



# WHY EVALUATE?

Good decisions about what research to fund require firm evidence. A well designed and executed evaluation provides exactly this evidence. It affords

a foundation the opportunity to monitor progress, to assess the impact and relevance of its activities, to learn from what it has done, and to review its policies and the focus of future programmes. Evaluation - together with the routine monitoring and data collection activities that underpin it - helps a foundation to support projects and initiatives of the highest quality and achieve its goals.

## PAMPHLET 1: WHY EVALUATE RESEARCH?

For this reason, the European Forum on Philanthropy and Research Funding ([www.efc.be/research\\_forum](http://www.efc.be/research_forum)) has supported the production of a series of research evaluation guidelines in the form of 4 pamphlets aimed at foundations that are considering how to develop and strengthen their monitoring and evaluation activity. The series is best seen in the light of foundations developing their overall evaluation and monitoring strategy. Detailed questions concerning implementation can be followed up using the case studies and the list of suggested reading.

Pamphlet 1 (Why evaluate research?) provides a practical and accessible introduction to evaluation for programme managers and foundation staff - focusing on the rationale for evaluation. It presents some theoretical background and practical considerations that should be taken into account before carrying out an evaluation.

Pamphlet 2 (What to evaluate) describes the typical objects of an evaluation exercise; Pamphlet 3 (How to evaluate) describes in greater detail the standard methodologies and tools that are commonly adopted to conduct evaluations. Finally, we present some case studies of research evaluation as practiced by foundations in Europe.

It is our hope that these documents can serve as a guide for funders who are in the process of formulating their approach to evaluation, and as inspiration for funders who are more experienced with evaluation.

### WHY EVALUATE?

Projects and programmes are evaluated for 2 main reasons: to strengthen and improve their implementation or to describe

their outcomes and results. Evaluations that do the former are called formative and focus on improving implementation and processes, or achieving a clearer understanding of aims and needs. Evaluations that do the latter are called summative and aim to know what has been produced as a result of the intervention, the cause and effect mechanisms and how effective it has been in its use of resources.

Breaking this down further we can see that evaluations typically inform the following goals of foundations:

- > **Accountability & validation** - to understand how well projects and programmes are delivering against their goals; to enable foundations to assess whether they have made the best choices; to validate their decisions and satisfy reporting requirements.
- > **Strategy & planning** - to explore the operation of funding initiatives; to identify the 'best' mechanisms to deliver on their aims; to identify priority areas to fund and inform funding strategy.
- > **Policy & advocacy** - to build the evidence base of the requirements and impact of the research that foundations support: such examples are important for use in policy and advocacy work.
- > **Organisational learning** - to identify research achievements and where funding has made a difference; to identify the impact of a specific funder's 'investment' alongside other funders and stakeholders in the research process.

### WHERE TO START

There are a number of very general and practical considerations to bear in mind before deciding on a particular method of evaluation:

- › Talk to stakeholders early in the planning of new funding initiatives. This will enable you to clearly establish what kind of information you will request and receive valuable feedback from stakeholders in the process.
- › Define clearly the measures for progress and success (sometimes called 'indicators') in the particular programme/initiative. This will make it easier to identify relevant results, including 'negative findings' with important impact, and to see when expected progress is not made.
- › Set up an evaluation scheme that ensures systematic and prospective collection of information while a grant is running. This kind of routine monitoring of performance will make it easier to gather the evidence for your final evaluation of whether your project or programme has met its aims.
- › Your evaluation scheme should reflect what the results will be used for and by whom.
- › Establish reporting requirements with those you fund. Make sure they know from the start what kinds of information you as a funder will be requesting and when.
- › Set realistic timeframes for monitoring and evaluation. Remember that research and funding activity can take time to deliver impact.
- › Is there anything for you to learn from existing practices? Look at the evaluation systems other funders have put in place and see if there are transferable approaches, metrics and tools that you might adopt. This might also deliver relevant benchmarks to compare the results of your evaluation schemes with those of other funders.

### THE EVALUATION PROCESS - THE TRACKING AND ASSESSMENT OF PROGRESS AND PERFORMANCE

While the main focus of these pamphlets will be the ex-post evaluation of research funding, it is important to keep in mind that this is part of a broader cycle of evaluation and decision-making. Each stage of the cycle should be designed with a view to improving the overall process: establishing realistic and pragmatic goals at the ex-ante stage (before the award is granted) can help ensure a more effective evaluation when the programme or project is completed; data and information gathered while an award is still in progress can be important inputs to any final evaluation and reduce the administrative burden on the grant recipient; and the outcome of your final evaluation may require the original goals to be changed and different information to be gathered.

It can be helpful to try to capture this cycle in a schematic model, sometimes known as a logic model or evaluation framework. Such frameworks provide conceptual lenses which can guide those implementing research evaluations. The choice of the most appropriate research evaluation framework will depend on a number of features of the evaluation context. These include:

1. **Evaluation objectives**, which flow from the rationales of evaluation (e.g. accountability, steering management processes, learning, and advocacy)
2. **Types of research results** - outputs, outcomes and impacts we are interested in understanding and the measures we want to capture
3. **Levels of aggregation in an evaluation**, which may be low (in case of an individual researcher, for example), intermediate (in case of a faculty or research programme) or high (when a whole research discipline is evaluated)
4. **Timing of the evaluation:** The focus of an evaluation can be longitudinal or cross-sectional. That is, the evaluation can look at outputs, outcomes and impacts resulting from a research project, programme or discipline, or it can look at results within a certain time frame (for example by a group or institution) but not necessarily belonging to the same piece of research.

FIGURE 1: THE EVALUATION PROCESS

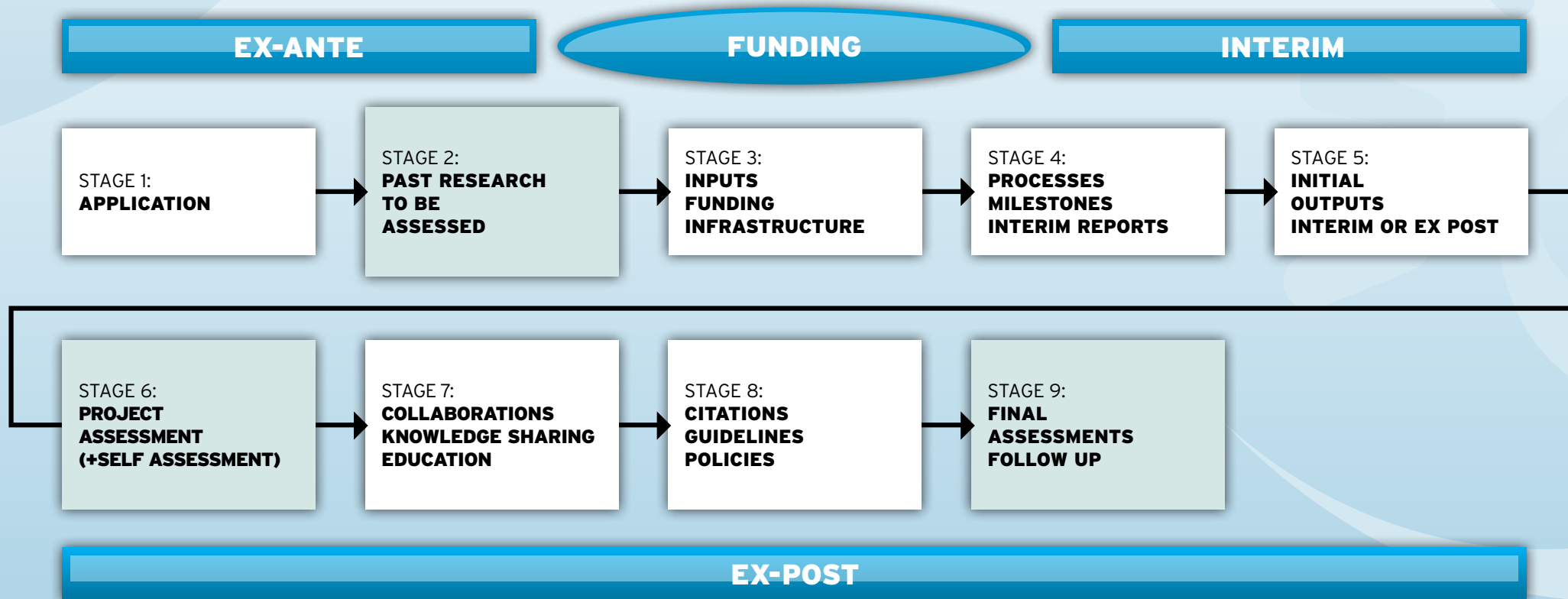


Figure 1 is an example of a simplified logic framework that illustrates the different stages of the evaluation process. We outline the main features of each stage and the issues to keep in mind below.

### **BEFORE THE GRANT IS AWARDED (EX-ANTE: STAGES 1 AND 2)**

Selecting the best applications for funding is a matter of assessing both the quality of the project and the individual or teams who will carry it out using uniform criteria. Consequently, both the project and the project management are evaluated before a decision is made on whether to award a grant. At this stage it is most common to use a combination of peer review (assessment by researchers with expertise in the same research area) and bibliometric analysis (statistical analysis of publication and citation patterns). In some cases, there may be a procedure for modification of the proposal post-review to take account of specific comments by reviewers and others involved in the review process.

### **DURING THE FUNDING PERIOD (FUNDING AND INTERIM: STAGES 3 - 5)**

Once a project has obtained funding and is under way, it is good to have in place a system to track progress against its objectives (a monitoring system). For a number of foundations, the practice during the course of a research project is to receive yearly or half-yearly progress reports for the project. When submitting these reports, it is also possible for the project management to account for any changes that have been made to the original research plan, and if necessary to discuss these with the foundation. These can be crucial in ensuring that research meets its objectives or, if necessary, to revise these objectives in the light of new discoveries or evidence. Ongoing evaluation can therefore play a formative role based on learning from experience and appropriate steering. Other issues to bear in mind include the inputs a project

will need (e.g. financial and physical resources, human resources including collaborators) and key factors that can affect the research process (e.g. the appropriateness of the research design and methods for answering the scientific question; the difficulties or challenges encountered during the research; facilitating or impeding factors; research efficiency; interactions with the potential users of the research; any potential early research dissemination or adoption activities occurring as milestones are reached). There may also be initial outputs from the project (e.g. scientific papers, demonstration models, new methods) that are available at this stage before the end of the funding period.

### **AFTER THE PROJECT HAS FINISHED (EX-POST: STAGES 6-9)**

Once a project is completed, the knowledge produced is typically shared within the academic community in the form of scientific articles and other publications. Additionally, there is extensive and important knowledge sharing when the researchers establish collaborations with other research groups, whether nationally or internationally, and when they present their projects and results at meetings and conferences. At the same time, the research results will also be presented to wider groups of users and practitioners in industry, government and the wider society. The channels for disseminating these results are varied and include educational activities, personal and professional networks, specialist and mainstream media and audience-specific briefs. In evaluating how the research is adopted and by whom, it is important to understand what these channels are and how they work. These mechanisms will have a great deal of influence on the final outcome of the project funding. It is these effects on the academic and wider community, or returns on funding, that we are typically interested in when making final summative assessments of projects and programmes

### **RETURNS FROM RESEARCH FUNDING: OUTPUTS AND OUTCOMES /IMPACTS**

Different types of research funding produce different types of return and, as we have noted before, this can happen at any time after the start of funding. It is normal to make a distinction between outputs and outcomes and impacts when talking about the return from research funding, and we will follow that convention here and in the other pamphlets. Roughly speaking, outputs refer to those effects concerned with knowledge production (publications, citations, patents, postgraduate training), while outcomes or impacts refer to wider social benefits in terms of health, wealth and quality of life; economic returns on investments; long-term effects on academic fields; and influence on political processes. Some of these economic and social impacts may be a result of deliberate efforts to disseminate research results more widely to user and policy communities; often the results are unforeseen. Outcomes will generally take longer to materialise than direct outputs, and can depend on a number of external factors such as the legal, political and social environments.

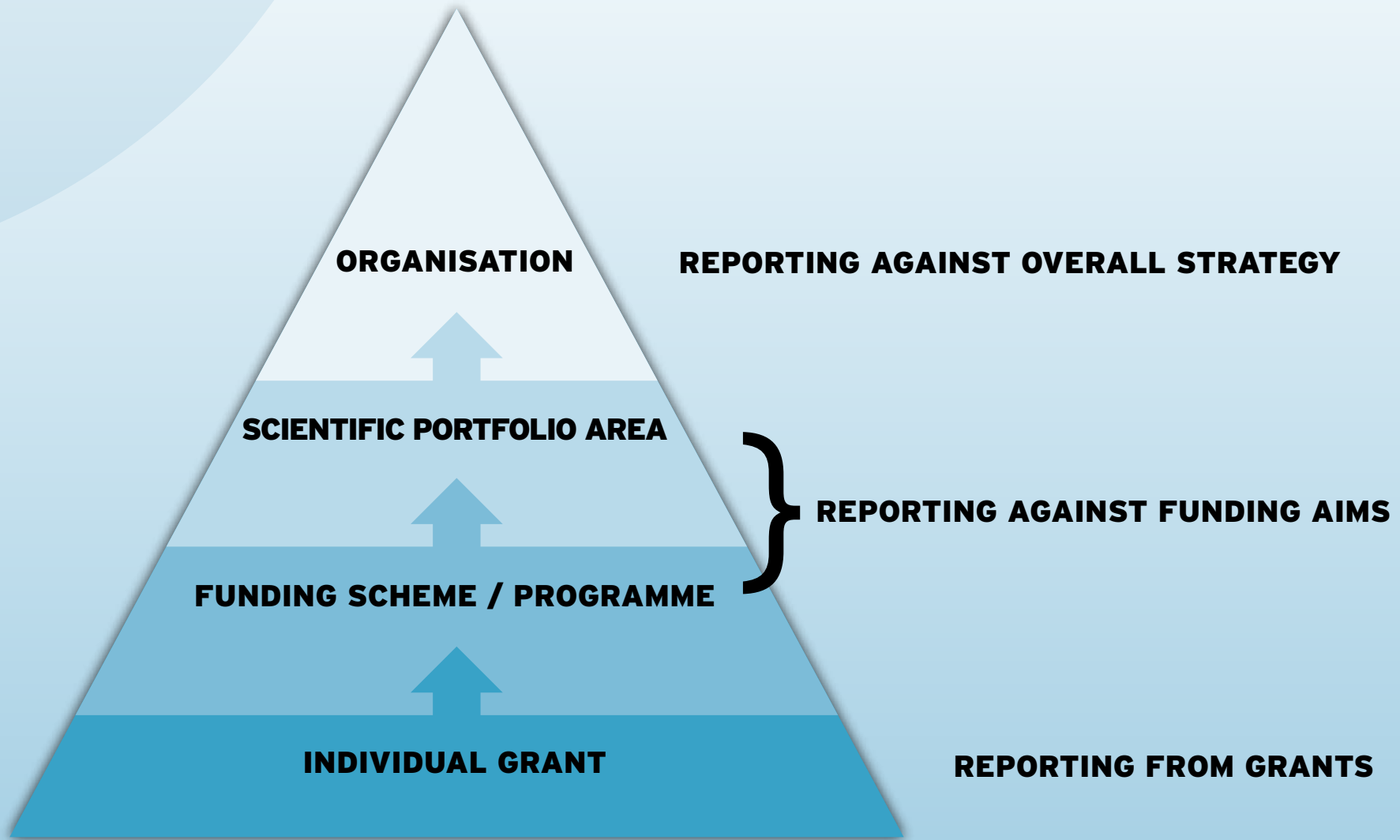
When aiming to measure the return from research funding, it is important to bear in mind the objectives of the funding: there is a big difference in the outputs and outcomes you can expect from basic biomedical research compared to a project that aims to establish a new diagnostic tool and test it in practice.

How one calculates the various types of return resulting from an individual research grant is a difficult question that we will come back to in Pamphlet 2 (*What to evaluate*).

### **WHERE TO LOOK FOR EVIDENCE OF IMPACT**

Impact of research can be evaluated at different organisational levels as illustrated in Figure 2. Evaluation processes should be tailored accordingly, depending on the requirements of your stakeholders and your strategy.

FIGURE 2: **EVIDENCE OF 'IMPACT' - FUNDING LEVELS**



Source: Wellcome Trust

## DOS AND DON'TS IN EVALUATION

Here we present a number of issues that need to be considered when undertaking monitoring and evaluation activity. Their importance will vary according to the aims of the foundation and the types of outcomes and impacts that are likely to emerge. Challenges concerning 'what to evaluate' and 'how to evaluate' will be addressed in the following two pamphlets.

- > **Match the evaluation to your goals:** Your evaluation system should reflect what the funded research is trying to achieve and how it is conducted. Curiosity-driven research aimed at producing new knowledge within the familiar disciplinary boundaries is well served by conventional methods of peer review and bibliometrics. Multi- or inter-disciplinary research less so. Research that is aimed at producing new products or technological breakthroughs may need different types of experts and indicators to measure success. After all, you want not just the best researchers, but the researchers best able to deliver your goals.
- > **Keep evaluation proportionate:** Balance the resources put into evaluation with the size, scope and focus of the research.
- > **Be aware of trade-offs:** When designing your framework it is important to be aware of the inter-dependencies and trade-offs that exist among these elements. More specifically, the choice of objective(s) of an evaluation influences the choice of outcome measures, and that the choice of outcome measures is likely to influence thinking about the right level of aggregation and timing. For example, if you are interested in capturing the social outcomes of your research you may need to evaluate much longer after the end of the award than if you are

interested in the impact on the academic community. In addition, the level of aggregation influences the "choice of methods" (*see also Pamphlet 3 - How to evaluate*).

- > **Don't only rely on quantitative data:** It is easy to fall into the trap of capturing what is easy to capture rather than trying to find a way to capture what is important. It is relatively easy, for example, to count the number of publications or trained postgraduates - but does it really tell you all you need to know? Foundations are increasingly drawing on a combination of quantitative (e.g. publication output, intellectual property output, funding leverage, number of visitors) and qualitative information (e.g. narrative stories of research progress, reviews of activity, media coverage) to demonstrate progress and impact.

**'NOT EVERYTHING THAT CAN BE COUNTED COUNTS, AND NOT EVERYTHING THAT COUNTS CAN BE COUNTED.'**

Attributed to Albert Einstein

- > **Don't over-interpret the data:** One should avoid attempting to evaluate impacts or returns where there is little data to support robust conclusions. This can be a particular problem in some disciplines and in measuring the social impact of research.
- > **Try to keep your data and results comparable:** It is useful to compare different evaluations, both across programmes and time. This helps to discern larger trends and patterns. The challenge here is to ensure comparability of data and findings, while giving due recognition to the distinctiveness of, for example, scientific disciplines and program objectives.

- > **Take a broad view of success:** Evaluations often focus on measuring success; this may have a tendency to focus foundations' work on positive results and good news stories, but should not neglect the equally important role of disproving theories or reporting negative findings.
- > **Beware of perverse incentives:** where it is known that a funder is interested in a certain outcome or impact, and that achievement of these may influence future funding, there can be a tendency for recipients of awards to focus on delivering what is perceived to be required. This can have two effects: first, to divert grant recipient attention away from the work which was originally supported and second, this may lead to the production of less high-risk (but potentially high-benefit) work.
- > **Take a long-term view where appropriate:** measurement of the final outcome or impact of a research project or programme is often initiated too early. Depending on the type of research and impact one wants to measure, the time that has to pass before a reliable measurement is possible may vary from 1-2 years to as much as 20 years. It can be quite a long term investment to do this properly - and there may be a need for more long-term tracking of outcomes (though this needs to be balanced with the resources available).

In summary, when setting up your evaluation system, it should be fit for the purpose you have in mind - try to keep it simple and proportional to your aims. Be mindful of unintended consequences, differences between disciplines and the limitations of the data. Try to think of the long-term, both in terms of the impact of the research and the evaluation system itself. We will examine these issues in more detail in the following pamphlets.

