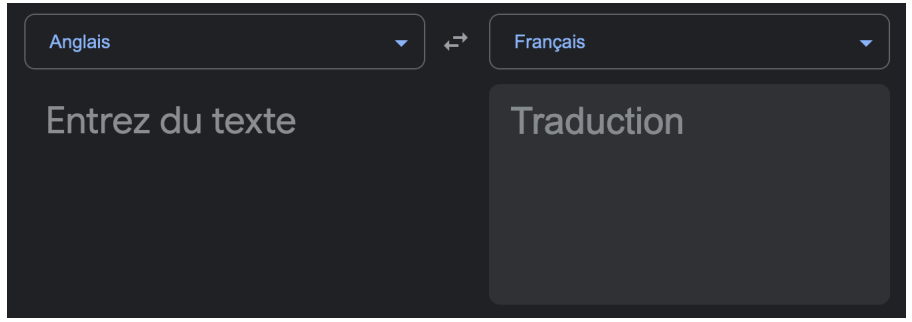
# Artificial Intelligence


A system that performs tasks that would require intelligence if performed by humans

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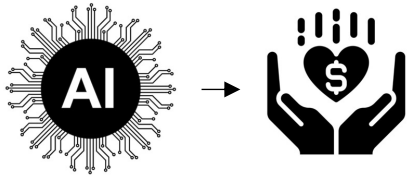
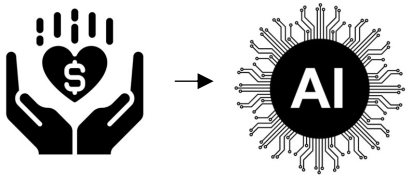
# Artificial Intelligence and Philanthropy

| | | |
|---|---|---|
| As AI is transforming society | → | AI is bound to transform philanthropy |
| It is not a matter of “if”, but of “when” and “how” | → | philanthropic organisations will adopt AI and confront its ethical impact |
| Little awareness and attention from the philanthropic sector | → | For use in Philanthropy Impact on society |
| Philanthropy operates with private logics to promote common good | → | Privileged position to guide AI towards common good |

# AI and Philanthropy: two areas of focus




**AI for Philanthropy**: developing tools that support philanthropic organizations' operations and strategies




**Philanthropy for AI**: Leveraging philanthropic organizations' potential to ensure the ethical and inclusive development of Artificial Intelligence

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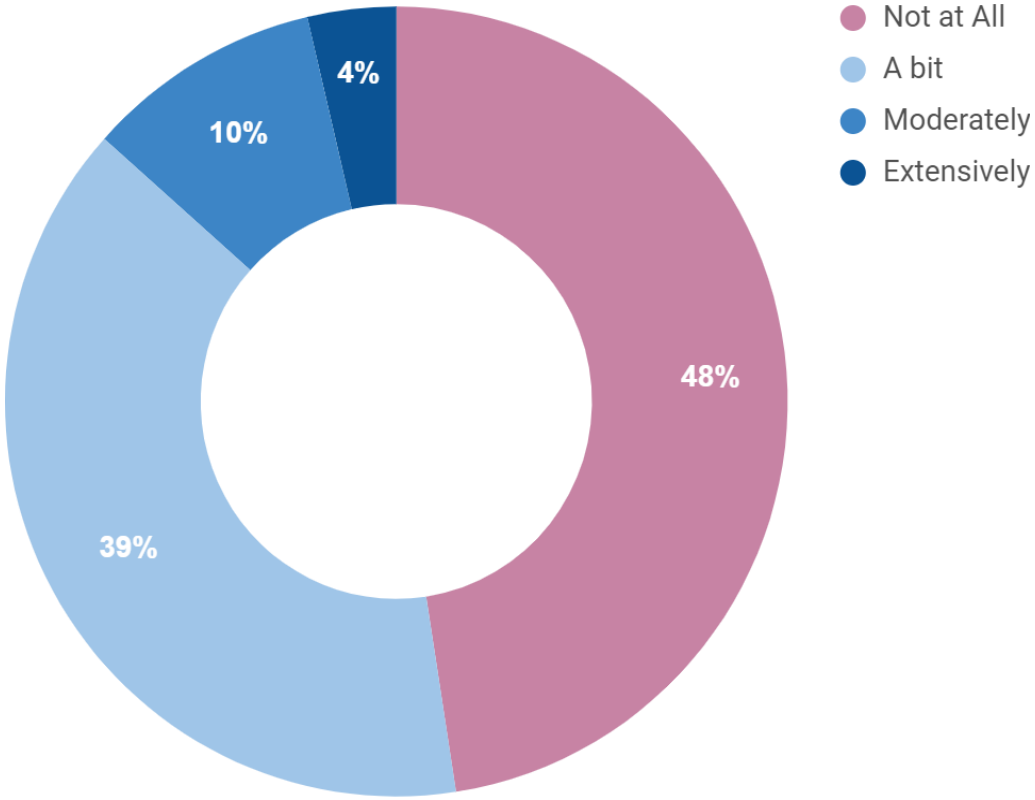
# A Survey of AI and Philanthropy among Swiss POs

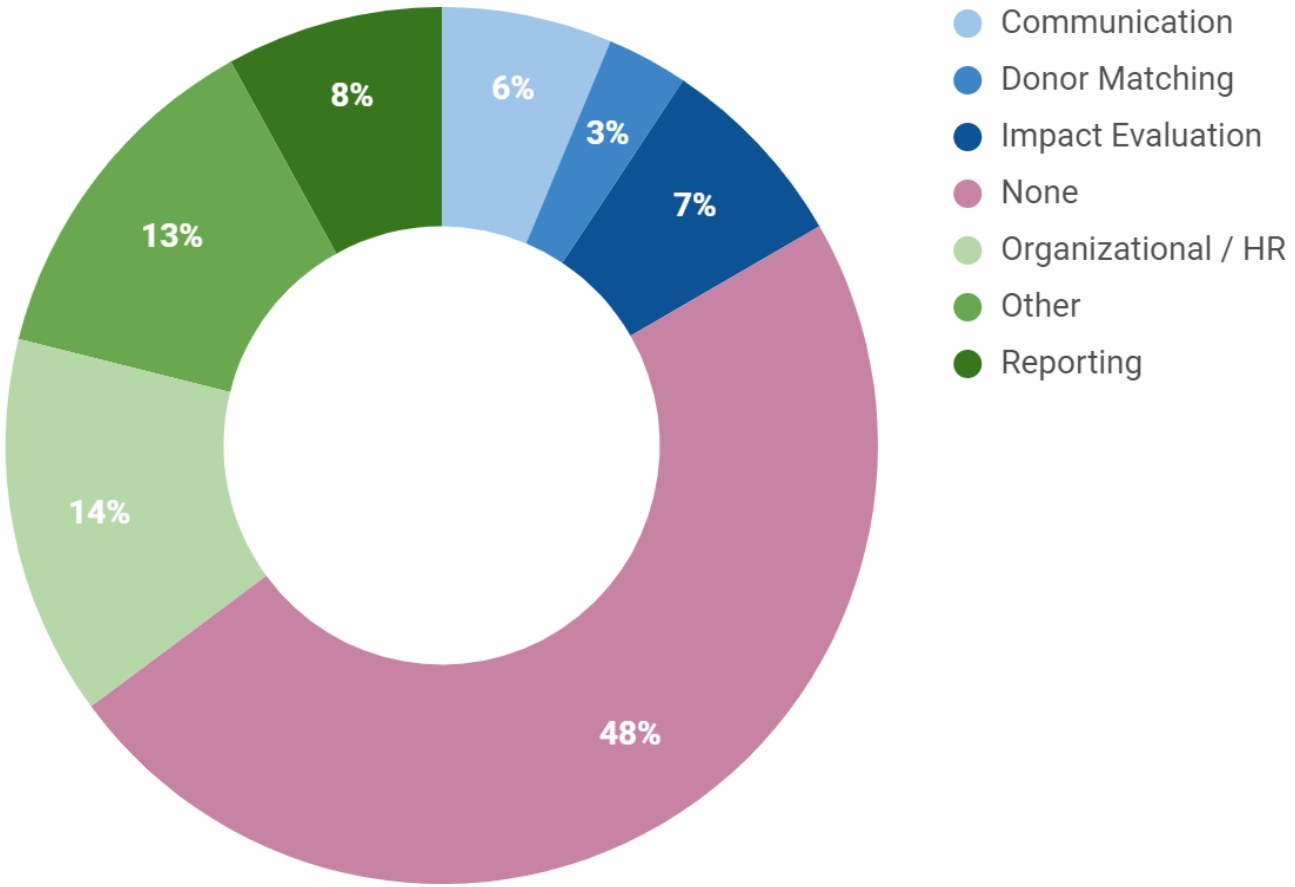
- Do organizations use AI?
- If yes, for what purposes is AI used?
- In which areas would organizations want to have AI assistance?
- What are the main concerns on the use of AI?

# Is AI used by Swiss POs?

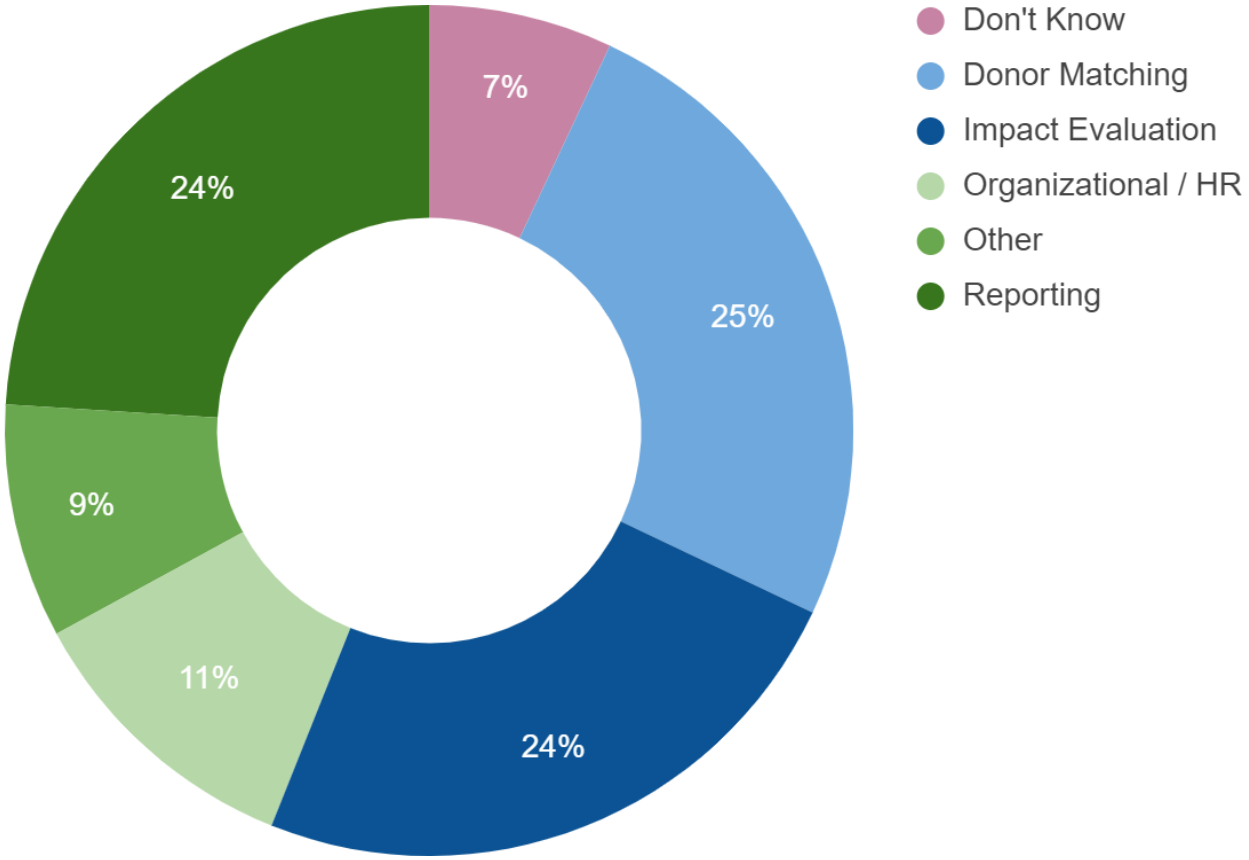



A word of caution: our results are likely biased (organizations using AI more likely to participate in the survey)

# In what area is AI Used?



# AI assistance would be helpful for my organization in:



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# What are the main concerns of using AI?

# A promising form of AI for Philanthropy: **Natural Language Processing**

- Decision tree classification of foundations in International Classification of Nonprofit Organizations (INCPO – International.)
  categories data = foundations' names - Litofcenko et al., 2019

- Several methods for classifying foundations in National Taxonomy of Exempt Entities (NTEE – U.S.)
  categories – Ma et al., 2021

Limitation: Classifications are static, philanthropy & society is dynamic

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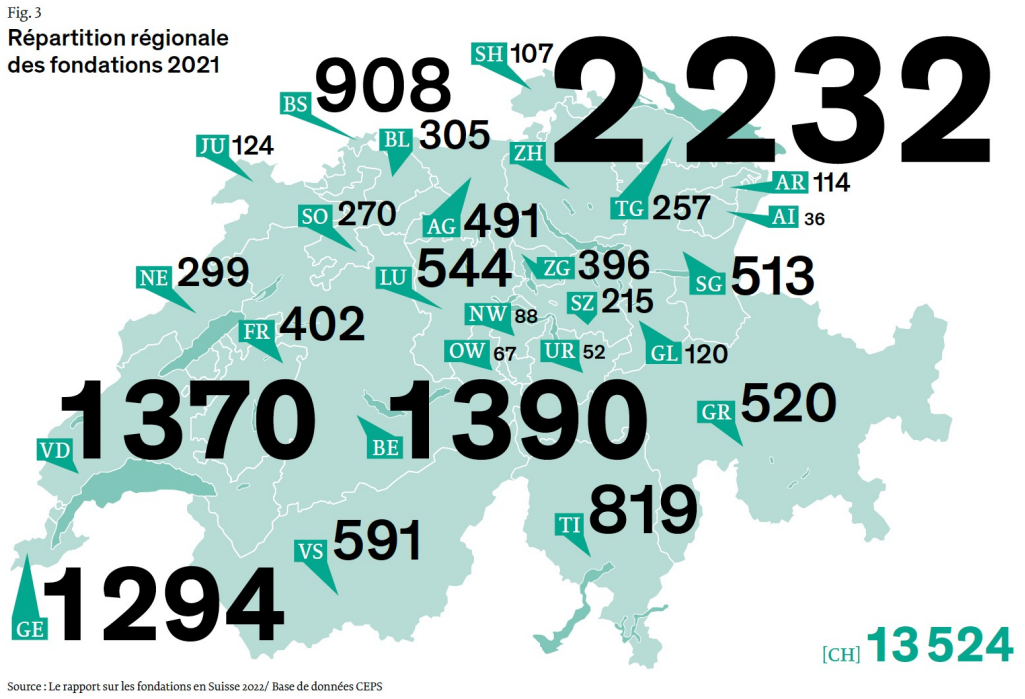
# Supporting Philanthropy Strategic Planning with NLP

- In what and in how many areas do POs operate?
- According to which Type do these work (Donors vs. Operating)?
- Are different Types of POs using a similar language?
- What motives determine POs engagement?
- To which extent are the U.N. SDGs addressed by POs?

# Philanthropy in Switzerland
# a use case on AI for Philanthropy

- About 17.000 POs in Switzerland
- No comprehensive database of these POs



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# Big NLP Data on Swiss POs

- Collected Mission Statements from ≈ 13.000 Philanthropic Organizations
- Identified 8485 unique and meaningful words from 12766 POs.

Translation → Word Tokenization → Lemmatization → TF-IDF scoring & pruning

| Fname | word | n | total | tf | idf | tf_idf |
|---|---|---|---|---|---|---|
| Foundation 1 | community | 1 | 4 | 0.25 | 0.6931472 | 0.1732868 |
| Foundation 1 | parish | 1 | 4 | 0.25 | 0.6931472 | 0.1732868 |
| Foundation 1 | promotion | 1 | 4 | 0.25 | 0.6931472 | 0.1732868 |
| Foundation 1 | youth | 1 | 4 | 0.25 | 0.0000000 | 0.0000000 |
| Foundation 2 | clubs | 1 | 4 | 0.25 | 0.6931472 | 0.1732868 |
| Foundation 2 | leaders | 1 | 4 | 0.25 | 0.6931472 | 0.1732868 |
| Foundation 2 | training | 1 | 4 | 0.25 | 0.6931472 | 0.1732868 |
| Foundation 2 | youth | 1 | 4 | 0.25 | 0.0000000 | 0.0000000 |

example

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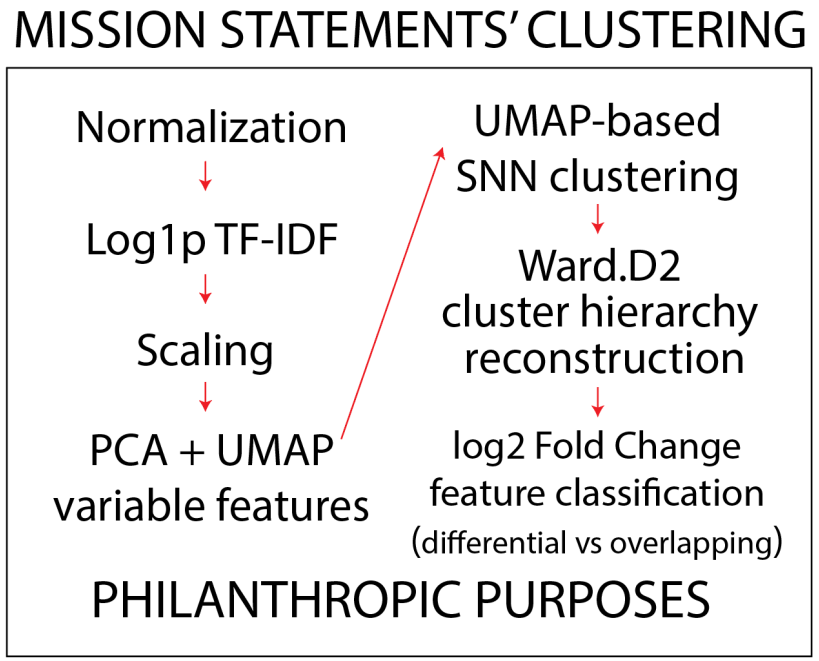
# Our approach in a nutshell

Machine Learning algorithms (NLP) to analyze Philanthropic Communications

Unsupervised Learning – Philanthropic Landscape
(Cluster organizations in Areas of Activity)



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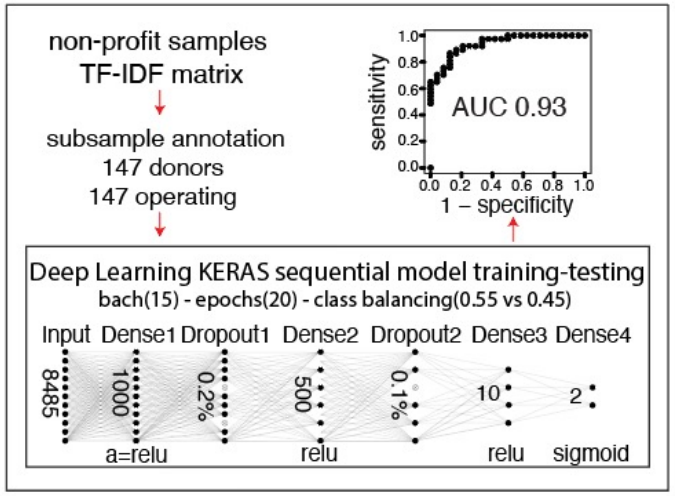
# Our approach in a nutshell

## Machine Learning algorithms (NLP) to analyze Philanthropic Communications

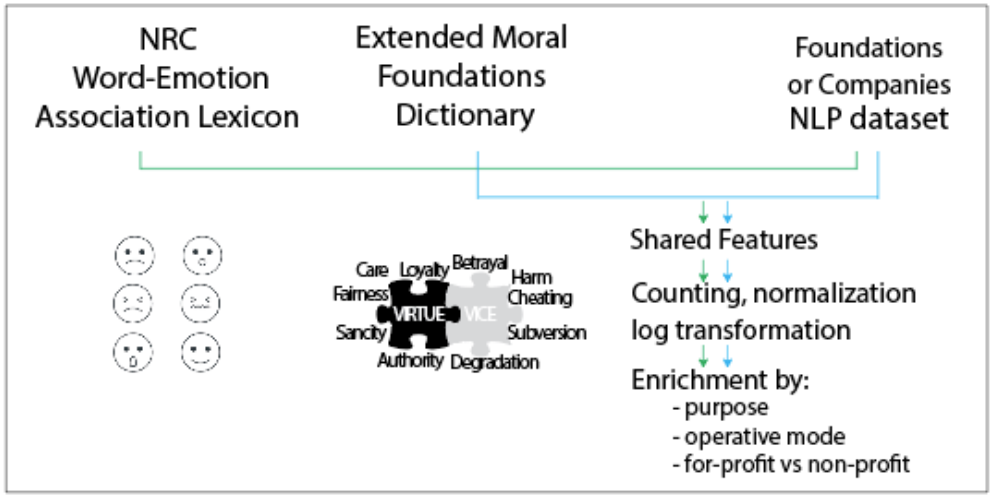
### Supervised Learning

### Operation Mode, communication overlap, motives, SDGs

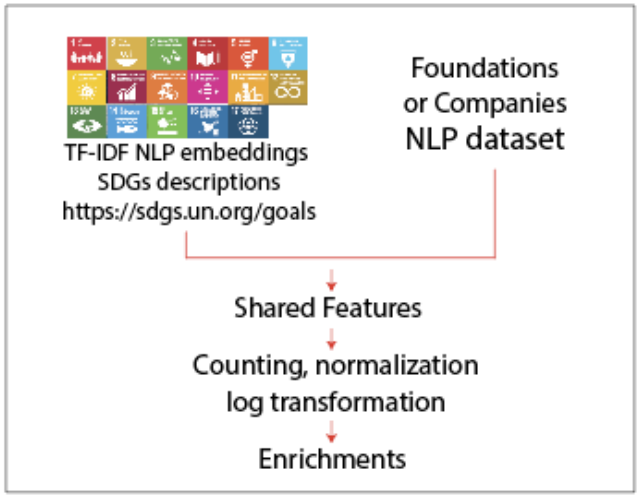
OPERATIVE MODE PREDICTION




LEXICON-BASED ANALYSIS: Emotions & Moral Values

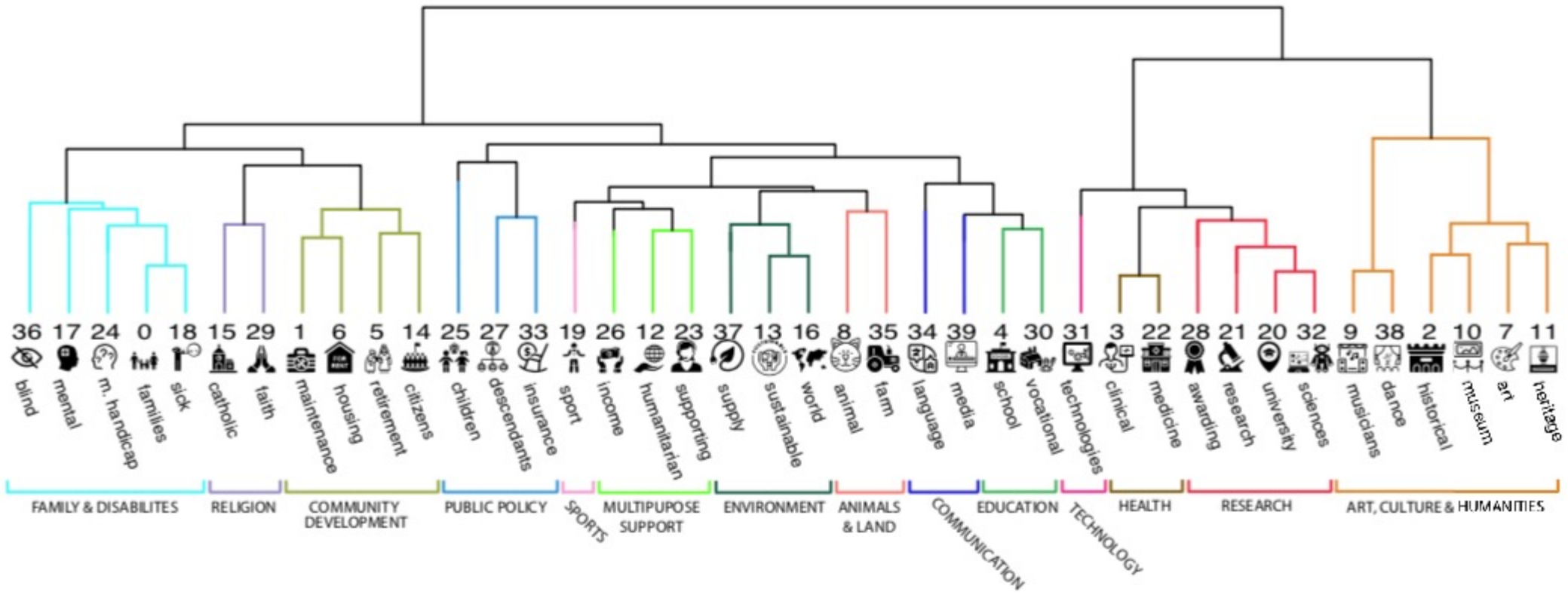



Sust Dev Goals (SDG) COVERAGE



# In what areas do POs operate

## 40 different Areas of Activity



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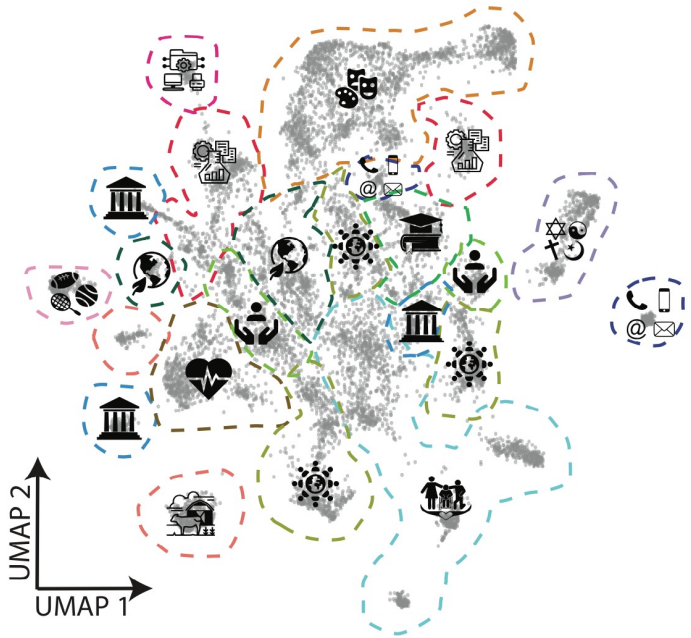
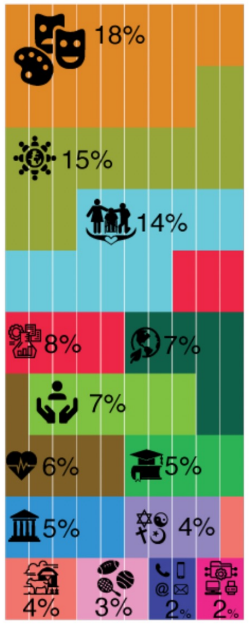
# In what areas do POs operate

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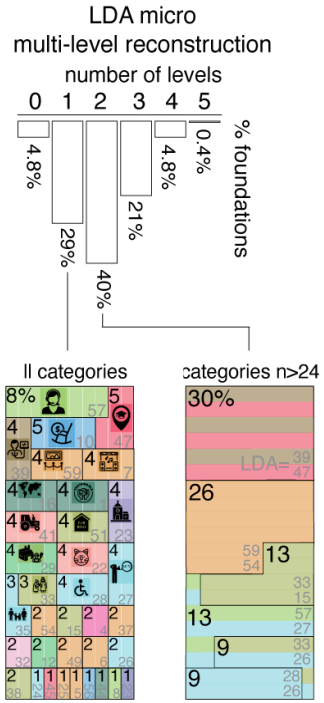
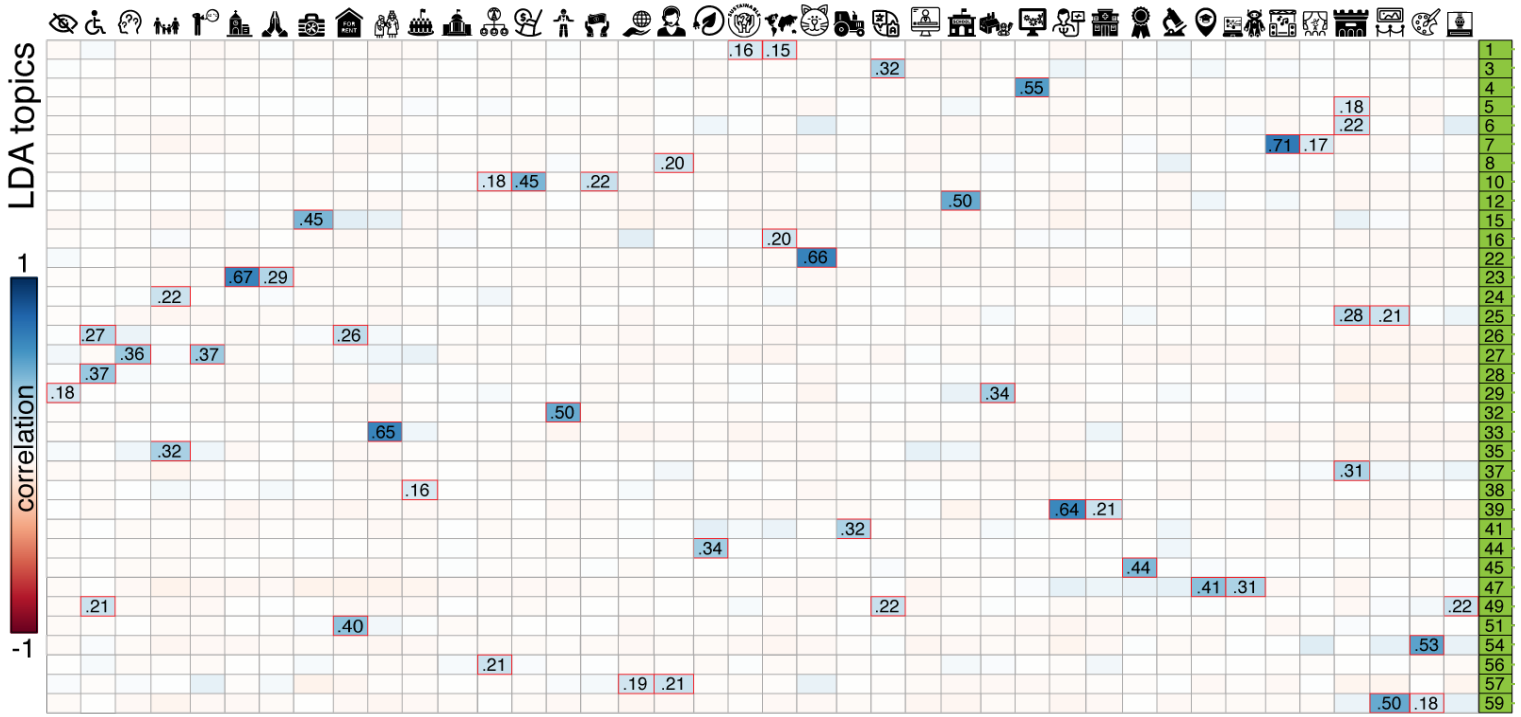
# How engaged is a PO in a given area of activity




rainbows4children

1° - 66% LDA topic 12 – education macrodomain

2° - 25% LDA topic 21 – family macrodomain

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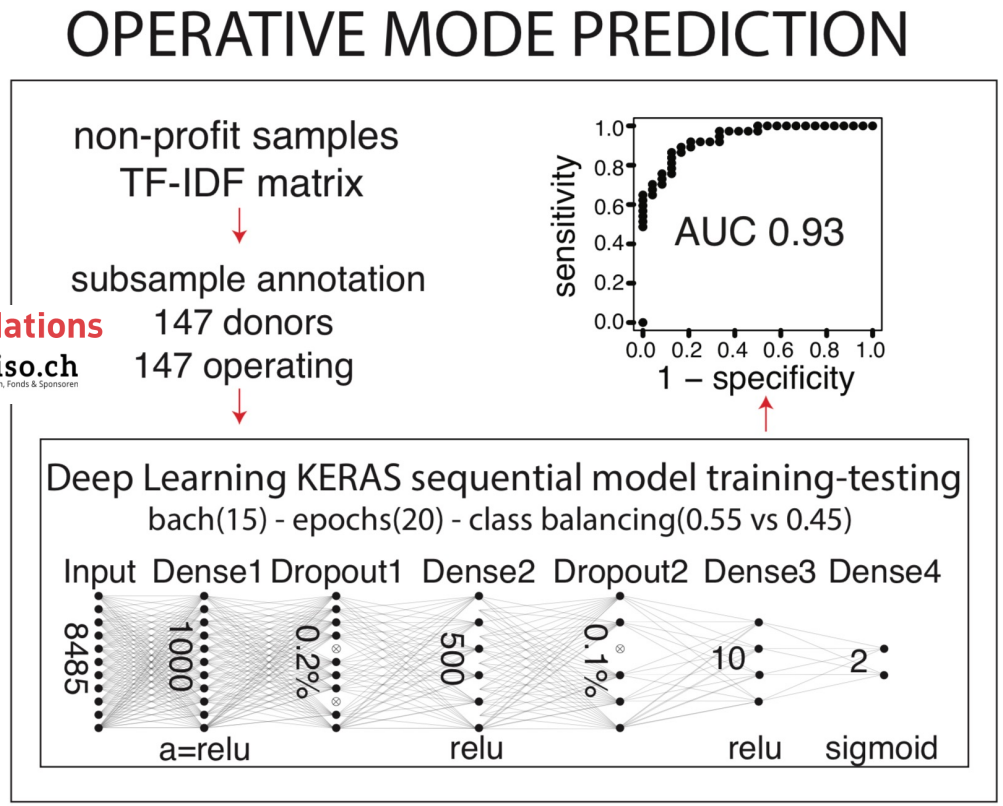
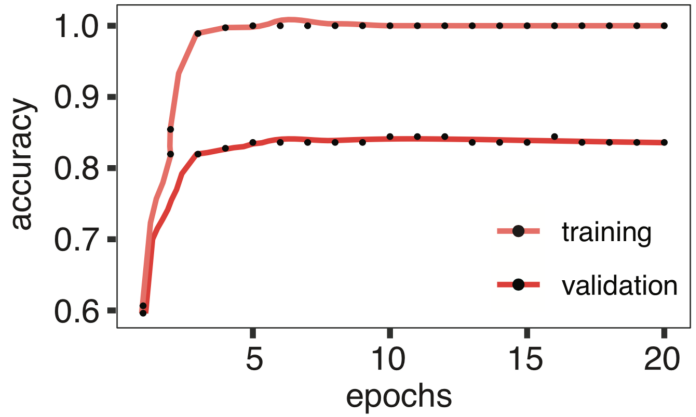
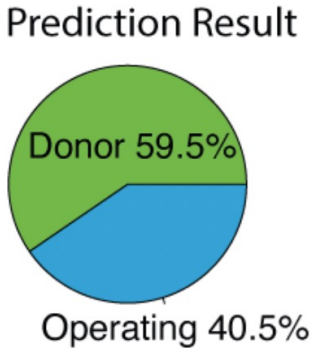
# Classifying Type of POs



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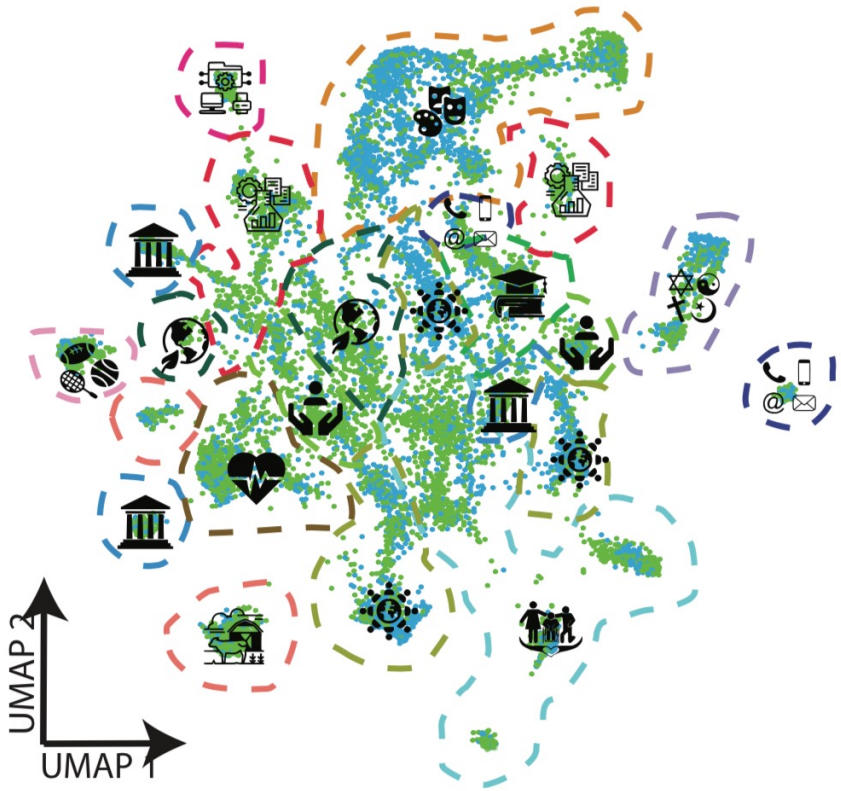
# Type of POs Across Areas of Activity



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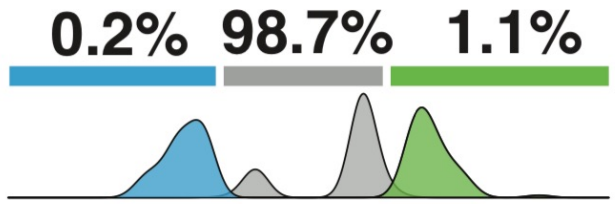
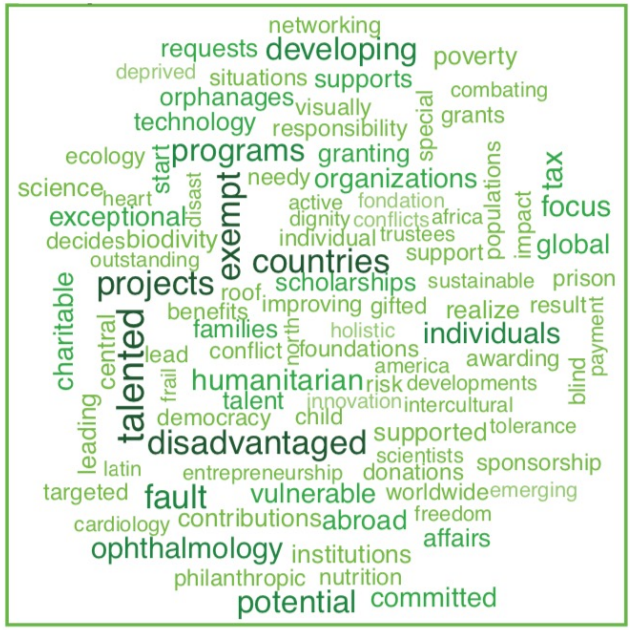
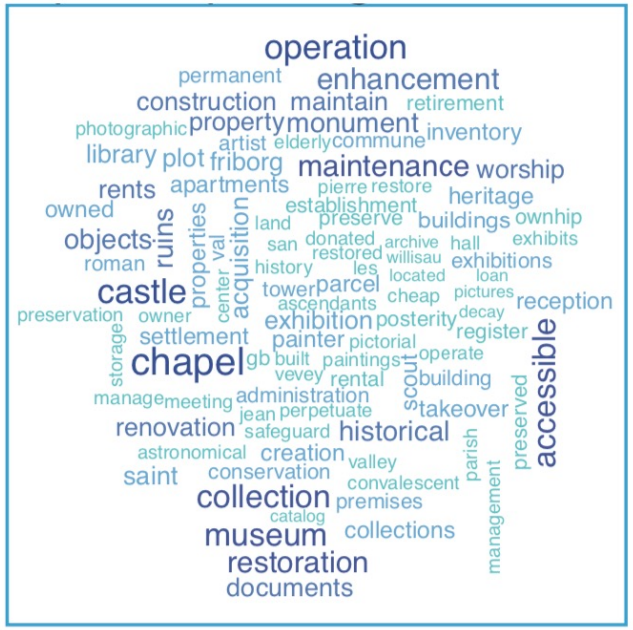
# Large overlap in language used by different POs




## Differential




## Overlapping

### 100 Most Generic Words

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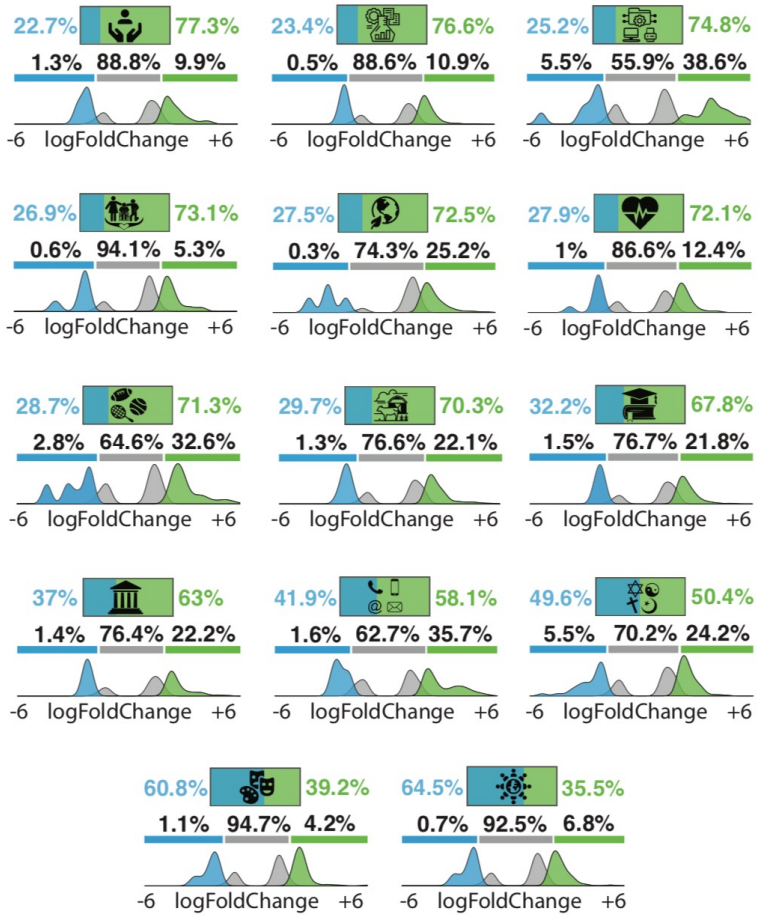
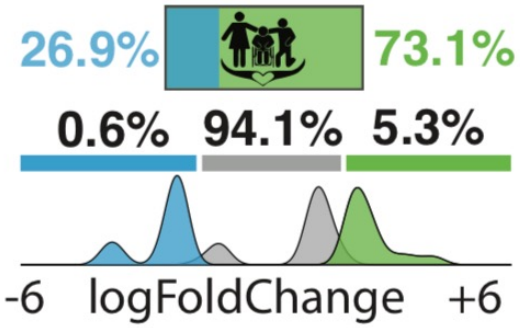
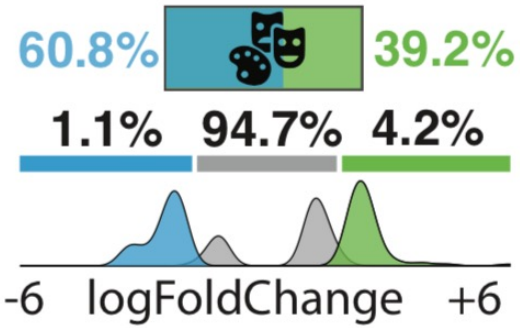
# Language Overlap Differs by Type of Activity

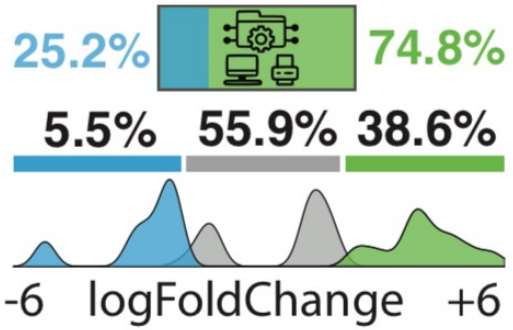


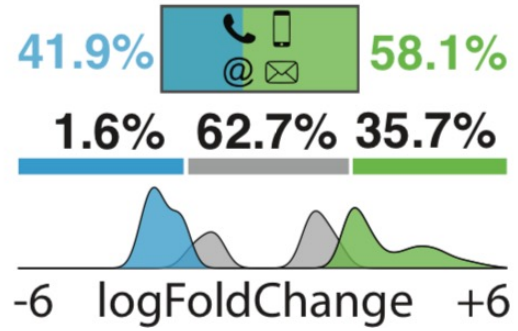

## High Shared Language




## Low Shared Language



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# “Related Dialect” Spoken in 6/14 areas of activity

- Related Dialects = 85% or more words shared across two languages (Eberhard, D. et al, 2020)

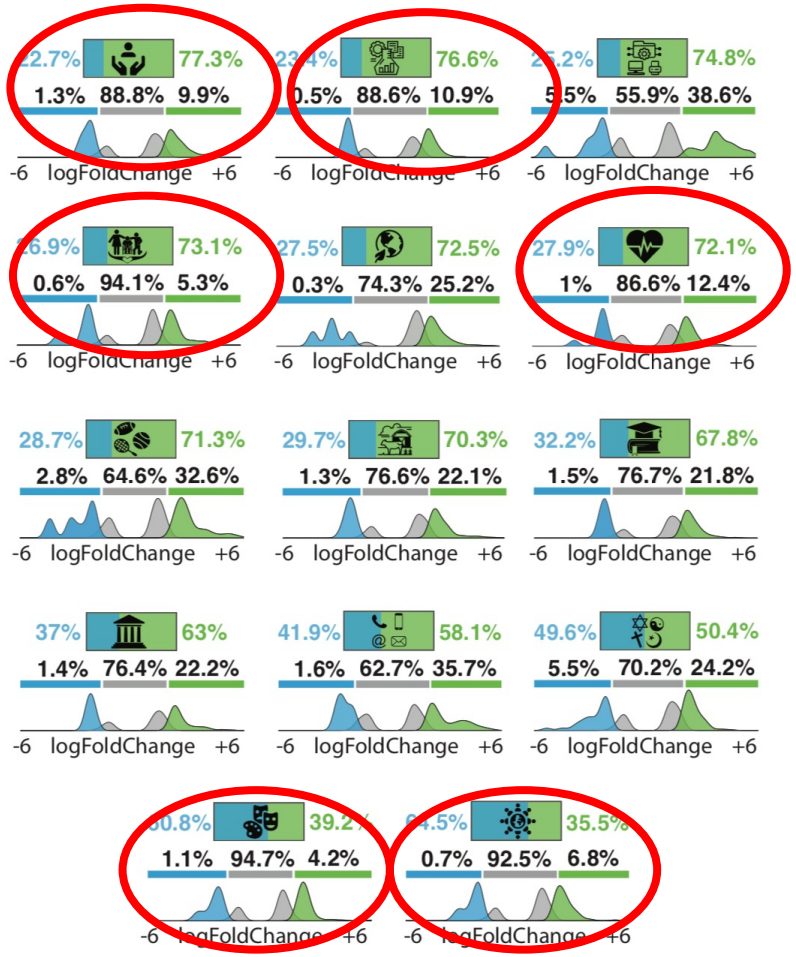

89%



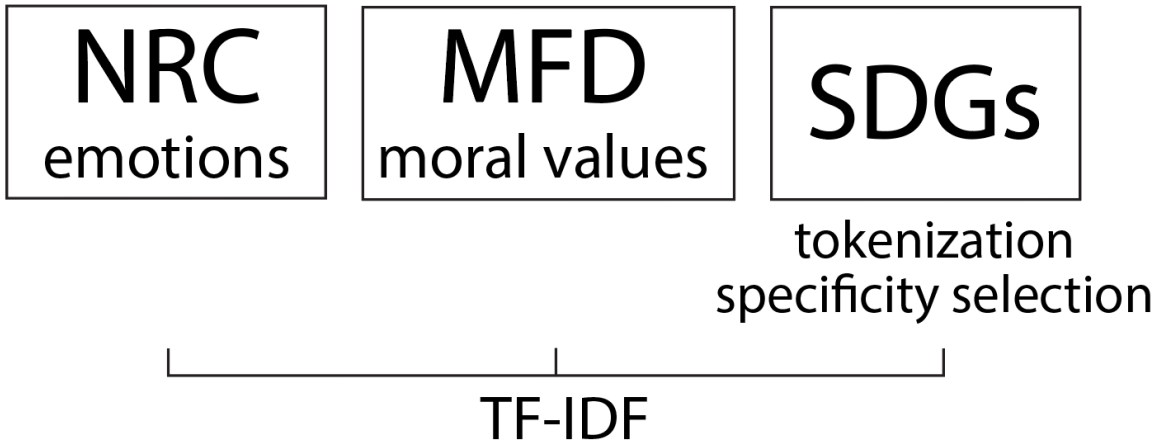
60%



27%

# Investigating Motives: “supervised learning”




Defining salient words related to
Emotions, Moral Values and the SDGs.

› Using these salient words to identify which organizations mention them in their mission statements to infer motives

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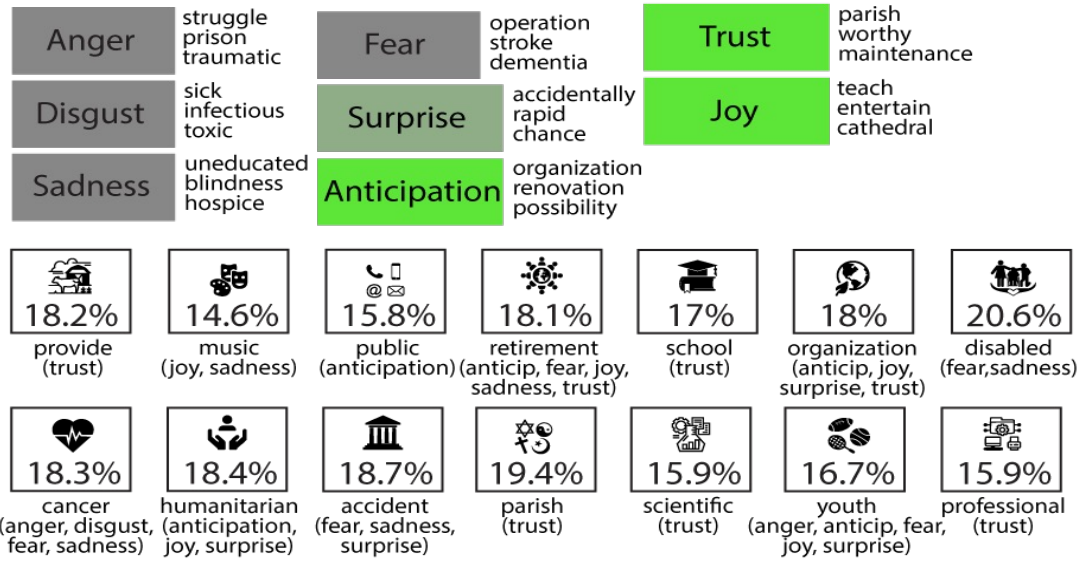
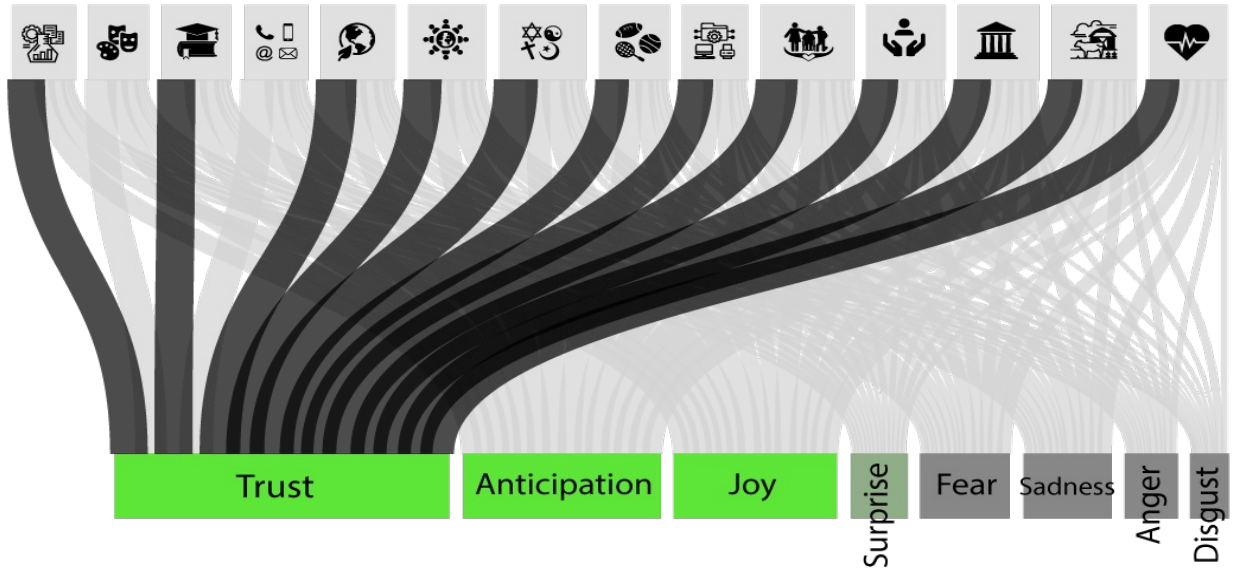
# Emotions



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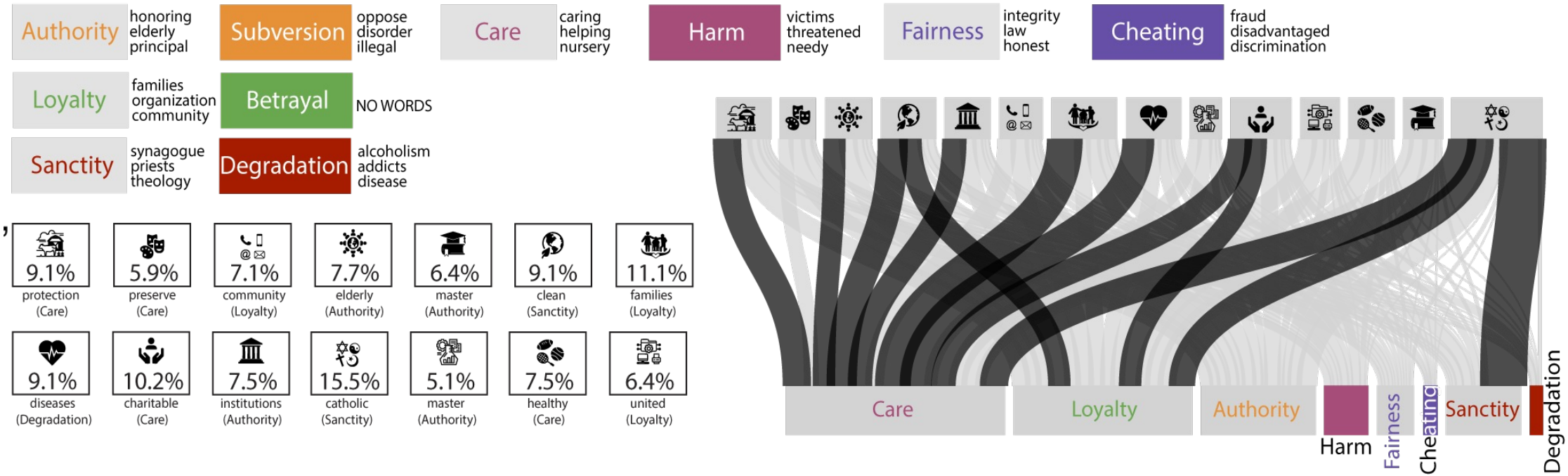
# Moral Values



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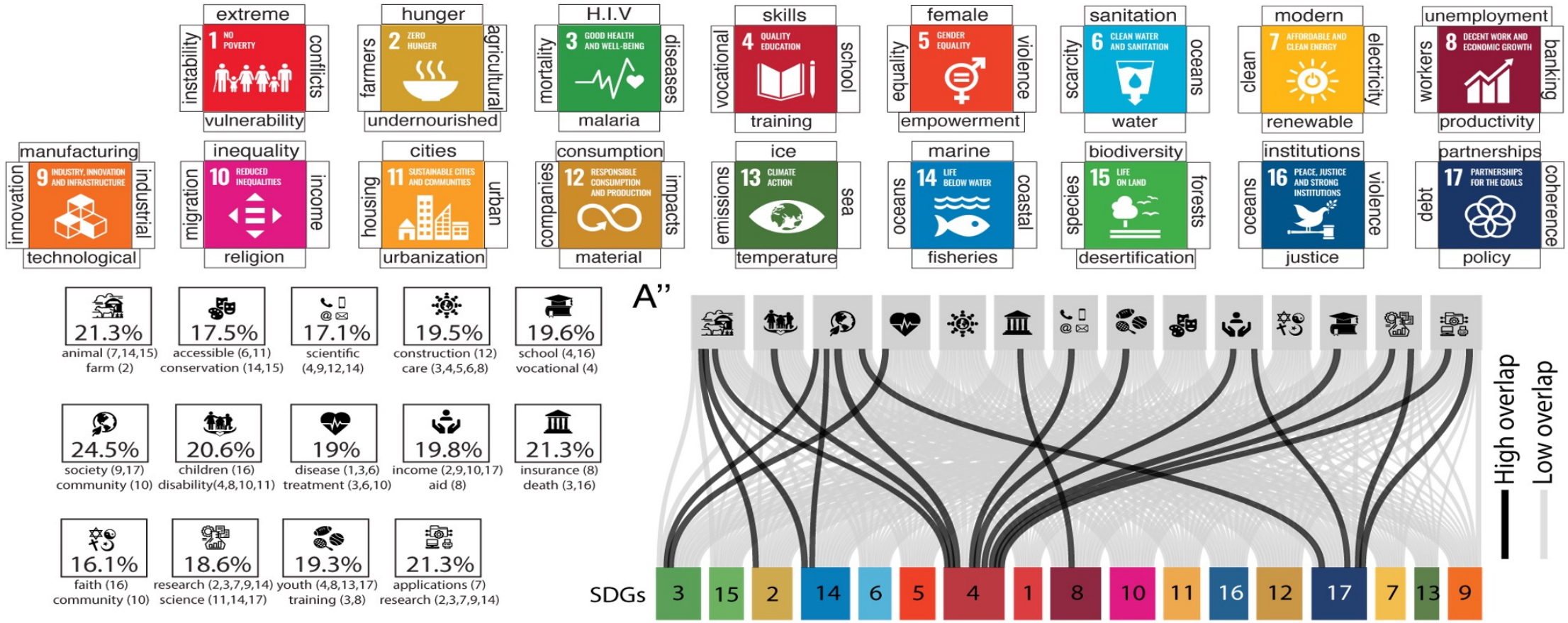
# Sustainable Development Goals



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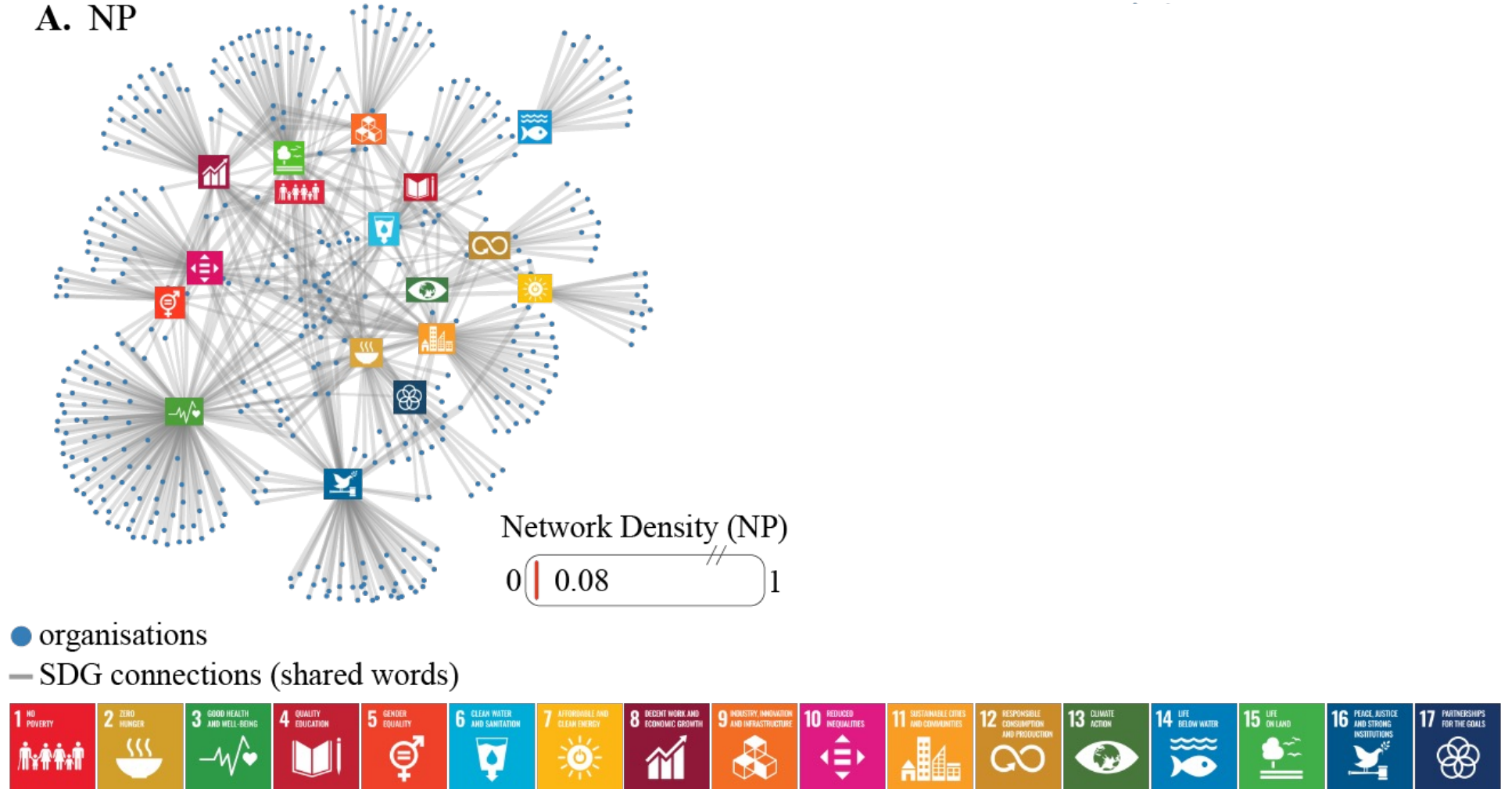
# Weak collaborations among POs in tackling the SDGs

***"SDG Connection-Network based on For-Profit missions"***



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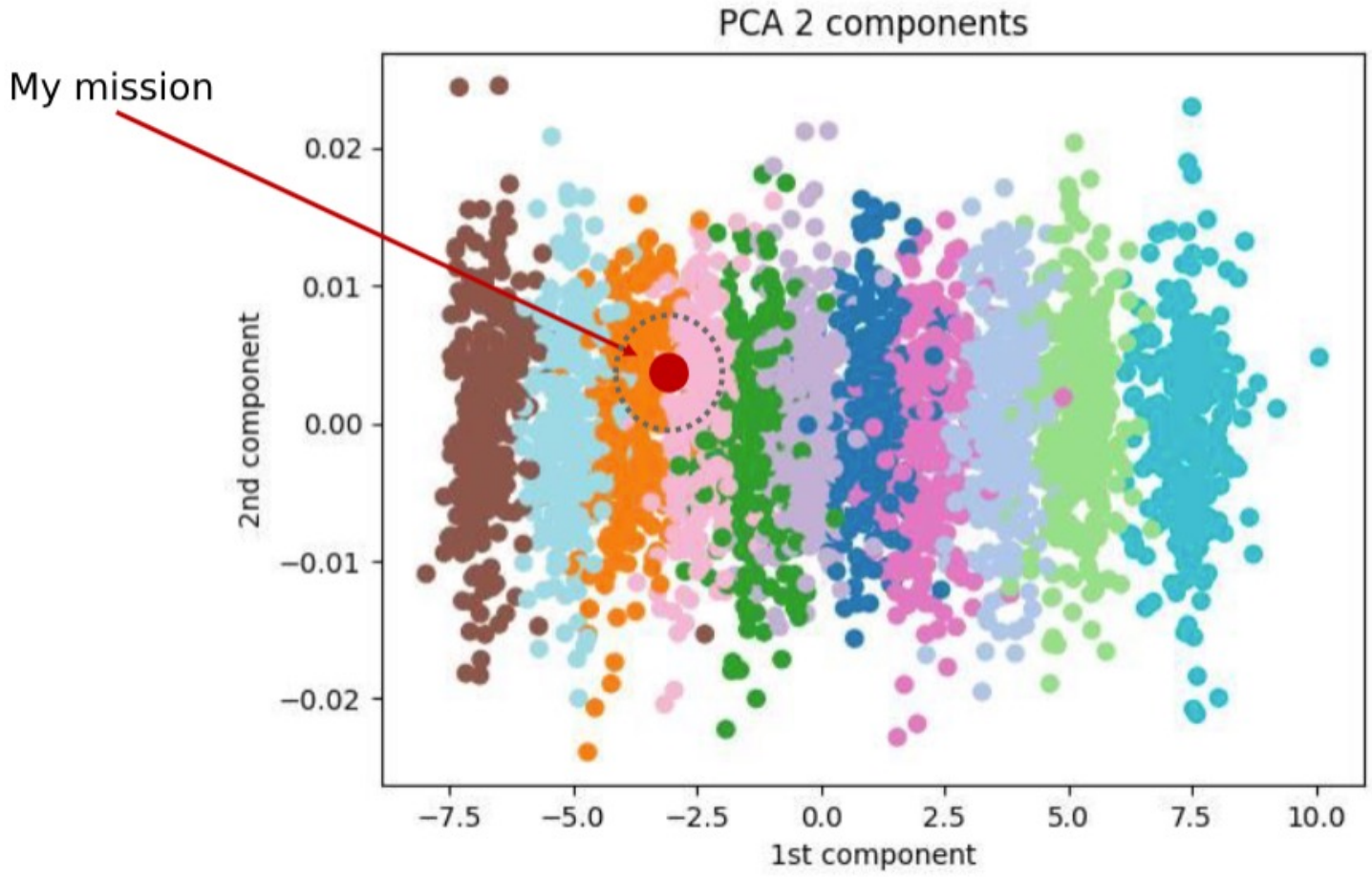
# From Classification to Flexible SDG-Localization



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# Conclusions

- AI can empower philanthropic collaboration by mapping POs:
  - Areas & Types of Activity
  - Geographical Distribution
  - Motivations, emotions & moral values
  - Informing Strategic Thinking to align with SDGs

- Key Advantages:
  - Can be used to find patterns too hard for humans to detect
  - Open Access, can benefit from inputs from anyone and easily replicable

# Thanks for your attention!

The AI and Philanthropy Team:

- *Lucia Gomez Teijeiro, PhD*
- Camilla della Giovampaola
- Hubert Halope
- Maria Cristiana Tudor
- *Nisa Thomas*

https://www.unige.ch/BehavioralPhilanthropyLab

Join us for the 10:45 workshop:

**Deep-Dive «Empowering philanthropy with AI and big data»**

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# Fragen und Anregungen?

Die Geschäftsstelle von Swissfundraising steht bei Fragen oder Anliegen immer gerne zur Verfügung.

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