

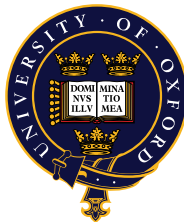
# Analyzing SHAPE Impact

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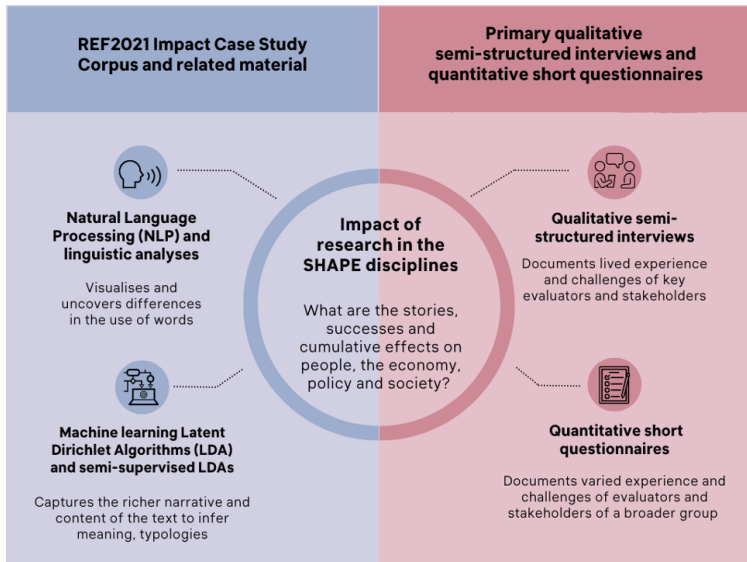
# Meet the Team



## Project Question

What are the stories, successes and cumulative effects on people, the economy, policy and society of the impact of research produced by the social sciences and humanities?

- Project aims to recognize, highlight, analyze and make accessible the multitude of forms that impact can take.
- Point of departure: Research Excellence Framework (REF) Impact Case Studies (ICS) 2021.



- 38 semi-structured interviews with panel members on:
  - Measurement of impact
  - Disciplinary particularities and interdisciplinarity
  - Characteristics of successful ICS
  - Future of impact

## Quotes

*"Because of the prestige ... REF brings to 'outreach' projects being championed by them, these women are now promoted and in more senior positions than otherwise possible"*

*"We have to think a lot more carefully about whether in fact it's a good thing to try and force very junior researchers, lecturers into impact because it is much harder to demonstrate impact as opposed to public engagement in a short period of time"*

- Case study narratives aided by ICS author interviews
- Example: unexpected ways of impacting business

#### The discovery and identification of King Richard III: economic and cultural impact



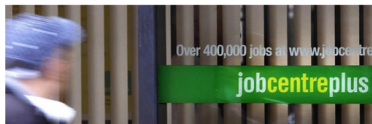
#### Using eye tracking research to improve training and performance under pressure



#### Improving productivity through better management practices

### Why the productivity gap?

21 May 2015



#### Hellblade: engaging video game players with Viking culture and contributing to success and innovation within the creative sector



# Our Survey Based Approach and Progress

- Online survey for over 500 panel members about:
  - Understanding **what impact means**
  - Prevalence of **different indicators**
  - Capacity to **demonstrate aspects of impacts**
  - Trends for the **future of impact**
  - **Audiences** reached

# The General Quantitative Approach

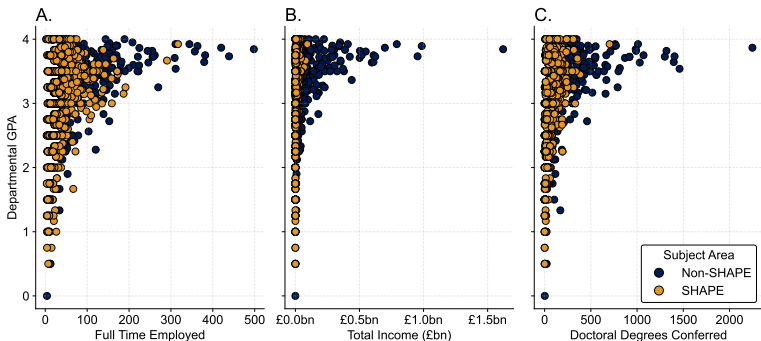
There are a multitude of things we are working on:

- High level descriptive statistics.
- Score inference at ICS level (new methodology).
- Deep dive into the scientometrics of underpinning research.
  - What are the characteristics of the authors?
- A thorough, frontier-level analysis of the topics and themes.

This is combined with the qualitative/survey approaches into:

- An online, interactive dashboard.

# Does SHAPE do More with Less?

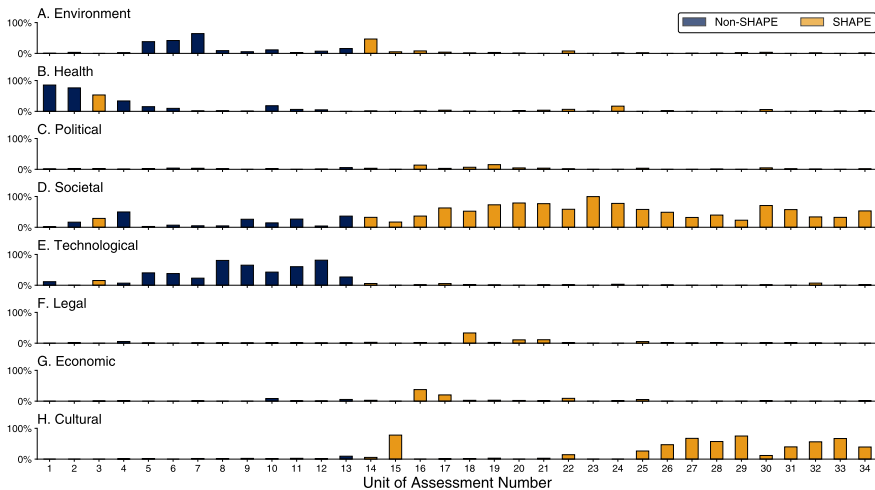


- Mean GPA (all Departments) of 3.168 (non-SHAPE) vs 3.1 (SHAPE).
- Mean GPA (FTE $\geq$ 100) of 3.558 (non-SHAPE) vs 3.368 (SHAPE).
- Mean GPA (50 $\leq$ FTE) of 3.012 (non-SHAPE) vs 3.051 (SHAPE).
- Mean GPA (1 ICS submitted) of 3.244 (non-SHAPE) vs 3.04 (SHAPE).

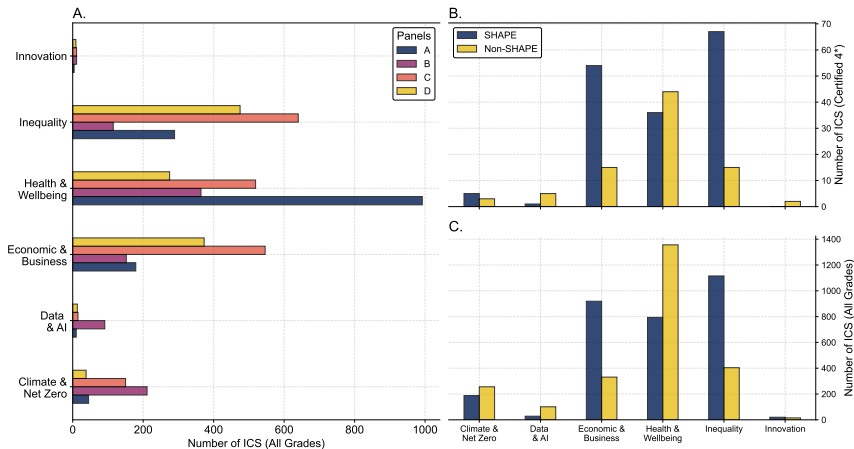
# What Impact is being generated by SHAPE?

- A decomposition of self-reported 'Impact Type'.
- Society's 'Grand Challenges' (via keyword searches)
- Word frequency and co-occurrence across Panels.
- Advanced topic modelling on ICS and underpinning abstracts.
  - Includes LDA and Large Language Models.
  - Includes different filters to train models.
  - Includes unsupervised, semi-, and supervised methods.
- Associated 'Fields of Research' underpinning ICS (Dimensions).
- 'Concepts' associated with underpinning research (Dimensions).
  - All analysis will be cross-correlated with things like 'funders'.

# Who is Generating What Types of Impact?

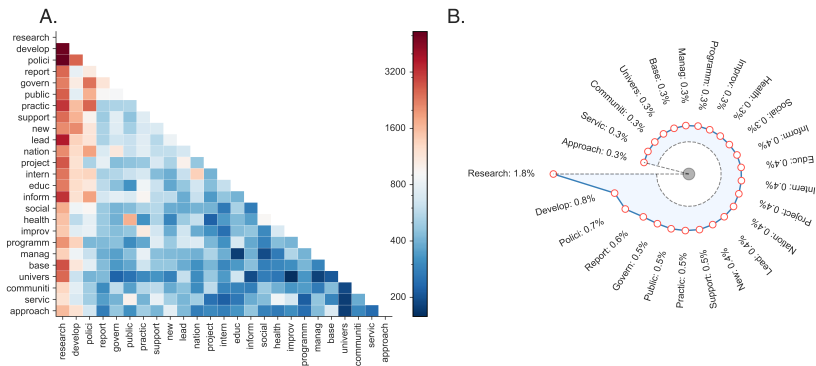


# Who is Solving the Six Grand Challenges?



- These may at some point soon be subject to revision.

# What can we Learn from Simple Wordage?



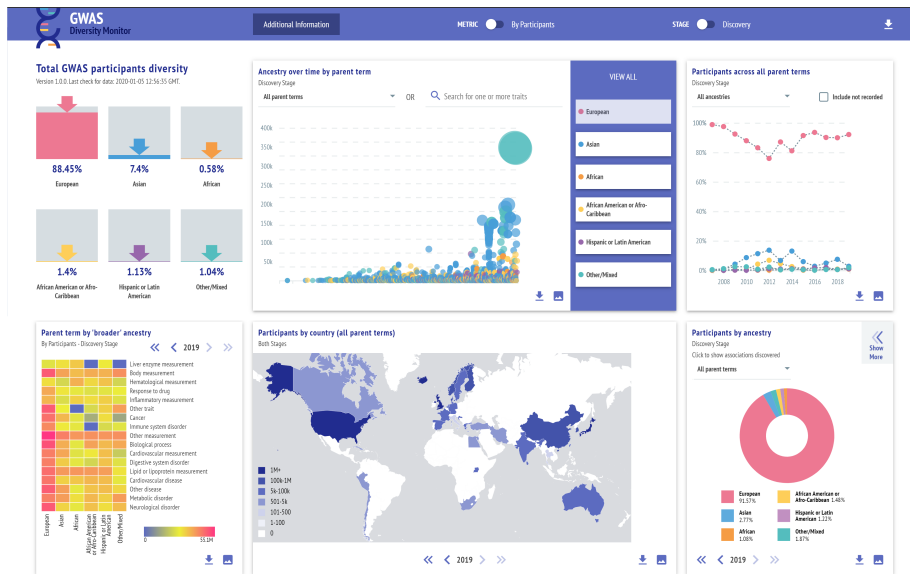
- Panel C most frequently contains (stemmed) words like 'Policy', 'Government', 'Education', 'public', 'social', 'community', and so forth.
- Panel D contains words pertaining to 'art', 'exhibitions', and 'museums'.

# Introducing the Project Dashboard

This dashboard merges together all of our other approaches.

- It will be publicly facing and interactive.
- Crucially, it will allow filtering of ICS based on 'topics'.
- It will also host augmented version of our enhanced dataset.
  - It'll also host 'ngrams', and link to project report.
- It will be hosted on an AWS LightSail instance.
  - To be created in Dash and Plotly.

We are currently proposing '[shape-impact.co.uk](https://shape-impact.co.uk)' as the address.



# Risks and Challenges

Always risks and challenges as mixed-methods work develops:

- Limitations of Panel members to comment on ICS.
- Inherent subjectivity of narrative approach.
- Research heterogeneously entered, hard to extract.
- Inferring ICS-level scores difficult, little training data.
- Dashboard must satisfy many different stakeholders.

## With Thanks!

ACADEMY  
of SOCIAL  
SCIENCES



- Gio Epifani (Interviews)
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- Simon Cooper (Literature)
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- Linda Li (Topic Modelling)
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