

Guidance for applicants: Pathways to Impact for Research Grant Proposals.

Summary of changes

From 20 April 2010, ALL research proposals submitted to NERC should be accompanied by Pathways to Impact. The key changes are that:

- Information on the potential economic and societal benefit of your research will be described in the Impact Summary and in the Pathways to Impact
- Details of who might benefit from the research and how they might benefit from it will be provided in the Impact Summary.
- Information regarding what is going to be done to ensure beneficiaries have the opportunity to engage with the research, will be provided in the Pathways to Impact
- Academic impacts will be described in the Academic Beneficiaries section

It will not be possible to submit a research proposal through JeS without attaching a Pathways to Impact document.

Background

NERC wishes to demonstrate the economic and societal impact arising from its investments. Studies illustrating the impact of our activities contribute to the evidence base for the continuation of the government science budget and can influence the outcome of NERC's spending review allocation (the funding we receive from government).

A core part of NERC's mission is to use its science for the benefit of the UK and more widely. Key to this is knowledge exchange, which provides the mechanisms for the impacts of research to be realised. Impact activities should be an integral part of any research and NERC expects all researchers to carry them out. Along with the UK's other Research Councils, NERC has made it mandatory for all research grant proposals to be accompanied by Pathways to Impact.

Carrying out the activities in the Pathways to Impact will allow potential users and beneficiaries to better understand and benefit from your research and will, in some cases, enable greater involvement in your research.

Requirements

ALL research grant proposals must be accompanied by Pathways to Impact. It is not possible to submit an application through JeS without attaching a Pathways to Impact document.

Applicants should identify the kinds of activities they expect to undertake in order to increase the potential for economic and societal impact to result from their research. There is a range of methods to do this. Some illustrative examples are in Annex 1. However activities need not be restricted to just these methods.

The activities should be project specific and should be appropriate for that piece of research, so it is not expected that all Pathways to Impact will provide the same level of detail or activity. However, applicants are expected to think carefully about the following questions:

- Who might benefit from their research?
- How might they benefit?
- What will be done to ensure that potential beneficiaries have the opportunity to benefit?

Whilst it may not be possible at an early stage to identify all possible outcomes or the best ways to encourage economic and societal impact, very often generic methods can be used to good effect.

Broad outline and structure of Pathways to Impact

There is a template to help you structure your Pathways to Impact and to ensure that relevant and useful information is included. This can be downloaded from the [Pathways to Impact](#) area of the website. Unless specified otherwise by the Announcement of Opportunity, the Pathways to Impact document should be:

- A maximum length of two sides of A4
- Minimum 11 point Arial, 2cm margins

Unless activities relating to academic impacts form a clear step in the pathway to economic and societal impact, they should **not** be described in the Pathways to Impact, but in the Academic Beneficiaries section.

Information on the potential economic and societal impact of your research should be described in the Impact Summary and in the Pathways to Impact.

Full details of who will benefit from your research and how they will benefit from it should be provided in your Impact Summary. In your Pathways to Impact, you should outline potential users¹ and the benefits of your research to those users. You should then provide detailed information on what you are going to do to ensure that these users have the best possible opportunity to engage with, and benefit from your research. You will need to describe the activities you are planning to carry out in order to facilitate knowledge exchange and impact. The cost of the activities to be undertaken should be included in the Pathways to Impact. Full details should be provided in the Financial Resources and Justification of Resources sections of the main JeS proforma.

If a proposal is highly speculative and novel and at this point no users outside the academic community can be identified, the Pathways to Impact document should:

- Provide a clear justification as to why no end users have been identified
- Attempt to identify areas / sectors in the user community this work might be relevant to in the future

¹ Users/user community = people who use the outputs of your science. For example, they could be from industry, business, government, charities or the general public.

Information to include in the Pathways to Impact

When writing Pathways to Impact, it is important to remember that impact is the outcome whereas knowledge exchange is the process by which impact is achieved. Impacts can be local, regional, national or international in scale and impact is most effective when user engagement is sought as early on in proposal development as possible, and where the activities are embedded within the research process.

In considering how best to maximise the impact of your research, you should think about its likely outcomes, who it might be of interest to and how best to engage with this individual / group. At this stage you might be able to identify individuals or groups in user organisations who will be interested in specific aspects. If at all possible, you should consider approaching these potential users prior to submitting your application: early user involvement will strengthen the likely impact of your research and users may be able to advise you on the best method(s) to disseminate your work. If you do this, you must allow a considerable period of time to build a relationship with the user community. Under no circumstances should you try to solicit support from them without appropriate and timely discussion. Users will not welcome demands for last minute engagement with proposals.

The Impact Summary should consider who will benefit from the research and how they will benefit from it:

1. Demonstrate awareness of / engagement with the user community, for example:
 - Who the potential users are
 - How the work will build on specific existing links
 - Other beneficiaries/stakeholders who may have an interest in outcomes
2. Demonstrate awareness of possible impacts of the work on users through increased knowledge and understanding, for example:
 - Economic impacts
 - Public policy or legislative impacts
 - Quality of life and public good impacts

Pathways to Impact should:

1. Provide an outline of the user information:
 - Who the users will be
 - How the work will benefit these users
2. Identify activities that will be undertaken to ensure optimal engagement with end-users and awareness-raising, such as:
 - Secondments of research or user community staff
 - Workshops to provide training or information dissemination
 - Publications summarising main outcomes in a way that people will be able to understand and use
3. Identify who is likely to be undertaking the Impact activities, such as:
 - PhD students and post-doctoral researchers who may be involved in activities in addition to research
 - Bought-in staff specifically to undertake Impact activities
 - Technical experts to write publications, web pages and user-friendly interfaces

4. Details of costs of the activities proposed, including staff time

Funding

There is no maximum funding limit for activities within Pathways to Impact provided that they are fully justified in the Justification of Resources section of the JeS proforma. Impact activities that are funded will be funded at 80%, but note that Pathways to Impact will not be funded as stand-alone activities.

Assessment of Pathways to Impact

Research grant applications will be assessed in the normal way (<http://www.nerc.ac.uk/funding/assessment/>). Science excellence remains the primary criterion for assessment of responsive mode proposals. Pathways to Impact will be considered as a secondary criterion.

Pathways to Impact will be sent for peer review and will be discussed by affiliates and members of NERC's Peer Review College at the moderating panel meetings.

The assessment scale for Pathways to Impact has been changed to provide greater clarity to applicants and reviewers alike. Pathways to Impact will now be scored from 0-6, where 0 is 'Non-Scoring' (representing those proposals where no Pathways to Impact have been written and where the reviewer / panel feels that this is properly justified) to 6, which is 'Outstanding'. Full details of this new scoring system are provided in Annex 2 of this Guidance document.

Following the moderating panel meeting, for Pathways to Impact that have received a score of 1-2, NERC reserves the right to withhold science funding until the Pathways have been revised to a sufficient standard. In such circumstances, feedback will be provided to help with resubmission of the Pathways to Impact

Criteria for assessment

For all Pathways to Impact, consideration will be paid to the research being undertaken and whether the Pathways to Impact are appropriate to deliver the relevant activities.

Assessment criteria for Impact Plans can be found at <http://www.nerc.ac.uk/funding/application/documents/assessment-criteria.pdf>

Monitoring of Pathways to Impact activities / outcomes

NERC routinely collects information on research grants and how researchers have engaged with users. We do this through the annual Outputs and Performance Measures (OPM) exercise and highlights are published in the NERC annual report. Pathways to Impact information collected through OPM will be made available through the science impacts database (SID) which is publicly accessible (<http://sid.nerc.ac.uk/>). NERC is also considering ways in which the Pathways to Impact information contained in JeS may be better used.

Advice, guidance and queries

Many research organisations have set up offices to help provide advice to researchers on areas such as economic impact and knowledge exchange. You are advised to contact them as they may be able to help guide you with putting together your Pathways to Impact.

For all queries relating to Pathways to Impact, please contact knowledge@nerc.ac.uk

Annex 1: Examples of activities that can be undertaken and described in Pathways to Impact

The list below illustrates activities that could be included in Pathways to Impact.

This list is by no means exhaustive and activities need not be restricted to these examples, however many of these methods are tried and tested and deliver good results.

Examples of users include: policy-makers, NGOs, charities, government agencies, industry, public sector, schools, museums, professional / amateur associations, media, etc.

Examples of activities include: workshops, websites, publications, public lectures, networks, freeware (data) tools, new methodologies, exhibitions, roadshows, media, training, commercialisation, technology, on-line databases, etc.

The following list has been provided to illustrate some activities you might want to consider as part of your knowledge exchange activities.

Activities need not be restricted to these examples, and this list is by no means exhaustive – however many of these methods are tried and tested and deliver good results.

- **Special data management:** substantial amounts of data are generated from research and often published in ways that are not easily available, accessible or meaningful to potential users. You could use the funds to convert the data into a form that can be readily used.
- **Networks:** formation of a network made up of researchers and members of the user community. This will enable the exchange of people, skills and knowledge and could allow new mutual research directions to be defined.
- **Website:** you could set up a website with information written in a user-friendly and accessible way to ensure your data can be used. NERC-funded websites must follow basic style guidelines developed by NERC. We can also advise you and give you support with construction and accessibility. Before embarking on any website planning, please contact the NERC communications team at the earliest instance: editors@nerc.ac.uk
- **KT translators/facilitators:** employ a facilitator to move between the research base and user community, and act as a focal point for a range of activities. The facilitator acts as a translator enabling the user community to access information in a meaningful manner from a wide range of sources through one main interaction.
- **Special publications:** data and knowledge are often held in journals and other formats that are not easy for many users to access. Produce targeted publications to enable the exchange of knowledge in a format that encourages uptake and use. Make sure that you talk to your user community so that you know what knowledge they need and what format is most useful to them.

- **Workshops:** these can provide a quick and easy way for researchers and users to come together to exchange skills and techniques that are vital for their activities. The involvement of users in the exchange of skills and techniques is key to the success of workshops in facilitating impact. Workshops inviting only researchers from within the disciplines involved in the proposal should not be considered as an effective mechanism to achieve impact. Inviting colleagues from disciplines outside the proposal will improve the opportunities for impact, but without the involvement of users, such a workshop still does not constitute a really strong impact.
- **Secondments, fellowships and interchanges:** exchanging staff between the research base and user community enables an increase in the understanding of common issues, access to skills and knowledge, and can facilitate future collaborations. During your research you could help users get involved in collecting data, experimenting, or interpreting results.

Annex 2: Scoring System for Pathways to Impact

Based on the reviewer scores and comments as well as the PI response, moderating panels are asked to assign a final grade of between 0-6 to each proposal for Pathways to Impact using the definitions provided below.

Score	Pathways to Impact (Secondary Criterion)
6	<p>Outstanding - Strong and potentially effective Pathways to Impact:</p> <ul style="list-style-type: none"> • All appropriate end-users have been identified and are actively engaged in the project. • End-users have been involved in the proposal development from its inception (e.g. in setting project objectives) and this involvement is clearly demonstrated in the Pathways to Impact. • A clear understanding of the needs of the end-user community is demonstrated; potential end-user benefits are comprehensively identified, with the research likely to be answering a particular end-user need. • Letters of support go beyond the norm and provide real evidence of end-user interest, support and potential end-user benefit (e.g. providing details of end-user objectives that the proposal hopes to meet, etc). • Activities proposed 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 in terms of timing, personnel, finance, etc, and the ability to deliver them is clearly evident.
5	<p>Excellent - Robust Pathways to Impact with minor weaknesses:</p> <ul style="list-style-type: none"> • Most appropriate end-users have been identified and are actively engaged in the project. • End-users have been involved in the proposal development, but possibly not from its inception. This involvement is clearly demonstrated in the Pathways to Impact. • A clear understanding of the needs of the end-user community is demonstrated, but this may not have been translated into a comprehensive identification of potential end-user benefits. However, regardless of which end-user needs have been identified, the research will likely go a significant way to answering them. • Letters of support go beyond the norm and provide real evidence of end-user interest. End-user support is more limited, but there is still clear evidence of how the proposed work will benefit the end-user. • Activities proposed are appropriate to the research, use both routine and novel ways of engaging end-users and are likely to generate significant potential for impact. Management of these activities has not been thought through quite as well as it might have been, but this should not pose a risk to the ability of the proposers to deliver these activities.
4	<p>Very Good - Appropriate Pathways to Impact with minor weaknesses:</p> <ul style="list-style-type: none"> • Some appropriate end-users have been identified and are engaged in the project. • End-users have been involved in the proposal development, but

	<p>perhaps only in the latter stages. This involvement is clearly demonstrated in the Pathways to Impact.</p> <ul style="list-style-type: none"> • An understanding of the needs of the end-user community is demonstrated, but it is not fully developed. Some potential end-user benefits have been identified and the research will likely go some way to answering a particular end-user need. • Letters of support provide evidence of end-user interest and potential end-user benefits, but the connection between the proposed work and the end-user benefits may be unclear. • Activities proposed are appropriate to the research and use both routine and novel ways of engaging end-users. These activities are likely to generate reasonable potential for impact. However some appropriate activities may have been missed. • Whilst the management of activities has clearly been thought through, there is a minor risk that it will not be possible to deliver these activities in the appropriate time frame, or with the resources requested.
3	<p>Good - Satisfactory Pathways to Impact with evident weaknesses:</p> <ul style="list-style-type: none"> • Some attempt has been made to identify likely beneficiaries, but they have not been engaged in the development of the proposal. The most appropriate end-users may have been missed. • End-users are involved in the Pathways to Impact, but only in a rather passive manner (e.g. attending workshops at the end of the proposed work, when there is little opportunity to feedback into the research process). • Only a modest understanding of the needs of the end-user community is demonstrated. Potential end-user benefits are identified, but it is not clear how the research will answer the particular end-user need. • Letters of support are of a standard format and although demonstrating general support for the proposal, don't go very far in outlining end-user interest or potential benefit. • Activities proposed are generally routine and unlikely to result in significant impact within the end-user community. Some attempt has been made to identify more novel forms of engagement, but the most appropriate activities may have been missed. • There is some evidence that management of the activities has been considered, but the detail provided is limited. It may not be clear who is going to carry out the activities or how much they are going to cost. The timing of the activities may not be optimal for achieving the greatest potential for impact.
2	<p>Modest - Weak Pathways to Impact with major flaws:</p> <ul style="list-style-type: none"> • Only a limited attempt has been made to identify likely beneficiaries and those that have been identified may have been approached as an 'after-thought'. The most appropriate end-users have been missed. • The Pathways to Impact may describe anticipated end-user involvement, but no engagement has actually taken place. • A limited understanding of the needs of the end-user community is demonstrated, but there is no clear idea of potential end-user benefits, or of how the research might answer the particular end-user need. • Letters of support are of a standard format and although demonstrating general support for the proposal, do not go very far in outlining end-user interest or potential benefit. • Activities are limited and may be inappropriate to the proposed work.

	<p>They are unlikely to result in any real impact within the end-user community.</p> <ul style="list-style-type: none"> • Management of the activities has only been loosely considered and there is no detail concerning who is going to carry out the activities or how much they are going to cost, etc. Resources requested may not be adequate and the timing of the activities will likely do little to enhance the potential for impact.
<p>1</p>	<p>Poor - Only minor aspects of impact have been demonstrated:</p> <ul style="list-style-type: none"> • Little or no attempt has been made to go beyond routine impact activities where non-routine activities would clearly be possible. Any activities or users that have been identified are not appropriate to the research described in the proposal. • Little or no attempt has been made to identify likely beneficiaries, even though there is an end-user community with an interest in the proposed work. End-users that have been identified may be inappropriate to the proposed work. • The Pathways to Impact make little attempt to describe any end-user involvement and there has been no prior engagement with end-users. • There is little or no understanding of the needs of the end-user community. Any end-user benefits that are described are likely to be unrelated. • Letters of support are absent. • Any activities that have been proposed are not particularly relevant to the proposed work and will not result in any impact within the end-user community. • Management of the activities has not been considered sufficiently and little or no information is provided as to how the activities will be managed. <p>- No Pathways to Impact have been described:</p> <ul style="list-style-type: none"> • Either there is no justification, or the justification given is not deemed adequate or appropriate.
<p>0</p>	<p>Non-Scoring - No Pathways to Impact have been described:</p> <ul style="list-style-type: none"> • Full justification has been given and the justification is considered appropriate given the nature of the research.