AESIS AUTUMN COURSE 2019

Methods and Instruments for Assessing the Societal Impact of Research

6-8 November, London

AESIS
NETWORK FOR ADVANCING & EVALUATING THE SOCIETAL IMPACT OF SCIENCE

uk arma

EARMA
EUROPEAN ASSOCIATION OF RESEARCH MANAGERS AND ADMINISTRATORS

euroCRIS
Current Research Information Systems

KING'S College LONDON

DAY 2

#ASIR19
@AESISNET

WIFI: CLOUD

OVERVIEW OF THE PROGRAMME

Day 1	Introductions
	Defining and assessing Institute's Strengths
	Introduction to the Case Study
	Interactive discussions
Day 2	**Integrating impact indicators in strategy**
	Preparation Case Study
	Research Information Systems and metrics
	Interactive discussions
Day 3	Disciplinary differences and conflicting interests
	Case Study Presentation
	Closing
	Social programme

Defining your institute's strengths and how to relate this to a portfolio of impact indicators

Rutger Engels
Rector magnificus of the
Erasmus University of Rotterdam

Defining your institute’s strengths

and how to relate them to a portfolio of impact indicators.

Prof. Rutger Engels
Rector Magnificus Erasmus University Rotterdam

Dominique van Deursen
Data Scientist at BI Center, Erasmus University

Wilfred Mijnhardt
Policy Director Rotterdam School of Management

Today’s agenda

1. Why an Impact Strategy
2. Who to convince: Partnering and Hurdles
3. Decisions for creating an impact system in your institute

1. Why an Impact Strategy

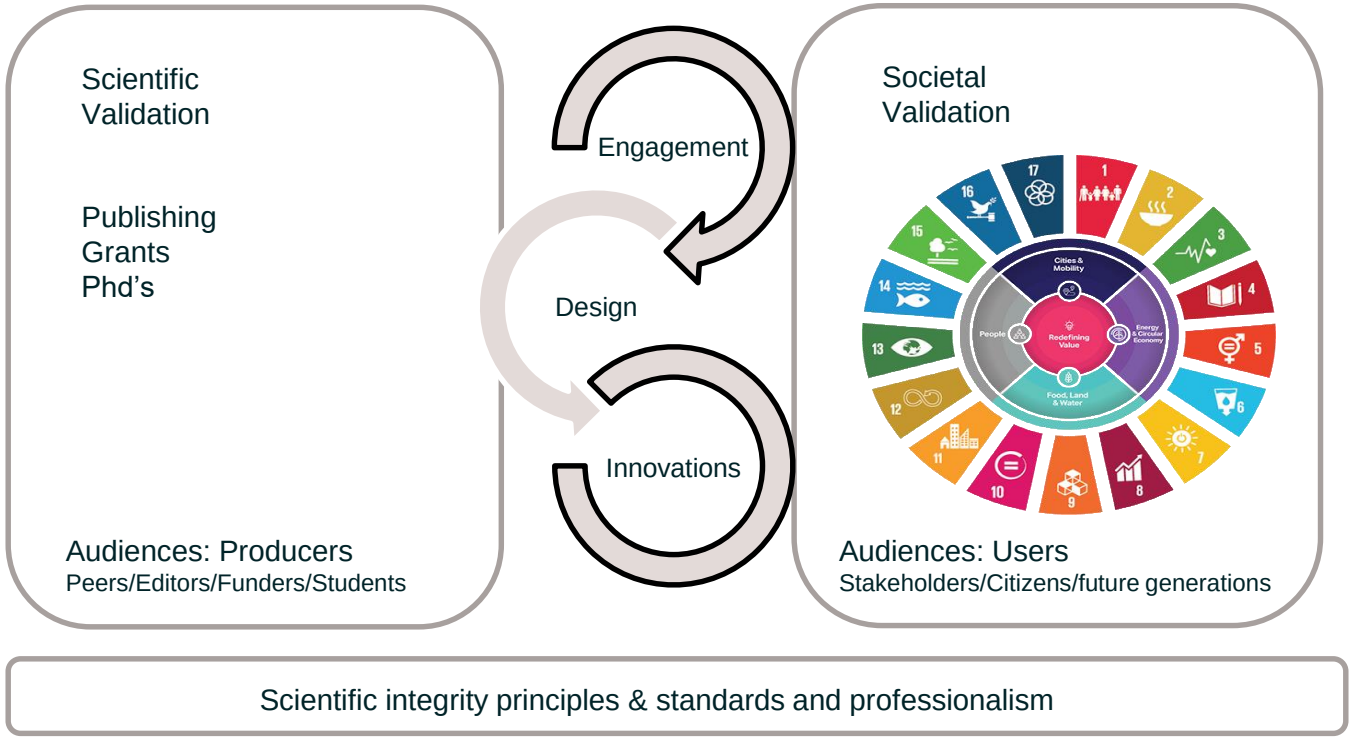
On the ambitions to contribute to a sustainable society.

Setting the Scene: Limitations of the linear growth model

Incentive	Intended effect	Actual effect
Publications	Higher productivity	• Incremental papers, • Poor methods, • Reduced quality peer review
Citations	Reward quality work that influences others	• Inflated citations lists • Reviewers/editors enforce their work
Grant Funding	Viability Research	• Too much time writing proposals • Overselling positive results, • downplay of negative results
PhD productivity + Placement	Prestige PhD Programme	• Oversupply of PhDs.

Edwards Marc A. and Roy Siddhartha, 2016: http://online.liebertpub.com/doi/abs/10.1089/ees.2016.0223

From valorization (linear thinking) to dual validation (engagement/innovation thinking)



New responsible turn in academia: examples of global manifestos and new principles on metrics, methods and data integrity

Leiden Manifesto
for research metrics

San Francisco
DORA
Declaration on Research Assessment

science
in transition

nature human behaviour

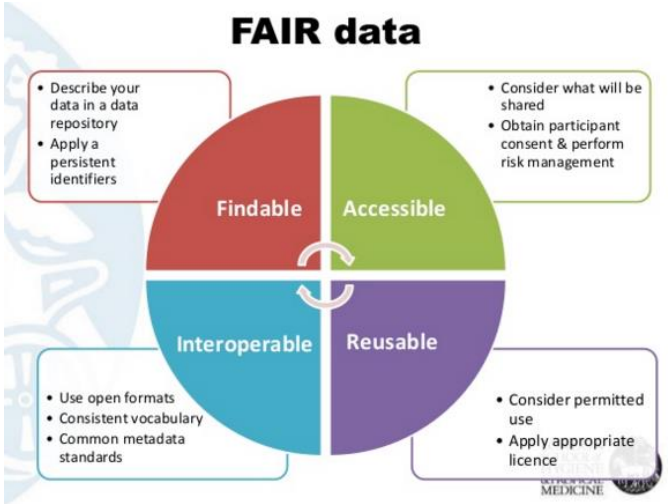
PERSPECTIVE

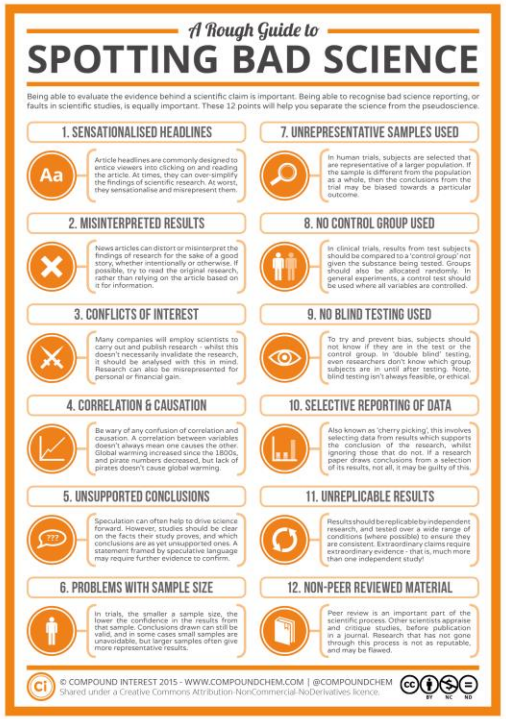
PUBLISHED: 10 JANUARY 2017 | VOLUME: 1 | ARTICLE NUMBER: 0021

OPEN

A manifesto for reproducible science

Marcus R. Munafò[1,2*], Brian A. Nosek[3,4], Dorothy V. M. Bishop[5], Katherine S. Button[6], Christopher D. Chambers[7], Nathalie Percie du Sert[8], Uri Simonsohn[9], Eric-Jan Wagenmakers[10], Jennifer J. Ware[11] and John P. A. Ioannidis[12,13,14]





The question to ask ourselves

1. Limits to linear growth have been reached
2. Responsible turn in academia has started

How will we develop a responsible method of integrating impact indicators in research strategies?

The answer is embedded in our University's Strategy

"We want to contribute to a sustainable society by critical and dedicated thinking, teaching and action in research, education and operations, as well as in our partnerships."

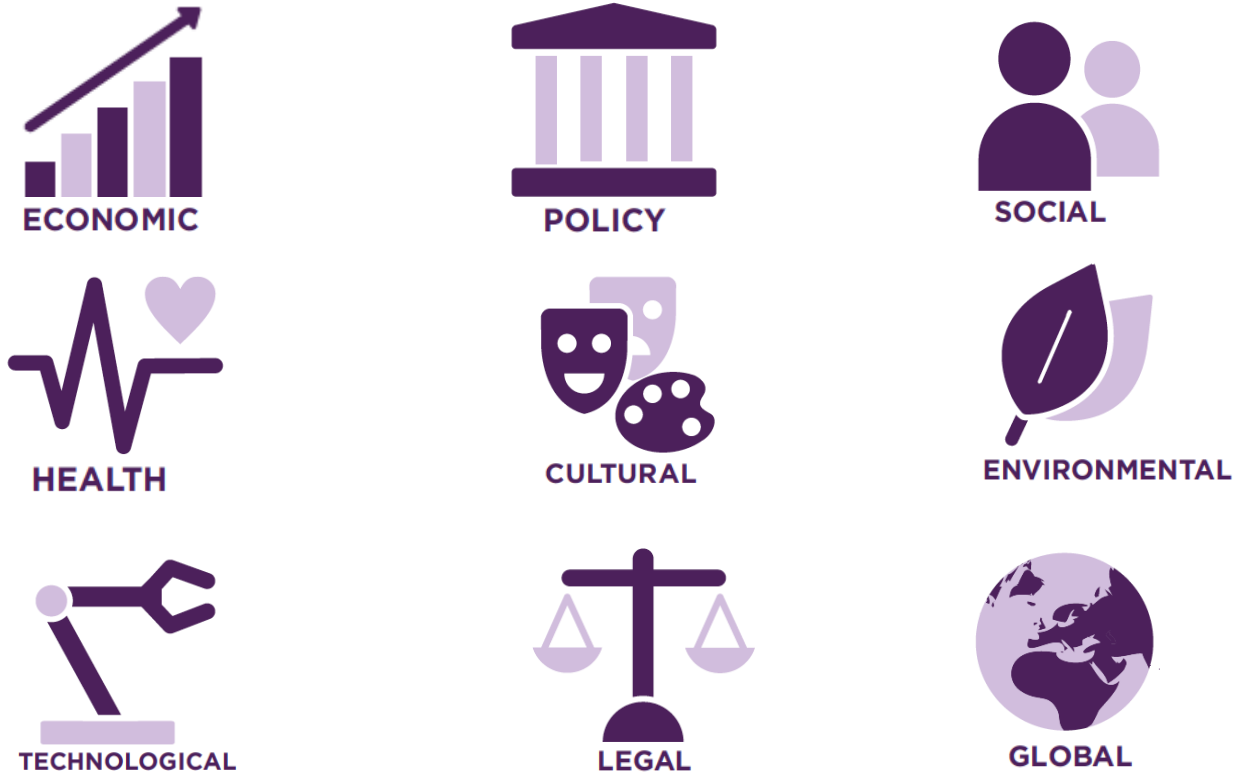
2. Who to convince - Partnering and Hurdles

How can we help those making viable decisions?

Framing Impact

9 types of Impact

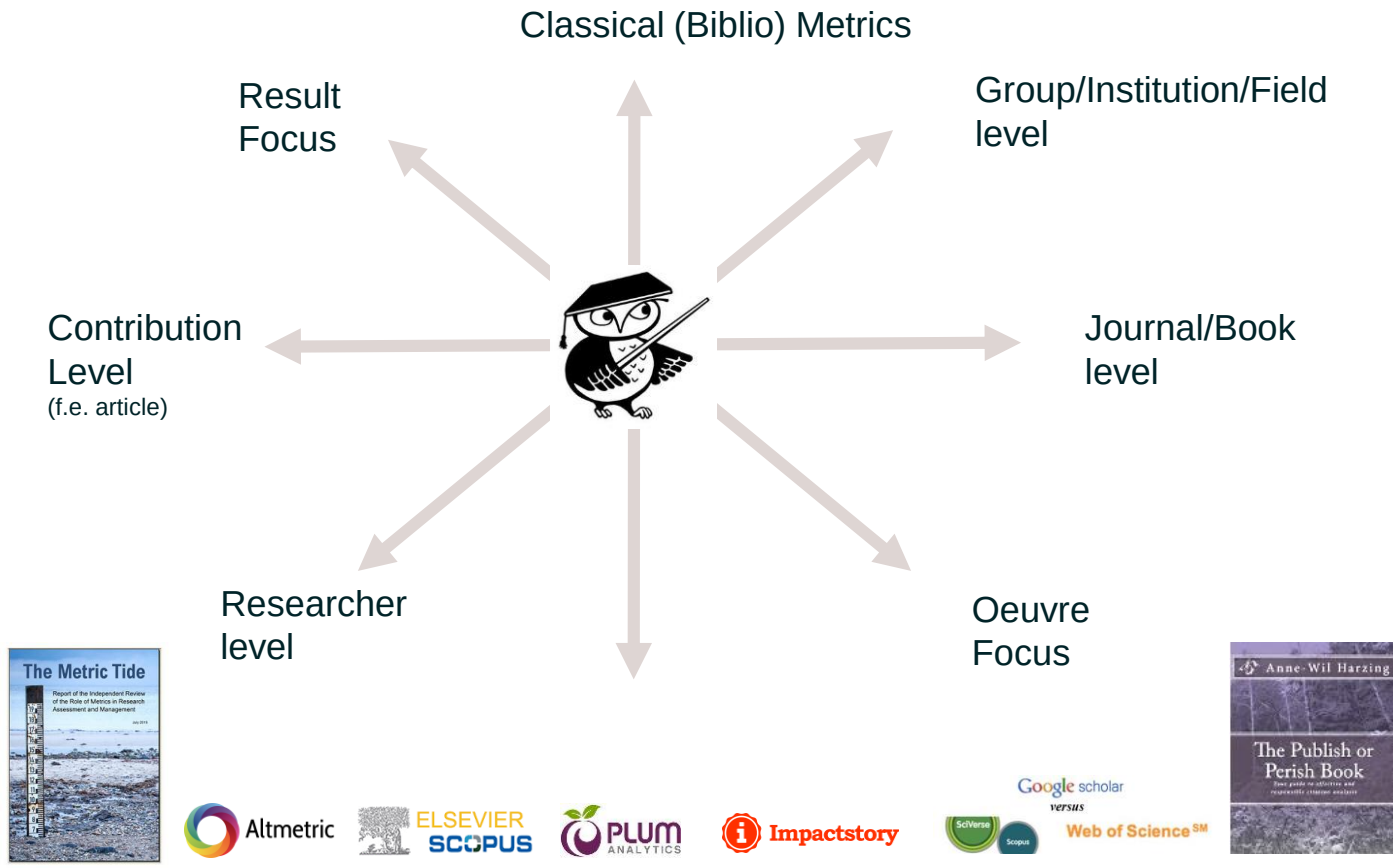
RUSSELL GROUP



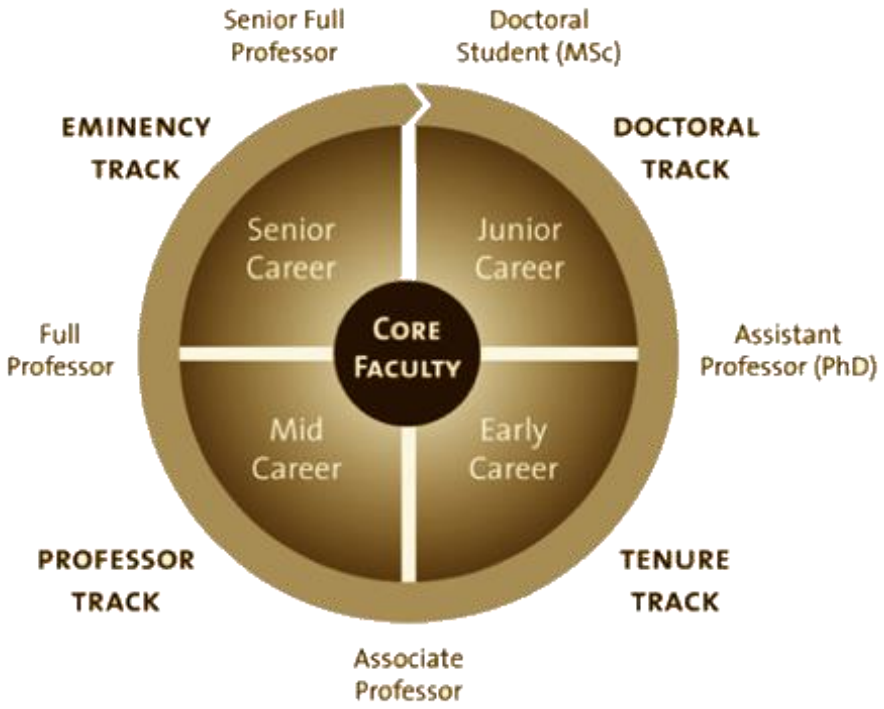
http://russellgroup.ac.uk/media/5324/engines-of-growth.pdf

Understanding Impact Diversity: Types of impact

Balancing Responsible Metrics



Academic Career Cycle model: linear thinking in 4 tracks



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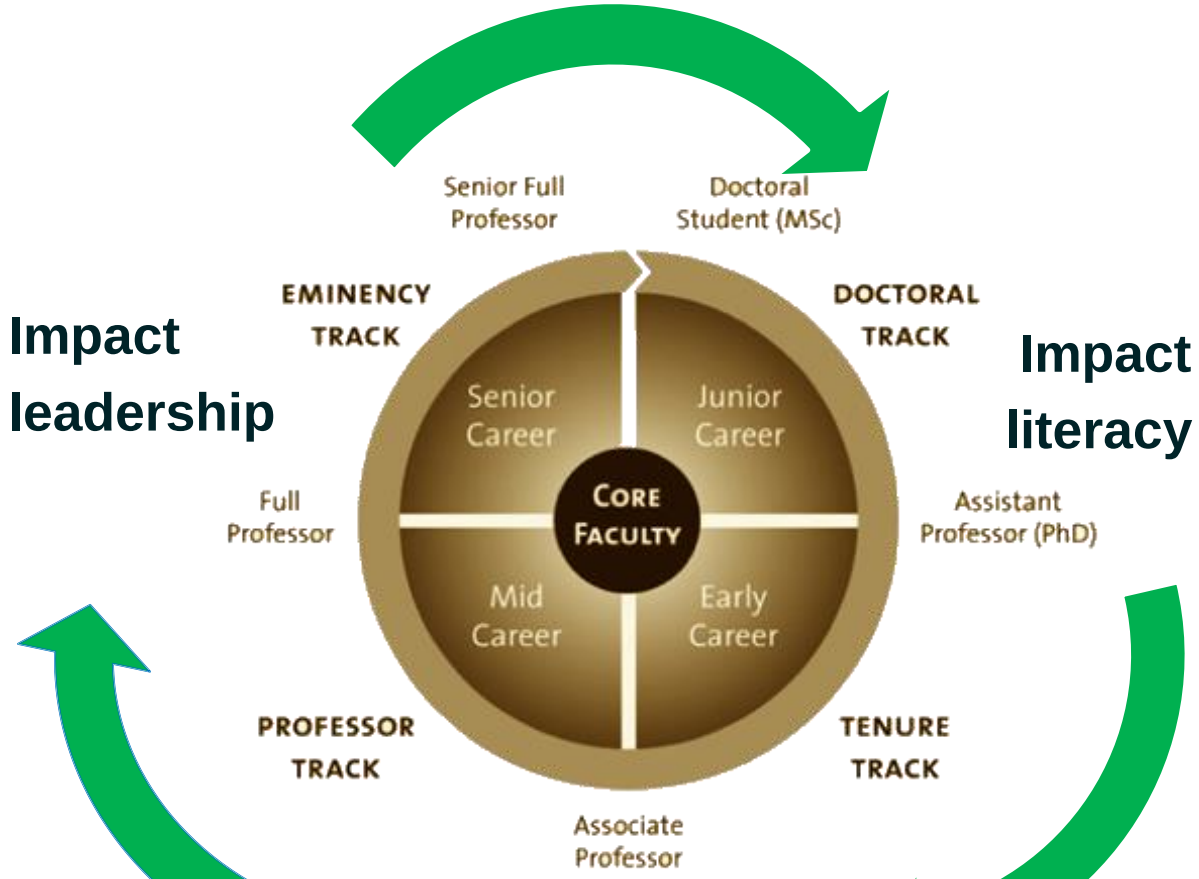


Impact leadership

Impact literacy

Impact praxis

The goals and challenges of impact assessment

Goals:

A first approach to an Impact assessment method should:

1. Fit your institute’s structure and strategy.

2. Be designed to aid decision makers in achieving their short and long term goals.

Challenges:

1. Identifying the right indicators of impact measurement

2. Providing the right support tool for the right people

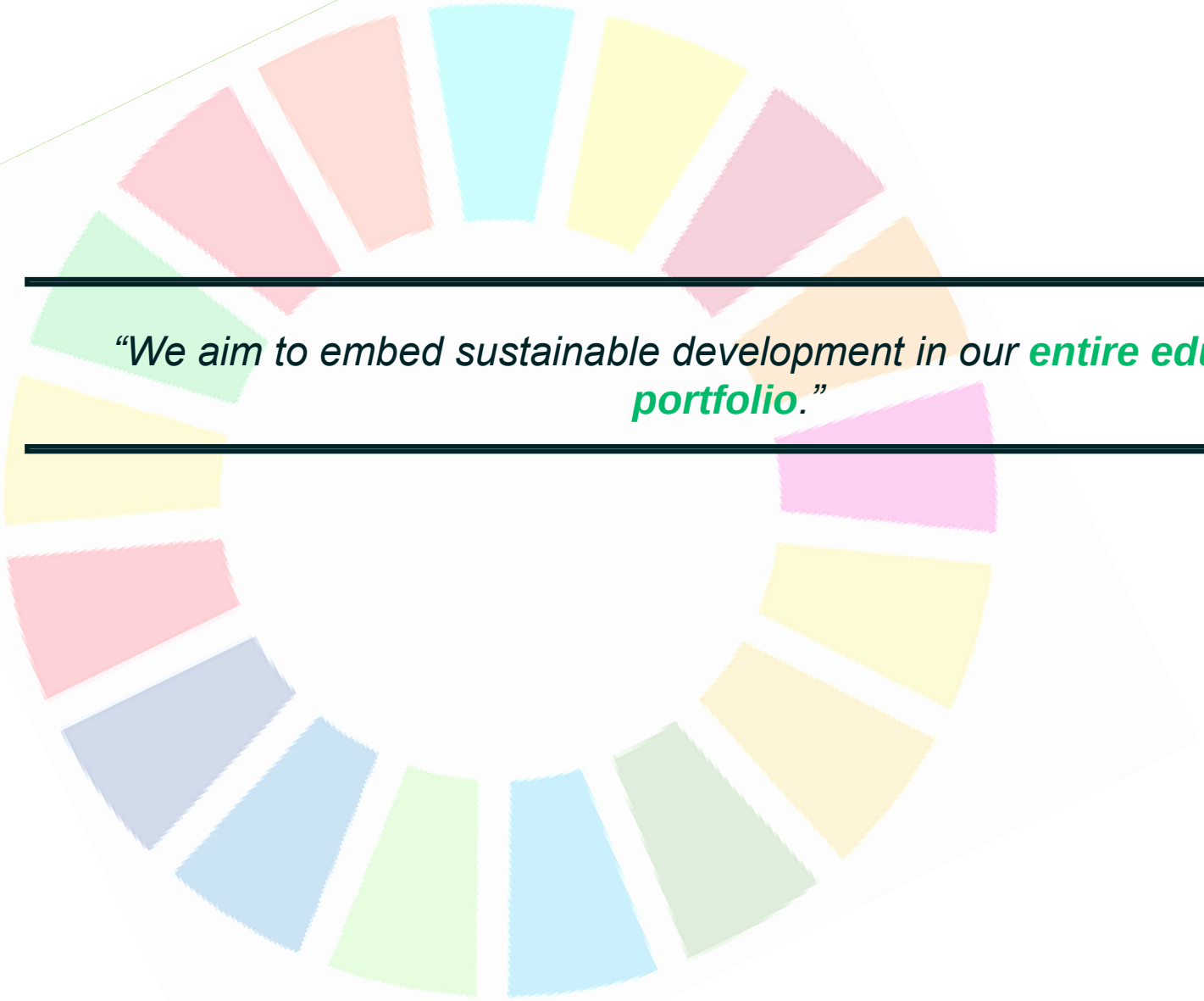
Who to convince: policymakers and other stakeholders

3. Decisions for creating an impact system in your institute

An extensive approach to assessing our contribution to society.

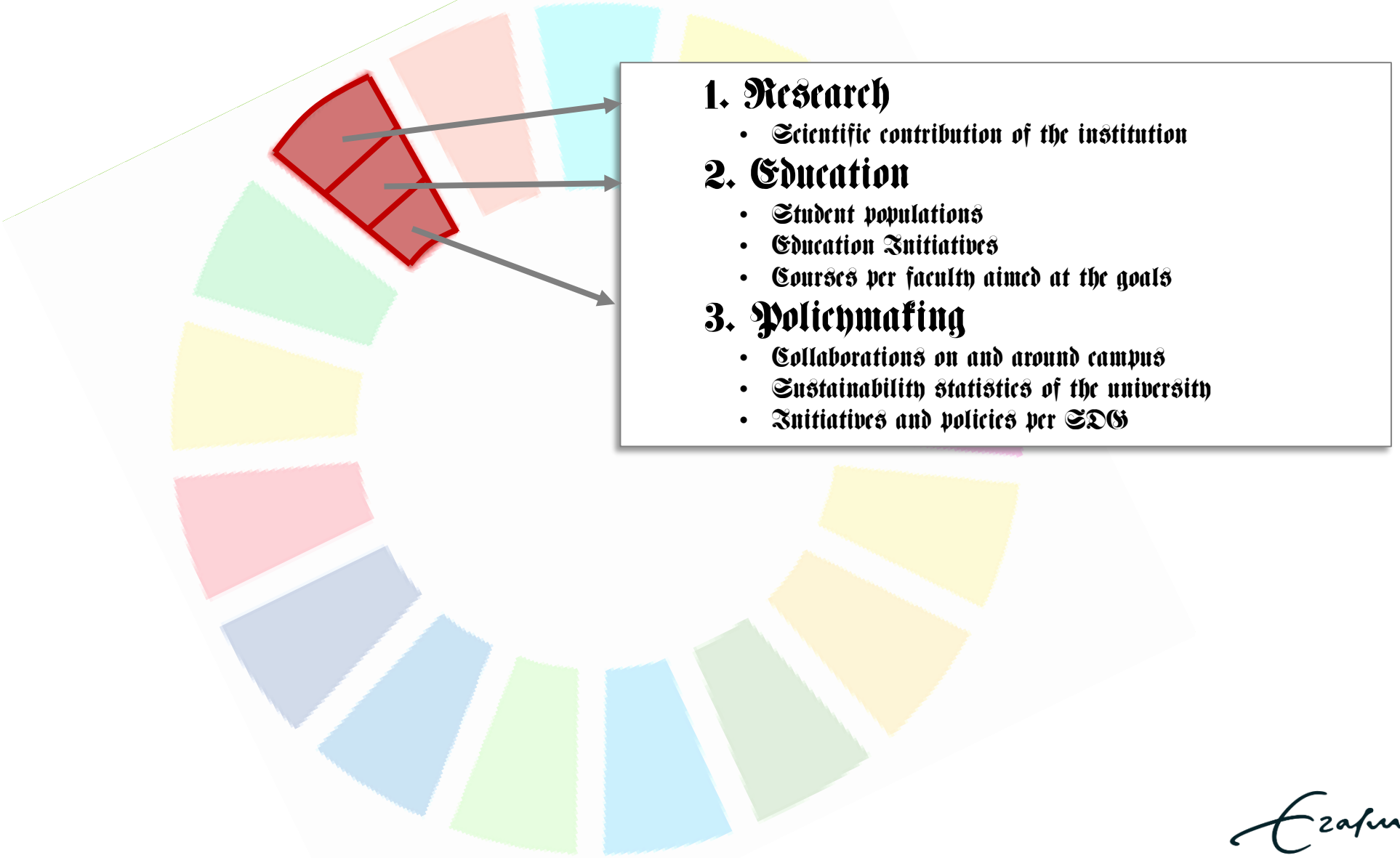

SUSTAINABLE DEVELOPMENT GOALS
1 NO POVERTY
2 ZERO HUNGER
3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
6 CLEAN WATER AND SANITATION
7 AFFORDABLE AND CLEAN ENERGY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
10 REDUCED INEQUALITIES
11 SUSTAINABLE CITIES AND COMMUNITIES
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
13 CLIMATE ACTION
14 LIFE BELOW WATER
15 LIFE ON LAND
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
17 PARTNERSHIPS FOR THE GOALS
SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals as policy framework



*“We aim to embed sustainable development in our **entire education portfolio**.”*

A first approach



1. Research

- Scientific contribution of the institution

2. Education

- Student populations
- Education Initiatives
- Courses per faculty aimed at the goals

3. Policymaking

- Collaborations on and around campus
- Sustainability statistics of the university
- Initiatives and policies per SDG

Targets of Goal 4: Quality Education

- Increased supply of qualified teachers
- Accessible quality development and education for all
- Accessible life-long-learning possibilities
- Substantial increase no. of youth and adults with relevant skills
- Upgrade facilities to are safe, inclusive learning environments

Indicators of contributing to Goal 4: Quality Education

1. Research

- Proportion of scientific literature that is viewed, downloaded or cited (FWCI)
- Number of publications directly aimed at or related to the goal-subjects

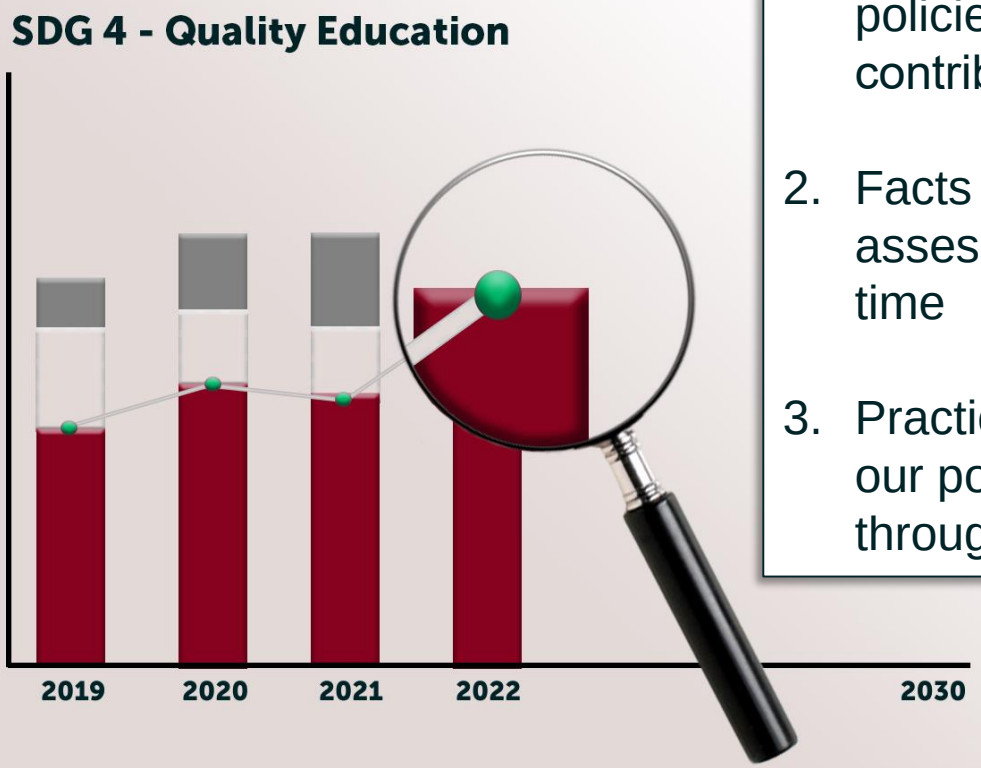
2. Education

- Proportion of graduates with teaching qualifications
- Education initiatives on campus organized by students
- Courses per faculty directly aimed at or related to the goal-subjects
- Amount of publicly accessible educational activities (e.g. lectures and courses)
- Proportion of first generation students starting a first degree

3. Policymaking

- Policies to ensure publicly accessible educational resources
- Educational activities in the community (e.g. schools, NGO's, local governments)
- Monitoring application and graduation rates of under-represented groups
- Encouraging applications in areas where those groups are under-represented

How our findings will be embedded in our strategy



1. Visual representation of our policies, projects and scientific contribution to the SDG's
2. Facts and figures of our impact-assessment, and changes over time
3. Practical guidelines to increase our positive societal impact through day to day practices

Thank you

BREAK

10:30 – 11:00

Research impact practices and vocabularies across different groups of disciplines

Alis Oancea
Director of Research in the department of Education and Special Advisor on Research Impact, University of Oxford

Research impact practices and vocabularies across different groups of disciplines

Presentation in a seperate file

LUNCH

12:30 – 13:30

Case Study

Preparation of the Case Study in groups

Integrating grand challenges in an institutional research strategy

Matt Walker
Senior Customer Consultant, Elsevier

BREAK

15:00 – 15:30

University Impact Rankings as a tool for understanding global impact

Duncan Ross
Chief Data Officer at Times Higher Education

Understanding Global Impact

Duncan Ross
@duncan3ross
Chief Data Officer,
THE

Points for discussion:

- Overview of the ranking
- The first year of the THE Impact Rankings
- Building a global and international model
- Outputs, outcomes and impact

Understanding universities across the world

THE WORLD UNIVERSITY RANKINGS

Young Universities

Reputation

Geographical

Subjects

WSJ THE 2020 COLLEGE RANKINGS

Objectives

- Understand how universities are making a positive impact on our world
- Show how the Higher Education sector is working towards the UN Sustainable Development Goals
- Showcase aspects of university performance not covered in other rankings
- Be fair to universities across the world
    - Recognise that we bring our biases to the process
    - Be committed to improving the rankings year by year

THE UNIVERSITY IMPACT RANKINGS

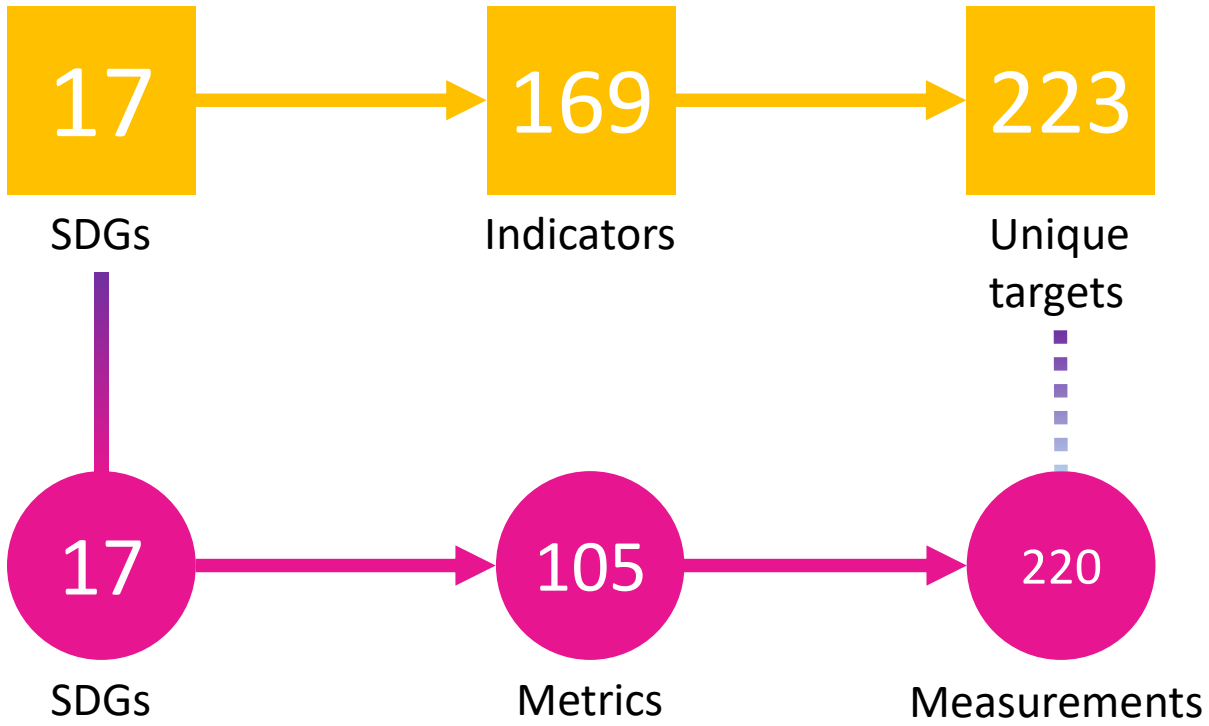
Why use the Sustainable Development Goals to measure impact?

- The Sustainable Development Goals are a call for action by all countries – poor, rich and middle-income – to promote prosperity while protecting the planet.

- They recognize that ending poverty must go hand-in-hand with strategies that build economic growth and address a range of social needs including education, health, social protection, and job opportunities, while tackling climate change and environmental protection.

THE UNIVERSITY IMPACT RANKINGS

How have we gone from an SDG to a metric in 2020?



Why might you want to use the SDGs?

Pros	Cons
Internationally recognised	Limited link to HE
Spend less time arguing about frameworks	Framework may be less specific
Broad exploration of sustainability	Too broad?
Globally relevant	
SDGs, measures, targets	No specific theory of change

What aspects of impact are we exploring?

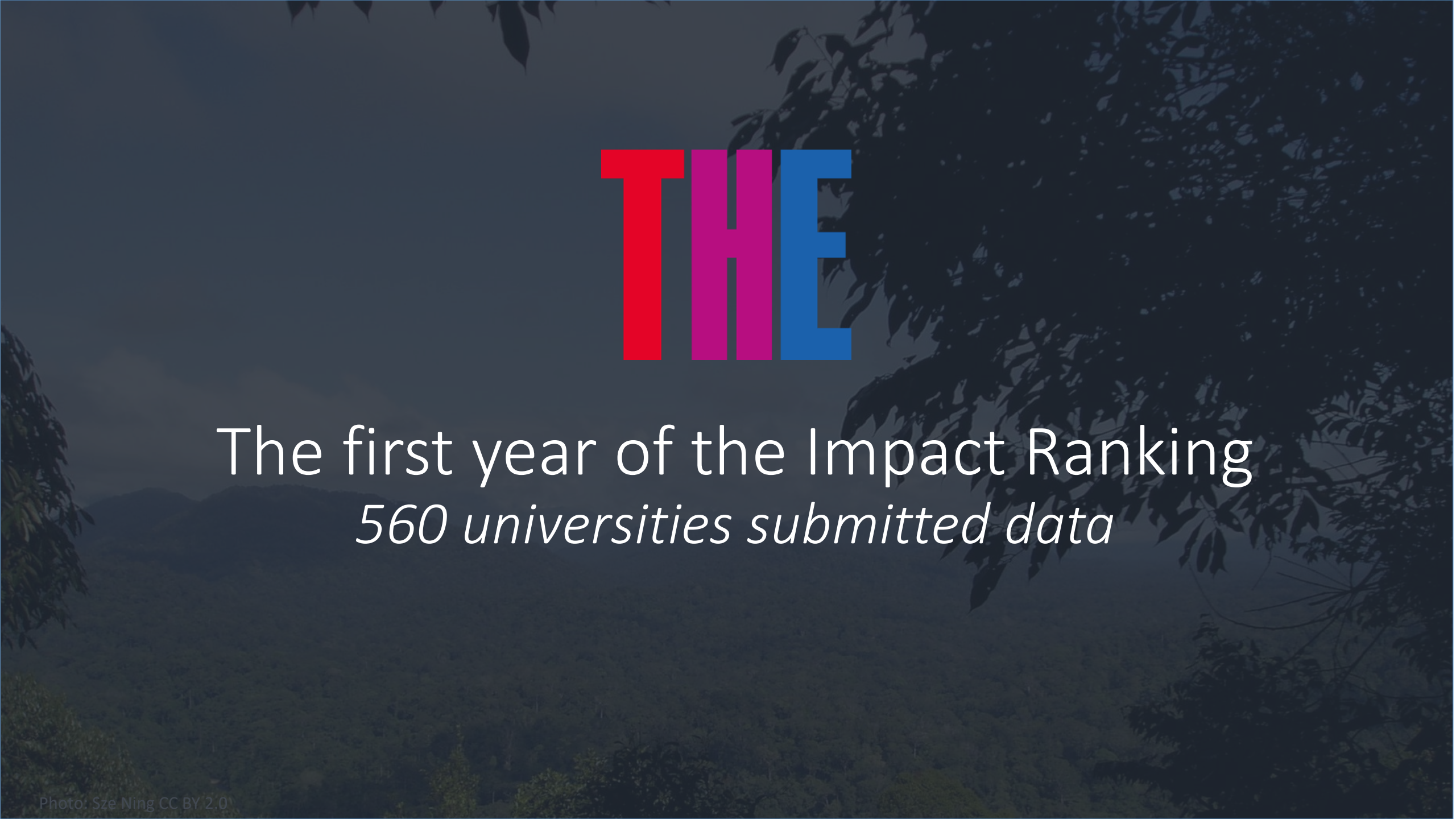
- **Research**
  - Research impacts the world by giving us the direction of travel, by helping us to understand how and why to make changes, and by putting this in the context of our beliefs and societies
- **Stewardship**
  - How we use our resources, fairly and equitably, shapes our impact on the world
- **Outreach**
  - Working directly with our communities and nations directs our impact within the wider context of society, and amplifies the work we do
- **Teaching**
  - Teaching the next generation to adopt sustainability in their lives

What does participation mean?

- All universities are able to join the rankings*
- There will be an overall ranking of universities based on best 4 SDGs per university
- Individual rankings of SDGs
- Participant badge

How did we (try to) make it fair globally?

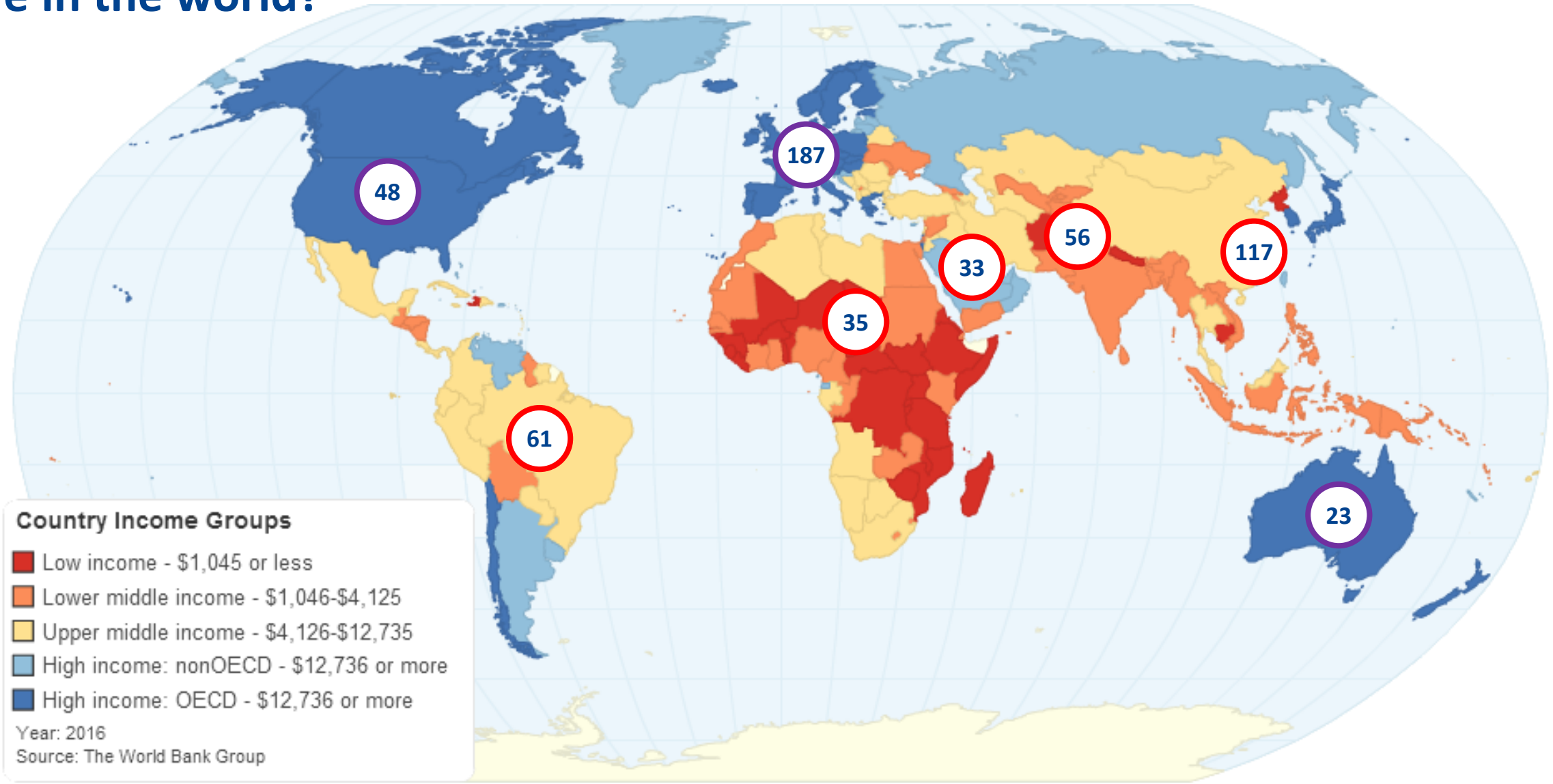
- No entry criteria
- Minimise SDGs in submission
- Think carefully about metrics
- Listen to input from universities, organisations, and individuals
- Publish each of the SDGs, not just overall score
- Banding to reflect uncertainty



The first year of the Impact Ranking

560 universities submitted data

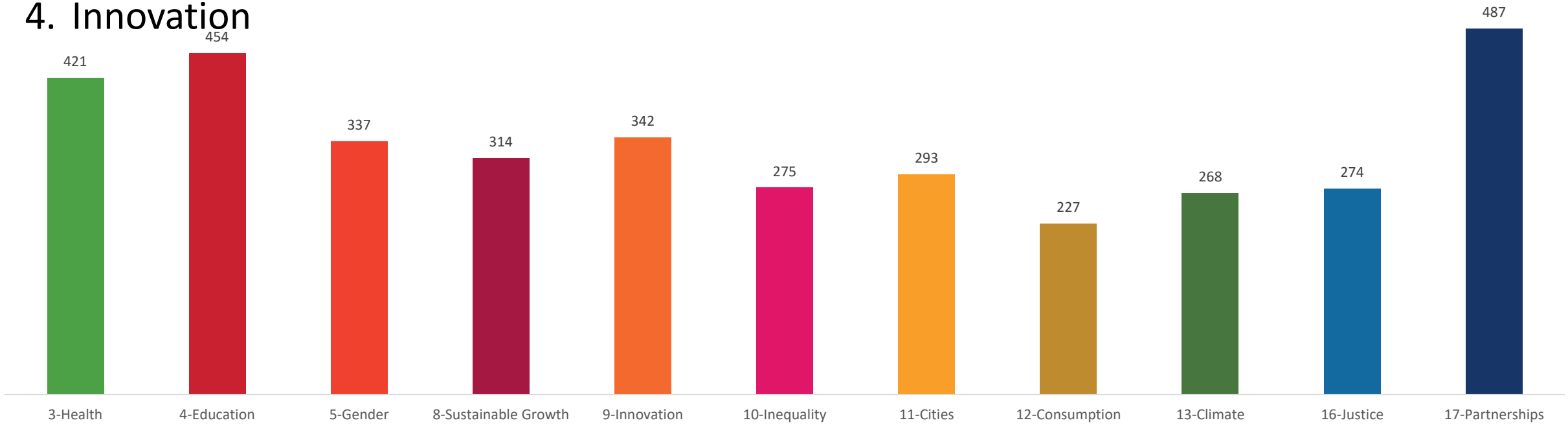
Where in the world?



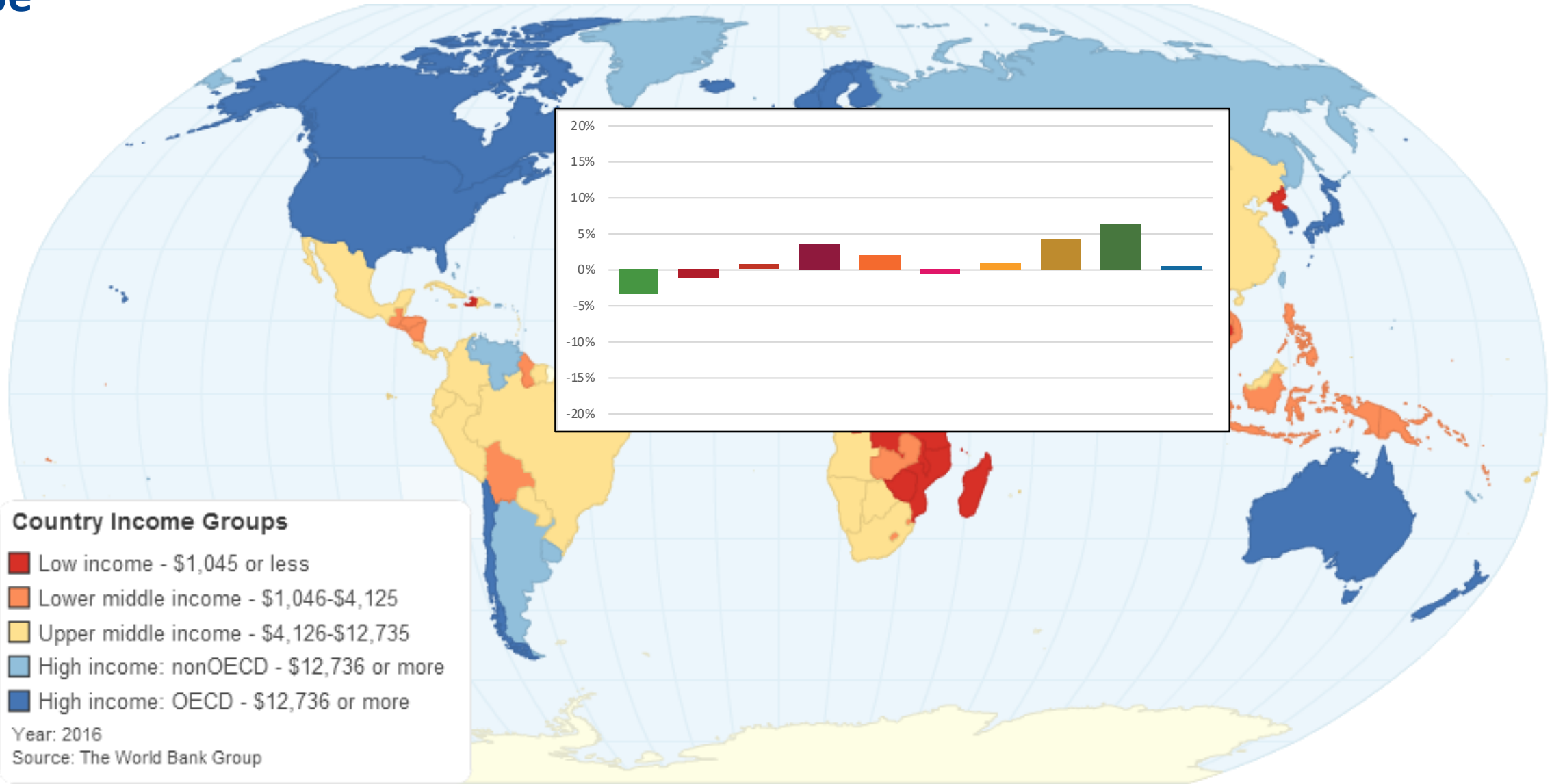
THE UNIVERSITY IMPACT RANKINGS

Most frequently submitted to:

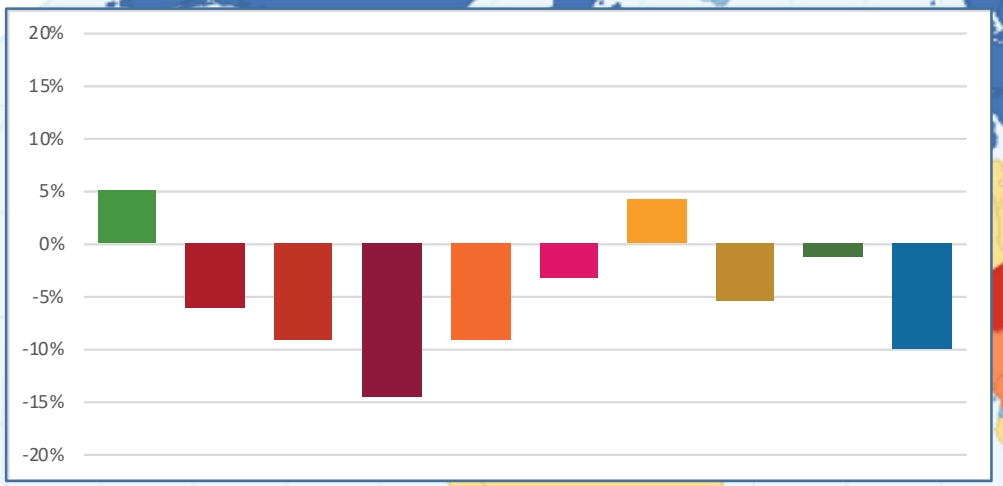
1. Partnerships
2. Education
3. Health
4. Innovation



Europe


20%
15%
10%
5%
0%
-5%
-10%
-15%
-20%
Country Income Groups
Low income - $1,045 or less
Lower middle income - $1,046-$4,125
Upper middle income - $4,126-$12,735
High income: nonOECD - $12,736 or more
High income: OECD - $12,736 or more
Year: 2016
Source: The World Bank Group

North America



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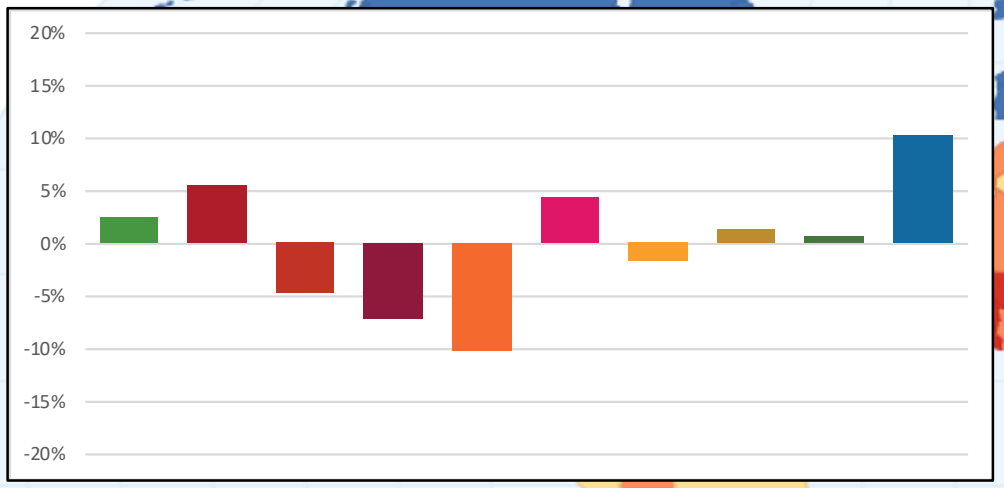
THE UNIVERSITY IMPACT RANKINGS

Latin America



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THE UNIVERSITY IMPACT RANKINGS

3 GOOD HEALTH AND WELL-BEING
4 QUALITY EDUCATION
5 GENDER EQUALITY
8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
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12 RESPONSIBLE CONSUMPTION AND PRODUCTION
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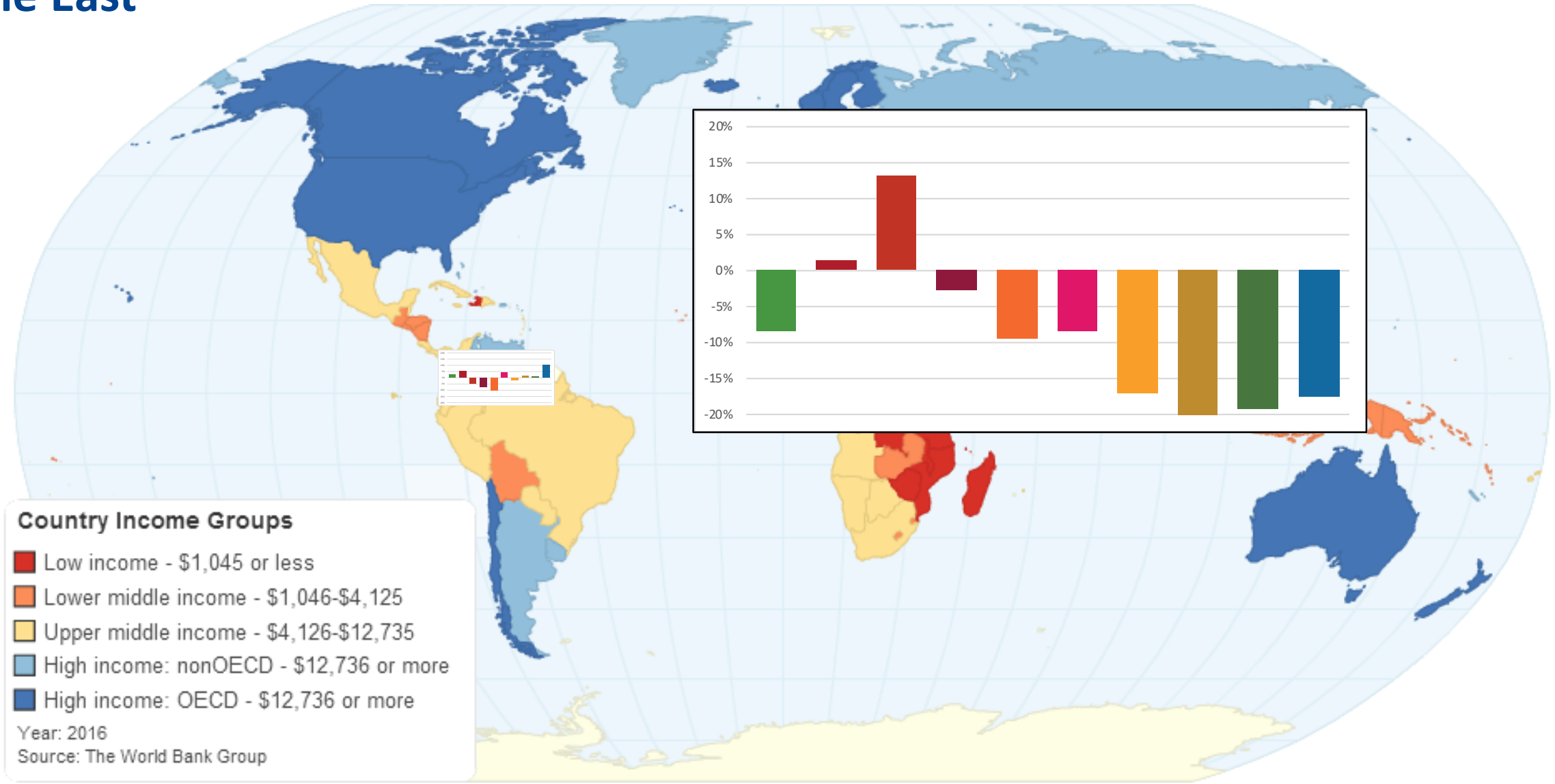
17 PARTNERSHIPS FOR THE GOALS

Middle East



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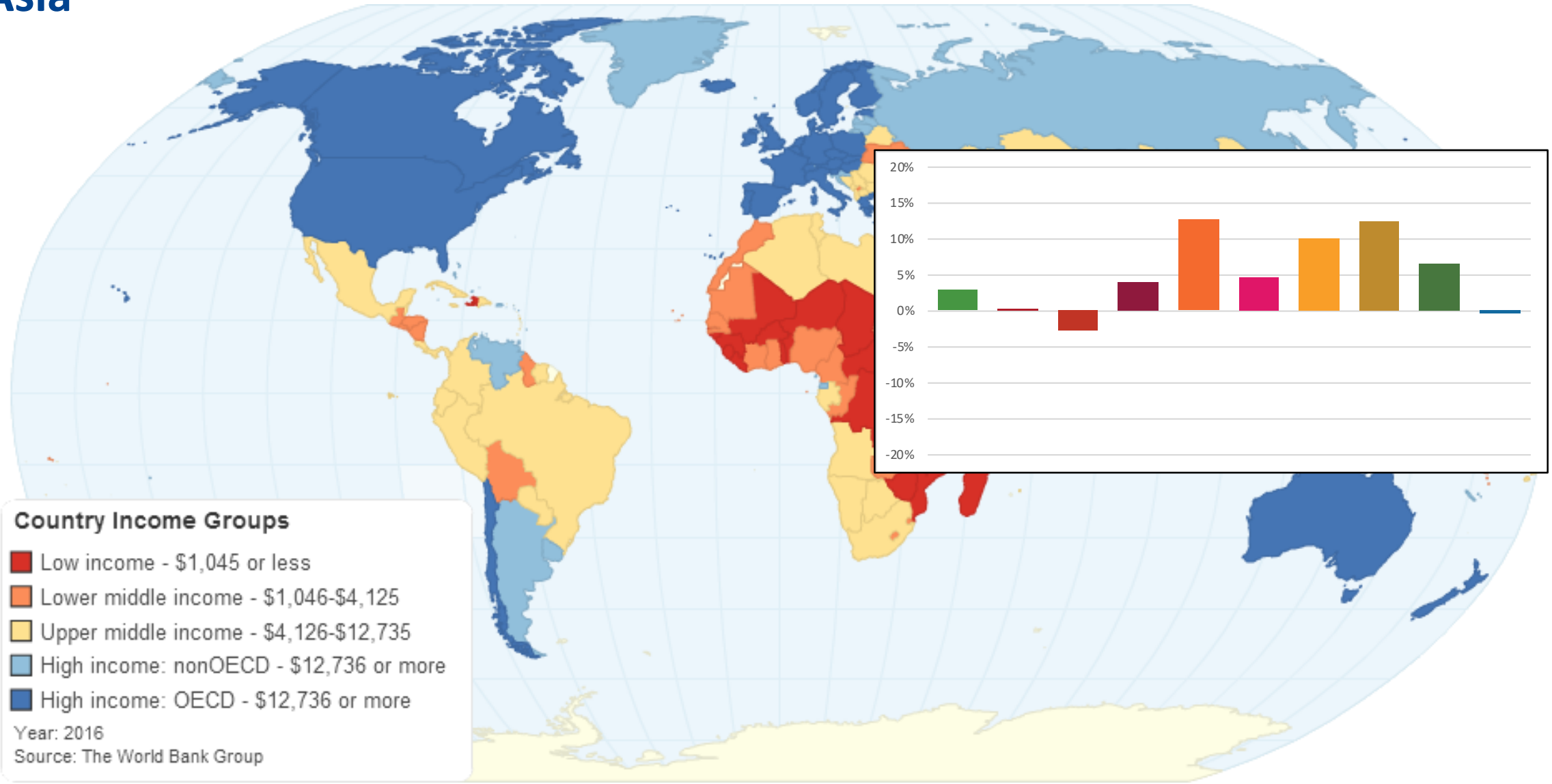
East Asia

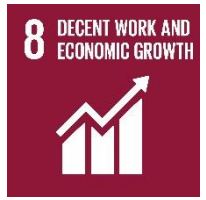


THE UNIVERSITY IMPACT RANKINGS

Universities from developing countries in Top 20

#17 Iran University of Medical Sciences, Iran

#2 Universiti Sains Malaysia, Malaysia
#6 Iran University of Medical Sciences, Iran
#16 Metropolitan Autonomous University, Mexico



#9 Bucharest University of Economic Studies, Hungary
#14 International University of Sarajevo, Bosnia and Herzegovina
#16 Voronezh State University, Russian Federation

#14 Lomonosov Moscow State University, Russian Federation

#5 University of Johannesburg, South Africa
#10 University of the Western Cape, South Africa

#4 Abdullah Gül University, Turkey

#16 JSS Academy of Higher Education and Research, India

#2 Rostov State University of Economics, **Russian** Federation
#8 University of Indonesia, Indonesia
#16 Koç University, Turkey
#17 National Autonomous University of Mexico, Mexico

THE

Ensure healthy lives and promote well-being for all at all ages

Exploring how universities deal with specific conditions and diseases, and support their community

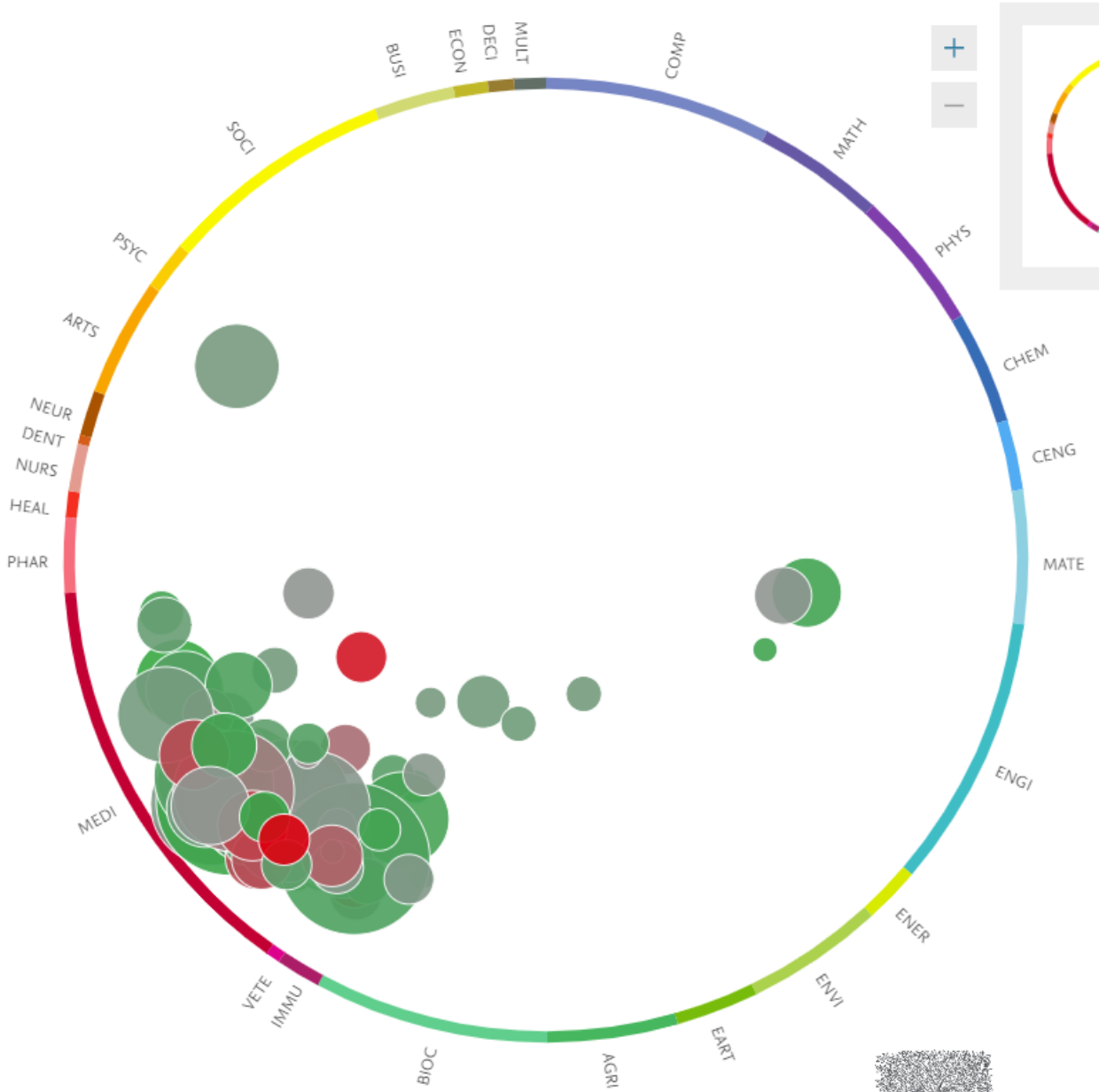
	Metric	Type	Data source	Area	Percentage
3.i	Research	Continuous	Elsevier	Research	7
3.ii	Number graduating in health professions	Continuous	University	Outreach	9
3.iii	Health impact	Pick list	University	Outreach/ Stewardship	10

3.i Research Metrics

Research is made up of three elements

- The proportion of a university's output that is viewed or downloaded
- The proportion of university's output that is cited in clinical guidance
- The number of publications

KeyPhrases	Rank	Prominence Percentile
ZIKV infections, Infection, Viruses	8	99.99
Melanoma, immune-related adverse, Immunotherapy	10	99.99
gut microbial, Obesity, Metagenome	13	99.99
Neoplasms, RNA, Long Untranslated, cancer tissues	17	99.98
Infrared devices, Chemotherapy, therapy PTT	24	99.98
recipient cells, Exosomes, Cells	25	99.97
ebola virus, Ebolavirus, Hemorrhagic Fever, Ebola	32	99.97
direct acting, Hepatitis C, Hepacivirus	44	99.96
Drug delivery, free DOX, Micelles	55	99.94
Nicotine, cigarette e-cigarette, Tobacco Products	65	99.93



Subject area abbreviations

THE UNIVERSITY IMPACT RANKINGS

ELSEVIER

3.iii Health Impact

Collaboration and health services looks at evidence around the following activities:

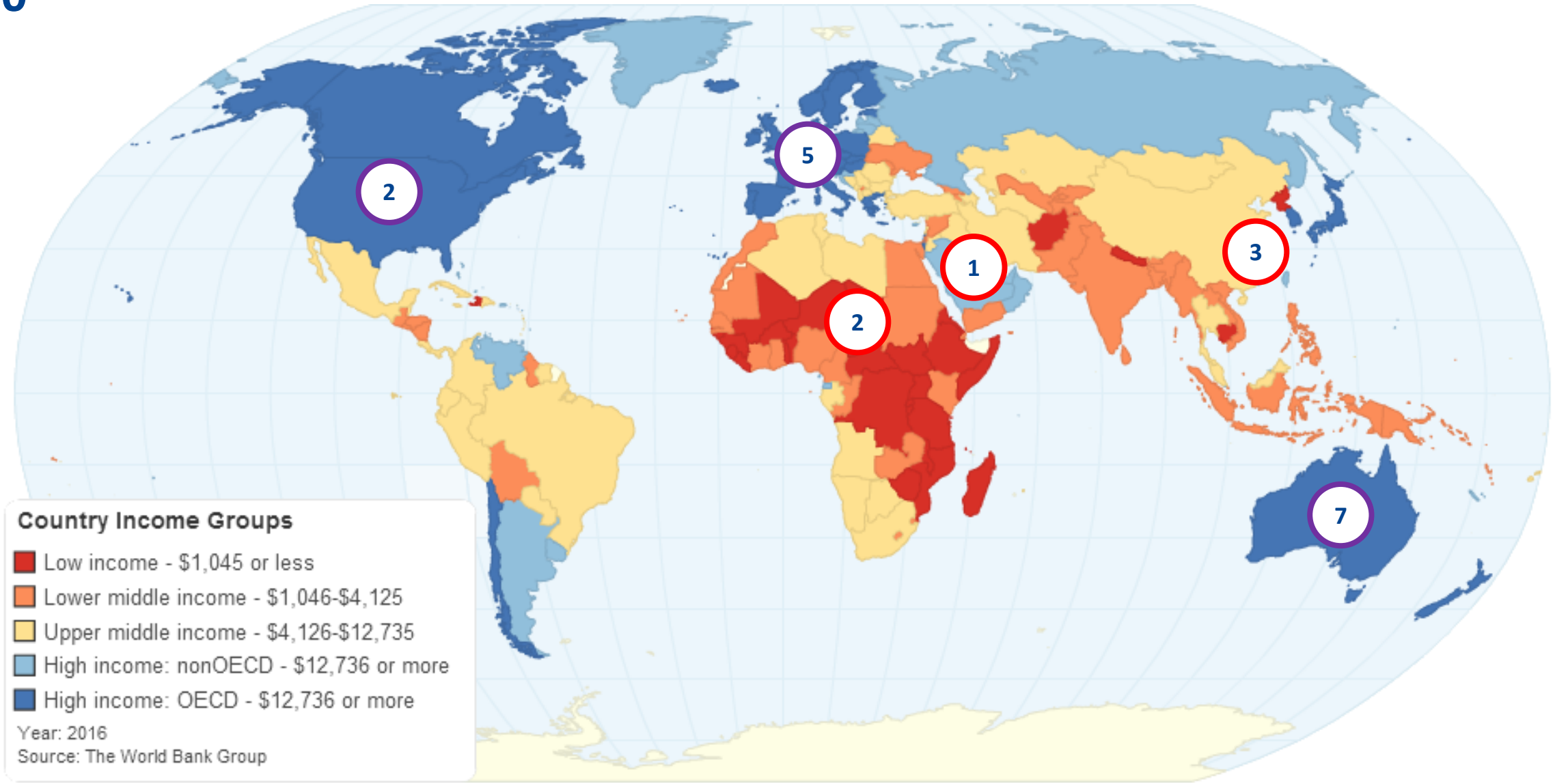
- Collaborations with local or global health institutions to improve health and wellbeing outcomes
- Outreach programmes in the local community to improve health and wellbeing
- Community access to university sports facilities
- Free sexual and reproductive health services for students
- Free mental health support for students and staff

Reduce inequality within and among countries

Universities tackling inequalities: economic, health based, international

	Metric	Evidence required
10.i	Research	• Citescore, FWCI, and number of papers
10.ii	First generation students	• Number of students starting a first degree • Number of first generation students starting a first degree
10.iii	Percent of international students from developing nations receiving financial aid	• Number of first degree students • Number of first degree international students from low and lower middle income countries receiving financial aid
10.iv	Percent of students with disabilities	• Number of students with disabilities • Number of students
10.v	Percent of staff with disabilities	• Number of employees with disabilities • Number of employees
10.vi	Measures against discrimination	• Non-discriminatory admissions policy • Tracking application and admission rates of under-represented groups • Delivering programmes to recruit from under-represented groups • Anti-discrimination and anti-harassment policies for staff and students • The existence of a diversity and equality committee or officer • Providing mentoring or other support programmes aimed at students and staff from under-represented groups • Provide accessible facilities for people with disabilities • Provide support services for people with disabilities • Provide access schemes for people with disabilities • Have reasonable accommodation policy/strategy implemented, including adequately funded mechanism for persons with disability

Top 20



THE UNIVERSITY IMPACT RANKINGS

UNIVERSITY OF JOHANNESBURG

10 REDUCED INEQUALITIES

Rank #5

10.6 Access to university - Action to support participation and success of underrepresented groups

power HEDA

Sign In

Peer Data Reports

The HEMIS data is annually provided by the Department of Higher Education and Training (DHET), based on the following process. Second HEMIS submission data (Year N) will be available at the end of May (Year N+1) and final audited HEMIS submission data (Year N) will be available from August (Year N+1). The August data submission will also include any resubmitted data of previous years. It is important to note that the May submission is provisional and possibly incomplete data. The latest dataset (final student 2017 submission 3) was received in November 2018. For help on using these reports, click HERE

go to the top

Student Headcount Reports	Viewers
• by Institution and Calendar Year	
• by CESM Category and Calendar Year	
• by Entrance Category and Calendar Year	
• by Qualification Type and Calendar Year	

Student FTE Reports	Viewers
• by Institution and Calendar Year	

Ratio Reports
• Research Output Publication Units per Permanent Instr/Res Staff Headcount
• Total Research Output Units per Permanent Instr/Res Staff Headcount
• Total Graduates per Permanent Instr/Res Staff Headcount
• Staff:Student FTE Ratio
• Graduation Rate (DHET)
• UG Degree Credit Success Rate

power HEDA HEDA Explorer Dashboards

Choose other viewer Save As New Report

Peer Data - Student Headcount by Entrance Category (HEDA Viewer)

Data Fields

Type here to search

Measures

Dimension

Attendance mode All

CESM Category All

Qualification Type PG_UG All

Calendar year 2014, 2015, 2016, 2017

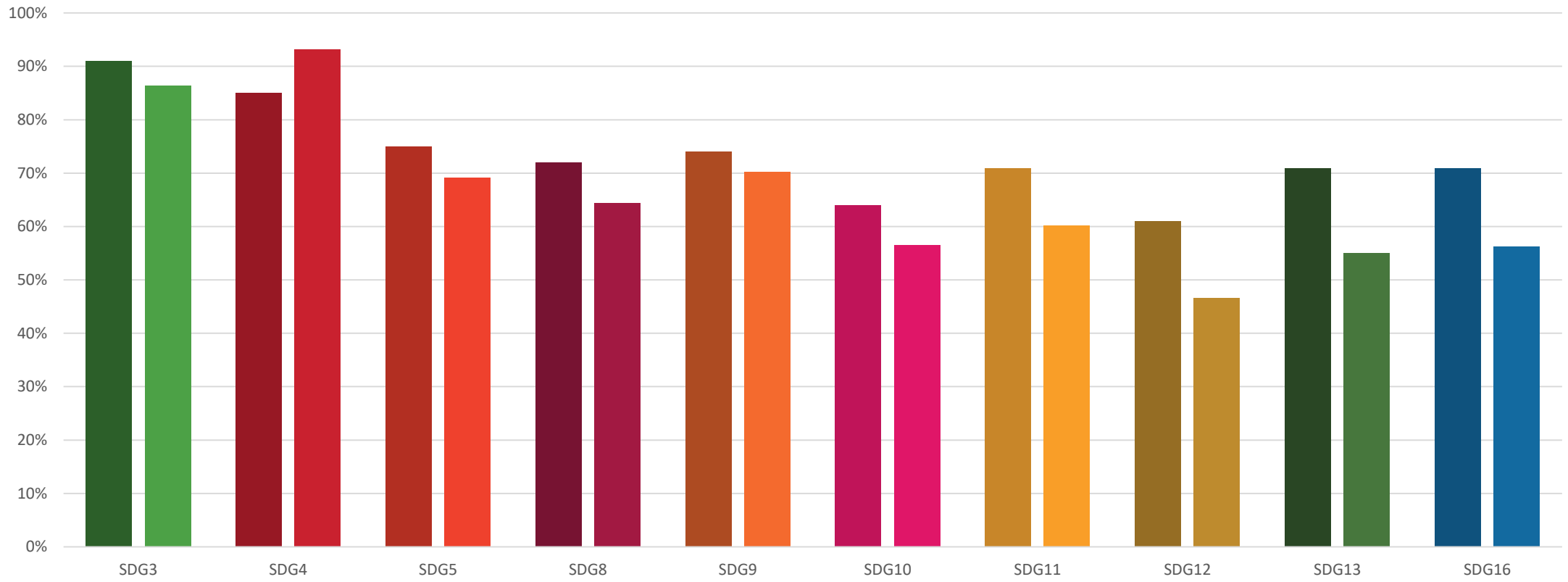
	Calendar year			
Entrance category Institution Active	2014	2015	2016	2017
	Headcounts	Headcounts	Headcounts	Headcounts
Entering student	77 440	82 903	89 408	97 906
First-time entering student	212 208	216 162	211 756	248 570
Non-entering student	638 697	643 460	651 361	643 459
Transfer student	40 809	42 687	23 312	47 049
Total	969 154	985 212	975 837	1036 984

THE UNIVERSITY IMPACT RANKINGS

university	Country/region	score	Rank
James Cook University	Australia	70.8	1
Western Sydney University	Australia	70.7	2
University of South Australia	Australia	69.5	3
University of Hong Kong	Hong Kong	68.1	4
University of Johannesburg	South Africa	68.0	5
University of Wollongong	Australia	67.3	6
Autonomous University of Barcelona	Spain	65.8	7
Stony Brook University	United States	63.9	8
Asia University, Taiwan	Taiwan	63.8	9
University of the Western Cape	South Africa	63.3	10
University of Manchester	United Kingdom	63.0	11
King's College London	United Kingdom	62.7	12
RMIT University	Australia	61.8	13
Glasgow Caledonian University	United Kingdom	61.3	=14
King Abdulaziz University	Saudi Arabia	61.3	=14
Pompeu Fabra University	Spain	60.7	=16
University of Waterloo	Canada	60.7	=16
Sungkyunkwan University (SKKU)	South Korea	60.6	18
University of Auckland	New Zealand	60.3	19
University of Tasmania	Australia	60.0	20

Thoughts on the rankings

Were there ‘best SDGs’ to submit in? Top 100 vs All



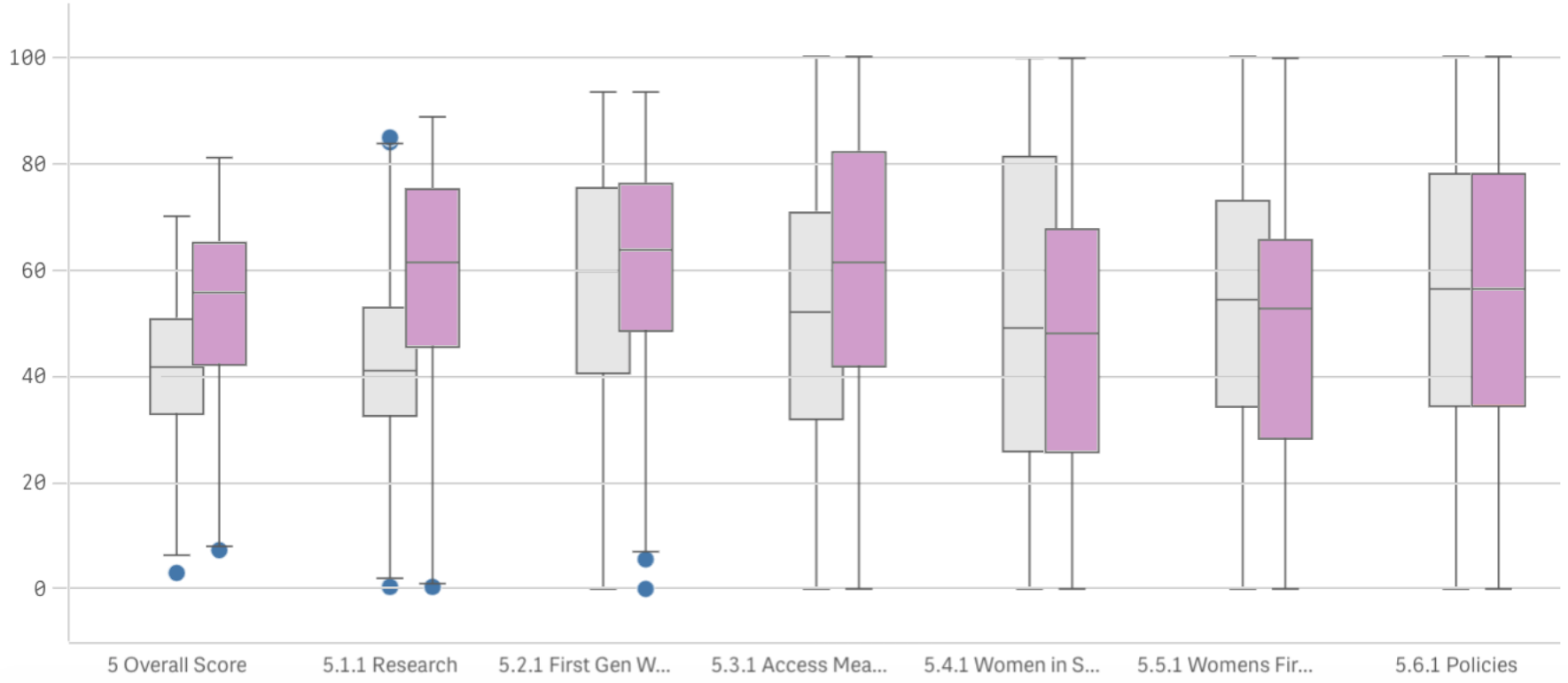
Were some countries or regions advantaged? Top countries in Top 100

Country/Region	Top 100	Submitted	Top 100 %
Hong Kong	2	2	100%
Netherlands	2	2	100%
Sweden	2	2	100%
Kuwait	1	1	100%
Norway	1	1	100%
Canada	9	10	90%
Republic of Ireland	5	6	83%
United Kingdom	17	29	59%
Australia	11	19	58%
Chile	2	12	17%
Mexico	2	12	17%
Taiwan	3	19	16%
Spain	4	26	15%
Indonesia	1	7	14%
France	1	11	9%
Iran	1	14	7%
Egypt	1	17	6%
Japan	3	52	6%
Russian Federation	2	38	5%

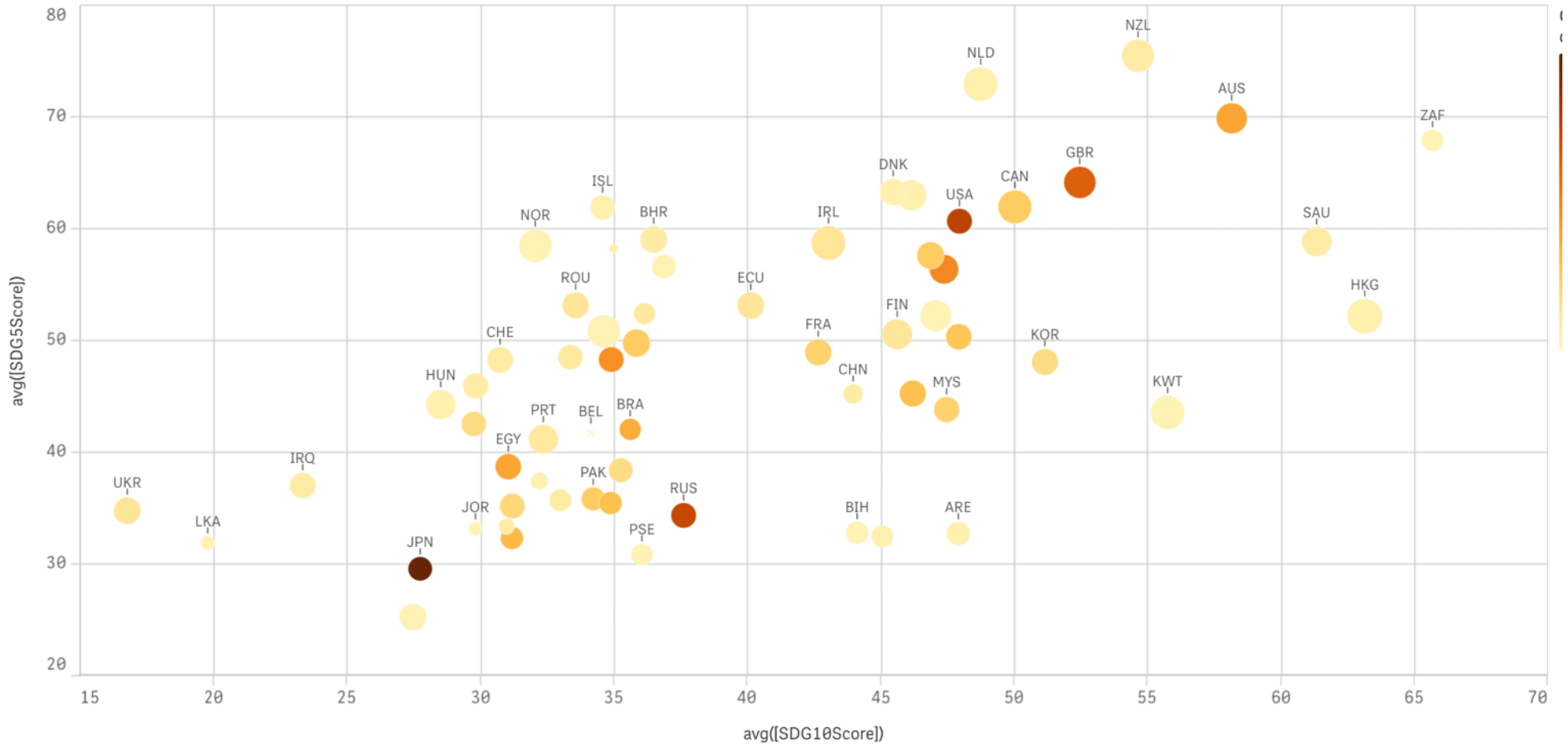
Is it too close to the WUR? Presence compared to WUR

Country/Region	Top 100	Top 100 WUR	WUR Performance
Finland	2	1	100%
Australia	11	6	83%
Canada	9	5	80%
United Kingdom	17	11	55%
Japan	3	2	50%
Sweden	2	2	0%
South Korea	2	2	0%
Hong Kong	2	3	-33%
France	1	2	-50%
Netherlands	2	7	-71%
United States	8	41	-80%
Germany	1	8	-88%

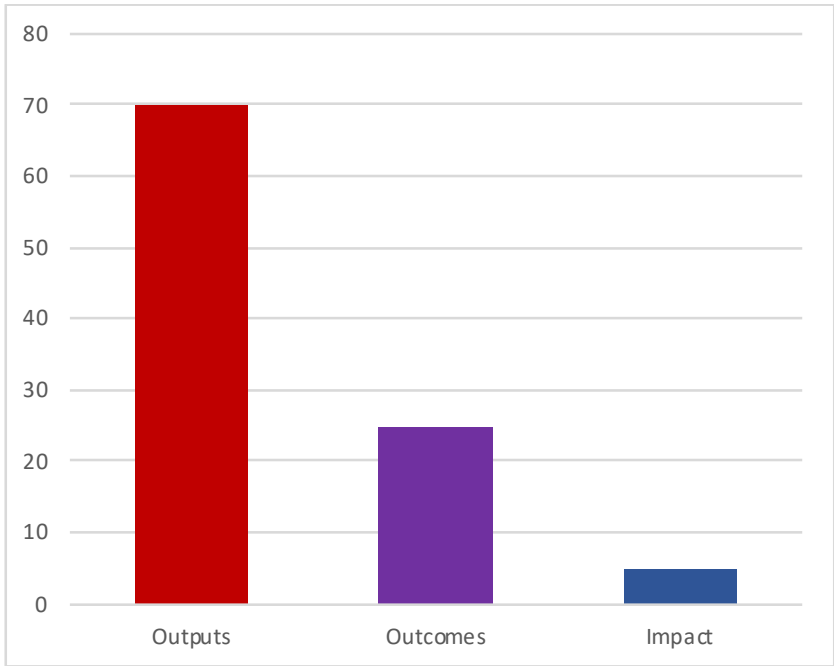
SDG 5: OECD vs Emerging Economies

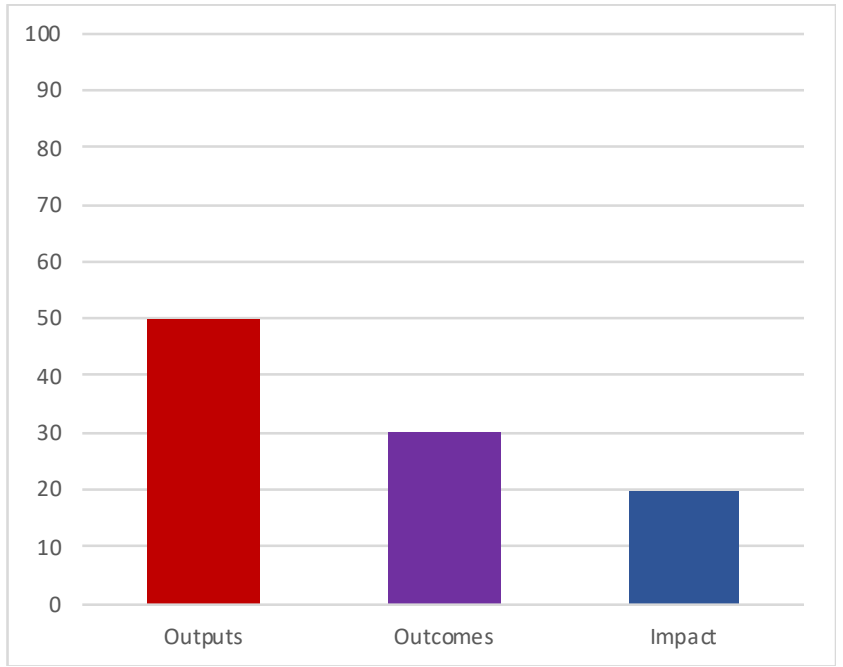


SDG 10 and SDG 5 – Inequalities and Gender



Outputs, outcomes, impact





Using the rankings as a benchmarking tool

- Theory of change
- International comparison
- There will be more detail available internally – rankings have an element of LCD
- Are SDGs most relevant to you?
- What have universities done:
    - Publicity
    - Focus
    - Behaviour

Key Dates

- Data collection opens – 14th October 2019
- Data collection closes – 3rd January 2020
- Impact rankings publication – 23rd April 2020

The 2020 University Impact Rankings will be launched at the **Impact and Innovation Summit at KTH in Sweden 22nd -24th April 2020**.

Panel about Research Strategies, Impact and Research Information Systems

Mark Cox (chair)

Duncan Ross
Simon Porter
Matt Walker

RECAP AND REMAINING QUESTIONS

#SPRICO19
@AESISNET

COURSE DINNER

18.30 Sarastro Restaurant
126 Drury Lane
WC2B 5SU London

Tomorrow we start with coffee & tea at 8:30

Research impacts and disciplinary diversity

Prof Alis Oancea

Structure

- Impacts in different groups of disciplines – commonalities and differences
  - Evidence from interview research
  - Evidence from REF case studies

  1. Conceptions of impact
  2. Generating impacts
  3. Narrating and evidencing impacts

- Frameworks for deciding indicators
  1. Vulnerabilities
  2. Dimensions
  3. ‘Toolboxes’

Note: You are welcome to cite/ use the information on these slides, but please refer to the sources provided on each slide.

Impacts in different groups of disciplines

Conceptions of impact

Impact in REF 2014: all subjects (6975 CSs)

- Types of impact varied **with disciplines** (e.g. Panel A clinical guidance 19%, Panel D media 26%), but pathways diverse in all (3709 pathways)
  - **Largest** - public policy and parliamentary debate impacts
  - **Small** % of commercial activity (5% CS spin outs, 9% patents, 10% licenses)
  - **PER** c6% CSs - Oxford, Cambridge and Edinburgh / Panel D
- **Stakeholders**:
  - Panel A – patients, NHS, clinicians;
  - Panel B: companies, manufacturers, engineers;
  - Panel C: children, communities, governments, workers, banks, unions;
  - Panel D: students, schools, teachers, museums, curators, writers, journalists

(King's College, 2015)

Impact narratives: medical and health sciences

- **Key distinction**: basic/ translational research
- **Anchor**: improved patient care and health outcomes
- knowledge transfer and collaboration with industry
- public engagement with science and research

"I sit as a trustee of probably up to 12 charities, most of which have something to do with medical research. I think that sort of contribution is at least as important as contributions made to government activities. [However] I think it would be intolerable to have to keep a detailed account of all such activities and how would they be ranked relative to each other." and "*would indeed be inhibiting of such activity*"

"impact assessment needs to consider carefully the various stages of translational research so as to award credit correctly to those who have devised and brought to clinical evaluation new interventions, rather than giving disproportionate credit to those who undertake late stage evaluation of technologies invented by others."

Medical schools

- **Outcome-based** indicators and **translational research**
- **Social accountability** strategies (Awases et al, 2010; Woolard and Boelen 2012)

> "the obligation to direct their education, research and service activities towards addressing the priority health concerns of the community, region, and/or nation they have the mandate to serve. The priority health concerns are to be identified jointly by governments, health care organisations, health professionals and the public" (WHO 1995)

Impact narratives: sciences

- **Key distinction**: applied/ non-applied
- **Anchor**: contributions to a) solving problems; b) the general stock of disciplinary and generic knowledge
- Commercial and technological advancement
- Communicating passion
- Transferring methods and techniques

In [this field of] *research there is NO immediate commercial impact. But we don't have the luxury of astronomy or astronomers, where they can make ANY picture of the galaxy look quite fascinating. There's always the public interest, right? So this is how we fall between the two extremes: the attraction of science for science's sake, and commercialisation*. (earth science interview).

Social sciences

- **Key distinction**: types and modes of research
- **Anchor**: societal relevance
- Inter- and multi-disciplinarity
- Policy influence, service uptake, educational engagement, methodological transfer, public influence, visibility
- User engagement and co-construction.

Forget the new buzz-word about impact – if you were talking to me a decade, or even two decades ago, I would have said the most important thing for my research is, does it have an impact on policy, which in turn has an impact on people, or on the well-being of people. That's what my research is about. (social sciences interview)

Professional schools

- Nexus teaching-research
- Innovation, professional education and entrepreneurship (vs consultancy and commercialisation)
- Infrastructure for KE and network-building
- ‘Porous boundaries’ (Pettigrew, 2001)

Repositioning in HEIs?

Impact narratives: arts and humanities

- **Key distinction**: disciplinary traditions
- **Anchor**: cultural value and public engagement
- Outreach, educational value, recreational and commercial value, Collective processes
- Creative practice

It's not really the impact of one individual; it's the impact of the whole field, and hundreds and hundreds of people, from all different parts of the world, working on this problem. (humanities interview)

Cultural value debates

- Instrumental vs intrinsic value
- Intelligent accountability vs politics of metrics
- Measurable vs. ‘ineffable’
- Monetisation vs aestheticisation
- ‘High’ vs ‘low’ culture, elite vs mass
- Positive vs ‘negative’ impacts
- Analogue vs digital

- contested concepts -

Oancea et al, 2018

Impacts in different groups of disciplines

Generating impact

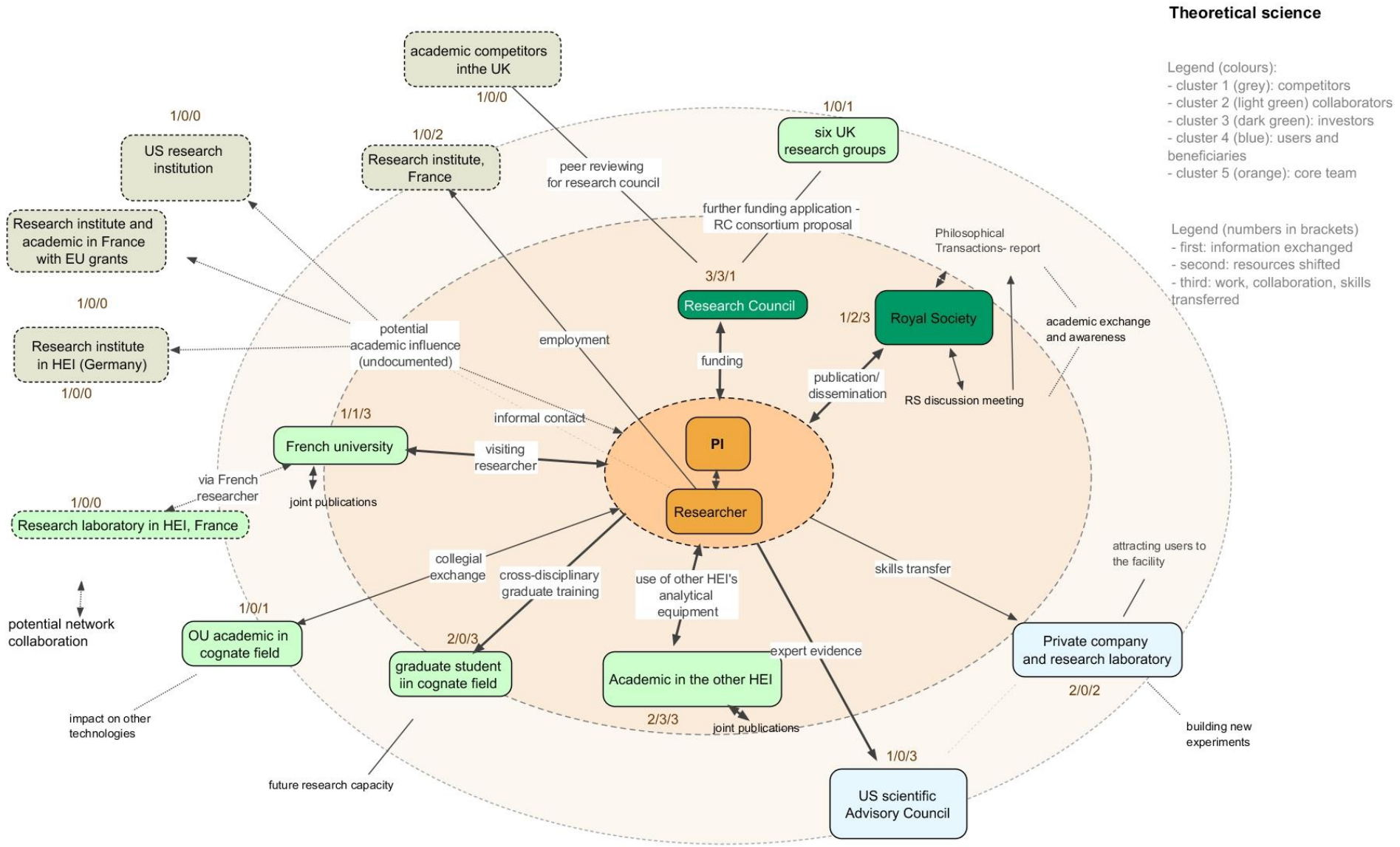
The relational spaces for impact in different disciplines

Qualitative network analysis

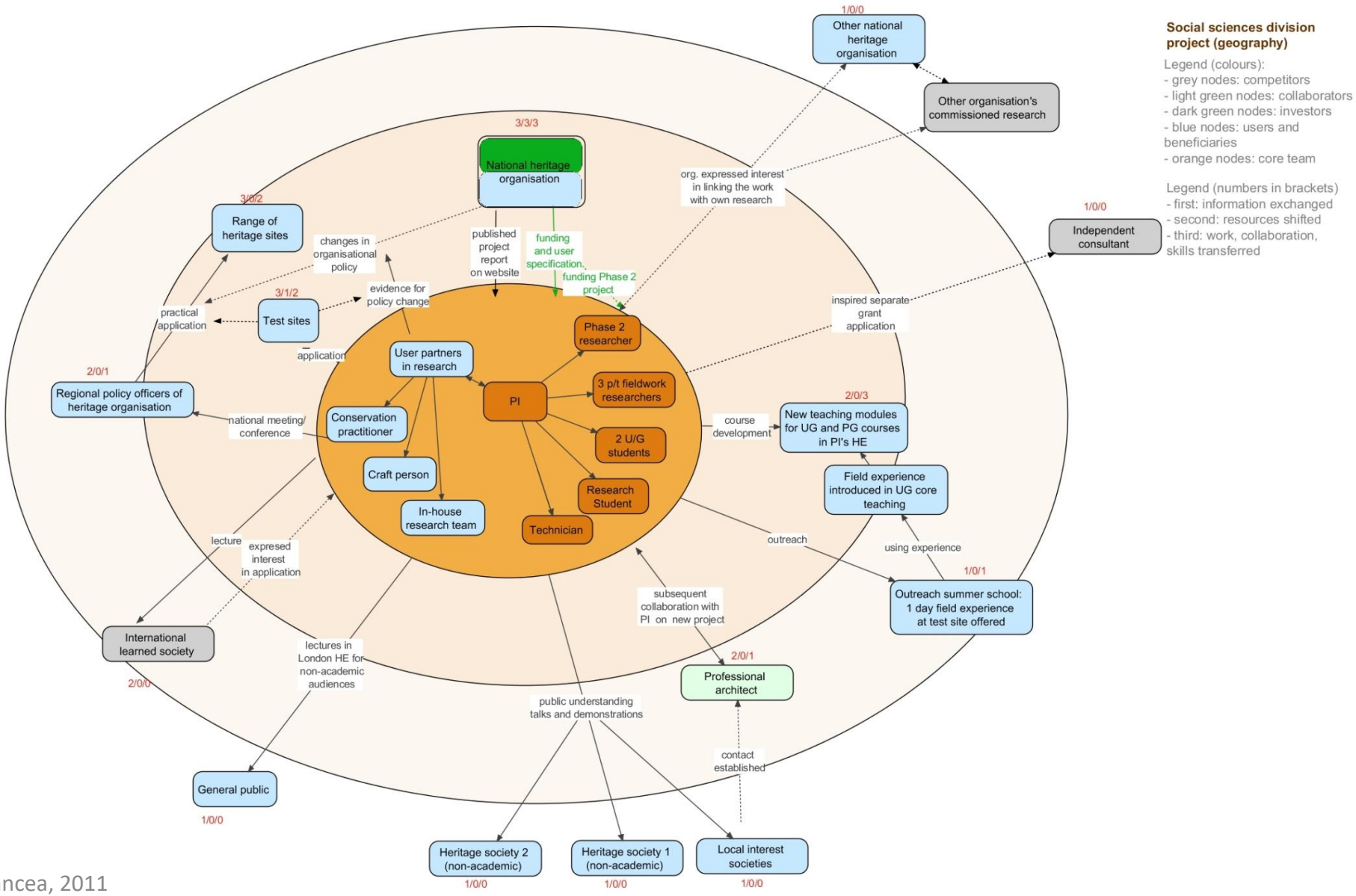
- Nodes
- Relationships: direct/ indirect
- Flows:
  - -direction: univocal; reciprocal; undetermined
  - -content: information, human resources, physical resources
  - -intensity: weak; moderate; strong; negative

Oancea et al, 2017

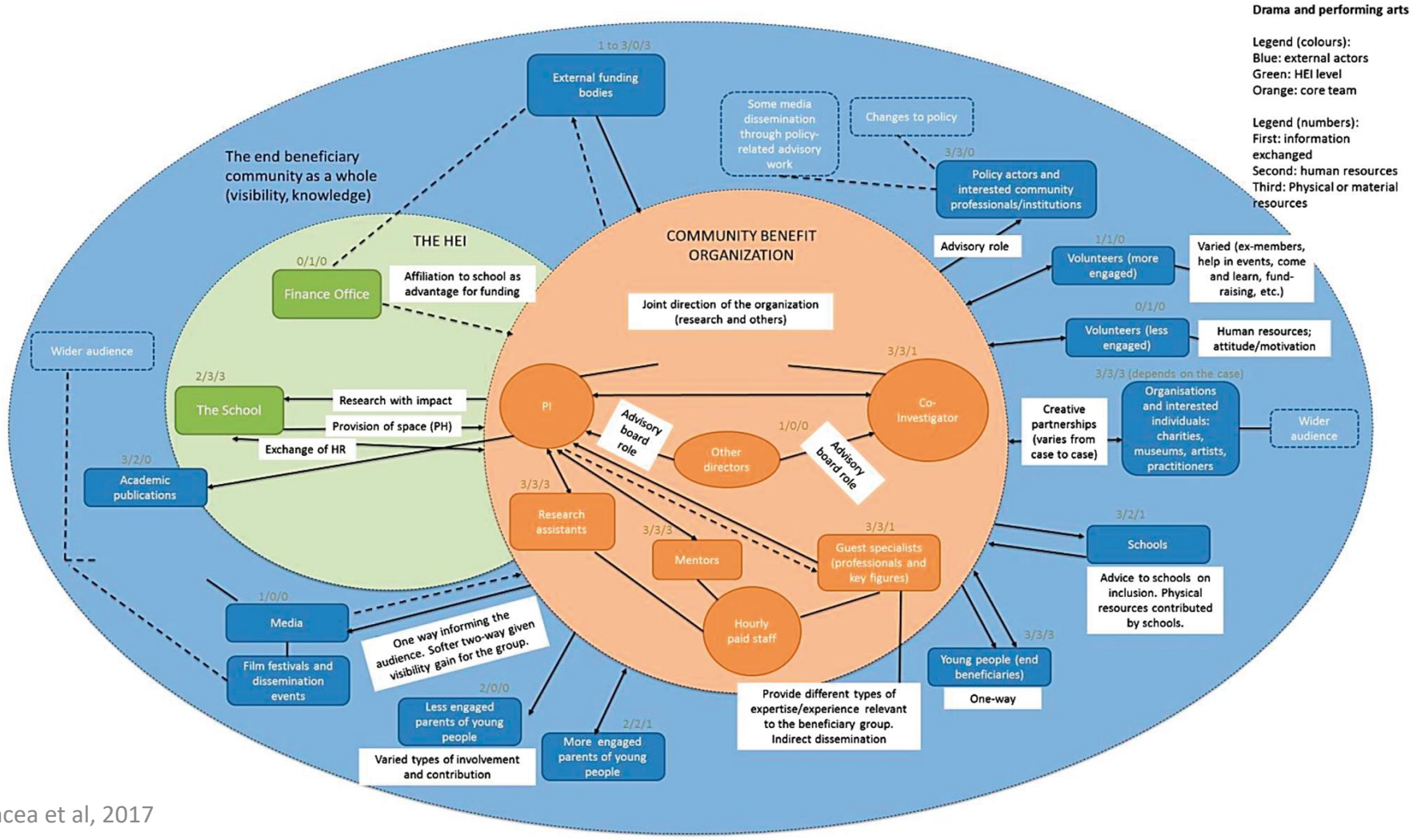
Externally funded research project (earth science)



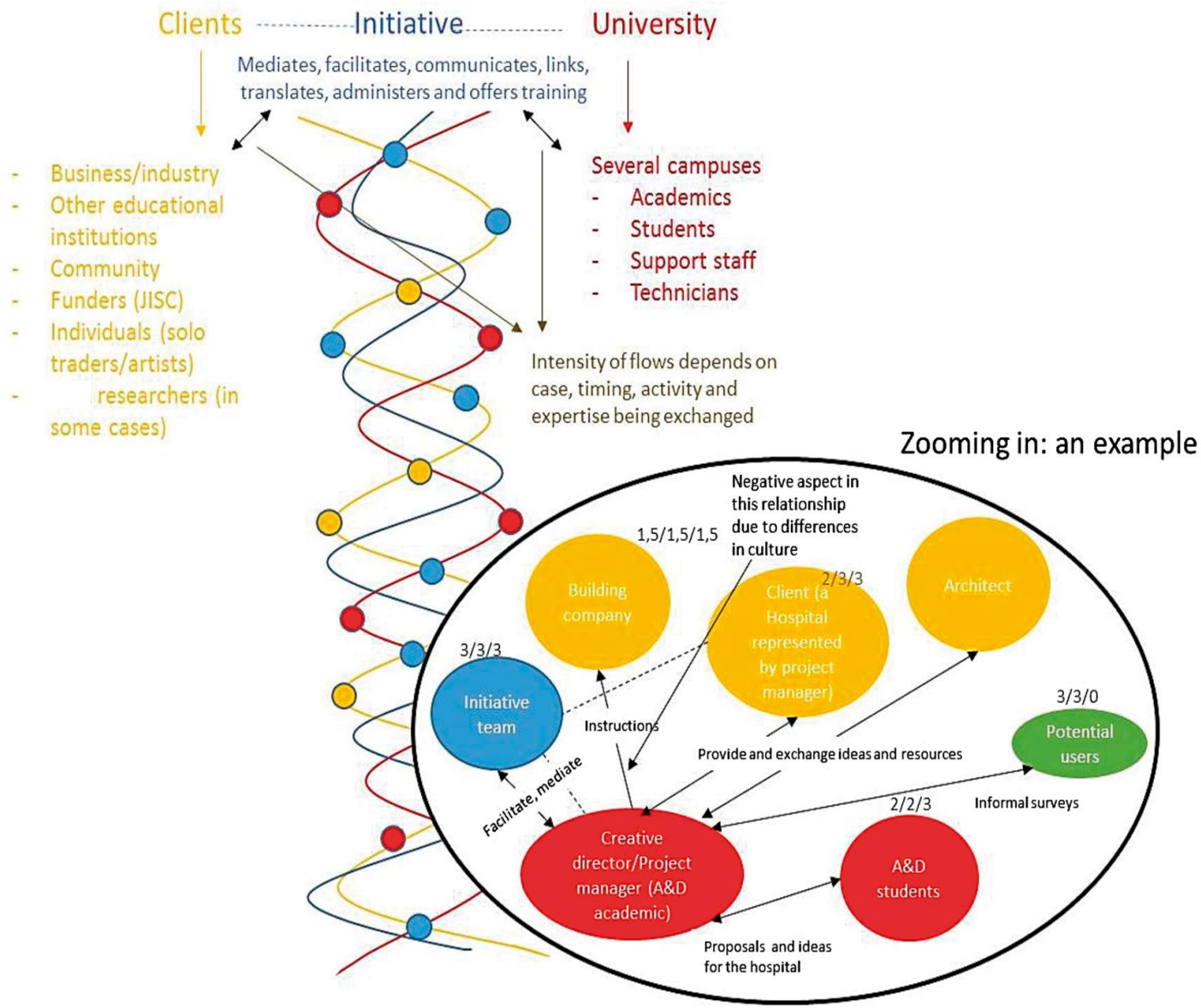
User-commissioned research project (geography)



Community- led project (performing arts)



Enterprise unit



Impacts in different groups of disciplines

Narrating and evidencing impact

Type of corroboration source (in n=250+ CSs)
Testimonials
Print and broadcast media
Digital and social media
International organisations and supranational agencies documentation
Independent academic and professional publication
Professional bodies and societies documents
Other UK national public bodies incl. RCUK
Industry documents and publications
UK national and local government documents
Third sector documents
Art and culture organisations publications
Foreign governments and bodies
Educational and training material
Parliamentary documents
Documents relating to spinouts
CS researcher-produced sources
Research websites
Award information
Web and altmetrics
Clinical trials
Court case reports
Other

Narrative construction of CS

- **Script types**
  - The money stories: Business success
  - The urgency stories: Demand or need driven
  - The practical stories: Problem- solution
  - The common good stories: Public and cultural interest
  - The weight of knowledge stories: Accumulation of compelling evidence
  - The technological leap stories: Innovation (cutting edge)

Oancea and Djerasimovic, 2015

Narrative construction of CS

a) Climactic
b) Headline
c) Portfolio
d) Chronological

(Oancea and Djerasimovic, 2015)

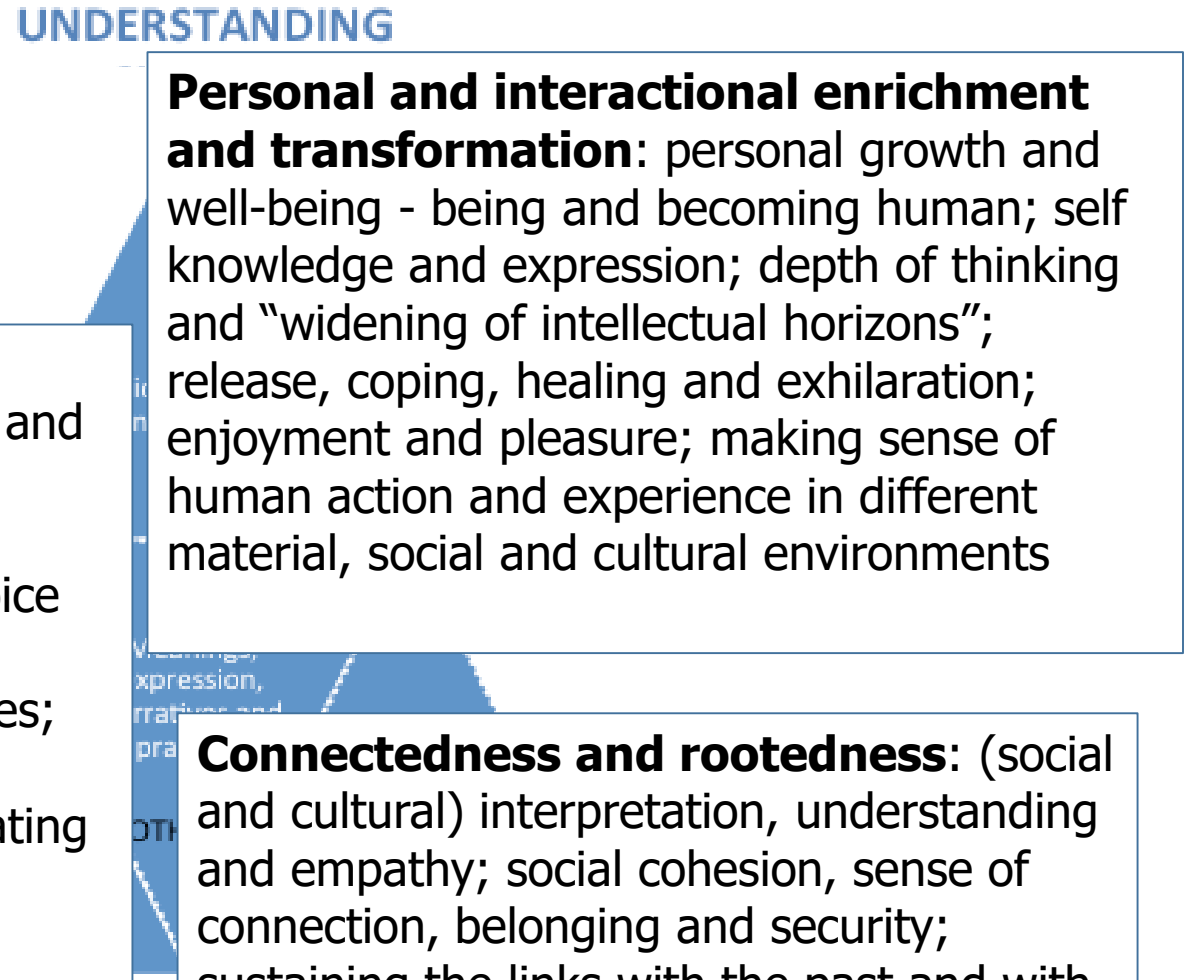
- “We measured [impact] according to the criteria by counting the reviews, itemising all the different stakeholders, showing how it had informed lots of television programmes and showing that it had actually influenced […] policy”
- “But we have to just be careful that we don't then become prisoners of those metrics.”

(principal investigator)

A different vocabulary?

Oancea et al, 2014

- **Bridging cultural divides**
- **Creative and connected learning**
- **Transformative experience leading to changes in behaviour**
- **Working in conditions of risk, doubt and uncertainty**
- **Culturally enhanced understanding and practical wisdom**
- **Experimentation and innovation**
- **Reframing value**
- **Impetus for disciplinary maturation**

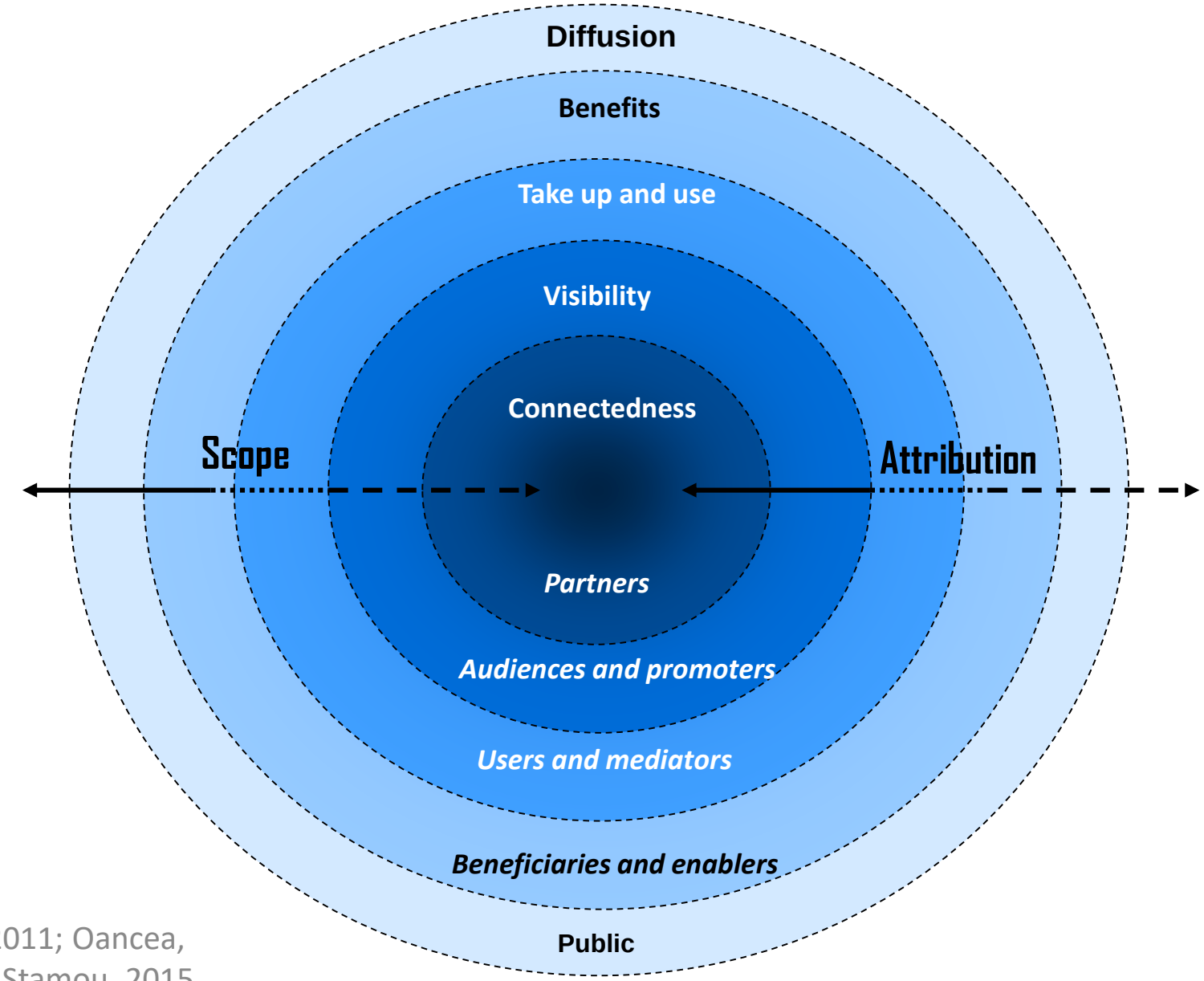


Personal and interactional enrichment and transformation: personal growth and well-being - being and becoming human; self knowledge and expression; depth of thinking and "widening of intellectual horizons"; release, coping, healing and exhilaration; enjoyment and pleasure; making sense of human action and experience in different material, social and cultural environments

Engagement and criticality: aesthetic experiences, expression and appreciation; (cultural access), engagement, and participation; (cultural) rights, social change, voice and resistance; productive engagement with cultural industries; making marginalised or silenced identities visible and vocal; motivating dialogue and understanding of difference

Connectedness and rootedness: (social and cultural) interpretation, understanding and empathy; social cohesion, sense of connection, belonging and security; sustaining the links with the past and with place; appreciation of cultural identities; recovering past or marginalised material and historical value

A textured concept of (pathways to) impact



(c) Alis Oancea, 2011; Oancea, Djerasimovic and Stamou, 2015

Frameworks for impact

Indicators and governance

Meanings	Stable & measurable attributes	⟷	Negotiated public judgement
Methods	Design and test metrics	⟷	Critical deliberation
Role	Technical	⟷	Developmental

Risks and caveats of impact metrics

- *Instrumentalism*: means-ends separation - commodification of value
- *Simplification*: downplaying conceptual complexity and practical serendipity
- *Homogeneisation*: glossing over diversity (disciplines, modes of inquiry)
- *Opacity*: obscuring power relations
- *Short-termism*: unable to capture “sea-change” nature of e.g. cultural shifts
- *Too exclusive*: narrowing of scope for the sake of definitional boundaries
- *Too inclusive*: broad to the point of being “virtually meaningless”
- *Residual*: what’s left after accounting for more defined forms of value
- ‘*Macrotising*’: artificial aggregation of surface/ non-standardised metrics
- *Undevelopment* : weak conceptual network (“contribution”, “impact”)
- *Obsolescence*: through association with particular performance regimes
- *Validity and reliability issues*: proxy indicators

Vulnerabilities in organisations

- overly tight division of labour;
- expansion of parallel functions;
- division academic/professional;
- micro-management;
- misrecognition of impact and impactful work;
- lop-sided ‘partnerships’ and resource grabbing;
- attitudinal problems - institutionalised condescension, conceit, attention seeking, boastfulness…?

Framework for decisions in institutions

Think about:

- Goal of monitoring/evaluation
- Mission of research
- Level of assessment
- Disciplinary structures, epistemic cultures and research approaches
- Stakeholders, audiences and beneficiaries
- Research environment

Adapted from framework for open science engagement - Wouters, Rafols, Oancea et al (2019)

Toolboxes

Develop:

- Capabilities
- Infrastructures
- Exemplars (investments, practices)
- Responsible reward and incentive systems

Adapted from Wouters, Rafols, Oancea et al (2019)

These slides draw on work published as:

Oancea, A. (2019) Research governance and the future of research assessment. *Palgrave Communications*, 5 (27). https://doi.org/10.1057/s41599-018-0213-6

Wouters, P., Ràfols, I., Oancea, A., Kamerlin, L., Holbrook, J. and Jacob, M. (2019) *Indicator Frameworks for Fostering Open Knowledge Practices in Science and Scholarship.* Expert report, European Commission.

Oancea, A, Florez-Petour, T, Atkinson, J (2018) "The ecologies and economy of cultural value from research", *International Journal of Cultural Policy*. DOI: http://dx.doi.org/10.1080/10286632.2015.1128418

Oancea, A, Petour, TF, Atkinson, J (2017) "Qualitative network analysis tools for the configurative articulation of cultural value and impact from research", *Research Evaluation*. DOI: http://dx.doi.org/10.1093/reseval/rvx014

Oancea, A. & Djerasimovic, S. (2015) *Findings from in-depth analysis of over 260 impact case studies.* Summary report, University of Oxford.

Oancea, A., Djerasimovic, S. and Stamou, E. (2015) *Impact and Knowledge Exchange*. www.education.ox.ac.uk/our-research/impact/kei-toolkit/

Oancea, A., Florez, T. & Atkinson, J. (2014) *The Cultural Value of Arts and Humanities Research: A Configurative Approach*. Arts and Humanities Research Council.

Oancea, A (2014) *Research assessment in the United Kingdom: past experience and current challenges*. ZfE - Zeitschrift für Erziehungswissenschaft, 23.

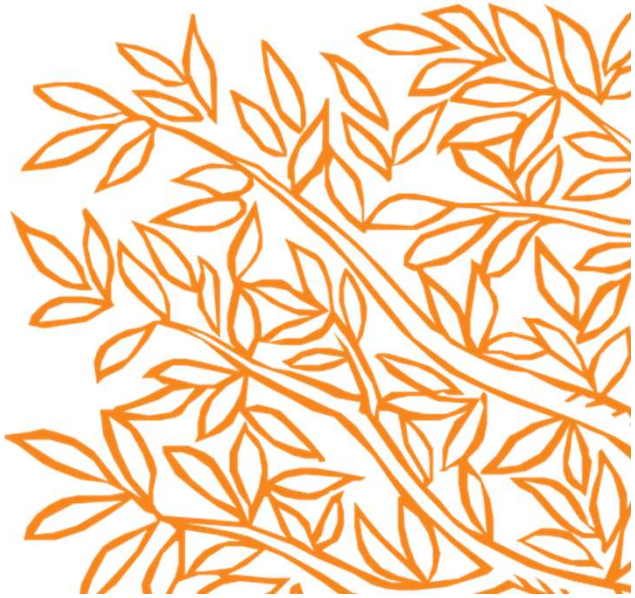
Oancea, A (2013) *Interpretations of research impact in seven disciplines*, European Educational Research Journal, 12(2), 242-250.

Oancea, A (2013) *Buzzwords and values: The prominence of "impact" in UK research policy and governance*. Research Trends, 33, 6-8

Oancea, A et al (2012) *Assessing research impact in academic clinical medicine: a study using Research Excellence Framework pilot impact indicators*. BMC Health Services Research, 12:478.

Oancea, AE (2011) *Interpretations and Practices of Research Impact across the Range of Disciplines*. Final Report. Oxford University.

Integrating grand challenges in an institutional research strategy



Assessing Societal Impact of Research Course

King’s College London

Nov 2019

Evolving expectations! From…

"I was entered at Oxford and have been properly idle ever since."

Edward Ferrars
Sense and Sensibility
Jane Austen, 1811

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To…

“To respond to the Grand Challenges, business, academia, civil society and government must work together, bringing their expertise and entrepreneurial spirit, to drive us all towards success.”

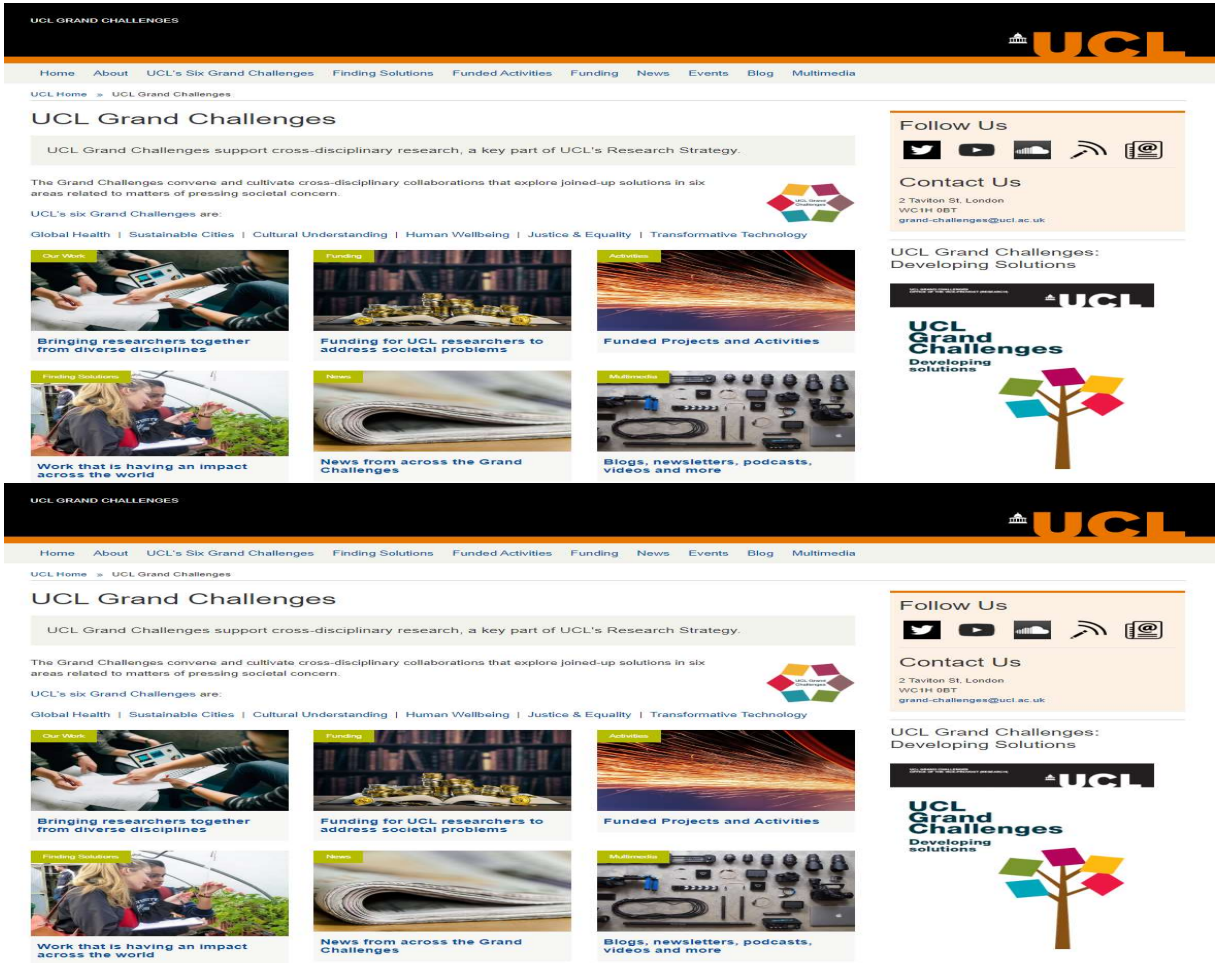
UK industrial strategy 2018

“A primary objective of the National Science and Technology Council is to ensure science and technology policy decisions and programs are consistent with the President's stated goals.”

Executive Office of the President of the United States 2019

UCL was one of the first UK universities to develop cross-disciplinary research themes focussed on global challenges:

1. Global Health
2. Sustainable Cities
3. Cultural Understanding
4. Human Wellbeing
5. Justice & Equality
6. Transformative Technology



UCL GRAND CHALLENGES
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UCL Home » UCL Grand Challenges
UCL Grand Challenges
UCL Grand Challenges support cross-disciplinary research, a key part of UCL's Research Strategy.
The Grand Challenges convene and cultivate cross-disciplinary collaborations that explore joined-up solutions in six areas related to matters of pressing societal concern.
UCL's six Grand Challenges are:
Global Health | Sustainable Cities | Cultural Understanding | Human Wellbeing | Justice & Equality | Transformative Technology
Bringing researchers together from diverse disciplines
Funding for UCL researchers to address societal problems
Funded Projects and Activities
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University of Nottingham > Research > Beacons of Excellence

Beacons of Excellence - Solving today's global challenges

Securing sustainable food supplies, ending slavery, developing greener transport, and reducing our reliance on fossil reserves are just some of the solutions to the pressing problems we face.

We are funding six new Beacons of Excellence committed to tackling these global challenges.

Rights Lab

A community with a shared vision of ending slavery in our lifetime.

Precision Imaging

Transforming healthcare with pioneering imaging.

Future Food

Addressing the challenge of feeding an ever growing world population.

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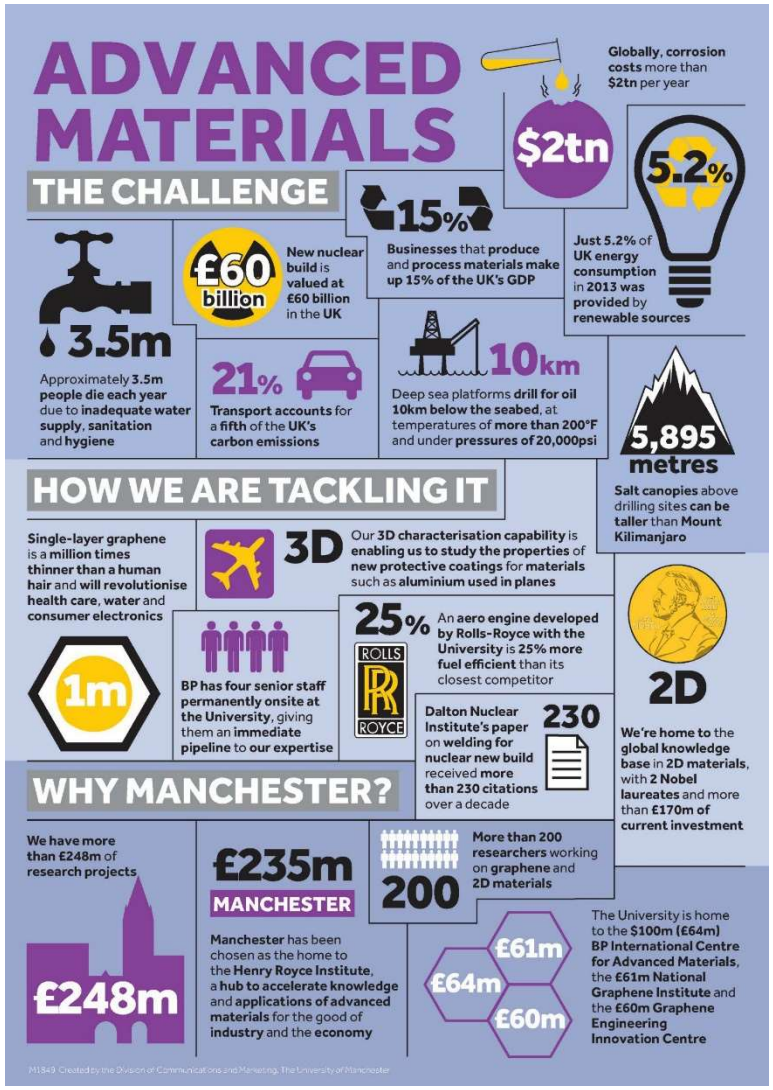
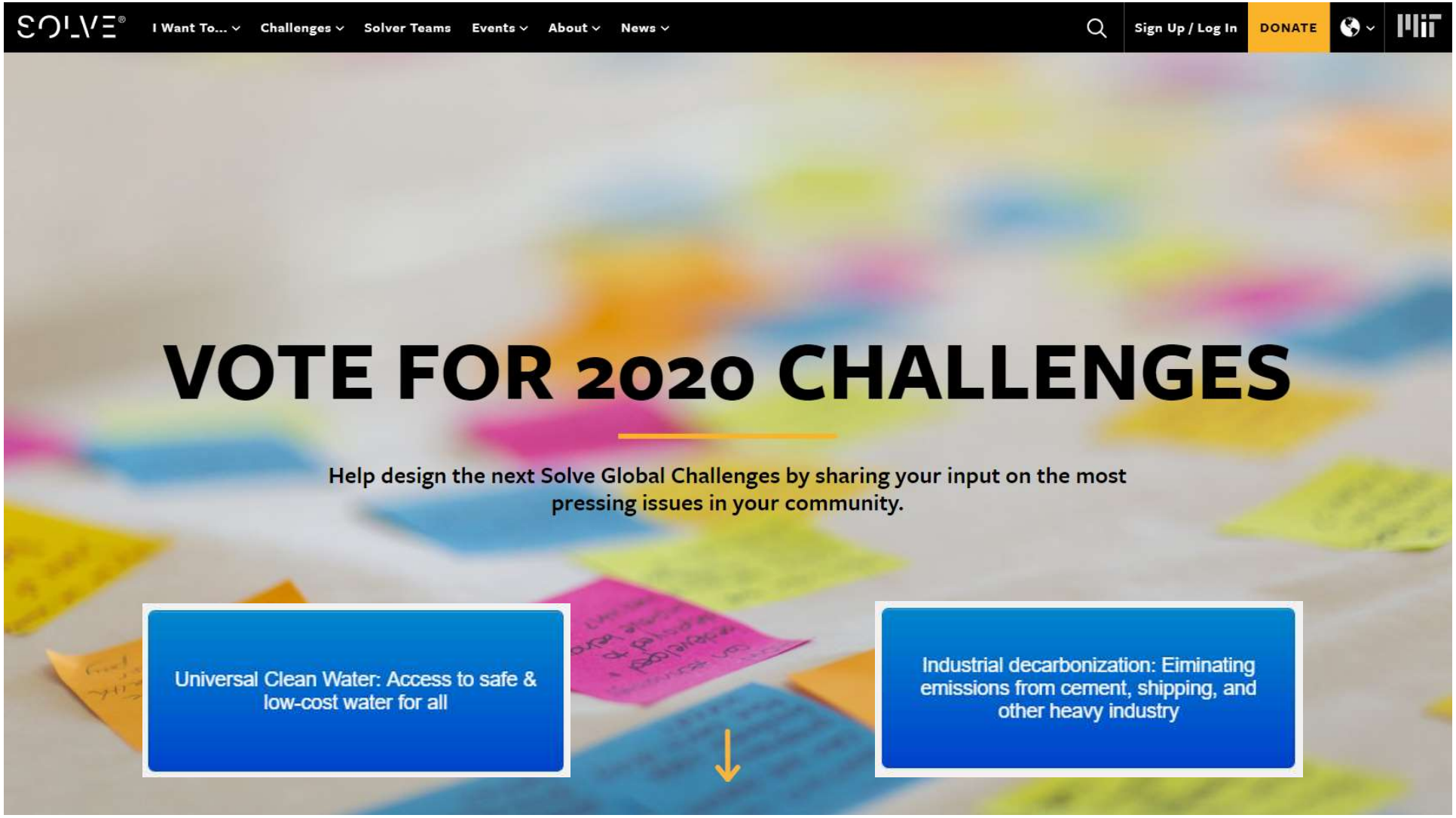
Green Chemicals

Securing the sustainable bio-economy of the future.

Smart Products

Technology research to make smarter and trusted products for everyone.

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Help design the next Solve Global Challenges by sharing your input on the most pressing issues in your community.
Universal Clean Water: Access to safe & low-cost water for all
Industrial decarbonization: Eiminating emissions from cement, shipping, and other heavy industry

Grand Challenges principles

These principles are the guiding aspects of Grand Challenges:

1. The aims of Grand Challenges will link strongly to those of the Education Strategy e.g. to encourage research-inspired, innovative, multi-disciplinary, enquiry based learning and improve the employability attributes of our graduates.
2. The topics covered will link to the University's HASS and STEM strategies where possible.
3. The programme will allow students to co-create some aspects of the Grand Challenges Week.
4. Grand Challenges Week will be open to all undergraduate students.
5. Grand Challenges will be a challenging, fun and engaging learning experience.
6. Challenges will be led by academics. The PGR and the wider academic community (i.e. academics from different disciplines) will be involved and support the Challenges.
7. Employers, alumni, honorary graduates, local businesses and the local community will be engaged in Grand Challenges in some form.
8. Students from all campuses will have the opportunity to take part in Grand Challenges.

Challenge Topics

The Challenges for 2019 were:

> Climate Change
> Food for Thought
> Gender Inequality
> Global Security
> Mental Health
> The Case for Earth

https://www.ucl.ac.uk/grand-challenges/
https://www.nottingham.ac.uk/research/beacons-of-excellence/
https://www.manchester.ac.uk/research/beacons/advanced-materials/M1849_Adv_Materials-large.jpg
https://solve.mit.edu/challenges
https://www.exeter.ac.uk/grandchallenges/

Matching the research workflow to the challenges…

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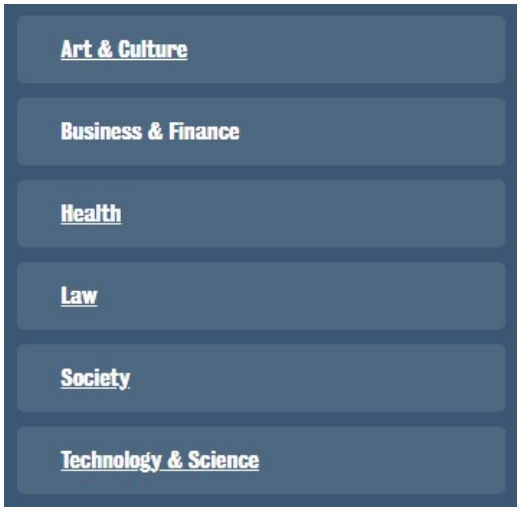
Research is (largely) organised by discipline

King's College London



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THE - Times Higher Education Classification

Arts and Humanities
Business and Economics
Clinical, pre-clinical and health
Computer Science
Education
Engineering and Technology
Law
Life Sciences
Physical Sciences
Psychology
Social Sciences

ASJC - All Science Journal Classification

Chemistry
- General Chemistry
- Chemistry (miscellaneous)
- Analytical Chemistry
- Electrochemistry
- Inorganic Chemistry
- Organic Chemistry
- Physical and Theoretical Chemistry
- Spectroscopy

FORD - Fields of Research and Development (FORD) Classification

Social Sciences
- Psychology and cognitive sciences
- Economics and business
- Education
- Sociology
- Law
- Political Sciences
- Social and economic geography
- Media and communications
- Other social sciences

The mission! Sustainable Development Goals (2015)

The research community has responded to these challenges by becoming more connected, collaborative and more focussed on addressing them.

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The SDGs: targets for impact

- By 2030, reduce the global maternal mortality ratio to less than 70 per 100,000 live births
- By 2030, end preventable deaths of newborns and children under 5 years of age, with all countries aiming to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births
- By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases
- By 2030, reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being
- Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol

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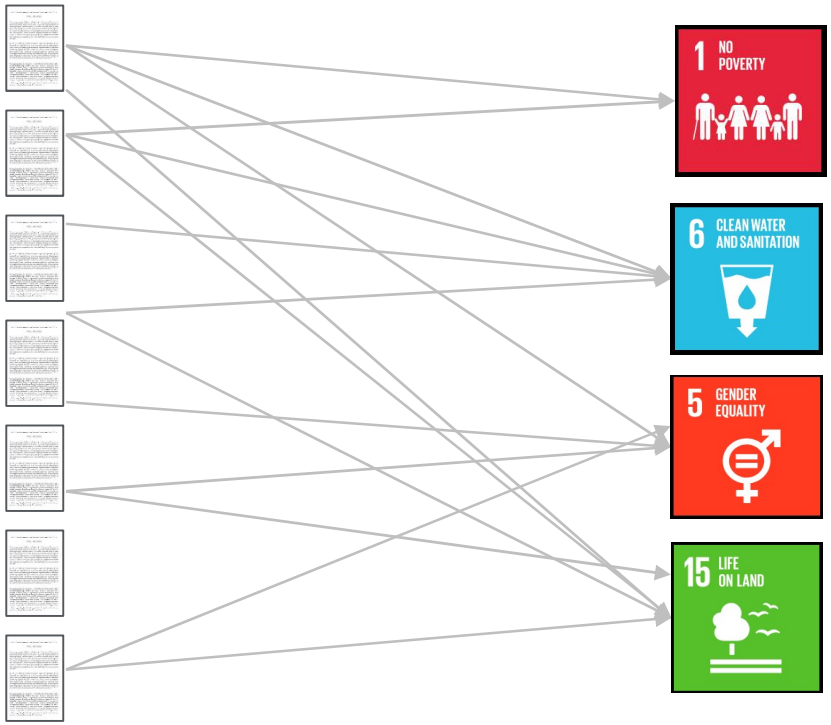
Have impact

Numerous and distinct diseases

Mix of medicine, social science, economics…

Linking research to the mission



Research outputs

SDG missions

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The SDGs: targets for impact

2017	Keywords	• Expert-vetted keywords from Elsevier Sustainability report 2015 mapped to SDGs	Based on SDG descriptions
2018	Review	• Elsevier + research community SDG expert review and testing	Results used in THE rankings
2019	Target	• Assess whether keywords relate closely enough to SDG **targets** (not just the **topics**)	Missing terns identified; false positive testing
	Share	• Results available in SciVal to all users	Released October 2019
	Iterate	• Feedback invited and welcomed…	More iterating to follow!

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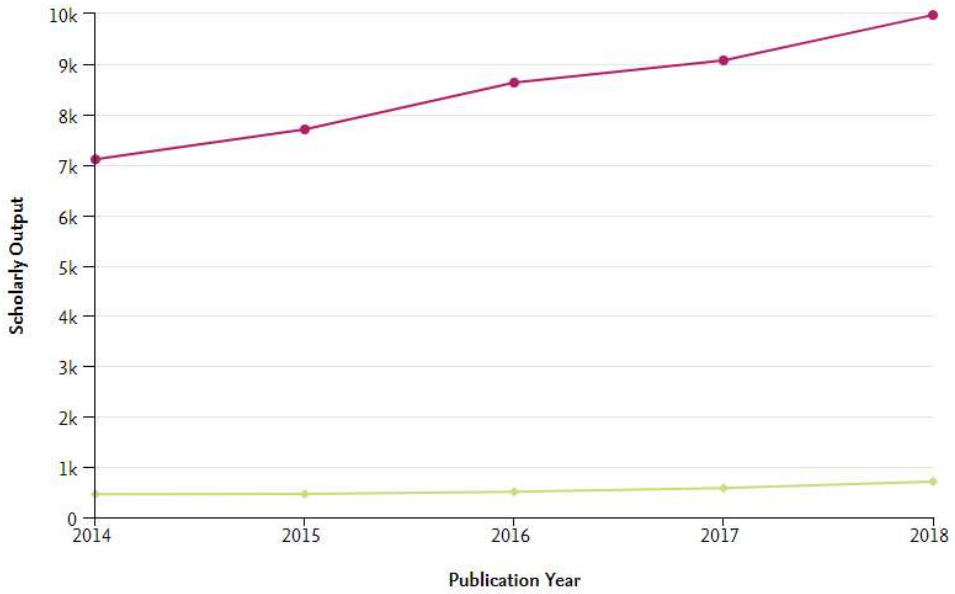
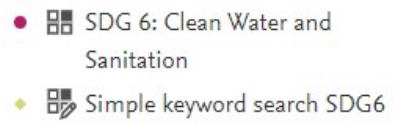
Very little research on these topics mentions “SDG”





Simple search for demonstrative purposes: (SDG or “Sustainable Development Goal” AND “Clean Water”) OR (SDG or “Sustainable Development Goal” AND Sanitation)

Select the SDG of interest in your Research Area, then go to Trends > Institutions and filter by region and Country to extract a table like the one above. Contact your SciVal support team for help navigating to your institution’s data if you cannot quickly and easily locate it.

Coupling research metrics with defined SDG fields will help institutions refine research and impact agendas

- Social media metrics (Shares, likes, +1, Tweets)

- Downloads from Github, RePEc, IRs
- Citations (field normalised, %iles, counts)
- Collaborators on Github
- Full text, pdf, html views on ScienceDirect, Figshare etc

- Wikipedia citations
- Blog mentions
- StackExchange links

- Number of patents filed and granted

- Number of Library holdings (WorldCat OCLC)
- Views on Slideshare
- Plays on YouTube
- Amazon book reviews

- Clinical citations or Health policy/guideline citations
- Government policy citations
- News mentions

- Patent citations
- Academic: Industry partnerships
- Licenses
- Business consultancy activities

Assessing the Societal Impact of Research: use cases for SDGs

- Examine, demonstrate and benchmark **institution contribution and impact** on the SDG fields
- Identify the **key authors** and **institutions** in the field
- Identify and characterise **sub-fields and topics**
- Identify **partnerships** (develop existing partnerships or new ones)

➢ Examine, demonstrate and benchmark institution contribution and impact on the SDG fields

- Explore the contributions*, impact and collaboration by **institution** to each SDG, measured in a variety of ways
  *publications and citing patents
- Benchmark against self (track changes over time), other institutions, and measure contribution to country
- View into the list of publications
- Set up performance measures for regular reporting

Institution	Scholarly Output	Citations per Publication	Field-Weighted Citation Impact
University of Oxford	224	12.0	3.02
London School of Hygiene and Tropical Medicine	220	21.8	4.01
University College London	209	14.0	3.55
King's College London	208	15.9	3.31
World Health Organization	167	15.3	3.14
Ghent University	149	16.9	3.97
University of Bristol	149	14.8	3.52
The London School of Economics and Political Science	138	16.2	4.10

Performance

+ Add to

Scholarly Output	Field-Weighted Citation Impact	International Collaboration
208	3.30	72

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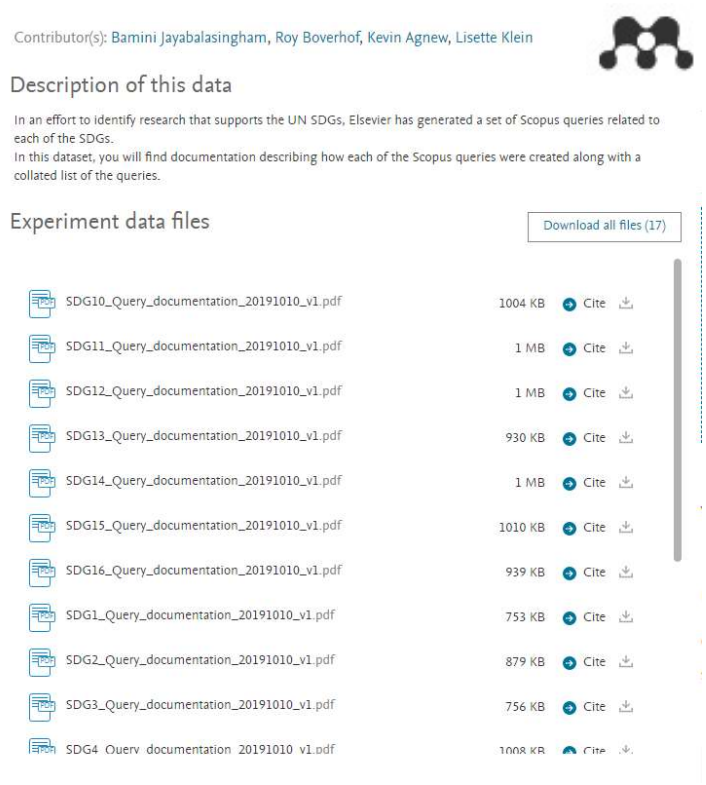
Select the SDG of interest in your Research Area, then go to Trends > Institutions and filter by region and Country to extract a table like the one above. Contact your SciVal support team for help navigating to your institution's data if you cannot quickly and easily locate it.

➢ Identify and characterise sub-fields and topics

- Explore word clouds of keyphrases:
  - Identify trends over time for keyphrases
  - Examine and demonstrate institution-level contribution to each keyphrase

Select the SDG of interest in your Research Area, then go to Trends > Summary and scroll down to Keyphrase analysis to see the above word cloud.

Scopus queries available for all SDGs



Contributor(s): Bamini Jayabalasingham, Roy Boverhof, Kevin Agnew, Lisette Klein

Description of this data

In an effort to identify research that supports the UN SDGs, Elsevier has generated a set of Scopus queries related to each of the SDGs.
In this dataset, you will find documentation describing how each of the Scopus queries were created along with a collated list of the queries.

Experiment data files

Download all files (17)

SDG10_Query_documentation_20191010_v1.pdf	1004 KB	Cite
SDG11_Query_documentation_20191010_v1.pdf	1 MB	Cite
SDG12_Query_documentation_20191010_v1.pdf	1 MB	Cite
SDG13_Query_documentation_20191010_v1.pdf	930 KB	Cite
SDG14_Query_documentation_20191010_v1.pdf	1 MB	Cite
SDG15_Query_documentation_20191010_v1.pdf	1010 KB	Cite
SDG16_Query_documentation_20191010_v1.pdf	939 KB	Cite
SDG1_Query_documentation_20191010_v1.pdf	753 KB	Cite
SDG2_Query_documentation_20191010_v1.pdf	879 KB	Cite
SDG3_Query_documentation_20191010_v1.pdf	756 KB	Cite
SDG4_Query_documentation_20191010_v1.pdf	1008 KB	Cite

SDG15: Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss

Original search string: 409,711 document results

TITLE-ABS-KEY((biodivers* OR bio-divers* OR bioeconom* OR bio-econom* OR {biological production} OR deforest* OR desertif* OR {earth system} OR {ecological resilience} OR ecosystem* OR eco-system* OR {food chain} OR {food chains} OR {threatened species} OR {endangered species} OR {extinction risk} OR {extinction risks} OR poach* OR {wildlife product} OR {wildlife products} OR {wildlife traffic} OR {wildlife market} OR {wildlife markets} OR {wildlife trafficking} OR {invasive species} OR {alien species} OR {land uses} OR {land use} OR {land uses} OR {land degradation} OR {soil degradation} OR {LULUCF} OR *forest* OR {land conservation} OR wetland* OR mountain* OR dryland*)) AND PUBYEAR BEF 2018 AND PUBYEAR AFT 2012

Research string after second (and last) update: 97,814 document results

TITLE-ABS-KEY ((terrestrial OR land OR inland OR freshwater) AND (biodivers OR {species richness} OR bioeconom* OR bio-econom* OR {biological production} OR deforest* OR desertif* OR {earth system} OR {ecological resilience} OR ecosystem* OR eco-system* OR {trophic cascade} OR {trophic level} OR {trophic web} OR {threatened species} OR {endangered species} OR {extinction risk} OR {extinction risks} OR poach* OR {wildlife product} OR {wildlife products} OR {wildlife traffic} OR {wildlife market} OR {wildlife markets} OR {wildlife trafficking} OR {invasive species} OR {alien species} OR {land uses} OR {land use} OR {land uses} OR {land degradation} OR {soil degradation} OR {LULUCF} OR *forest* OR {land conservation} OR wetland* OR mountain* OR dryland* OR {mountainous cover} OR {protected area} OR {protected areas} OR {REDD} OR {forest management} OR {silviculture} OR {timber harvest} OR {illegal logging} OR {slash-and-burn} OR {fire-fallow cultivation} OR {tree cover} OR {soil restoration} OR {land restoration} OR {drought} OR {sustainable land management} OR {mountain vegetation} OR {habitat restoration} OR {Red List species} OR {Red List Index} OR {extinction wave} OR {habitat fragmentation} OR {habitat loss} OR {Nagoya Protocol on Access to Genetic Resources} OR {genetic resources} OR {biological invasion} OR {biodiversity-inclusive} OR {forest stewardship council} OR {rainforest alliance} OR {forest certification} OR {forest auditing} OR {ecotourism} OR {community-based conservation} OR {community based conservation} OR {human-wildlife conflict})) AND PUBYEAR < 2018 AND PUBYEAR > 2012*

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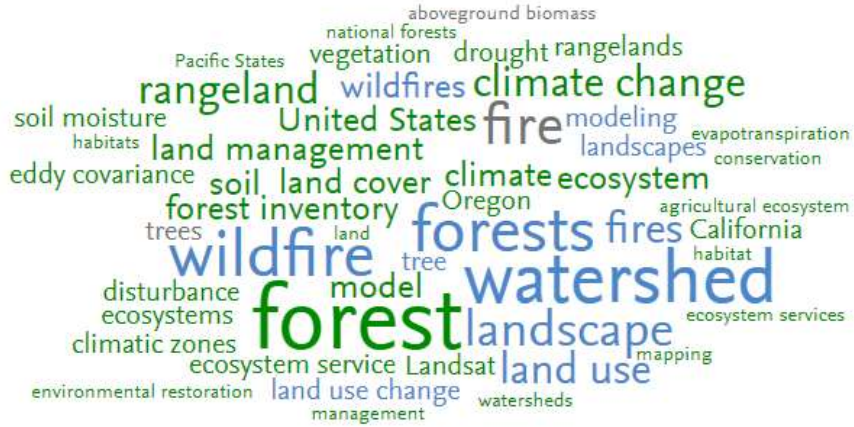
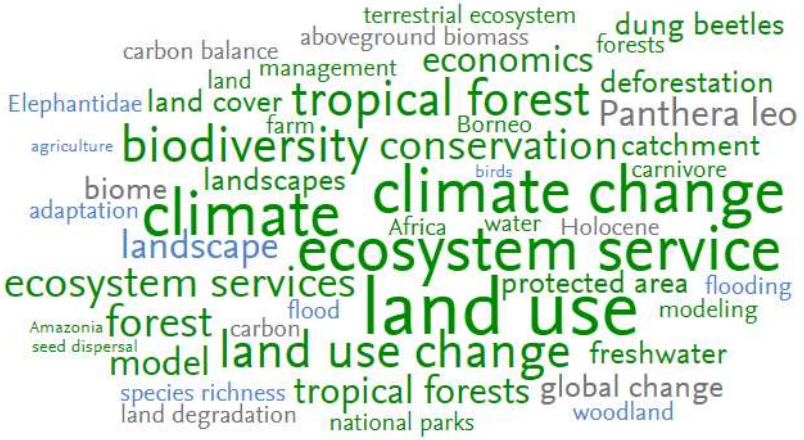
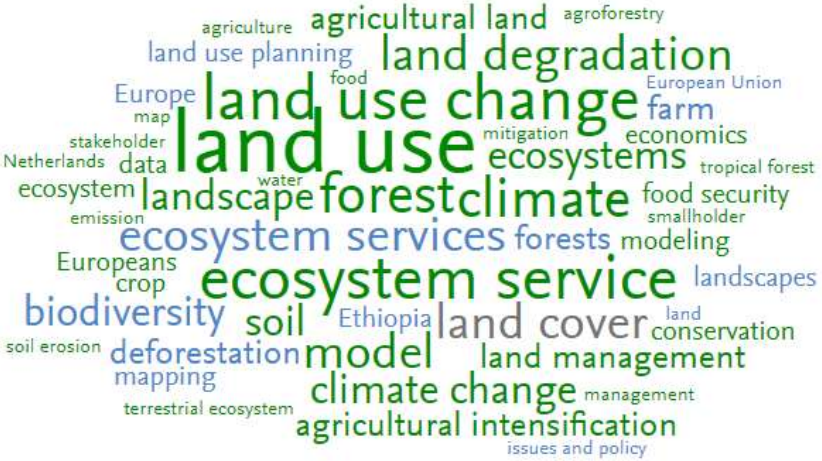
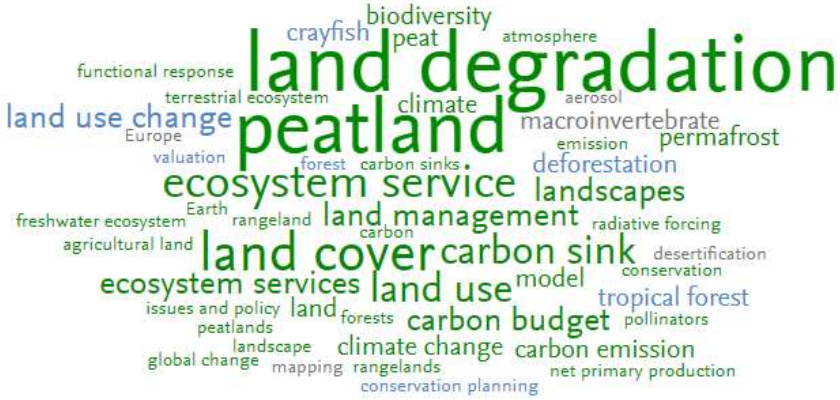
https://data.mendeley.com/datasets/87txkw7khs/1









A A A relevance of keyphrase | declining A A A growing (2014-2018)

Topics & Topic Clusters

+ Add to Reporting Export

Between 2014 to 2018, Publications at the United States Department of Agriculture within SDG 15: Life on Land | 2014 to 2018 has contributed to:

212 Topic Clusters | Learn about Topics and Topic Clusters

759 Topics

Table | Wheel

All Topics

Filter by keyphrase(s)

	In this Publication Set			Worldwide
Topic	Scholarly Output	Publication Share	Field-Weighted Citation Impact	Prominence percentile
Fire; Wildfire; Fuel treatment T.1825	103	10.93% ▲	2.64	98.871
Tree; Trees; Street tree T.4552	36	3.70% ▲	2.33	98.313
Watersheds; Watershed; Water assessment T.1993	34	2.22% ▲	2.03	99.540
Forests; Forest; Forest landowners T.9560	33	8.09% ▲	1.48	90.848
Optical radar; Forest inventory; Tree detection T.1452	25	1.72% ▲	2.06	99.367
Landsat; Land cover; Cover maps T.1780	25	1.16% ▲	5.02	99.725
Eddy covariance; Net ecosystem exchange; Carbon flux T.2183	23	2.67% ▲	2.16	98.486
Quercus; Forest; Red maple T.4702	23	7.42% ▲	1.39	87.977

Topics & Topic Clusters

+ Add to Reporting Export

Between 2014 to 2018, Publications at the University of Leeds within SDG 15: Life on Land | 2014 to 2018 has contributed to:

○ 112 Topic Clusters | Learn about Topics and Topic Clusters ↗

◉ 248 Topics

Table | Wheel

All Topics

Filter by keyphrase(s)

	In this Publication Set			Worldwide
Topic	Scholarly Output ↓	Publication Share	Field-Weighted Citation Impact	Prominence percentile
Tropical forest; Tropical forests; Rainforest T.30219	17	5.67% ▲	3.99	97.317
Dissolved organic carbon; Dissolved organic matter; Matter DOM T.5026	14	2.40% ▲	1.42	95.071
Ecosystem service; Ecosystem services; Multiple ecosystem T.2046	11	0.39% ▲	3.55	99.932
Desertification; Land degradation; Soil degradation T.28348	10	3.32% ▲	3.30	91.537
Landsat; Land cover; Cover maps T.1780	9	0.42% ▲	1.69	99.725
Forest; Deforestation; Community forests T.2790	9	0.67% ▲	2.55	98.900
Bee; Pollinator; Wild bee T.2041	8	0.40% ▲	4.46	99.814
Climate; Climate change; Negative emissions T.3285	7	0.41% ▲	3.61	99.922

Conclusions

1. University research is increasingly expected to explicitly **drive forward national or global policy objectives**

2. Research is often not *organised* around these objectives, it is possible to **link research outputs to the missions**

3. Analyses based on this linked data can help **universities finetune their research and impact agenda**

4. The SDG fields that Elsevier has defined are just one way of looking at each of the SDGs and will **iterate and evolve over time** and with use

5. Defined SDG fields, coupled with the assessment of research that SciVal can power will hopefully help researchers and institutions **track and demonstrate progress**, as well as **finding new people to collaborate with and new areas to investigate**

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Thank you

The basket of metrics through SciVal…

F. Qualitative input

Metric theme	Metric sub-theme	Metrics in SciVal	
A. Funding	Awards	• Awards Volume	

B. Outputs	Productivity of research outputs	• Scholarly Output
		  • Number, Type and Growth
		  • Subject Area Count	

	Visibility of communication channels	• Publications in Top Journal Percentiles	
C. Research Impact	Research influence	• Citations Count • Field-Weighted Citation Impact • Outputs in Top Citations Percentiles • Citations per publication • Cited publications • *h*-indices	• Number of citing countries • Views Count • Outputs in Top Views Percentiles • Views per Publication • Field-Weighted Views Impact
	Knowledge transfer	• Academic-Corporate Collaboration • Citing-Patents Count • Patent-Cited Count	
D. Engagement	Academic network	• Collaboration • Collaboration Impact	
	Non-academic network	• Academic-Corporate Collaboration • Academic-Corporate Collaboration Impact	
	Expertise transfer	• Academic-Corporate Collaboration • Citing-Patents Count • Patent-Cited Count	
E. Societal Impact	Societal Impact	• Academic-Corporate Collaboration • Citing-Patents Count • Patent-Cited Scholarly Output	• Patent-Citations Count • Mass Media • Media Exposure • Field-Weighted Mass Media

The basket of metrics is diverse and available for all entities

F. Qualitative input
Expert feedback on quality and impact of my research

Theme	Sub-theme
A. Funding	**Awards** Can I support my research?
B. Outputs	**Productivity of research outputs** How productive am I?
	Visibility of communication channels What is the impact of the channels that my outputs are published in?
C. Research Impact	**Research influence** How are my outputs used in academia?
	Knowledge transfer How are my outputs used in industry?
D. Engagement	**Academic network** How good is my collaboration network within academia?
	Non-academic network How good is my collaboration network outside academia?
	Expertise transfer How do I transmit knowledge to others within academia?
E. Societal Impact	**Societal Impact** What is my wider impact?

Outputs
e.g. article, research data, blog, monograph

Custom set of outputs
e.g. funders' output, articles I've reviewed

Researcher or group

Institution or group

Subject Area

Serial
e.g. journal, proceedings

Portfolio
e.g. publisher's title list

Country or group

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