An International Perspective on Public Impact and Engagement

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NORDP 2015
Science and Society
Government

October 16, 2014

NSF-Bankrupt Shrimp

MILLIONS OF YOUR TAX DOLLARS TO...
EXERCISE SHRIMP

AND OTHER NATIONAL SCIENCE FOUNDATION WASTE

Rep. Lamar Smith, a Texas Republican and chairman of the House science committee to find fault with the National Science Foundation is taking a growing toll on researchers.

Most Popular

1. Catholic Colleges Greet an Unchurched Generation
2. In Taste of Autonomy, Sports Programs Now Buy Athletes' Bellies
Shift to Applied Research Triggers Protests

Canadian scientists rally in Ottawa for restoring research spending.

Sean Kilpartick, The Canadian Press
The Big Picture
Session Outline

- Definitions and Examples
- Drivers
- Barriers
- Support structures
- Training and supporting researchers
- Discussion
DEFINITIONS AND EXAMPLES
Impact

• Demonstrable contribution that research makes beyond academia
  ◦ To the economy, culture, national security, public policy or services, health, environment, quality of life, etc.
  ◦ Return on investment for taxpayer
The lessons of multilevel modelling

8 May 2012

Multilevel statistical models developed by Professor Harvey Goldstein and Dr George Leckie show school league tables to be unreliable guides to school choice.

Dr George Leckie, Lecturer in Social Statistics at the Graduate School of Education explains, 'In the 1990s, league tables were only based on the percentage of children getting five A* to C grades at GCSE, but that is an unfair measure of school quality, as schools differ hugely in the ability of their student intakes, with some schools starting off with much higher-achieving pupils than others. You can’t use the raw exam results as a measure of school quality, because you’re not starting with a level playing field.'

So how do you produce fairer and more representative league tables? This is where the world of multilevel modelling enters the classroom. Multilevel models give statisticians tools to analyse individual behaviour taking account the different hierarchical contexts within which individuals operate. In the case of schools, you have students at the first level, at the second level are schools, and at the top level are the local authorities within which schools operate. By taking into account the fact that students do not learn independently and that their behaviour is influenced by the characteristics of their peer groups, teachers, schools and local authorities you can go some way to providing a more well-rounded picture of a school’s performance in a league table.

In 2006, the government introduced a ‘contextual value-added’ school performance measure to their league tables, derived from a multilevel model. This measure takes account of the differing achievements of students entering the school, as well as adjusting for a range of ‘contextual’ factors such as eligibility for free school meals and lack of spoken English at home.
Composition for brass band: Gaia Symphony and Eden

12 February 2012

John Pickard, internationally-recognised composer in the Department of Music, has composed pieces for brass band to wide acclaim. Two pieces in particular, Gaia Symphony and Eden, have generated considerable attention from the mainstream and specialist press, attracting audiences across the globe.

“Gaia Symphony was completed during a three-year residency with Welsh brass band The Cory Band who premiered the piece at the 2005 Cheltenham International Festival of Music,” said John. “Since January 2008, the piece has been taken up internationally including being broadcast by BBC Radio 3 and recorded commercially.”

Gaia Symphony was composed over a period of more than 10 years, although the bulk of the work took place between 2001 and 2004. Comprising four movements, each of which may be performed separately, the individual sections were premiered by the National Youth Band of Wales, promoting the piece with young musicians (aged 13 to 18). There have been many different performances of the piece, including more recently at the 2011 Royal Northern College of Music (RNCM) Festival of Brass. The symphony’s fourth movement, Men of Stone, was used as a test piece at the Australian Band Championships in 2002, and the whole symphony was performed in its entirety by Eikanger-Bjørsvik Band of Bergen, Norway, in 2011, making it the first non-British band to perform the complete work. They now plan further performances as well as a recording.

As a result of the success of Gaia Symphony, the Brass Band Heritage Trust commissioned John to compose another piece — Eden — for the final of the 2005 British National Brass Band Championship at the Royal Albert Hall, London. Recognised as a contemporary classic, Eden


Engagement

- Multi-directional dialogue about the science and technology impacting our daily lives
  - Characterized by mutual learning
  - May inform scientific investigations, institutions, and/or science policy
Community Based Research

Global Trends in Support Structures for Community University Research Partnerships
Survey Results - September 2014

Prepared by
Crystall Tremblay, Badd Hall and Rajesh Tandon
UNESCO Chair in Community-based Research and Social Responsibility in Higher Education

UNESCO Chair in CRPS

Map 1. Regional map of survey responses.

Geographically, we received responses from a diversity of countries and regions of the world. In addition to places that have strong CURP cultures (i.e. Netherlands, Canada), we also discovered these partnership structures to be present in less ‘common’ countries (i.e. Albania).

Table 1. Survey responses by region of the world.

<table>
<thead>
<tr>
<th>Region of the World</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Africa Continent</td>
<td>20</td>
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<tr>
<td>Asia</td>
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<td>Europe</td>
<td>75</td>
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<td>Latin America</td>
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<td>Middle East</td>
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<tr>
<td>North America</td>
<td>75</td>
</tr>
<tr>
<td>Pacific</td>
<td>6</td>
</tr>
</tbody>
</table>
DRIVERS
Impact – it's not new

- Royal Society - 1662 Charter
- "promoting … the sciences of natural things and of useful arts"
- RCUK – health and wealth
- But increasing focus (UK) since 2008
- Requirement for funding (and funding explicitly provided) “pathways to impact” and formal collection of outputs and outcomes
Pathways to Impact

Academic Impacts

Worldwide academic advancement

Innovative methodologies, equipment, techniques, technologies and cross-disciplinary approaches

Contributing towards the health of academic disciplines

Training highly skilled researchers

Improving teaching and learning

Improving health and well-being

Wealth creation, economic prosperity and regeneration

Enhancing the research capacity, knowledge and skills of public, private and third sector organisations

Changing organisational culture and practices

Enhancing the knowledge economy

Enhancing the effectiveness and sustainability of organisations including public services and businesses

Attracting R&D investment

Improving social welfare, social cohesion and/or national security

Commercialisation and exploitation

Enhancing cultural enrichment and quality of life

Environmental sustainability, protection and impact

Evidence based policy-making and influencing public policies

Increasing public engagement with research and related societal issues

Economic and Societal Impacts

RESEARCH COUNCILS UK
What is Impact (to funders)

- A clearly thought through Pathways to Impact statement is a condition of funding [www.rcuk.ac.uk/ke/impacts/](http://www.rcuk.ac.uk/ke/impacts/)
  - project-specific and not generalized
  - flexible
  - focus on potential outcomes
- Researchers need to
  - identify and actively engage relevant users of research and stakeholders
  - articulate the context and needs of users
  - consider ways for the proposed research to address these needs, in short- or long-term
  - outline the planning and management of associated activities
The US NSF

“The [broader impacts] criterion was established to get scientists out of their ivory towers and connect them to society.”

~Arden Bement, former director of the NSF
America COMPETES
Reauthorization Act of 2010

- NSF must apply a BIC to
  - increase economic competitiveness
  - develop a globally competitive STEM workforce
  - expand national security
  - expand the participation of women and underrepresented minorities
  - increase partnerships between academia, industry, and others
  - improve STEM education at PK-12 and UG levels
  - increase public scientific literacy

- NSF and universities must provide training and support
Policy makers want to know
  ◦ the best way to measure research impact
  ◦ how to direct public investments to produce the highest return

Group of 8 ‘Backgrounder’…
  ◦ Outcomes of research are unknowable in advance
  ◦ Subsequent development and innovation also carry high risks
  ◦ Only a small proportion of commercial ideas are successful
  ◦ Even successful innovation is complex and iterative
    • “I have not failed. I have just discovered 10 000 ways that won’t work”

Measurements of research impact should acknowledge the technical risks of the research and the commercialization and market risks
Science with and for Society

The aim of this programme is to build effective cooperation between science and society, to recruit new talent for science and to pair scientific excellence with social awareness and responsibility.

The ‘Science with and for Society’ programme will be instrumental in addressing the European societal challenges tackled by Horizon 2020, building capacities and developing innovative ways of connecting science to society. It will make science more attractive (notably to young people), increase society’s appetite for innovation, and open up further research and innovation activities.

It allows all societal actors (researchers, citizens, policy makers, business, third sector organisations etc.) to work together during the whole research and innovation process in order to better align both the process and its outcomes with the values, needs and expectations of European society. This approach to research and innovation is called Responsible Research and Innovation (RRI).
Policy

Public Engagement

What is Public Engagement in Research & Innovation?

Public engagement in Horizon2020 implies the establishment of participatory multi-actor dialogues and exchanges to foster mutual understanding, co-create research and innovation outcomes, and provide input to policy agendas. It is about bringing on-board researchers, policy makers, industry and civil society organisations and NGO, and citizens, to deliberate on matters of science and technology. Public engagement also creates the space for ethical value-laden issues to be explored, while bringing inclusiveness, transparency, diversity, and creativity into the research and innovation process.

Furthermore, public engagement processes enable multiple actors to establish a common language, arrive at joint understandings, learn from each other, explore controversies, and co-create ideas, knowledge or solutions. To be of greatest impact, public engagement needs to be designed as a two-way process with feedback loops, so that the outcomes of the engagement processes are usefully fed back into the research and innovation process.

More Info

- Special Eurobarometer Responsible Research and Innovation (RRI), Science and Technology, this 2013 study follows on from that of 2012 in addressing European citizens’ general attitudes towards science and technology. More on public opinion here.

- Responsible Research and Innovation: European ability to respond to societal challenges: this leaflet is an introduction RRI

BARRIERS
Pl Response to BI Criterion

- political
- ambiguous
- undermining
- burdensome
- irrelevant
- confusing
- frustrating
- extraneous
- punitive
- counterproductive
“My general feeling is that it is important to engage in broader impacts as a scientist, but I may not be the best person to implement them (and do not have the time to learn how and don't want to make it my focus). I wish there were a way to partner with experts in broader impacts so that we could work together, but each have expertise in one area - broader impacts and the intellectual merit of the science.”
Identity

- “And what of those of us in the humanities? Do we not provide a social benefit to humanity?”
- “Quantify it. If you can't justify the benefit of your work to taxpayers, you shouldn't expect them to provide support.”
- “The benefit of the humanities is not a matter of quantity, but of quality. The debased human life in which monetary gain is the only value is what the humanities intentionally resist, because they offer values that are intangible yet vital: memory and introspection, cultural identity and cohesion, compassion and empathy. To quantify such values is inherently to betray them.”
News

Graduate Programs and their Participants
A map of graduate positions from 2012 data collected by the National Science Foundation (NSF) through a survey of degree-granting institutions called the Graduate Student Survey (GSS).

Measuring the Results of Science Investments
Science agencies and research institutions are building the infrastructure to evaluate results of federal funding of science research.

Vice President Biden, University Leaders Discuss Impact of Stimulus on Research and Innovation
Among American Recovery and Reinvestment Act's investments, federal R&D funding is one area that has received a lot of attention from the public and the media. STAR METRICS® data can help assess the impact of these investments.

How to Get Started With Level I
Get started learning about STAR METRICS® by visiting the following links:

About STAR METRICS®
Getting Started with Level I
Employment Calculations

Federal RePORTER
Federal RePORTER is an initiative of STAR METRICS® to create a searchable database of scientific awards from federal agencies and make this data available to the public.
Research Impact Assessment

For: All

The department has investigated options for the design of a university-based research impact assessment mechanism. The broad aims of this mechanism is to:

- provide an evidentiary basis for public investment in research
- increase incentives for universities to engage with research end-users
- improve understanding of pathways between research and innovation to inform policy.

Feasibility study

The 2011 Focusing Australia’s Publicly Funded Research Review recommended that the department undertake a feasibility study on possible approaches for assessing the wider benefits arising from publicly funded research.

Undertaken in 2012, the study considered the findings of a number of reports that have made recommendations in relation to impact assessment; including:

- Research skills for an innovative future, the Australian Government’s Research Workforce Strategy (Priority 6.2)
- Smarter Manufacturing for a smarter Australia, the report of the non-

Tips for searching this site

Search documents
Research Excellence Framework

The REF is a UK-wide framework for assessing research in all disciplines. Its purpose is:

- To inform research funding allocations
- Provide accountability for public funding of research and demonstrate the public benefits
- To provide benchmarks and reputational yardsticks
Research Excellence Framework

Overall quality

Outputs
- Maximum of 4 outputs per researcher

Impact
- Template and case studies

Environment
- Template and data

- 65%
- 20%
- 15%
# REF - Overall rankings at Bristol

<table>
<thead>
<tr>
<th>Unit of Assessment</th>
<th>Overall rank in Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>UoA 2 (Public Health)</td>
<td>4th out of 32</td>
</tr>
<tr>
<td>UoA 7 (Earth Sciences)</td>
<td>2nd out of 45</td>
</tr>
<tr>
<td>UoA 8 (Chemistry)</td>
<td>4th out of 37</td>
</tr>
<tr>
<td>UoA 10 (Maths)</td>
<td>5th out of 53</td>
</tr>
<tr>
<td><strong>UoA 17 (Geography)</strong></td>
<td>1st out of 74</td>
</tr>
<tr>
<td><strong>UoA 26 (Sport &amp; Exercise)</strong></td>
<td>1st out of 51</td>
</tr>
<tr>
<td>Veterinary Sciences, Engineering, Economics, Law, Social Policy, Sociology, Education</td>
<td>Within top 10</td>
</tr>
</tbody>
</table>
## REF - Impact rankings at Bristol

<table>
<thead>
<tr>
<th>Unit of Assessment</th>
<th>Impact rank in Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>UoA 1 (Clinical Medicine)</td>
<td>100% 4* 1st out of 31</td>
</tr>
<tr>
<td>UoA 2 (Public Health)</td>
<td>100% 4* 1st out of 32</td>
</tr>
<tr>
<td>UoA 10 (Maths)</td>
<td>4th out of 53</td>
</tr>
<tr>
<td>UoA 15 (General Engineering)</td>
<td>5th out of 62</td>
</tr>
<tr>
<td><strong>UoA 18 (Economics)</strong></td>
<td><em><em>100% 4</em> 1st out of 28</em>*</td>
</tr>
<tr>
<td>UoA 23 (Sociology)</td>
<td>4th out of 29</td>
</tr>
<tr>
<td><strong>UoA 26 (Sport &amp; Exercise)</strong></td>
<td><em><em>100% 4</em> 1st out of 51</em>*</td>
</tr>
<tr>
<td>Dentistry, Neuroscience, Veterinary science, Management, Law</td>
<td>Within top 10</td>
</tr>
</tbody>
</table>
Assessing Impact

- **REF2014 Impact Case Study Database** - [http://impact.ref.ac.uk/CaseStudies](http://impact.ref.ac.uk/CaseStudies)
  - >6,500 documents, searchable by subject = ‘Unit Of Assessment’
  - compare between institutions and against national reference profiles and benchmarks

- **Initial Analysis of Impact Case Studies** - [www.hefce.ac.uk/analysisREFimpact/](http://www.hefce.ac.uk/analysisREFimpact/)
  - Policy Institute at King's College London
  - Text mining and qualitative analysis to identify general patterns and thematic structures
  - Useful infographics, but read the caveats behind the methodology.

- **Evaluation of Preparing Impact Submissions** – RAND Europe [www.hefce.ac.uk/pubs/rereports/Year/2015/REFimpacteval/](http://www.hefce.ac.uk/pubs/rereports/Year/2015/REFimpacteval/)
  - Looked at submission preparation by universities, and assessment process by REF panels.
  - Median cost to produce a single case study was £7.5k
  - Average time to produce an impact case study was 30 days
  - Total cost to the universities for the impact element was £55M
Impact case studies as publicity

- Audiences include – internal academics, businesses, funding agencies, government, local community, potential students
  - www.ucl.ac.uk/impact/case-studies - search by subject
  - www.bristol.ac.uk/research/impact-stories/
  - www.ox.ac.uk/research/research-impact/impact-case-studies
  - www.gla.ac.uk/research/impact/impactsonsociety/
SUPPORT STRUCTURES
Supporting Roles

- **Existing / Conventional Roles in UK Universities**
  - Research Development Manager / Administrator
  - Technology Transfer Manager
  - Business Development Manager / Account Manager
  - Knowledge Exchange / Transfer Manager
  - Industry Liaison Manager
    (often based in Faculty/Dept or focused on a Sector)

- **New roles emerging since 2014....**
  - Impact Officer
  - Combined roles e.g. Research & Impact Development Manager
Finding Funding

Bid Support
- Structure and content
- **Impact review**
- Advice about costing
- Mock panels for interviews

• Capacity building to develop topic
• Funder relationships and visits
• Intelligence; information gathering and sharing

Facilitate the process
Bid support
Institutional commitment
Partners
Impact Development

- Finding Funding
  - Bid Support
    - Structure and content
    - Impact plans
    - Translation/commercialisation
    - Advice about costing
    - Mock panels for interviews

- Capacity building to develop topic
- Funder relationships and visits
- Intelligence; information gathering and sharing

- Project
- Outputs
- Translation/impact

Facilitate the process
Bid support
Partners (non-academic)
Research and Impact Support Structures

Skill types

Res Dev  KE  Bus Dev  Tech Transf

People

Faculty 1  Cross Faculty  Cross Faculty  Faculty 1

Faculty 2  Cross Faculty  Faculty 2

Faculty 3

Gaps in some areas of University
Research and Impact Support Structures

University of Bristol – Commercialisation & Impact Development Team
Research and Impact Support Structures

Res Dev

Impact, KE and Bus Dev

Tech Transfer

Faculty 1

Faculty 2

Faculty 3

Bristol National Composites Centre

Brunel Automotive

Imperial Innovations

Sector 1, Cross Faculty

Sector 2, Cross Faculty

Sector 2, Cross Faculty
The Engaged University

- Providing training on facets of engagement
- Ensuring engagement is appropriately resourced
- Including engagement in strategies and reviews
- Supporting researchers to maximise impact of their work
- Recognising engagement in appointment, progression and promotion criteria and workload models
- Celebrating and rewarding success
- Students as agents for knowledge exchange
- Including engagement in the curriculum
- Fostering a culture of volunteering

- Work with a range of partners
- Be reflective about engagement
- Embed in the student experience
- Provide a supportive environment
- Recruit and retain staff

- Developing activities and events that enable dialogue
- Collaborative research and education
- Coordinating conferences, workshops and networks outside academia
- Disseminating research outputs
- Evaluating our engagement
- Sharing learning and best practice
Insights for impact support

- Culture
  - Internal groups can generate shared knowledge on impact
  - You probably have unmet demand, academic enthusiasm and momentum
  - Funding provides a motivation for impact training and sharing good practice
  - Create space and time to experiment – allow academics & companies to shape their collaborations

- Dovetail with institutional strategies
  - Align funding with Tech Transfer processes and teams
  - University Advisory Boards for impact / industry / sectors
  - Clearly defined points of contact at University or Faculty level
  - Allow different roles to evolve in different disciplines / sectors
Some challenges

- **Structural challenges**
  - Time commitment can increase hugely while in ‘valley of death’
  - Lead times and delays e.g. researcher recruitment, fast pace of business

- **Operational challenges**
  - Contracts and IP negotiations - short term gain vs impact & collaboration
  - How much effort on project management and next steps?
  - Skills & contacts to engage with public, industry, NGOs, government…

- **Cultural challenges**
  - Academic time constraints and priorities
  - Widening participation beyond the usual suspects
  - Career progression – industry and impact can be good for research
  - A project is not an end in itself - achieving impact is a long-term game
Welcome to the Broader Impacts Network! The MU BIN was established in 2012 as a response to the National Science Foundation's emphasis on the integration of education and outreach into research projects. Our mission is to assist researchers in the development, implementation, and evaluation of high-quality broader impacts activities.

Getting Started

We have created several tools to help you on your journey to broader impacts stardom. Start out "How Do I" box on the left and choose which category best fits your needs:

- Learn about broader impacts
- Create a broader impacts plan
- Find someone to help me implement my broader impacts plan
- Evaluate my broader impacts activities

In addition to helping plan your educational and outreach activities, we also document the breadth of broader impacts activities at MU and can provide letters of support for your promotion and tenure portfolio.
SP@ISU

Strengthening the Professoriate

Iowa State’s Broader Impacts Resource

SP@ISU serves as a single point of contact on campus to gain knowledge in developing quality Broader Impact programs. SP@ISU helps make connections between researchers and resources on campus to develop and implement Broader Impact plans. The target audience is faculty, postdoctoral research associates, and advanced graduate students in science, technology, engineering, and mathematics (STEM).

The goal of SP@ISU is to strengthen the professoriate by enabling professional development in STEM, while promoting and enhancing a diverse community of scholars and learners.

More about SP@ISU

What are Broader Impacts and why are they important?

From the National Science Foundation

The project Summary will contain the following required separate statements: overview of the project, statement on intellectual merit, and statement on broader impacts. Annual and Final Reports must address activities related to the Broader Impacts criterion that are not intrinsic to the research. NSF New Merit Review Criteria: Requirements for Proposals

The Project Description must contain, as a separate section within the narrative, a discussion of the broader impacts of the proposed activities. Broader impacts may be accomplished through the research itself, through the activities that are directly related to specific research projects, or through activities that are supported by, but are complementary to the project. NSF values the advancement of scientific knowledge and activities that contribute to the achievement of societally relevant outcomes:

- Full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM)
- Improved STEM education and educator development at any level
- Increased public scientific literacy and public engagement with science and technology; improved well-being of individuals in society
- Development of a diverse, globally competitive STEM workforce
- Increased partnerships between academia, industry, and others
Centers for Science Outreach

- Penn State
  - Center for Science and the Schools
    - http://csats.psu.edu/
- Vanderbilt University
  - Center for Science Outreach
    - http://www.scienceoutreach.org/
- Stanford University
  - Office of Science Outreach
    - http://oso.stanford.edu/
- Northwestern University
  - Science in Society
    - http://scienceinsociety.northwestern.edu/
- Yale University
  - Yale Science Outreach
    - http://onhsa.yale.edu/science-outreach-home
Welcome to the National Alliance for Broader Impacts

NABI has its roots in the Broader Impacts Infrastructure Summit of 2013, held at the University of Missouri. BIIS 2013 was the first meeting of the national BI community. It was followed by a second Summit in Arlington, Virginia. A result of those meetings was the formation of an engaged and active community that is ready to create its own national organization.
Ecsite brings together more than 350 organisations committed to inspiring people with science.

Is your organisation active in science engagement? Join us.

367 members
- 236 SCIENCE CENTRES/MUSEUMS,
- 16 NATURAL HISTORY MUSEUMS,
- 3 AQUARIUMS/ZOOS,
- 35 PRIVATE COMPANIES,
- AND 77 OTHER ORGANISATIONS

NEWS 13 March 2015
March e-news out
Jobs, opportunity to get involved in a Horizon2020 project on nanotechnology, good reads, calls for papers... and fictional space pictures made of milk, cinnamon and cat hair. Read it here.

NEWS 11 March 2015
Advertise with Ecsite
Reach thousands of science engagement professionals
COSEE NOW created the Broader Impact Wizard to help you develop a broader impact statement that will satisfy NSF Criterion II and fulfill your interest in communicating your science. The quick and easy five-step process will produce an outline of important points to include in your BI statement and will help frame discussions with your BI partners.

For more information about the wizard and an introduction to constructing effective broader impact projects, please view the video.
Impact toolkit

Our Impact Toolkit gives you everything you need to achieve the maximum impact for your work. The toolkit includes information on developing an impact strategy, promoting knowledge exchange, public engagement and communicating effectively with your key stakeholders.

The ESRC expects that the researchers it funds will have considered the potential scientific, societal and economic impact of their research.

Impact - what, how and why?

To find out more about impact, including how to make an impact with your research and what the benefits are, follow the links below:

- What is impact?
- Why make an impact?
- What the ESRC expects

Maximising impact

A step-by-step guide to maximising impact.

- How to maximise impact
- Developing a strategy

The tools for impact

Tools and tips to help you maximise impact.

- Impact tools

Resources

Maximise your impact through promoting knowledge exchange and public engagement.

- Knowledge exchange
- Public engagement

Contacts and help

Useful websites and publications to help you maximise impact.

- Impact resources
- ESRC Pathways to Impact for Je-S applications
The LWEC Knowledge Exchange (KE) Guidelines have been developed to aid the KE process across all activities endorsed by the LWEC Partnership. A version suitable for printing can be downloaded as a pdf below. What follows is an online version of the guidelines which we are hoping to develop as a dynamic resource bank with plenty of shared experience through case studies and interviews with KE practitioners.

You will find the same top level guidance in the printed version but the online version allows you to choose links to material which can help you with specific parts of your KE strategy.

The guidelines are not prescriptive. Their aim is to inform and inspire with a resource bank of ideas, tips and suggestions on how KE can be most effective.

Effective KE is crucial to the success of the Living With Environmental Change (LWEC) Partnership, which aims to “ensure that decision-makers in government, business and society have the foresight, knowledge and tools needed to mitigate, adapt to and benefit from climate change.”

By establishing a two-way flow of knowledge between researchers and potential users of their research, and ensuring a clear, mutual understanding of needs and priorities, LWEC initiatives will have a more meaningful impact on decisions, actions and behaviours in the years ahead.

Although these Guidelines are primarily aimed at people taking decisions at a programme level, it is hoped that they will provide useful ideas and principles for anyone involved in KE and complement guidance available from other sources, such as Research Councils UK (see attachment below).

The Guidelines are divided into the following eight components, each of which represents a key stage in a successful KE process.

<table>
<thead>
<tr>
<th>Attachment</th>
<th>Size</th>
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<tbody>
<tr>
<td>Guidance available from the Research Councils and their funded programmes.pdf</td>
<td>46.45 KB</td>
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</tbody>
</table>
The NCCPE seeks to support a culture change in universities. Our vision is of a higher education sector making a vital, strategic and valued contribution to 21st-century society through its public engagement activity.
TRAINING AND SUPPORTING RESEARCHERS
2014 Broader Impacts Intensive Training & Resource Fair

October 2nd, 2014
Bond Life Sciences Center
Register NOW!
http://broaderimpacts.missouri.edu/

8-9am
Broader Impacts 101

9-10am
Making an Extension Connection in Your Research

10:30-12pm
Concurrent Sessions: K/12 Education, Web & Social Media, Business Development/Tech Transfer, Legislative Outreach

12-1pm
Broader Impacts Resource Fair

1-2pm
Evaluating Your Broader Impacts

2-3pm
NSF Rotator & Reviewer Panel
Research and Innovation Services

Research and Innovation Services
Training sessions
Training materials
Financer events

Impact clinic

Time: Upon reservation, suggest a time suitable for you

Place: Agora, room AgC 513.1

How to make an effective funding proposal? In the Impact clinics you can refine your research idea. Funding organisations, especially EU and Tekes, require a clear description and plan for the use of research results, as well as a clear description of results and impacts in the project proposal. At the clinics, you will get support from your peers, tools for writing the project proposal and sparring from the funding and innovation advisors. To receive preparation funding from the Science Council for EU/H2020 projects, participation is obligatory. For more information, see the Science Council’s preparation funding.

Welcome to the impact clinics!

For more information, contact Funding Advisor Lasse Löytty, ture @jyu.fi, tel. +358 40 805 4887 (internal tel. 4533).

To get the most benefit from the clinics, you are asked to prepare a pre-assignment for the clinics.

- For the first clinic, we wish you to prepare a One Page Proposal in which you describe your project idea and its results according to the funding instrument’s requirements. Prepare to give a five-minute speech about your project idea.
- For the second clinic we wish you to prepare a Who took my money assignment and model the Big Picture of your research project: How the results of your research project are used in practice in short and long-term periods.
- In order to get better feedback, please send your pre-assignments before your clinic to ture@jyu.fi. Please remember that it is beneficial to participate at least in two clinics, so please reserve time for them in your calendar.

Commercialisation clinic
Communication
Workshops, Trainings & Briefings

**WORKSHOPS**

**COMPASS** brings together scientists, policy-makers, non-governmental organizations (NGOs), and other stakeholders to facilitate dialog on policy-relevant science issues.

Our workshops and working groups range from small gatherings to large, long-term efforts. [Learn more](#) about workshops and meetings that we have led or helped develop.

**TRAININGS**

**COMPASS** helps scientists communicate their work in a concise, lively manner that will get the attention of non-scientists including journalists and policymakers.

Our trainings are customizable, highly interactive, and range from one-on-one tutorials to multi-day workshops for large conferences. [Learn more](#) about our trainings.

**BRIEFINGS**

**COMPASS** connects science to policymakers and resource managers by organizing meetings and briefings for state and federal agencies and legislators.

Our briefings help inform decision makers about the latest scientific research and accelerate the pace of solving important conservation problems. [Learn more](#) about these briefings.
Recognition for Research Impact

- Institutional
  - Monash University (Australia)
  - Swansea University (Wales)

- National organizations
  - APLU Community Engagement Scholarship
  - AAAS Public Engagement with Science

- Federal
  - NSB Public Service
  - Queen’s Anniversary Prizes
CONCLUSIONS
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