This mini-guide, helpful for planning impact and writing pathways to impact statements was put together during 2015 at the National Oceanography Centre, and contains input from researchers and other specialists across the Natural Environment Research Council and several Universities.

The guide is a collaborative effort, for shared benefit. It is intended to be useful to researchers writing pathways to impact statements - and to stimulate thinking around research impact more broadly. To make any edits or add information, please contact Eleanor Ashton elht@noc.ac.uk.
# Contents

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>About Impact</td>
<td>3</td>
</tr>
<tr>
<td>Benefits of planning for Impact</td>
<td>4</td>
</tr>
<tr>
<td>Challenges to achieving Impact</td>
<td>5-6</td>
</tr>
<tr>
<td>Communication considerations</td>
<td>7</td>
</tr>
<tr>
<td>Thoughts on stakeholder engagement</td>
<td>8</td>
</tr>
<tr>
<td>Tailoring your plans</td>
<td>9</td>
</tr>
<tr>
<td>Assessment of Impact</td>
<td>10</td>
</tr>
<tr>
<td>Pathways to Impact tips and advice</td>
<td>11</td>
</tr>
<tr>
<td>Useful resources</td>
<td>12</td>
</tr>
</tbody>
</table>
About Impact

Research Impact is often defined as the demonstrable contribution that excellent research makes to society and the economy.

However, Impact can mean different things to different people and organisations. Here are some examples of different types - can you think of any other ways in which your work could make a difference?

- It is important to check the types of impact recognised by your potential funders when applying for a grant.
- Consider any opportunities to build in multiple benefits.
Impact is important in demonstrating the value of investment in science. Assessment exercises such as the Research Excellence Framework (REF) help academic organisations demonstrate their pedigree, and make the case for further funding. Case study examples of impact are also really helpful when talking with others about research – and knowledge exchange work to translate excellent science into societal benefit can also be hugely rewarding, great fun, and a useful means of career development.

Impact from research seldom happens by itself. It is not always possible to know in advance how or when it may occur, but designing appropriate pathways of mechanisms and linkages gives the best chance that it will, and the most control over outcomes. Think about what you might like to happen, if the circumstances were right... then design steps that lead toward this.

There can be little question of the advantages of Impact – but note that pathways to impact statements in a grant application may themselves be beneficial as a way to convey enthusiasm about the project to reviewers.

Your work should include ways to check and, if possible, quantify what has been done. Without a plan it is very difficult to demonstrate how Impact has been achieved.
Impact Challenges

Generating Impact is not always straightforward ...but why not?

**Mindset matters**
In many cases the science question or technological challenge is of greater interest to the grant writer than the applications of this work, or Knowledge Exchange (KE) processes are perceived to be ‘something else’ and not the expertise of the writer – yet much of the skillset needed for successful scientific collaboration is actually the same as that used for KE, and the research and KE activities should be closely interlinked.

- How could you make best use of things you are already doing and/or the opportunities you have through your organisation?
- If you intend your focus to be purely on the research, could you involve someone whose focus would be the translation of that research?

**It’s about time**
Often the timescales over which impact occurs are considerably longer than those of project activities/funding – sometimes by many years.

- What could you do to accelerate impact or to catalyse legacy activities?

**Tracking and measurement**
When something has happened, how will you know about it, and will your efforts be credited?

If you do know that something has happened, how much of that thing are you responsible for through your work, how much is attributable to other factors?

It is very difficult to predict at the outset of a piece of work what the impacts could be (particularly in the case of blue skies research), and indeed research results should never be pre-empted.

- Could you design processes that are capable of making the most of diverse possible results?
- How will you capture the information? Has it been used and/or developed further? Do end users find it effective and has it recouped the investment?
- Are there ways in which you could work, or relationships you could build, in order that your impact generation activities can react effectively and efficiently to developments in the research?
Resource
Useful impact often comes through early stakeholder engagement and collaboration, and it is very helpful to have evidence of this in your proposal - but there is not usually any funding for this kind of pre-submission activity (to support either time or travel expenses).

- Could you use engagement from other work areas or wider organisational activities toward your current plan?
- Do your stakeholders have any resources for working together which you could benefit from?
- Could a support mechanism for this sort of useful activity be created?

Change
Your Impact plan needs to be resilient; readily able to respond to changes in circumstance.

One key thing is to build in flexibility in a PI plan. It’s all very well surveying your stakeholders, working out deliverables, working alongside them to meet their needs, etc. But once a Knowledge Exchange (KE) project is underway, things change. People move on, markets shift, competitors arrive, people have babies… all sorts of things require the KE project person to change tack if necessary. Be open to new kinds of impact, new kinds of output, I’d say.

Dr Dan Bloomfield, University of Exeter

Requirement to value longer-term and broader-picture gains
Motivation to cost and deliver impact from research may be absent from proposals because impact generated is not assessed in a quantitative way during review. Neither does impact directly contribute to career progression, kudos or REF points. Until any of these things do, it is likely that some of the impact from research investments may not be realised or communicated. Even when there is genuine intention or attempt to progress activities which deliver impact from research, many projects are operating on tight margins and have run out of resources by the time this is needed - and/or the staff with relevant expertise have moved on to a new post.

- Tagging on impact accelerator grants to projects may be a good way to mitigate this second issue, but can involve additional project management time for Research Councils – could this be done for all projects as standard?

Communication
The skills and resources needed to communicate research outputs are hugely important. An element of translation is often required – with complex science requiring clear and careful presentation to avoid misunderstanding and promote engagement (the current difficulties over climate science illustrate why this can be highly significant not only for researchers, but for society at large). Communication is key in almost all areas of generating impact, and we will consider this further…
Communication considerations

To generate impact you need to be clearly understood by the grant panel, and to communicate effectively with the project team, with stakeholders, and possibly also the wider public.

• **Language**
  Different stakeholder groups (including researchers themselves) often use different jargon and lots of interest-specific acronyms. Your statement may not be assessed by specialists in your subject area, so it is wise to write for the lay reader. For knowledge exchange purposes it is wise to write this way as much as possible. – and with great clarity. Your material should then be well understood by most audiences, which will save considerable time otherwise spent re-creating or re-purposing work for different end users.

  “**We think of a lay reader as educated and informed, but without detailed knowledge of any particular field and its technical language. Writing for a lay reader means: not assuming any background knowledge about your subject area; spelling out in the clearest terms your research objectives, methodology, and intended outputs; and explaining any technical or specialist terms (even when you have given an explanation elsewhere in the application).**”
  - Leverhulme Trust

• **Confidentiality**
  Information needs handling with great care. On occasion it may be sensitive for commercial reasons, for reasons relating to Intellectual Property rights, or if it has not yet been through the peer review process for publication. But not sharing information carries its own risks and makes Impact unlikely. Seek advice if you have any concerns about sharing information.

• **Context**
  Think about where information is being used. If there were a 90% chance of something being a reality, a scientist might tell you the chances were not statistically significant, whereas a business person might decide it best to operate as though the thing were true.

  • Consider diagrams if your format permits. Other mechanisms such as video clips, or interactive PDFs, can be great and engaging ways to share information, but be conscious of the preferences of your audience, aware of the technology systems they have available and any operational limitations.

  • Have a communications plan. Who are you engaging with and when? This should be flexible enough to adapt to changing needs and circumstances, but sufficiently specific to focus efforts toward the generation of impact.

  • Get help! Use your organisations existing communications professionals and/or channels. Use existing networks. Collaborate/contribute and make things as easy for yourself as possible. Effective communication can actually save you money, so ensure you allocate sufficient resources for achieving what you need to.
Some thoughts on stakeholder engagement

Who will the work affect? Who may have things to contribute?

In order to have a pathways to impact plan, you first need to identify WHO your research results will impact on. It may sound obvious, but in some cases, identifying the ‘end-user’ is really difficult.

Clare Warren, Open University

Make sure you are properly engaged with your end users and that you have involved them in developing your impact plan. This will show, to your reviewers that you are working with them, you understand their needs and you will deliver what suits them – or is mutually beneficial.

Viki Hirst, Leeds University

On engaging stakeholders early: If they are involved in the development of the research proposal then the outputs are much more likely to be things that they want and need. It also enables you to have a discussion about the form of the outputs, so that results are communicated in a format that stakeholders understand and can use.

Dr Claire Helen Quinn, Leeds University

Understanding (mapping) stakeholders / beneficiaries of the research and the nature and scope of their engagement are critical to defining and realising the potential impacts. This reflects the fact that stakeholders/beneficiaries have different capacities and expectations and that the research and dissemination processes need for engagement vary in time and with the stage of the research.

Delivering on this mapping should involve co-definition and co-development of the engagement process and of the pathways to impacts, but also co-evaluation of these throughout the research and dissemination processes. As to the former, this means early engagement and more than just seeking letters of support.

Roger Street, UKCIP

‘Learn as much as you can about operational context and adapt accordingly’ i.e. not only what problems do end-users say need solving, but also the setting within which the solution must fit. Allows you to make what you have to offer more relevant and builds trust and respect. In our case it was by attending training exercises and debriefing meetings as observers, visiting end-users premises, attending their conferences, just listening actively and learning from them.

Julia McMorrow, Manchester University

Really make sure to focus on societal impacts rather than academic impacts and define a plan as concretely as possible to make sure that those societal impacts are achieved. Talk to potential stakeholders and ask if they are interested in what you are proposing to do, as early as possible. If so, ask more about what their needs are, incorporate this into your proposal if possible, and ask for a letter of support as evidence of their interest.

Ingrid Cnossen, BAS

Ingrid Cnossen, BAS
Pathways to Impact are all different. There are many types, with different stakeholders, needs, opportunities... It is hugely important to tailor impact-generating processes to your own work.

- Your pathway to Impact should be bespoke. Think deeply and broadly. Don’t feel confined to known options. Try something different, and remember that there is value to many different types of knowledge. Make sure your funder becomes aware of all the potential impacts of the work.

- Make the ‘So What’ factor clear and focus on tangible outputs. You can request resources for Impact generation activities, so think carefully about your costings. It is helpful to have capacity sufficient for people to be able to respond to opportunities.

Think about value-for-effort for each piece of your Impact Plan. You will only have limited time within your project to dedicate to Impact activities: spending days working on an activity for a small group may really help them, but ultimately you might have been better spending the time designing something that will engage a wider audience. Most impact activity is low cost in terms of funds, but remember that your time is valuable (especially at Full Economic Cost!) Edward Mitchard, Edinburgh University

- Think beyond academia. Get out there with end users and engage with their events. The plan must be fit for purpose for both the community and for the research.

- It is important to understand decision-making processes and relationships between different organisations and people. Find out how they absorb information and act on it.

- Think about internationalising your work (not essential – but worth thinking about in relation to the reach of the impact).

- If your work is a blue skies project where potential impacts are not predictable, consider ways of opening up new options from the research - such as presenting to wider disciplinary areas and the use of more open access journals. Follow on from publication and encourage feedback. Alex Twyford, Edinburgh University

It is important to show what you are doing above-and-beyond what is expected. For example, everyone will have a website, give talks at a conference - what are you proposing that is different? I would also say it is excellent when you can integrate engagement into your research. For example, asking citizens to provide samples.
How is impact assessed?

For Research Councils UK (RCUK), a clearly thought through and acceptable Pathways to Impact statement is an essential component of research proposals and a condition of funding. Pathways to Impact are not quantitatively marked – but are assessed as to whether they are acceptable. This is not to say that ‘acceptable’ should be the target to aim for! Potential to generate Impact may prove a way to differentiate between proposals ranked equally in terms of the science excellence.

The panel assessment as to whether or not a statement is acceptable is made through judgement, and in many cases criteria are used to guide the decision.

Some example indicators for excellent impact:

✓ The key areas where impact should be explored by the researchers during the course of the grant have been clearly identified.
✓ Clear, realistic and appropriate objectives are given.
✓ Proposed activities are appropriate to the research, use both routine and novel ways of engaging end users, and are likely to generate very significant potential for impact.
✓ Management of these activities has been well thought out.
✓ The ability to achieve the objectives is clearly evident.

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Having reviewed a lot of NERC grants now, I would say the most common problem is the absence of evidence of prior effort to engage with stakeholders / end users. An Impact Plan is a lot more convincing if you can show you’ve already worked with end users or have taken real steps to begin doing this.

Dr. Dylan Z. Childs

You can get bad feedback for stretching the applications of your research. If your project isn’t especially applied it is best to state this in the PTI and concentrate on public engagement.

Colin Tosh, Newcastle University

Common characteristics of …

High quality submissions:

- Good consideration of the relevant beneficiaries, user needs and tailored activities.
- Clear description of deliverables and milestones.
- Co-production and involvement of beneficiaries and users from the outset.
- Clear commitment for realising both academic and non academic research impacts.
- Briefly noted track record for knowledge exchange and impact generating activities in the context of the specific research project.

Problematic quality submissions:

- Vagueness, lack of specificity and clear deliverables.
- Activities are not project specific, but routine activities for research posts.
- Too much focus on track record rather than what will be done as part of this research project.
- Lack of consideration of broader beneficiaries, likely impacts and appropriate mechanisms.
- Activities narrowly and end of project focused.
Pathways to Impact tips and advice

- Be clear about what it is you want to achieve with your research/technology... getting to speak to industry/government/potential users is easy the first time round but not the second therefore make sure you are clear about what it is you want from them and what it is you will be ‘giving’ them....

- Work with your user community and build this into the project from the start. Engage with them frequently adapt to their suggestions... Collect written statements (letters or emails) from the users as you go along.

- Use the Knowledge Transfer Networks and other government bodies and organisations (e.g. CIRIA - the Construction Industry Research and Information Association) that are set up to help you engage with industry/government etc. in order to build your user community.

- At the end of the day you are going to need to be able to demonstrate impact. The most valuable statements are where you can demonstrate a numerical value or something quantifiable... numbers are key.

- Don’t leave it until the last minute, and one supporting statement doesn’t make a good impact story...

- Look to building in writing an impact statement for your project as you go along i.e. develop it continually this way you will know where you are and can adapt your impact plan accordingly.

- Publish the research...... 1. NERC are particularly looking to show research through to impact; 2. many companies won’t use research unless it’s been peer reviewed (i.e. insurance sector).

- Don’t forget the power of the internet and social media in generating interest and impact that can be quantifiable ...... if no one knows about your work how can it ever generate impact.... Make sure you put your papers out there, tweet them, facebook them etc...there are lots of ways these days to get your work noticed.

Dr Katherine Royse, BGS

- Engage and involve potential users and other beneficiaries as early as possible, even before finalising the pre-proposal research ideas to help co-formulate the approach, and build in appropriate mechanisms to continue engagement throughout and after the research (e.g. regular update on developments, meetings at milestones, conversations about successes or snags etc.).

- Don’t leave the production of the Pathway To Impact(PTI) to the end, or the last minute. Think about and produce it at the same time as producing the science sections, enabling them to reflect and improve each other.

- Put your foot in the potential users and beneficiaries’ shoe and build in appropriate mechanisms that would successfully attract and engage a broader number and range of them during the research...and this extends well beyond dissemination or websites activities and includes things like hosting site/university visits, open meetings, demonstrations etc. that engage their and your interests (drawing in to other relevant research where and as appropriate).

- Research Councils are primarily interested in the potential impact of the proposed research as opposed to past successes in impact, therefore by all means illustrate past success and potentially how this will contribute and strengthen the current research but do not major on this at the expense of describing the pathways to impact from the proposed research.

- Consult with peers and involve KE professionals within your organisation to develop and build in appropriate costings and plans that enable the proposed impact activities to be realistically and successfully achieved.

- It is important to ensure that PTI activity and resource are directed to where applicants feel it will achieve the best outcome in relation to the research being proposed, and not just to where it is most popular.

Perry Guess, Head of Knowledge Exchange, NERC
Resources

Detailed guidance is available on the RCUK website (this includes links to guidance provided by individual councils) http://www.rcuk.ac.uk/innovation/impacts/

RCUK also provide:
• Impact case studies http://www.rcuk.ac.uk/media/brief/impactcase/
• A typology of Impacts http://www.rcuk.ac.uk/RCUK-prod/assets/documents/impacts/TypologyofResearchImpacts.pdf
• Frequently Asked Questions about impact requirements http://www.rcuk.ac.uk/RCUK-prod/assets/documents/impacts/RCUKImpactFAQ.pdf

The Economic and Social Research Council provide an online toolkit for achieving Impact: http://www.esrc.ac.uk/funding-and-guidance/impact-toolkit/ including a template for developing an impact and communications strategy http://www.esrc.ac.uk/_images/impact-strategy-template-2014_tcm8-14726.docx

What approaches could you take to ensure your Pathway to Impact is excellent?
Here are a few ideas:

• Brainstorm with colleagues.

• Use the web – you can find out a lot about the priorities and interconnections of people and organisations online, as well as seeking out useful events and opportunities, and information on past efforts in the subject area. A thorough programme of web research can focus your scrutiny and save significant amounts of time and effort during networking events.

• Talk to your potential funder(s) and stakeholders (e.g. policymakers and regulators) in advance.

• During development of ideas, talk to anyone you can to gauge their perspectives on your ideas and generate new ones: your friends and family? any existing connections to interested parties?

• Run your Pathway to Impact past people in good time before submission. How could it be improved? Co-design it with stakeholders if possible. Find others outside of the work area who may be able to look at the work without any personal interest or bias and act as a ‘critical friend’.

...do you know any Knowledge Exchange or Communications professionals or successful past applicants you could ask for specific advice and ideas?