

Implementation and Evaluation Plan for the Research Strategy 2016-2025

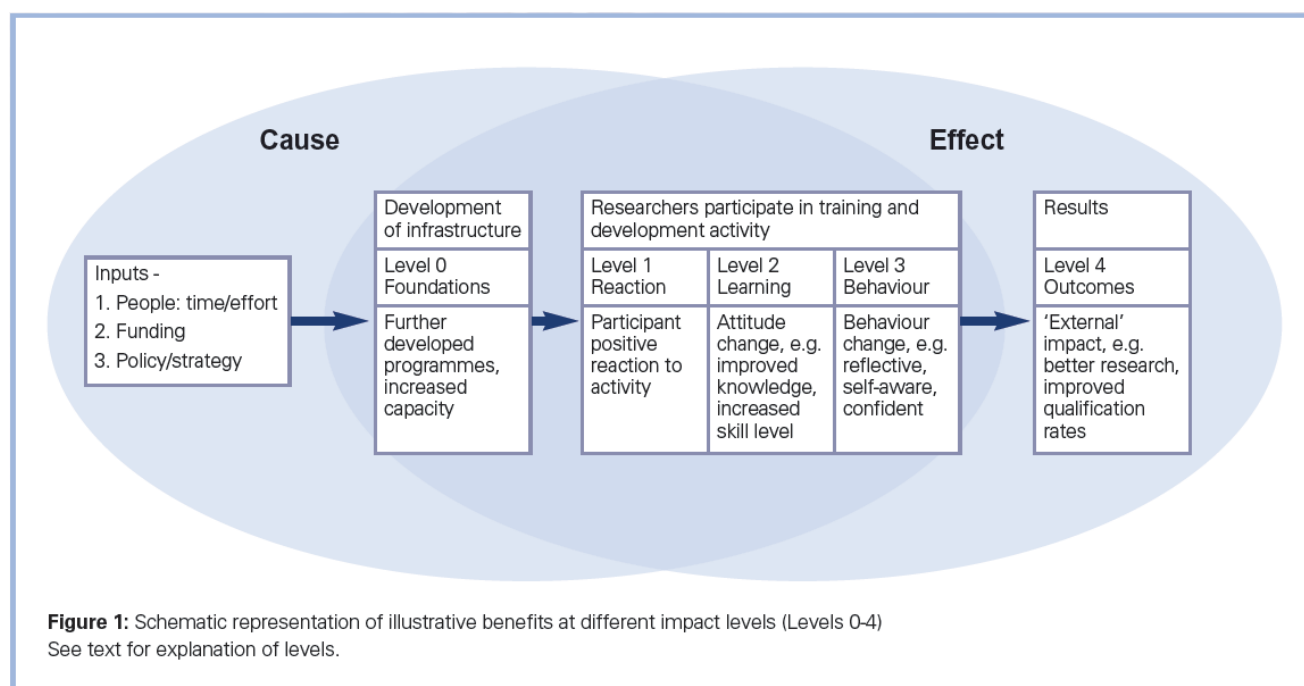
Overview

The University intends to become a research intensive institution by 2025 and has adopted an ambitious new strategy designed to make this transformation effective and efficient. The strategy focusses on four ways of developing and improving the inputs to research – the environment and culture change initiatives – and eight ways of developing and improving our problem-solving opportunities and thereby our ability to produce more sophisticated outputs and outcomes – the targeting initiatives. This document explains how we will implement the strategy, set the baseline, benchmarks and targets, and build an evidence base to support its evaluation.

The Realist (or Realistic) Evaluation Model

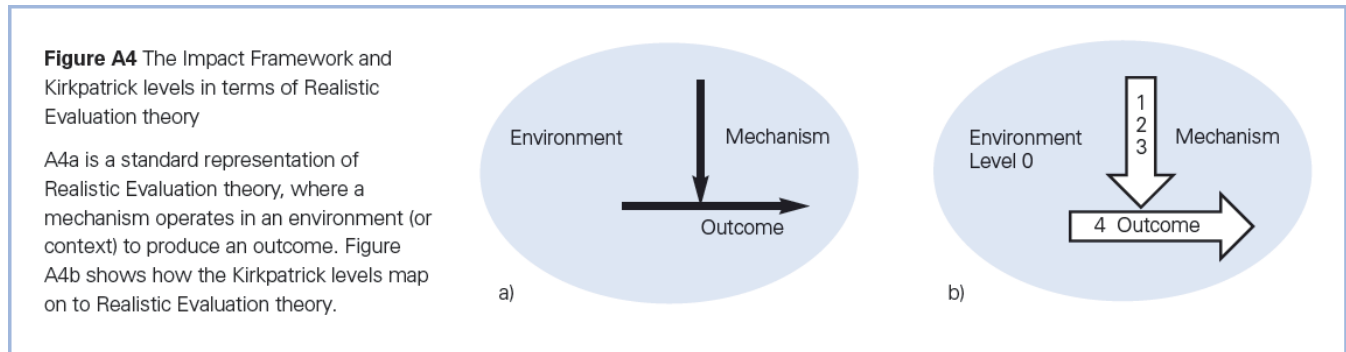
The realist evaluation approach is based on an understanding that it is possible to evaluate a programme only by understanding the hypothesised mechanism of change. A “mechanism” is what it is about programmes and initiatives that bring about any effects. These mechanisms can perform differently in different contexts to produce different outcomes and therefore the job of any evaluation is to understand the relationship between context, mechanism and outcome.

Using the realist evaluation approach *Vitae* has developed an *Impact Framework*¹ for training and development activities that describes a logical progression from initial inputs through a learning process to eventual outcomes. This *Framework* provides a reference point for understanding the potential impact points (levels) at various stages in a ‘pathway’ towards an outcome and for specifying the evidence of change that will be collected at each point (see Figure 1 and Table 1).



Impact and Evaluation Group (2012) *The Impact Framework 2012*. Cambridge: Vitae. Accessed 16 March 2016. URL: <https://www.vitae.ac.uk/vitae-publications/reports/ieg-report-2012.pdf>

Although *Vitae's* formula applies specifically to training and development activities (known as the Kirkpatrick levels, 0-4) the general theoretical and methodological principles of assessing the relationship between cause and effect can hold for evaluation of any other activity, provided that the mechanism (or logic diagram, represented by steps 1-3) is replaced by an appropriate logic diagram for the activity to be evaluated (see Figure A4).



Our detailed implementation plan for the research strategy will therefore incorporate a set of logic diagrams and evaluation maps tailored to each individual programme and initiative, although in practice many of these activities will be training and development initiatives in which the Kirkpatrick logic diagram and the evaluation map template shown in Figure 1 and Table 1 will apply.

The eight golden rules - guiding principles for evaluation design

A number of evaluations have been completed using the *Impact Framework* and eight key points of methodology have emerged. These will guide our implementation plan.

1. **Know** what the aim of any activity is at the outset, i.e., what is the identified need that led to the activity taking place? What impact is the activity designed to have?
2. **Know** how the activity contributes to meeting the needs of different stakeholders, i.e., the needs of researchers, the institution, funders etc.
3. **Build in evaluation from the start.** Work through the logical thought process before designing any activity, such that evaluation is built in from the start and a logic diagram is constructed.
4. **Baseline assessment:** know where you are starting from before you implement an initiative, i.e., do a baseline assessment, preferably at multiple impact levels.
5. **Respect** the issue of attribution. Although direct causality is unlikely to be ultimately proven consider the balance of evidence to draw conclusions 'beyond reasonable doubt'.
6. **Don't make a judgment** based upon only one source of evidence. Acknowledge the potential for metrics to mislead when quoted as standalone figures. Collate both quantitative and qualitative information. Reinforce quantitative data with a narrative about the methodology that generated the data and supporting evidence of a qualitative nature.
7. **Appreciate** the subjective nature of participants' views. Always have additional supporting evidence when drawing conclusions from participants' views.
8. **Don't ignore the unexpected.** Design and evaluate activity based upon the aims of the activity, but do not ignore unintended outcomes that become apparent during an evaluation. They may be valuable and help focus future new activity.

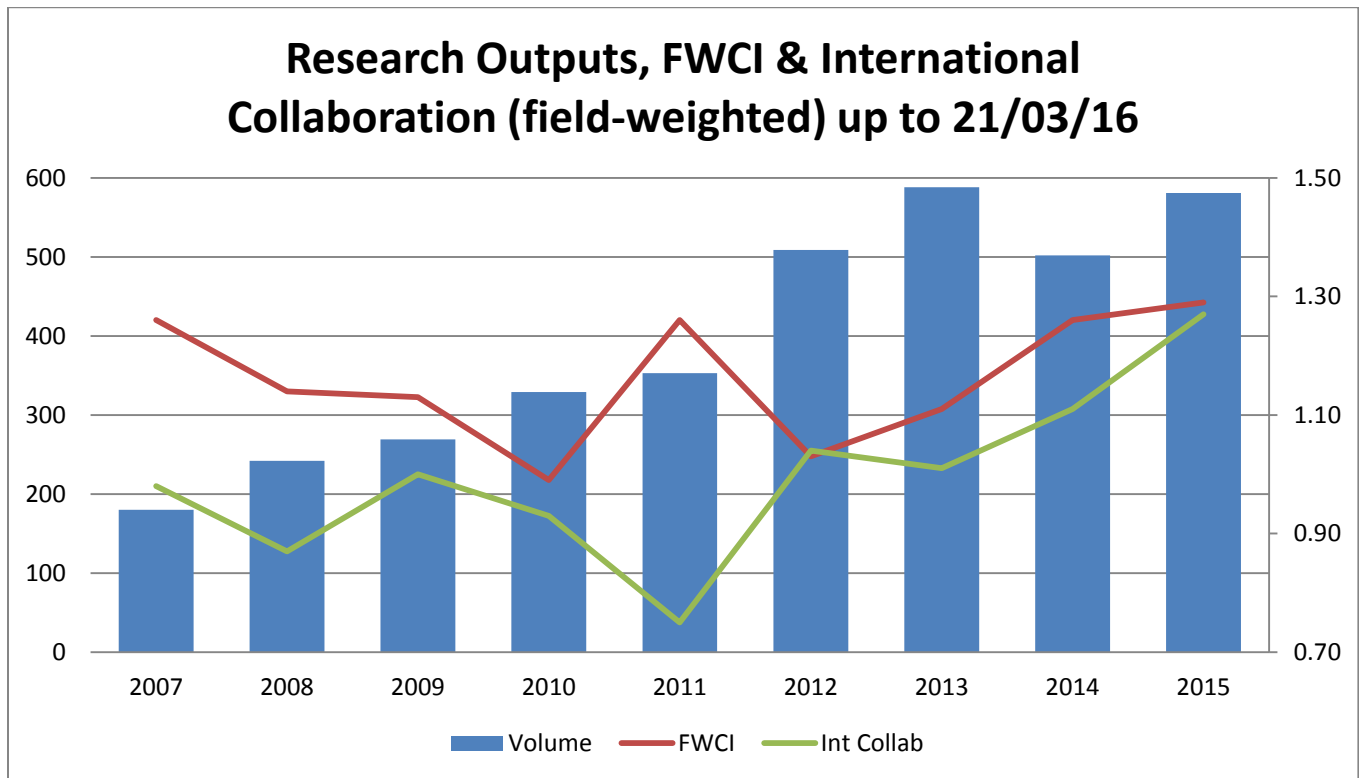
TABLE 1 The evaluation map template

The evaluation map embodies key methodological points in using the *Vitae Impact Framework* approach to build an evidence base for the impact of an initiative. The 'logic diagram' represents the *mechanism* (steps 1-3 for a training and development initiative, but the mechanism/logic diagram will vary according to the context in which the impact evaluation is being made) acting in an *environment* (0) to produce specific *outcomes* (4). See Appendix A for a completed example.

EVALUATION MAP TEMPLATE								
LOGIC DIAGRAM	IMPLEMENTATION PLAN	Issue	Drivers for change		Key stakeholders	Input(s)	Key implementation steps	Expected outcomes
		The need to: 1. 2.	Carrots Why is change needed?	Sticks What happens if we don't change?	Researchers			1. 2.
LOGIC STEPS TO ACHIEVE OUTCOME			Foundation 0 Stakeholders will be aware of...	Reaction 1 Stakeholders' reactions to... (e.g. positive / negative views)	Learning 2 Stakeholders consider implications and plan change	Behaviour 3 Stakeholders implement change	Outcomes 4 There will be: 1. 2.	
EVALUATION	EVALUATION QUESTIONS/LOGIC STEP		Is each stakeholder group aware of...?	What are the reactions of each stakeholder group to...?	Have stakeholders developed any plans for change?	Have stakeholders implemented any plans for change?	Are there any indicators that... 1. 2.	
	EVIDENCE		0	1	2	3	4	
	Potential sources of evidence (✓) to answer evaluation questions/ key stakeholder at each level							

The context and the baseline

The University's research profile has developed rapidly since the current expansion began in 2007 as the chart below illustrates. The chart includes Scopus data on research outputs, field-weighted citation impact (FWCI) and field-weighted international collaboration (world average = 1.00).



Comparing the two four-year periods 2008-2011 and 2012-2015 the average volume of outputs increased from 298 to 545, field-weighted citation impact (FWCI) climbed from 1.13 to 1.18 and international collaboration increased from 0.88 (twelve percent below world average) to 1.11 (eleven percent above). Over the same period research grant and contract income quadrupled and the postgraduate researcher population quintupled. This is a strong foundation for future success.

Some of the key events were:

- **2007** – Professor Cryan appointed as Vice Chancellor, first Pro-Vice Chancellor (Research and Enterprise) appointed, first Director of Research and Enterprise appointed, RAE 2008 submission.
- **2008** – Strategy Map 2008-2013 adopted, RAE 2008 results, 20 Professors Scheme launched.
- **2011** – Research Strategy 2011-2020 adopted, First research audit for REF2014, Researcher Development Funds for Staff and URF/SP support for REF2014 launched.
- **2012** – 3MBIC opened, *THE* Entrepreneurial University of the Year.
- **2013** – *THE* University of the Year, Strategy Map 2013-2018 adopted, REF2014 submission.
- **2014** – REF2014 results.
- **2015** – Quality-related research income increased by 140%, Athena SWAN Bronze Award.

The implementation plan

We will (a) take action in each of the twelve strategic areas of development as detailed below (b) conduct continuous evaluation of our programmes using the *Impact Framework* explained above, and (c) achieve the specified results within the stated timeframe.

E1: PERSONAL DEVELOPMENT AND INCLUSIVITY

To support our researchers we will

- Develop a communications plan for researcher support.
- Produce an institutional researcher development strategy.
- Provide additional training opportunities in response to requests made by at least half of respondents to the Careers in Research Online Survey (CROS) 2015:
 - Research impact (requested by 71% of respondents)
 - Personal effectiveness (68%)
 - Interdisciplinary research (68%)
 - Knowledge exchange (65%)
 - Career management (62%)
 - Public engagement (61%)
 - Communication and dissemination (59%)
 - Collaboration and teamworking (56%)
 - Being mentored (50%)
- Provide additional opportunities for researchers to gain experience of “working with others” in response to requests made by at least half of respondents to CROS 2015:
 - Work as part of an interdisciplinary team (requested by 65% of respondents)
 - Knowledge exchange (65%)
 - Mentor and support other researchers (56%)
 - Interdisciplinary research projects (53%)
 - Undertake an internship/placement outside higher education research (50%)
- Provide continuing professional development in response to requests made by at least one third of respondents to the Principal Investigators and Research Leaders Survey (PIRLS) 2015:
 - Managing staff performance (requested by 47% of respondents)
 - Managing group/project finances (44%)
 - Providing research staff with advice on the range of career opportunities (40%)
 - Leading your people/group (38%)
 - Personal effectiveness (37%)
 - Conducting appraisals (35%)
- Provide briefings on developments in national and international policies in research.
- Expand the range of excellent online / blended learning opportunities.
- Promote Massive Open Online Courses (MOOCs) on platforms such as FutureLearn, Coursera and edX as an economic and effective vehicle for professional development.
- Develop and deliver distinctive challenge events and prizes on a regular basis.

- Provide opportunities for all researchers to work with REF2014 panel members on the quality of planned research outputs.
- Appoint champions in strategic areas of development, including international research leadership, open innovation and impact.
- Support HR initiatives on equality and diversity and researcher integration.
- Implement our approved Athena SWAN 2015-2018 Action Plan.
- Implement our approved HR Excellence in Research Award 2015-2019 Action Plan.
- Continue to support an annual 'Excellence in Research and Innovation' awards scheme.
- Coordinate course offerings from across the University to provide a structured, thematic approach to personal and professional development by 2016/17.
- Develop a comprehensive evidence base on the effectiveness of development opportunities.
- Provide seminars and webinars on the use of the CRIS and SciVal in personal and professional development from 2016/17 onwards.

The results will be:

- A year-on-year increase in the number of initiatives evaluated as effective.
- A year-on-year increase in academic staff hours dedicated to personal development.
- A score by early career researchers above the national benchmark for Q10 on "equal treatment" in each biennial administration of the Careers in Research Online Survey (CROS).
- A score by early career researchers above the national benchmark for Q11 on "integration" in each biennial administration of CROS.
- A score by early career researchers above the national benchmark for questions in Section 4 on "support and career development" in each biennial administration of CROS.
- A score by early career researchers above the national benchmark for questions in Section 5 on "equality and diversity" in each biennial administration of CROS.
- A score above the national benchmark for questions in Section D on "how your institution supports you" in the Principal Investigators and Research Leaders Survey (PIRLS).
- A score above the national benchmark for questions in Section E on "equality and diversity" in PIRLS.

E2: EMBEDDING RESEARCH

To embed research we will

- Produce a guidebook for researchers.
- Continue to organise URF spending rounds aligned to research strategy.
- Continue to monitor UoA spending plans in accordance with the QR policy.
- Align central administrative support to this implementation plan.
- Finalise the staff/outputs/impact model for REF2021.
- Support Directors of Research in their cross-institutional role to identify and report on opportunities and risks relating to our strategic initiatives and multidisciplinary themes.

- Support the HR initiatives on 'Research Leader Development' and 'Researcher Development' under the HR Excellence in Research Award Action Plan 2015-2019.
- Continue to expand the postgraduate researcher population to 2,000 FTE in the long term.
- Produce a postgraduate researcher strategy.
- Continue to support the Research Excellent Staff Scheme through URF in order to minimise risk and maximise opportunity to recruit staff in fulfilment of strategic plans.
- Coordinate access to our research projects, groups, and networks for undergraduate students (through the Teaching and Learning Strategy) by liaising with responsible individuals and groups across the University.
- Continue to coordinate regular meetings of UoA governance groups; embed performance management of UoAs; complete a gap analysis and monitor UoAs against REF2014 strategic plans.
- Develop detailed metrics (sub-KPIs) through the CRIS for use in planning and accountability by October 2017.
- Put in place processes to enable research staff to understand and manage their profiles in the CRIS and in SciVal as the basis for systematic improvement in individual performance against personal and institutional targets.
- Maintain and expand the remit of the central performance management and review system introduced in April 2016.

The results will be

- A score by early career researchers above the national benchmark for questions in Section 4 on "support and career development" in each biennial administration of the Careers in Research Online Survey (CROS).
- A score above the national benchmark for questions in Section D on "how your institution supports you" in the Principal Investigators and Research Leaders Survey (PIRLS).
- Achievement of REF2021 targets.
- Achievement of University Strategy Map 2013-2018 KPIs.
- Significant impact on the University's league table profiles and targets.

E3: RECOGNITION

To support the recognition of researchers we will

- Produce a strategy for external recognition.
- Support HR's initiative on 'Researcher Development' to develop clear expectations of skills and performance outcomes at each career level with supporting development programmes and careers advice.
- Establish programmes to improve external recognition of researchers through publicity, awards, honours, and appointments to external bodies.
- Coordinate University nominations for external recognition.

- Explore the potential for a hierarchy of structured rewards for strong performance with a view to implementation of appropriate schemes no later than 2017/18.

The results will be

- A score by early career researchers above the national benchmark in Section 2 on “recognition and value” in each biennial administration of the Careers in Research Online Survey (CROS).
- A score above the national benchmark in Section B on “recognition and value” in each biennial administration of the Principal Investigators and Research Leaders Survey (PIRLS).
- A year-on-year increase in nominations for external recognition.
- A year-on-year increase in the number of staff holding higher doctorates.
- A year-on-year increase in the number of staff holding visiting professorships.
- A year-on-year increase in the number of staff holding recognised positions of international research leadership.
- A year-on-year increase in the number of staff holding fellowship of the national academies.

E4: INCOME

To support an increase in research grant and contract income we will

- Provide additional training on the criteria for and approaches to funding success.
- Increase central support for bid development.
- Monitor and evaluate the implementation and uptake of internal peer review.
- Monitor and evaluate the implementation and uptake of internal mentoring support.
- Identify and disseminate opportunities for funding through multidisciplinary and grand challenge based initiatives, e.g., through Horizon 2020, the Global Challenges Research Fund etc.
- Fully embed the Agresso PAPA module.

The results will be (within the context of strategy map targets)

- An annual increase in the number of applications per FTE.
- An annual increase in the value of applications per FTE.
- An annual increase in the average value of applications.
- An annual increase in the number of awards per FTE.
- An annual increase in the value of awards per FTE.
- An annual increase in the average value of awards.
- An annual increase in income spent per FTE.

T1: RESEARCH INSTITUTES

To support the development of research institutes (RIs) and areas of strategic research importance (ASRIs) we will

- Continue to review and audit research institutes in accordance with the *Procedures for Establishment, Review and Termination of Research Institutes*.
- Create an evidence base by 2016/17 to inform the creation and dissolution of RIs and ASRIs.
- Develop a trajectory by 2016/17 towards a stable portfolio reflecting the optimal number of RIs and ASRIs.
- Monitor the recruitment and retention of high-performing researchers to RIs and ASRIs.
- Monitor the recruitment and retention of high-performing PGR to RIs and ASRIs.
- Review ASRI alignment with UoAs and Horizon 2020 opportunities.
- Sunset underperforming and redundant RIs and ASRIs.

The results will be

- An increase in the number of staff producing world-leading research outputs.
- An increase in the number of staff producing outputs with international and corporate partners.
- An increase in the number of staff holding external grants.
- An increase in the number of strategic partnerships.

T2: STRATEGIC PARTNERSHIPS

To build strategic partnerships we will

- Produce a strategy and structured framework for creating new and developing existing relationships with businesses, third-sector organisations, policy-makers and the public.
- Continue to provide matched funding for significant new partnerships.
- Encourage researchers to take the initiative in forming strategic relationships.
- Audit our networks, connections, strengths and opportunities to identify overlaps and commonalities.
- Create a strategic gap analysis and action plan by 2016/17.
- Embed CRM for definitive corporate information on strategic partnerships and engagement.
- Provide guidance and training on open innovation.

The results will be

- An increase in the proportion of our Scopus outputs co-authored with corporate partners to UK average for the period 2016-2020 and to Russell Group average for the period 2021-2025.
- An average of at least one strategic partnership per research institute.
- An increase in access to previously inaccessible funding streams.
- An increase in joint outreach, engagement and influence.
- An increase in joint networking opportunities and multilateral strategic partnerships.
- An increase in joint professional development and training opportunities.
- An increase in shared infrastructure and business processes.
- De-risking of research and innovation opportunities.

[See Appendix B for baseline and benchmarks]

T3: COLLECTIVE DEVELOPMENT

To create the environments and infrastructures needed to address large-scale, complex research and innovation challenges beyond the scope of strategic partnerships we will

- Produce a regional engagement strategy.
- Explore opportunities for synergistic joint projects within the regional innovation smart specialisation strategy (RIS3).
- Explore opportunities for joint projects within the national innovation strategy.
- Actively support the Northern Powerhouse initiative.
- Actively support the Local Enterprise Partnerships with a focus on Leeds City Region.
- Pursue the creation of an SME Catapult with regional partners.
- Pursue the creation of a Digital Innovation Park with local partners.
- Develop a culture of intrapreneurship together with the concept of the University as a Living Lab, i.e., a user-centered, open-innovation ecosystem.
- Act as an “honest broker” and facilitator of research and innovation opportunities.
- Act as a conduit for investment in collaborative research and innovation.
- Provide systems and business processes to facilitate collaborative working by disparate partners.

The results will be

- The catalysis and development of collaborative infrastructure, relationships and projects resulting in new opportunities for multidisciplinary research and research impact.
- The acceleration and de-risking of collaborative research.
- The acceleration of open innovation.
- The acceleration and de-risking of innovative product and service development.
- The acceleration of economic growth and poverty reduction.

T4: AWARENESS RAISING AND SUPPORT

To support awareness raising we will

- Develop institutional guidance on minimum compliance levels for national initiatives.
- Circulate standard guidance and simple checklists to all researchers.
- Provide additional professional development opportunities.
- Develop a Current Research Information System (CRIS) by 2016/17 to provide comprehensive data on individual performance to every member of academic staff.
- Create and embed standard benchmarking reports.
- Identify and mitigate corporate risks around research.

The results will be

- An increase in compliance toward national benchmarks as evidenced by our mandatory submissions to external bodies.
- An increase in the percentage of early career researchers giving a positive rating for “knowledge and understanding” of initiatives (relative to CROS 2015):

Initiative	UoH score (%)	National benchmark (%)	2019 target (%)	2023 target (%)
Athena SWAN	35.29	47.93	51	85
Concordat for Engaging the Public with Research	26.47	10.81	51	85
Concordat to Support the Career Development of Researchers	29.41	15.31	51	85
Concordat to Support Research Integrity	17.65	7.05	51	85
HR Excellence in Research Award	12.12	7.95	51	85
National Coordinating Centre for Public Engagement	2.94	3.95	51	85
RCUK Pathways to Impact	26.47	24.18	51	85
Research Excellence Framework	82.35	70.18	90	90
Vitae	35.29	23.61	51	85
Vitae Researcher Development Framework	35.29	19.47	51	85

T5: MULTIDISCIPLINARITY AND GRAND CHALLENGES

To support multidisciplinary and grand challenges we will

- Develop a distinctive institutional ethos of social and ethical values from a focus on impact through international grand challenges.
- Develop a training programme for leaders of multidisciplinary teams.
- Provide distinctive challenge events and prizes on a regular basis.
- Explore the potential for additional internal networking events.
- Provide Horizon 2020 networking and support through KITE Innovation (Europe) Ltd.
- Adopt the Global Goals for Sustainable Development, the 2015 Paris Agreement on Climate Change and the Sendai Framework for Disaster Risk Reduction as catalysts for multidisciplinary collaboration on grand challenge research and impact projects.

The results will be

- A doubling in the number of projects related to the global goals undertaken by research institutes and centres by 2020 and a quadrupling by 2025.
- An increase in the proportion of Scopus subject area sub-categories in which our outputs appear from 65% in 2015 to 75% by 2020 and to 85% by 2025.
- Increased access to funding streams dedicated to grand challenge themes.

[See Appendix C for the baseline and benchmarks]

T6: PORTFOLIO PLANNING AND MANAGEMENT

To support portfolio planning and management we will

- Produce a portfolio planning and management strategy.
- Provide training on publication strategies.
- Provide individual bibliometric data to researchers through the CRIS.
- Fully implement ORCID for all researchers.
- Encourage staff to become editors or editorial board members of international journals.
- Ensure that all researchers publish in sources indexed by Scopus wherever possible.
- Provide mentoring for researchers with a significant proportion of uncited work.
- Establish publication in the World Top 10-25% of journals/sources as a University standard.
- Use the CRIS to promote the visibility and accessibility of outputs.
- Monitor the impact of the University's open access and data management policies.
- Optimise the reporting of our output performance to external bodies.
- Actively manage the data submitted to and utilised by the league tables.
- Ensure that publications are promoted effectively through online media including social media.
- Explore the potential for networking events with publishers and journal editors.

The results will be

- An increase in the number of Scopus outputs from 2,533 for the period 2011-2015 to 5,000 for the period 2016-2020 and to 10,000 for the period 2021-2025.
- An increase in our Field-Weighted Citation Impact to UK average by 2020 and to Russell Group average by 2025.
- An increase in the proportion of our cited Scopus outputs to UK average by 2020 and to Russell Group average by 2025.
- An increase in the proportion of our Scopus outputs in the world top 1%, top 5%, top 10% and top 25% highly cited to UK average by 2020 and to Russell Group average by 2025.
- An increase in the proportion of our Scopus outputs in the world top 10% and top 25% of journals by SNIP to UK average by 2020 and to Russell Group average by 2025.
- A year-on-year increase in the number of editorships or editorial board memberships held by staff.

[See Appendix D for the baseline and benchmarks]

T7: INTERNATIONALISATION

To promote internationalisation we will

- Produce a research internationalisation strategy.
- Increase the international PGR population proportionally.
- Create an international applicant portal for research vacancies.
- Provide opportunities for international PGR at other universities to use our facilities.
- Promote joint supervision opportunities and split-site provision.
- Monitor the recruitment and retention of high performing staff with international experience.
- Encourage the formation of international partnerships, especially those with multi-national collaboration.
- Promote international collaboration as a source of critical mass.
- Encourage staff to take up international visiting professorships and lectureships.
- Encourage staff to take and to host research sabbaticals with/for international partners.
- Encourage Schools to appoint international visiting professors and visiting lecturers on at least a 1:4 ratio.
- Provide training on external collaboration and how to cultivate international networks.
- Support strategic international business development and enterprise partnerships.
- Review and benchmark postgraduate completion rates.
- Use metrics to identify potential international / regional development partners.
- Explore opportunities for international public engagement activities.
- Explore the potential for international partnerships around the Global Goals for Sustainable Development.

The results will be

- An increase in the proportion of international students from 26.9% in 2015 to 30% by 2020 and to 33% by 2025 (with a contribution to this increase from PGR).
- An increase in the proportion of international academic staff from 13.6% in 2015 to 19.0% by 2020 and to 25% by 2025.
- An increase in the proportion of our Scopus outputs co-authored with international partners to UK average for the period 2016-2020 and to Russell Group average for the period 2021-2025.
- An increase in the number of formal relationships with QS top 500 universities.
- An increase in the number of formal relationships with international organisations.

[See Appendix E for the baseline and benchmarks]

T8: IMPACT

To promote impact from our research we will

- Produce an institutional impact strategy.
- Produce an institutional public engagement strategy.

- Provide additional central staff support for impact.
- Provide training on how to develop an individual knowledge exchange and impact strategy.
- Explore opportunities to engage in research impact with corporate, third sector and international partners.
- Explore opportunities for multidisciplinary collaboration on research impact projects.
- Explore opportunities for collaboration on research impact with local and regional partners.
- Use the Global Goals for Sustainable Development to forge relationships with new impact partners.
- Utilise the diversity of our international staff and students to identify new opportunities for impact.

The results will be

- A doubling in the number of candidate research impact case studies from 45 in REF2014 to 90 in REF2021.
- A doubling in the number of research impact case studies from 34 in REF2014 to 70 in REF2021.
- A year-on-year increase in the number of impact partners.
- A year-on-year increase in cross-UoA collaboration on impact projects.
- An increase in the international reach and significance of impact projects.

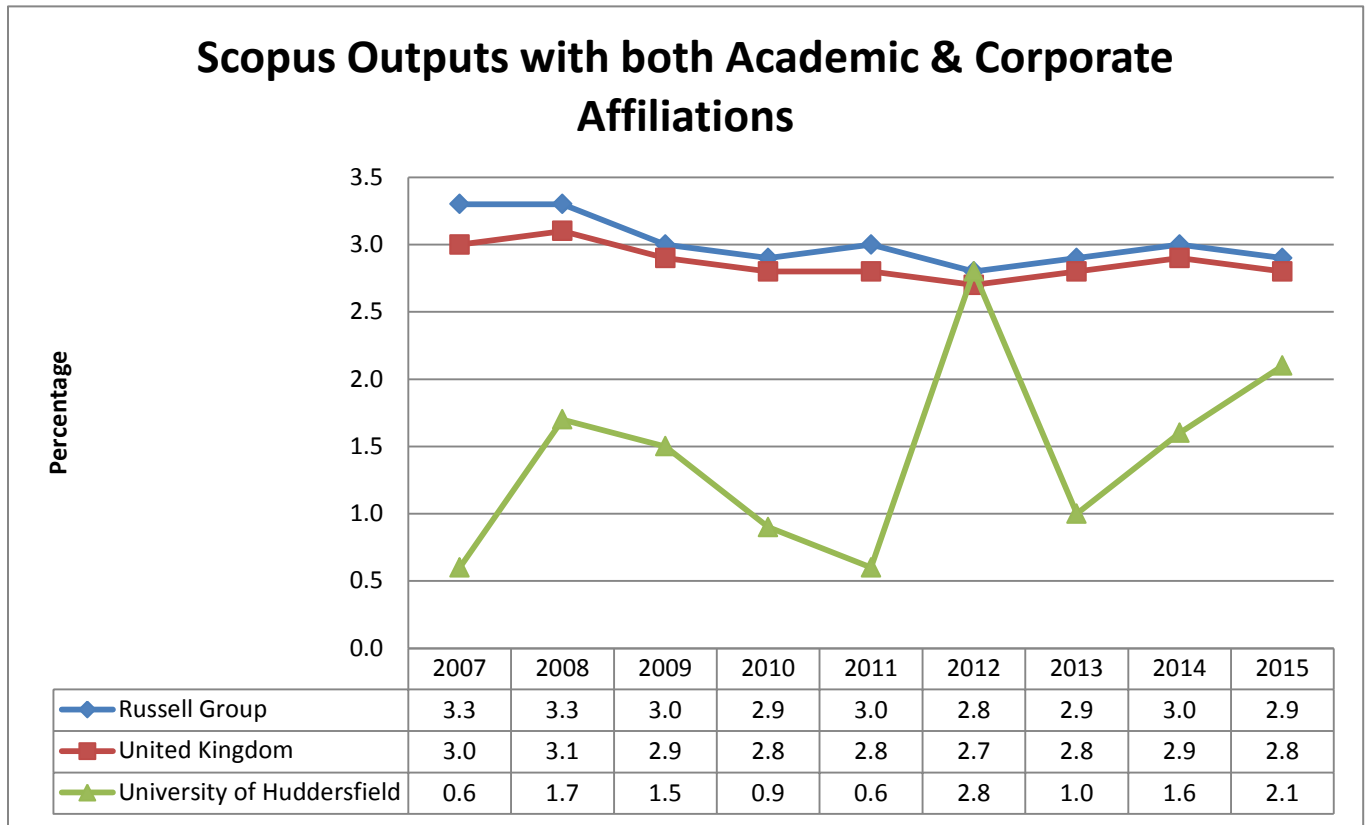
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APPENDIX A: Evaluation map example

An example of a completed evaluation map – this for Vitae’s implementation of the *Concordat to Support the Career Development of Researchers*.

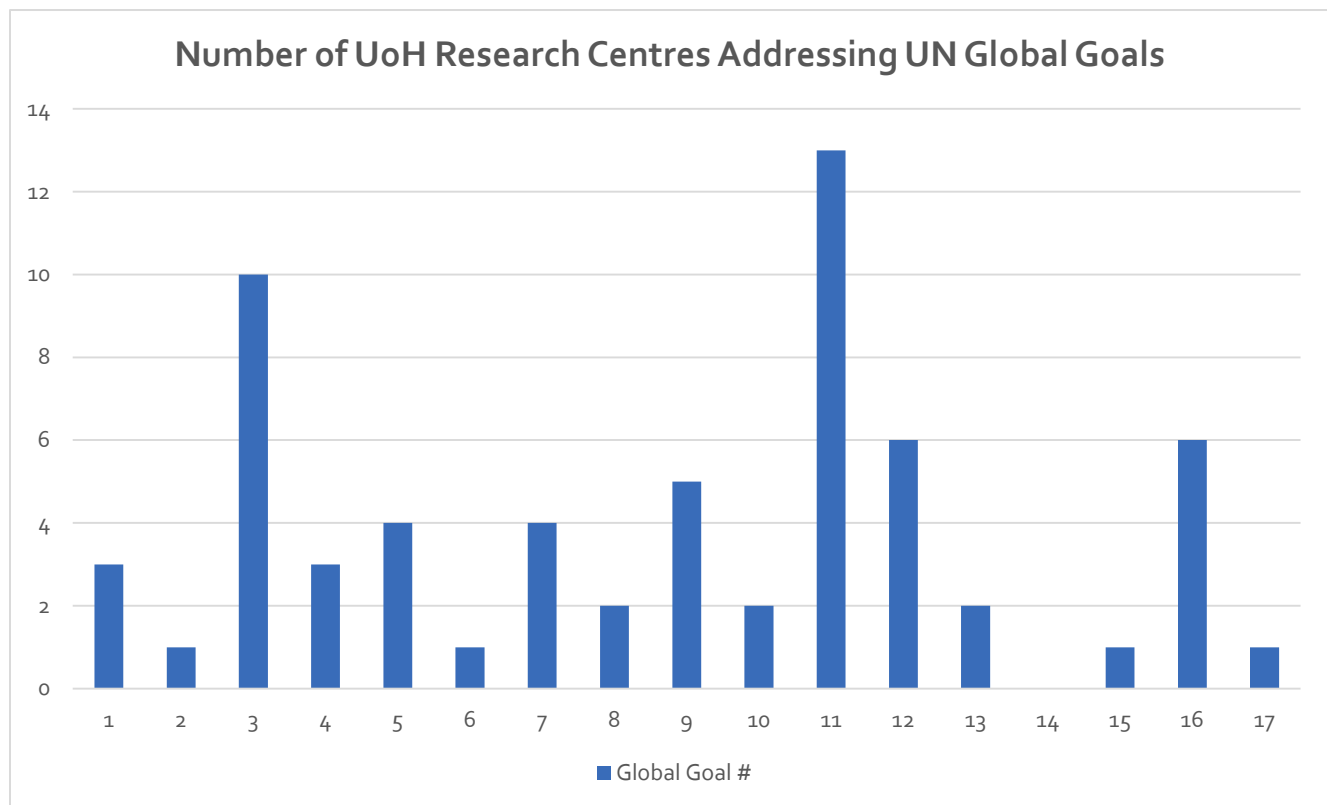
Evaluation Map – The Concordat to Support the Career Development of Researchers							
Logic Diagram	Issue	Drivers for change		Key stakeholders	Input(s)	Key implementation steps	Expected outcomes
	Implementation Plan	The need to: 1. Increase the attractiveness and sustainability of research careers in the UK 2. Improve the quantity, quality and impact of research for the benefit of UK society and the economy	Carrots Why is change needed? To increase sustainability, attractiveness of careers and impact of research	Sticks What happens if I/we don't change? Loss of attractiveness and sustainability of researcher careers in the UK	Research staff Principal investigators/supervisors Research funders UK Government Institutions Non-HE employers	Concordat signed by key stakeholders Establish baseline	Launch event June 2008 Concordat Strategy Group set up Implementation Coordinator recruited Vitae lead for implementation
Logic steps to achieve outcomes			Foundation 0: Stakeholders will be aware of the Concordat	Reaction 1: Stakeholders' reactions to the Concordat (e.g. positive/negative views)	Learning 2: Stakeholders consider implications and plan change	Behaviour 3: Stakeholders implement change	Outcomes 4: There will be: 1. Increased attractiveness and sustainability of research careers in the UK 2. Improvement to the quantity, quality and impact of research for the benefit of UK society and the economy
Evaluation questions/Logic step			Is each stakeholder group aware of the Concordat?	What are the reactions of each stakeholder group to the Concordat?	Have stakeholders developed any plans for change?	Have stakeholders implemented any plans for change?	Are there any indicators that a research career is more attractive? Are there any indicators that a research career is more sustainable? Has the quality, quantity and impact of research improved?
Evidence			0	1	2	3	4
Potential sources of evidence (✓) to answer evaluation questions/key stakeholder at each level	CROS/researchers		✓	✓	✓	✓	✓
	FIRLS /principal investigators		✓	✓	✓	✓	✓
	HR Excellence/institutions		✓	✓	✓ (Action plans)	✓ (Monitoring report)	
	Other, etc...		✓	✓	✓	✓	✓

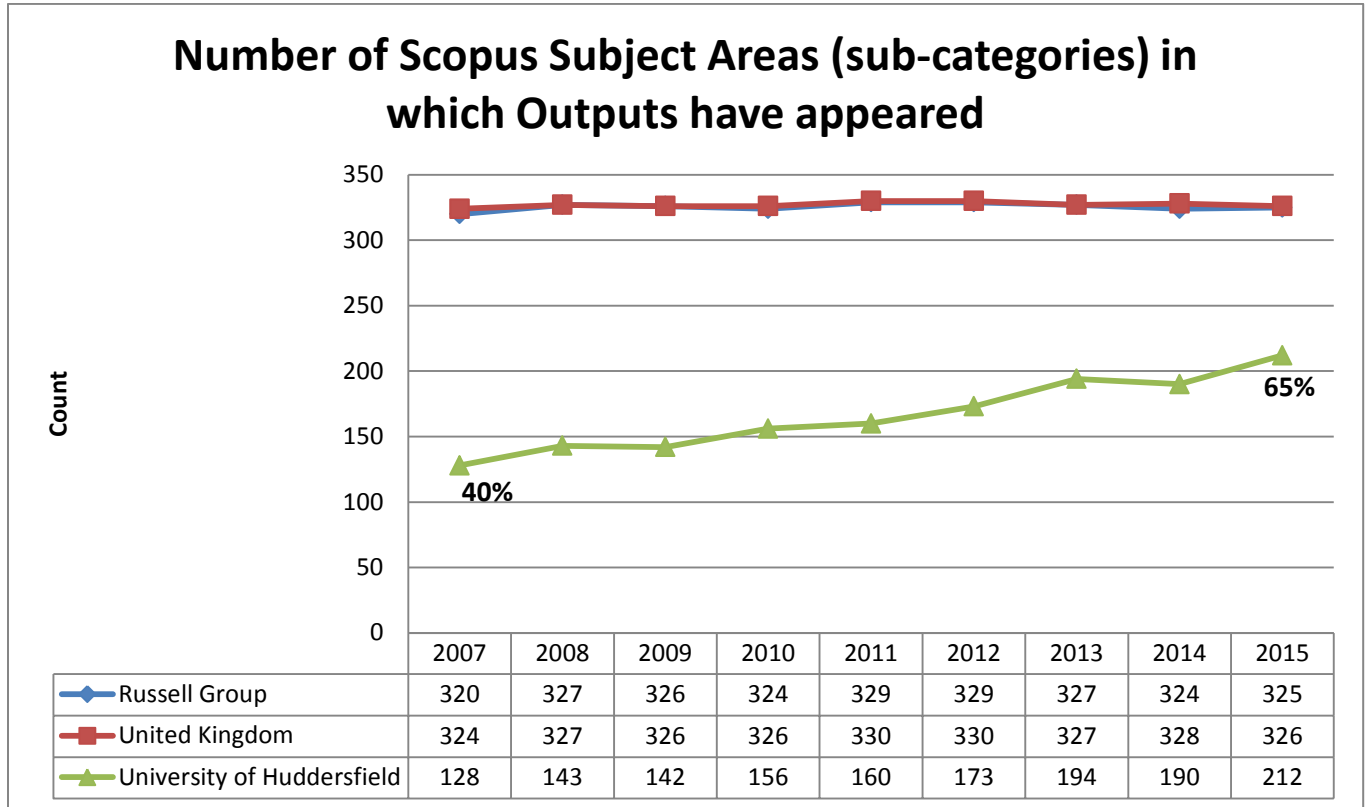
APPENDIX B: Strategic Partnerships (T2)



The average percentage of co-authorship with corporate partners over the whole period 2007-2015 was 3.0% for the Russell Group, 2.8% for the United Kingdom and 1.5% for the University of Huddersfield.

APPENDIX C: Multidisciplinary and Grand Challenges (T5)

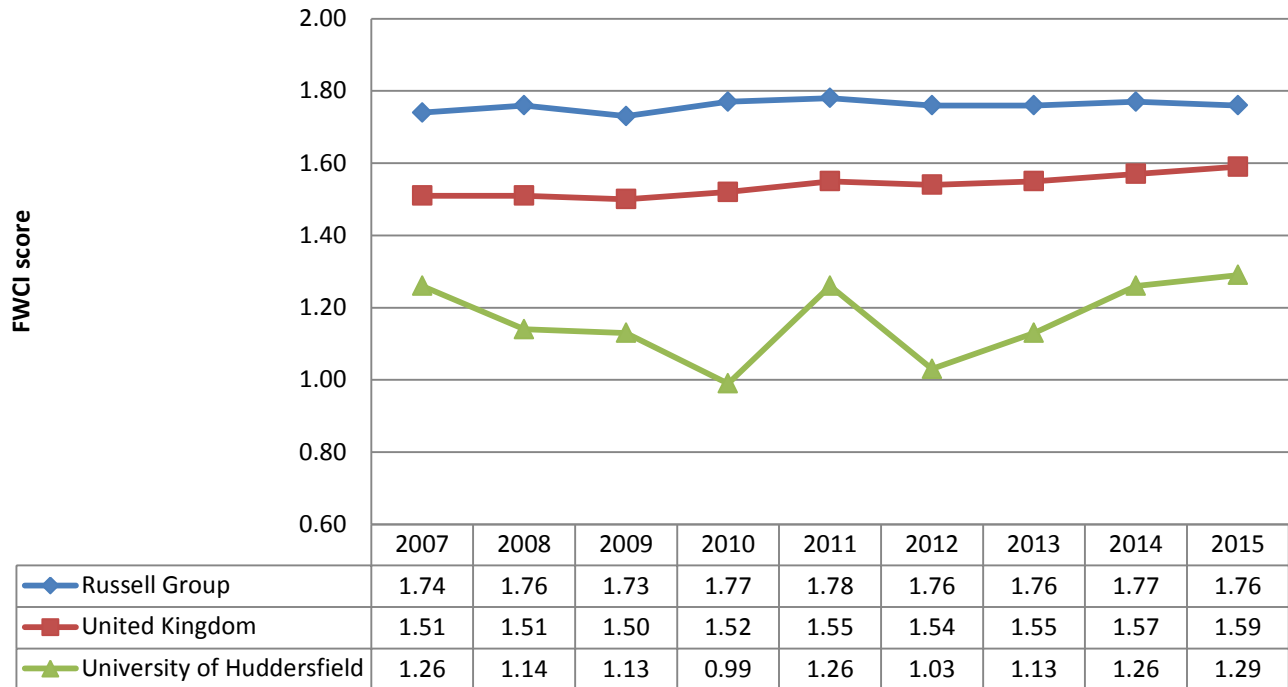




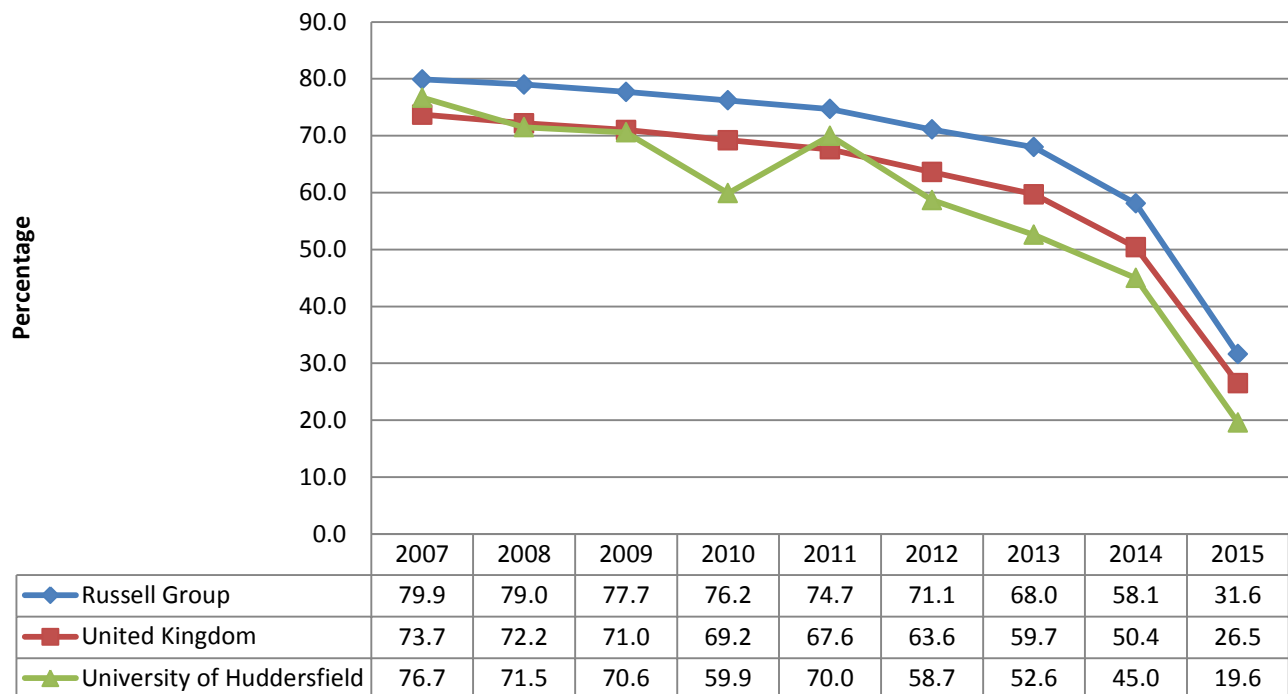
The number of Scopus journal sub-categories in which the University’s outputs have appeared has grown from 128 (40%) to 212 (65%) over the period 2007-2015. In some circumstances this metric might serve as a proxy for multidisciplinary. HEFCE and Elsevier are both working on more sophisticated metrics, see for example ‘[A Review of the UK’s Interdisciplinary Research Using a Citation-based Approach](#)’ (July 2015).

APPENDIX D: Portfolio Planning and Management (T6)

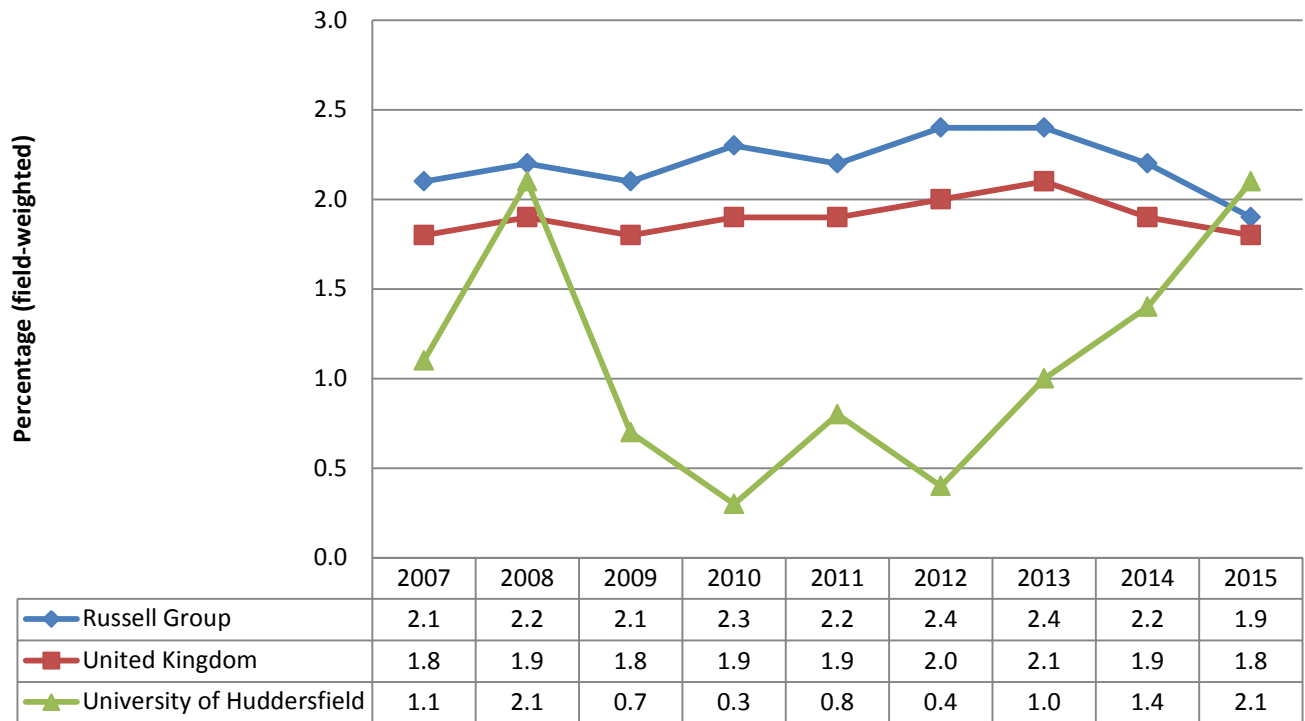
Field-Weighted Citation Impact 2007-15



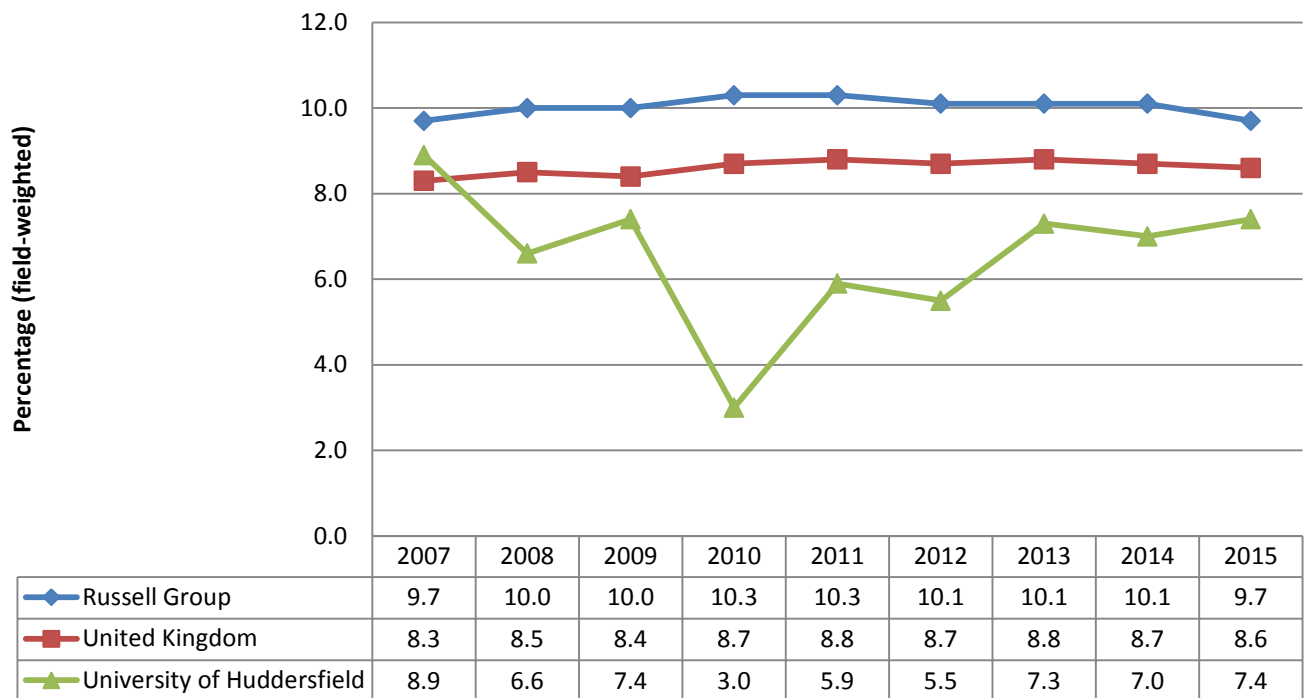
Scopus Outputs Cited



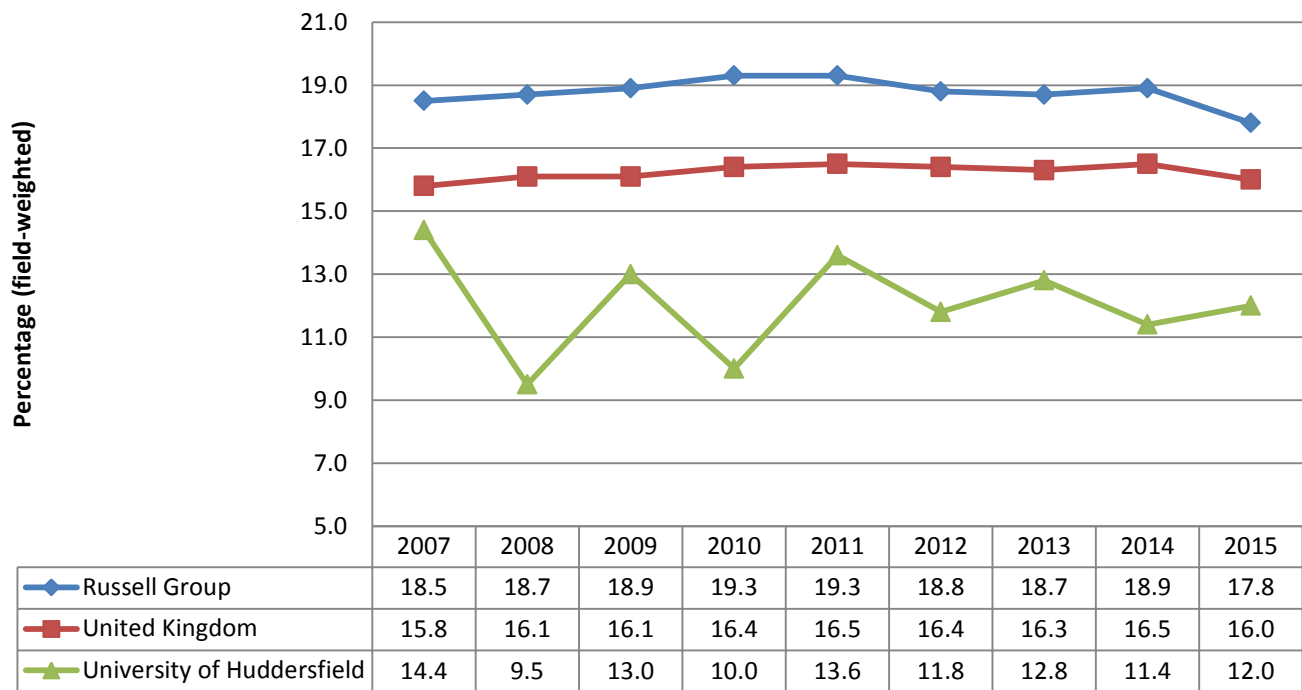
Scopus Outputs in the World Top 1% Highly Cited



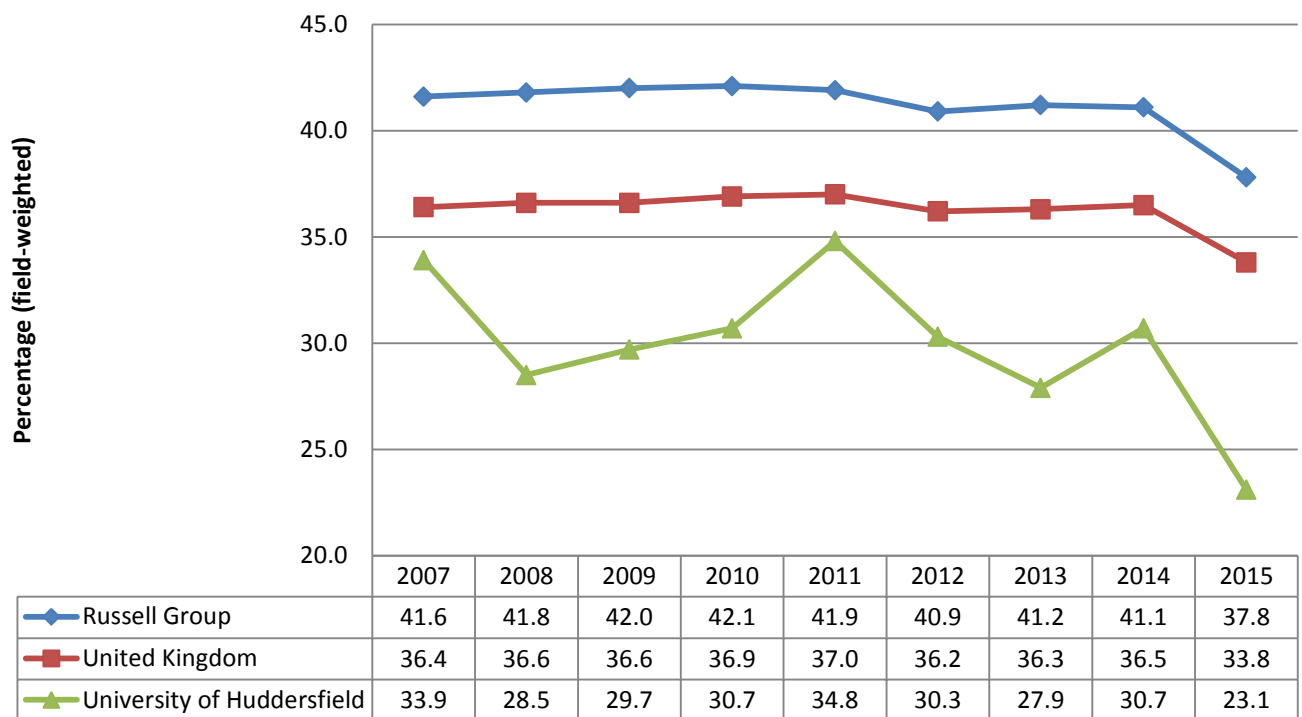
Scopus Outputs in the World Top 5% Highly Cited



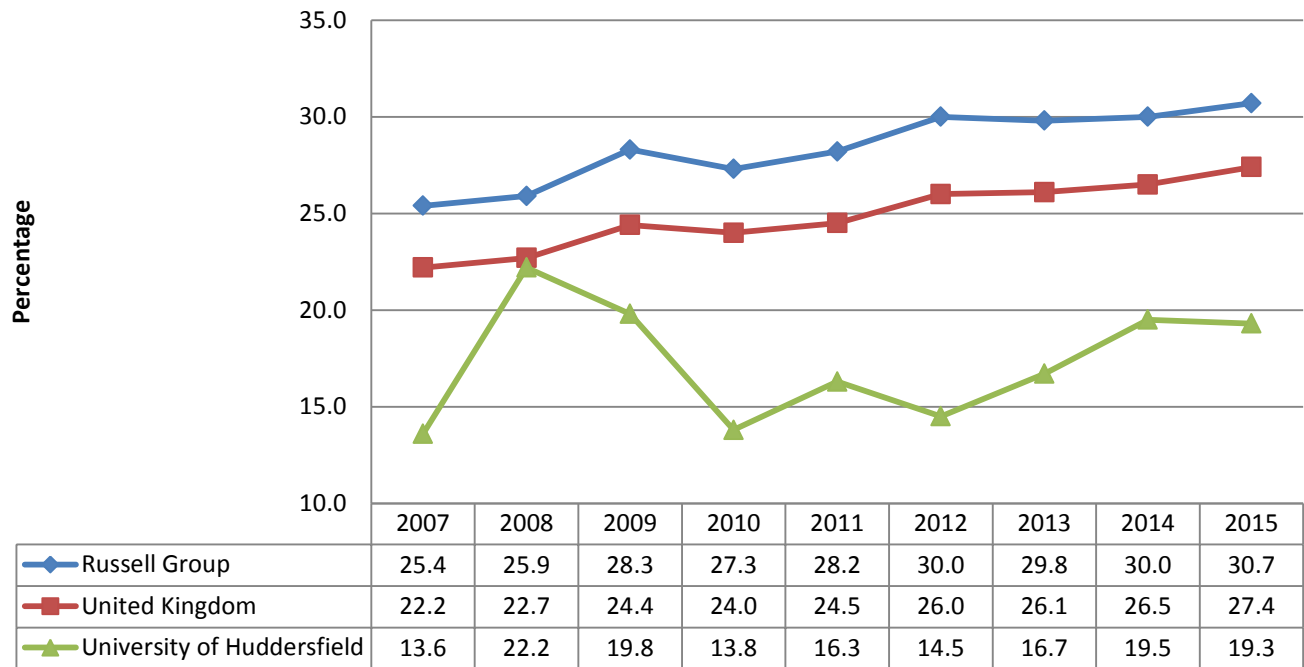
Scopus Outputs in the World Top 10% Highly Cited



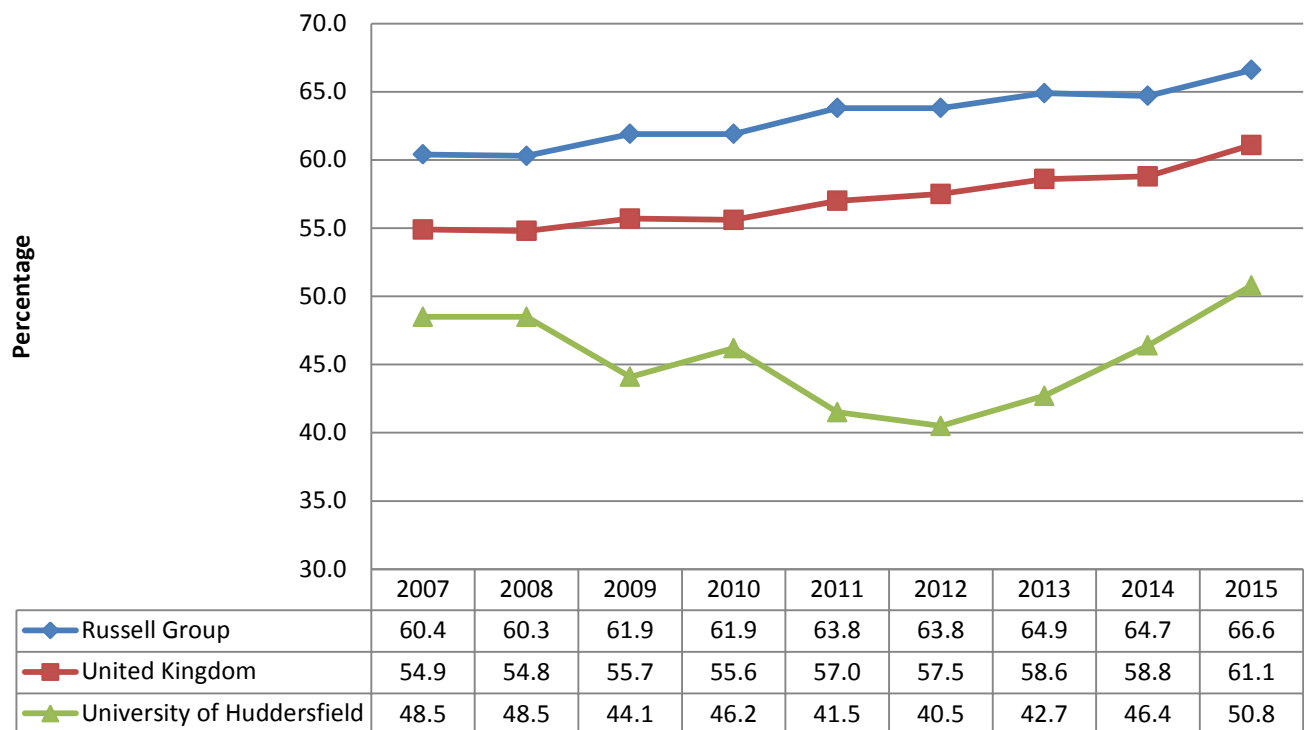
Scopus Outputs in the World Top 25% Highly Cited



Scopus Outputs in World Top 10% of Journals by SNIP



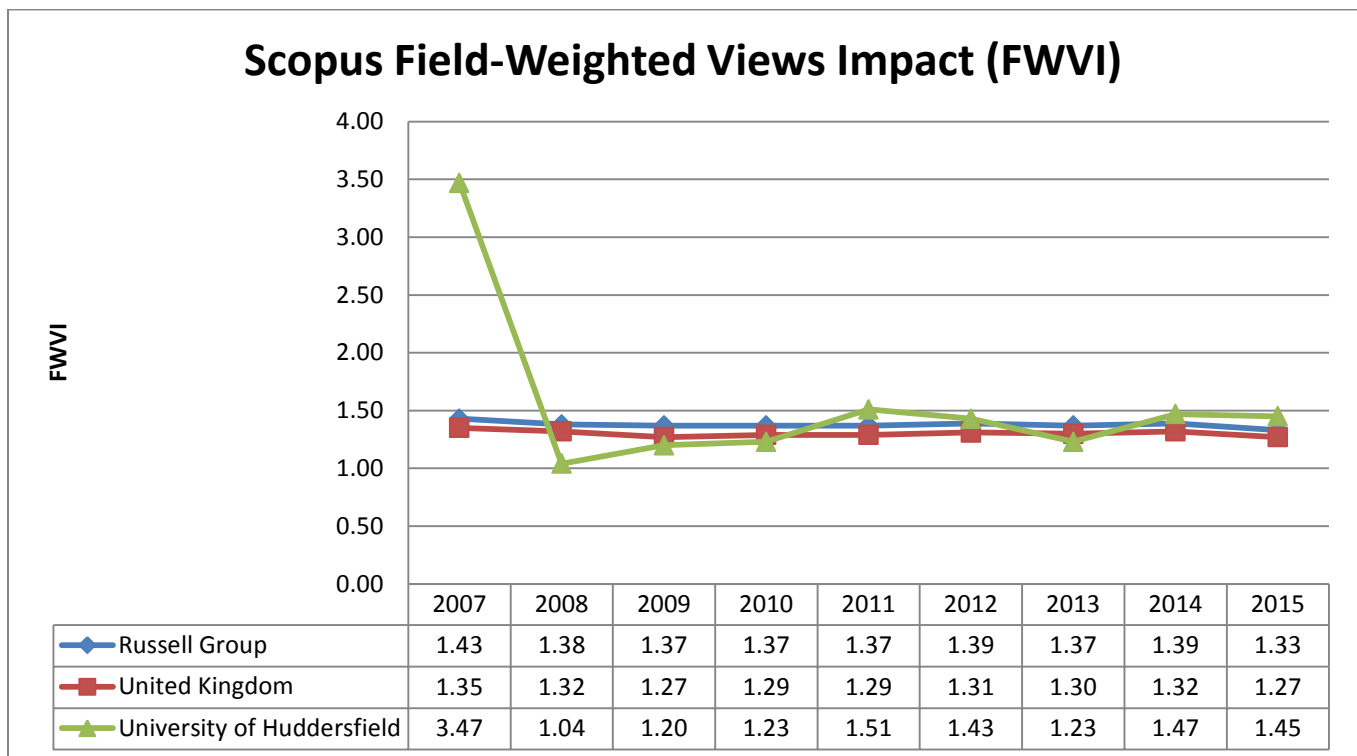
Scopus Outputs in World Top 25% of Journals by SNIP



A comparison of all University of Huddersfield Scopus outputs 2012-2015 with the subset in the world top 1%, 5%, 10% and 25% highly cited

	Number	% of total	FWCI	% International Collaboration	% in World Top 10% of Journals by SNIP
All outputs	2180	100	1.18	36.0	17.6
Top 1%	27	1.2	19.90	51.8	17.6
Top 5%	149	6.8	8.95	45.6	36.6
Top 10%	262	12.0	6.46	42.4	33.3
Top 25%	606	27.8	3.78	40.6	28.2

Highly-cited outputs are more likely to have been co-authored with international partners and to have been published in a top journal. The 27.8% (~150 outputs per annum) of the University’s outputs in the world top 25% most highly cited attracted three times more citations than the University average (field weighted).



The University’s Field Weighted Views Impact (FWVI) - the ratio of views in Scopus relative to the expected world average for the subject field, publication type and publication year - indicates that our publications are at least as visible as those of our competitors; consequently neglect of our work is unlikely to be a significant factor in explaining our low citation counts.

APPENDIX E: Internationalisation (T7) – QS World Ranking Data for the University

DEMOGRAPHICS	
Faculty	851
International Faculty	116
Students	15,366
International Students	4,140
Faculty Student Ratio	18.1:1
International Faculty Ratio	13.6%
International Student Ratio	26.9%
% Undergraduate	86.7%
% Postgraduate	13.3%

■ % Undergraduate ■ % Postgraduate

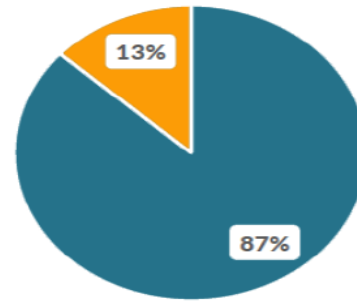


FIGURE 1 Proportion of students by level

RESEARCH DATA*	
Papers	1,978
Citations	5,149
Citations (self-citations excluded)	3,783
Citations per Faculty	4.4
Self-citation Ratio	26.5%
Faculty normalized citations	6,167
Normalized citations per faculty	7.2

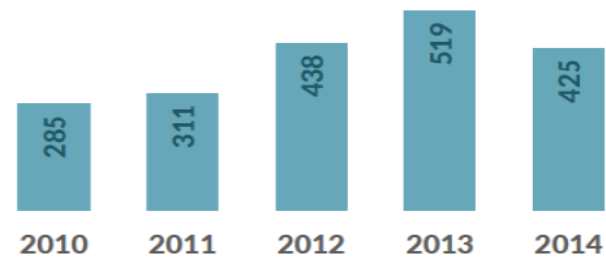
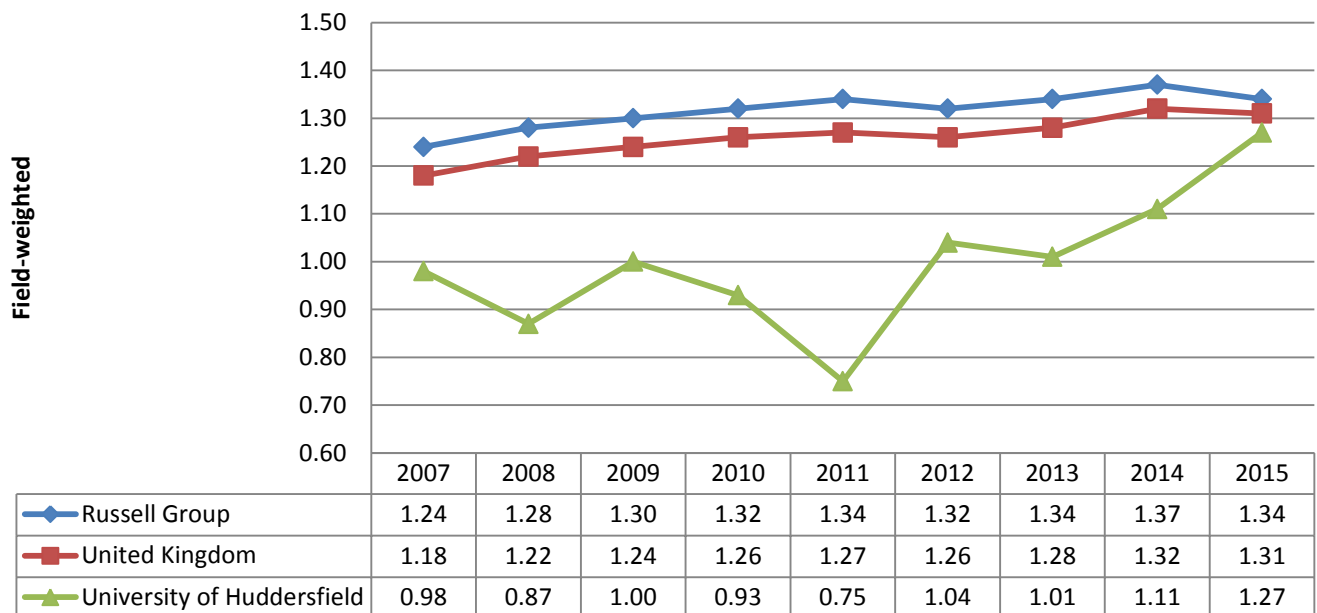
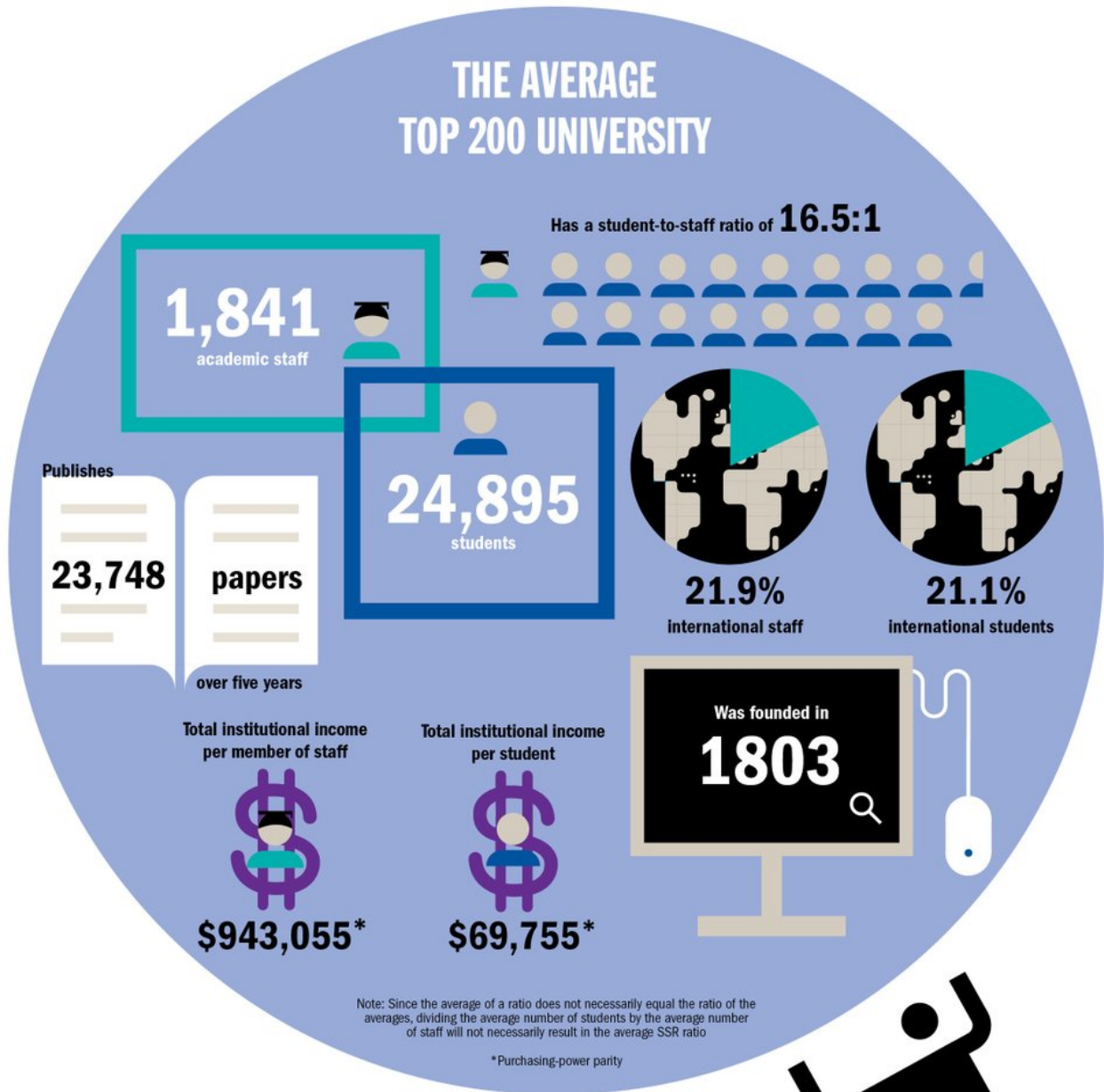


FIGURE 2 Scopus indexed papers by year

International Co-authorship of Scopus Outputs



The Times Higher Education Average Top 200 University



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