Taking a strategic approach to outreach
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In 2007, the Trust started working with university physics departments to support their outreach. We now support a network of current and previous Ogden outreach officers who share ideas, resources and experience.

Over the years, the Trust has worked with the Ogden outreach officers and their departments to help them develop outreach strategy and practice. This guide brings together rationale and recommendations for practice at department level.

*Taking a strategic approach to outreach* explores a range of approaches for the strategic leadership, management and delivery of outreach. The guide includes top tips to inform the process and case studies to give an insight into real-life experiences.

A strategic approach will help universities to deliver more meaningful, impactful outreach which will better support, engage and encourage teachers and learners; repeat interventions and longer term engagement will make more effective use of often limited resources.

**Our terminology**

The Ogden Trust uses the word outreach to refer to all external engagement by a university, apart from with industry. However, there are a lot of different terms used, all of which have slightly different meanings and may be used by different institutions in different ways.

Some of the terms currently used include:

- Public engagement with research
- Community engagement
- Civic universities
- Schools outreach
- Widening participation

Consider what phrases are meaningful to those in your department and ensure you all understand the same definition of it. When making the case for outreach beyond your department, look at which terms are included in university-wide strategies and consider linking these to your strategies and business cases to generate broader support.

We recognise that different universities have different structures, and, in this document, we have used ‘department’ to describe the smallest size level in the breakdown, although this may also be known as a school or faculty.

Job roles may also have different titles. We use outreach officer in this document to refer to a professional role, usually at department level, that has specific remit to work with schools and the public. The outreach team consists of your academic outreach lead, any professional outreach roles and supporting administrators.
A written strategy for outreach helps to clarify the department’s priorities and ensures a consistent message. A strategy with tangible objectives can be measured and the data used to make the business case for investment in outreach. It brings together different perspectives across the department so that everyone is moving in the same direction.

A strategy will be useful to you if you are just getting started and want to plan your intended outcomes and the activity to achieve them. It can also be useful when you want to co-ordinate the work of your department to increase the impact of everyone’s activities.

The strategy should cover a significant time period, usually three to five years, to prevent continual changes in priority. The strategy document should be supported by an activity plan giving more details of what will actually be happening and who is responsible for each activity. The activity plan should be reviewed annually to ensure the activities are still suitable for the wider context and are aligned to the strategic priorities; it should take into account the available resources, considering both budget and time of those involved. You will be able to set more ambitious objectives if you include undergraduates, postgraduates and staff in your delivery.

**Key items to include**

Strategies take many forms and are often publicly available so you can look at examples from other departments or projects similar to those you work on. However, if you are starting from scratch you should make sure your strategy answers the following questions:

- What is the purpose of your outreach activities?
- What do you hope to achieve through doing them?
- What types of activities are you concerned about under the theme of outreach?
- What timeframe does your strategy cover?
- Who should be doing these activities?
- How you will know they have worked?

Once you have determined the higher level answers to these questions you will probably start to get diverted into the detail of what you are going to deliver. This is where an action plan is useful. By detailing who will do what, and when, you can keep track of your activity and keep the messages in your strategy clear and focused.
Top tips

Consider who is leading the strategy process. They should have sufficient time to give to the process and expertise in the area. This may be a professional role with outreach as part of their job or it may be an academic with time allocated. The lead should be supported by a senior academic, ideally the head of department, to facilitate and champion the process. Their role may involve supporting the document through higher level committees and ensuring available resource to deliver the strategy.

For a strategy to be effective, it is essential to have buy in from across the whole department. Creating the document should include discussions with different research groups and professional staff to enable them to share their views on what the priorities for the department should be. Several iterations of the strategy may be needed to give everyone the opportunity to feed in.

Look at other department and institutional strategies and see how this strategy can feed in and support other priorities. Linking to wider priorities can help those outside the department to see the merits of the activity.

The strategy should state the intended outcomes of the department’s work. You may wish to use a theory of change model to identify the planned impact, measurable outcomes and activities. The strategy should also have a clear enough plan to be able to identify what to say no to. This may involve some difficult decisions about key priorities.
We brought in a strategy for outreach and public engagement in 2017. Following discussions in 2016 about our Research Excellence Framework (REF) 2021 impact case studies, we realised it would be useful to have a more formalised, written-down, framework in place, which would guide us in where to invest our limited time and budget for outreach and public engagement activities.

The strategy was driven by me, my line manager and the SEPnet Director of Outreach, but we were keen that it was something that belonged to the whole Institute of Cosmology and Gravitation (ICG). We had an initial meeting with the ICG Directors and Innovation Fellow where we discussed the ICG’s existing outreach and public engagement activities, focusing on the purpose of each activity.

I then wrote a first draft of the strategy document which was shared with the ICG Directors, then presented at an academic staff meeting and finally, circulated to the entire department. At each stage comments and feedback were encouraged. The final strategy was implemented in September 2017 for a five-year period.

I found it really useful to involve someone in the process who was outside of our department (SEPnet Director of Outreach) but still linked to our outreach and public engagement work, particularly in the initial meeting. We deliberately kept the strategy short (in the hope that lots of people would read it!) but I also put together documents with background information and implementation details for anyone who wanted to know more.

The strategy is intended to be a working document and has already been modified several times. As we come to the end of our first five-year period, I’m looking forward to learning from the experiences of other Ogden officers who have since gone through a similar process, and to introducing concepts like theory of change to accompany our next strategy!

Dr Jen Gupta, Senior Public Engagement & Outreach Fellow
ICG, University of Portsmouth
Academic leaders in outreach

Within a university environment, some aspect of academic leadership for outreach is always needed. This role provides an advocate for staff time and budget. They add their reputational value to encourage the participation of others and support any professional staff. This role should be clearly defined and allocated.

The amount of time required for academic leadership will vary depending on the size of the department, the size of the outreach programme and whether there is a professional outreach officer role. It may be possible for the head of department to take the role of championing outreach but in larger departments it is helpful for there to be a separate academic staff member with allocated time for leadership in outreach.

The academic lead roles must be supported to excel in their outreach leadership. This may involve going on training courses, shadowing other outreach leaders, attending conferences about outreach, or taking up other opportunities in which they are able to learn more about what high quality outreach looks like and how to enable it within their departments. The work they do for outreach should be recognised and rewarded in appraisals and promotion applications. There may be opportunities for recognition in the wider university or through external organisations, for example the Institute of Physics awards.

Setting up an academic leader

• Determine the key tasks required of the academic lead and how much time these will take.

• Use the task list to write a short job description to ensure clarity on the role.

• Advertise the opportunity across the department so anyone can apply.

• Go through a usual application process. This may be light touch, for example, more informal interviews, but it should be clear how the decision is being made.

• Appoint a suitable person to the role. Add the role to their workload allocation model and reduce their other workload accordingly.
Top tips

If there is a professional outreach officer use the job description to clarify what the respective roles of the academic lead and outreach officer are.

It may be that a single role is not most effective for your department and you may consider splitting the leadership role across a number of academics in different positions in the department. For example, an outreach champion in each research group.

Depending on the role, consider the level of seniority of the person appointed. If a high level of advocacy is required, it may be that a senior academic is in a better position to do this effectively.

The job description should be kept under review; the needs of the department may change and different things may be required of the role as a result.
I took on the newly created role of Director of Outreach and Public Engagement (OPE) in 2018 (work-loaded at about 0.1FTE – half a day a week). The duties had previously been allocated to the Observatory director at our Bayfordbury site. I inherited a pretty healthy portfolio of ongoing projects and activities, but it was clear that things needed a shake-up in some areas, particularly with respect to how our incoming Ogden/SEPNet outreach officer would be tasked and directed.

As a physicist and an academic, there can be a hubris that leads to the assumption that we ‘know how to do outreach’. Although there may be some truth in that, many of us have been talking to and interacting with the public for most of our careers, this is a long way from actually understanding the job of the outreach professional. If you are going to manage someone effectively, you probably need to have a clear picture of what their job is as well as what you want them to achieve.

Contact and listen to OPE professionals; follow them on twitter, read blog posts and, if you can, take some training. I took part in the Engage Academy for OPE professionals (rather than the academic version). Make time to learn how to support OPE effectively and be prepared to relearn what you think you know about public engagement. This process informed the strategy when we finally developed it.

Our outreach officer took the lead on developing our strategy – most of our strategic goals align with ideas of civic duty and public good via widening access to science. Our outreach officer bounced ideas off me as she explored her vision for what she wanted to do. She valued this approach and says she is now much more confident in her abilities.

One of the most significant benefits to our department is how our outreach activities help to build community and create engagement between undergraduates, postgraduates, post-docs and faculty. Of course, adding value to student experience is also a great way to sell OPE to senior leadership. With this in mind, we continue to do things that may not directly meet core objectives of our strategy, but which do build community. These activities are crewed and largely organised by students and are financially self-sufficient via ticket sales. Even better, they run at a surplus which creates a pot for discretionary spending. You can empower your team to pursue new ideas and support other less obvious projects and collaborations that might not otherwise be fundable. This feeds back to generate more buy-in from the team and allows us to do more across the board.

Dr Ben Burningham, Senior Research Fellow & Director of Outreach & Public Engagement
Centre for Astrophysics Research, University of Hertfordshire
Outreach committees

An outreach committee is a useful tool to bring together key people from different areas of the department to co-ordinate activity. The committee acts to oversee outreach across the department and share information and practice. It enables a wider proportion of the department to be represented in decisions about strategy and gives a shared responsibility for advocacy. Outreach committees are particularly useful in bigger departments, especially those with activities being delivered by a number of different people in different areas. They will also act as a peer support network for those involved in outreach activities.

First steps to setting up a committee

If you are setting up an outreach committee, start off with an initial meeting of about an hour and a half that includes the academic lead for outreach, any outreach officer posts, administrative support for outreach, representation of any faculty or university level outreach or public engagement lead, and a representative of each research group.

In this initial meeting you can work out the details of how your committee will work in the future. Meetings should be regular, but not too often, perhaps once a term to keep your activities on track. Consider whether external representation would be helpful. This might be a teacher or a member of a local community group that you want to work with. They might be an in person attendee or just someone you consult on the agenda and minutes.

Terms of reference bring clarity to the purpose and proceedings. They do not need to be lengthy but should consider who the committee reports to, what decision making ability it has, and how frequently it meets. The committee is often well placed to oversee the budget for outreach, assess evaluation reports and review the strategy.

Chairing the committee

The chair is responsible for ensuring the meetings achieve their objectives. A senior academic or head of department might be a good choice for chair.

- Ensure an agenda is circulated at least a week in advance with outline timings for each item.
- Consider whether any papers are required to provide necessary information for decisions. If needed, papers should also be sent at least a week in advance.
- Make sure all members of the committee have equal opportunity to speak. If a particular viewpoint is missing from the group (either for one meeting, or more generally) the chair should ensure their perspective is considered.
- Keep the meeting to time so all items get the consideration needed.
- Focus on the viewpoints of others in the room. The chair should facilitate rather than speaking themselves.
- Challenge stereotypes, bad behaviour (eg interrupting) and biased thinking.
Top tips

Consider who should be part of the committee to get representation across the department and a broad and diverse set of perspectives. The committee should be made up of roles rather than keen individuals so that it is built into what is expected of those roles.

The committee must report upwards to feed into higher level decisions about outreach. This is usually the head of department but depending on organisational structure it may be a central university engagement or outreach committee. If the head of the department is not on the committee and not the direct report, there should be a mechanism in place to keep them involved and aware of the activities of the committee.

It is important that meetings have clear objectives and are a good use of everyone’s time. Only have the minimum number of meetings needed and keep activity structured towards tangible tasks.

If a formal committee structure is not suitable for your department, consider more informal networking opportunities such as regular outreach coffee mornings.

“In Cardiff, we are lucky to have a fantastic number of physics outreach and education projects as our close neighbours. Alongside several Cardiff University projects, we also have external organisations and projects which have strong links with, or are run with support from, the School of Physics & Astronomy. Although we share a physical office space, it is incredible how easy it is to have little-to-no idea of the bigger picture for each of these projects. We acknowledged that simply being in the same physical space did not result in collaboration and started a monthly meeting – Physx and Friends. Putting one hour aside each month allows us to share progress and resources. We are now more aware of the expertise, networks and opportunities we each have – and are minimising duplication of effort and encouraging collaboration.

Dr Grace Mullally, Ogden Outreach Officer
Cardiff University
In summer 2019, the Director of Research established a science communication committee in the Faculty of Science. It brings together voluntary members who represent all departments within the faculty; each member has interest or experience in science communication (either outreach, public engagement or both). The 16 committee members are a mix of academics, technicians, professional services staff and PhD students.

The committee was formed to offer a more joined-up approach to science communication, encourage knowledge sharing and offer support and guidance to staff and students undertaking science communication work across the faculty. We meet once every two to three months, work on collaborative projects and assist with projects specific to departments. We are able to avoid repeating work or starting from scratch on projects where there may already be a wealth of knowledge or content.

Two key deliverables have been prepared by the committee to act as the foundation for science communication across the faculty – both are working ‘documents’ that we continue to update and improve. A science communication priorities document has established the aims and objectives for science communication work, as well as best practice guidance on how to make sure this work is valuable for audiences. This document is intended as a first port of call for anyone looking to run science communication activities and should be used as a framework for department specific outreach strategies. The document aligns with the public engagement objectives of funding bodies such as the STFC, as well as Sheffield University’s civic responsibility plan. A science communication hub has been set up to provide an online repository for resources. It is accessible to staff and students seeking advice and support for science communication work. The hub offers case studies, in-house training, links to funding opportunities, awards/recognition and external support agencies.

The committee does not have its own budget and most members do not have science communication as their primary job, so there are challenges – but overall, co-ordinating our efforts and working in collaboration has facilitated a more proactive and wider reaching approach to outreach.

Laura Meade, Ogden Outreach Officer
University of Sheffield
Ensuring suitable people are able to be involved in the outreach team is key to the success of an outreach programme. Time needs to be allocated for the delivery of outreach as well as for planning, evaluation, strategic thinking, grant writing and project management.

When working with different groups bring in experienced practitioners to support you, whether that is teachers, community leaders or other outreach professionals with experience delivering this type of work. This will help make your activities as focused and accessible as possible.

**Professional outreach officer**

A professional outreach officer role is highly recommended for an outreach programme that goes beyond ad hoc events and is a great way to provide the expertise and time for co-ordination, planning, evaluation and strategic thinking.

**Staff**

Both academic and professional staff should be able to take part in outreach activity with the department. For academic staff, this could mean specifically allocating time in the workload model, or explicitly saying which area of the workload model outreach time should count towards, for example research. Similarly, professional staff should have sufficient time for outreach in their workload, including for administrative or technical support, agreed with their line manager. For all staff, outreach activity should be considered in their performance management and promotion opportunities.

**Undergraduate and postgraduate students**

Taking part in outreach activities is a great opportunity for undergraduate and postgraduate students to develop a broad range of skills. Training should be provided to ensure quality of delivery and to allow them to develop. It may be possible to run credit bearing modules for undergraduates or training as part of doctoral training centres. If not credit bearing, undergraduate students should usually be paid to ensure equal access to the opportunity. The only exception to students being paid is when they are delivering their own self-directed work and have complete autonomy (for example, a self-organising volunteer group).
Top tips

Consider the need for an outreach officer role and how many hours work is needed. Think carefully about the job description and what criteria are most important to bring in the skills for the department. You can look at other job descriptions and pay bands across the university for comparison.

Having identified the need for an outreach officer, think about the funding sources for the role, for example, through inclusion on research grants.

Be aware of wider support available across the university. Many universities have widening participation or public engagement teams centrally who may be able to contribute expertise and help with planning and evaluation.

When recruiting, include specific expertise on the interview panel, for example, from a central specialist team or an external expert.

Staff involvement in outreach, whether leadership or delivery, should be appropriately included in workload planning and recognised in appraisals and promotions. There should be a clear understanding of how much activity can be undertaken and where it should sit in the workload model.

At the University of Edinburgh, I run the Physics Outreach Team which is entirely comprised of taught students; they are mostly volunteers but there are some paid members who lead specific projects and activities.

Taught students are probably the best people to deliver family-focused outreach activities as they usually relate well with the young audiences, have a huge enthusiasm for physics and are excellent at inspiring others! You have to be prepared for regularly working with a new cohort and training the students who will all have different experiences, expertise and strengths – but it is clear to me that student involvement in outreach is extremely beneficial to all. Our Physics Outreach Team enables us to deliver a large number of successful activities, while reinforcing the student experience.

“I have always loved sharing my passion for science and especially physics, and being part of the team has allowed me to do this in new and creative ways from which I feel I have gained a lot…” Student, Physics Outreach Team

Dr Jean-Christophe Denis, Ogden Outreach Officer & NBIC Outreach Officer
University of Edinburgh
Academic staff are strongly encouraged to include an engagement activity within grant proposals and the assessment of engagement activities is a specific part of the internal review process within the department. To ensure that staff are supported to deliver high quality engagement activities, I provide different levels of support:

- **Level 1** - a paragraph that describes the current engagement activities in the department and the department’s research environment.
- **Level 2** - a detailed engagement activity related specifically to the research in the grant proposal, listing key outcomes, costings for materials and evaluation methods. For Level 2 support, five to ten per cent of my time is costed into the grant to provide advice and guidance on the development of the engagement activity.
- **Level 3** - a standalone project for a public engagement grant where I would be named on the application and responsible for co-delivering the project alongside the academic member of staff. These types of engagement grant typically do not include staff costs, but if they do, my time is costed appropriately.

Currently, about 60 per cent of my time is paid for using research income costed on Level 2-type projects.

Feedback from reviewers has been very positive: “the costing of the Physics Outreach Officer is a very good use of this money and will enable the application and PDRA to work with an experienced public engagement specialist”.

*Erin McNeill, Physics Outreach Officer*

*University of Leeds*
A budget for outreach should be included in your department’s annual budget setting process so that your outreach team knows how much there is to spend and can develop a suitable activity plan. You may have a specific cost code for outreach or outreach may be included in a larger budget code, for example, the general department budget. In either case, what matters is that the outreach team knows how much is available to spend and can monitor the spend that has taken place.

Your core strategic activities should be covered by university funding as that provides stability to plan longer term. Outreach budgets are typically small compared to wider university budgets and a lot can be done with relatively little funding. The most significant cost is usually that of the delivery team, both paying deliverers and covering their travel costs.

External grants for outreach are available through a number of organisations. Additionally, funding for outreach should be included in research grants. Consider how the extra funding could improve, develop and enhance your programme.

Make sure that managers throughout your department consider outreach as they review their budgets through the year. If opportunities arise you will be well prepared to make the most of them. For example, if there is underspending in some budget lines, could this cover the costs of a project you have been seeking funding for?

The spend against the budget should be regularly monitored to ensure that the funding matches the activity plan agreed from the strategy. If you have an outreach committee, they are in a good position to oversee this.

Key financial processes for outreach

- Expenses will need to be claimed, predominantly for travel to and from events. Claims must be reimbursed promptly to avoid students being unnecessarily out of pocket. If this causes problems, consider buying travel directly in advance.

- To free teachers up to be involved in programmes, they will often need their cover time to be funded. Providing schools with the cost of teacher cover enables them to leave the classroom more easily. This may be needed for teachers to participate in events for them, or for some schools to enable class trips.

- Outreach uses a lot of small-scale consumables which can’t be ordered through purchase order so access to a credit card is key. It is unfair to expect staff or students to pay for this upfront and wait for reimbursement.

- Student involvement will usually be paid through university payroll.
Top tips

- Having a separate code for the outreach budget will make it easier to have oversight but is not always sensible for a relatively small amount of money.

- Make sure it is clear who holds the budget and who needs to approve outreach activities and spend. Ideally this should be the same person who offers support and advice on the activities (for example the outreach officer).

- For the budget line, ensure everyone is clear who authorises the budgetary spend and how it is tracked. If the budget authoriser is not directly involved in outreach, communication will be needed to discuss the approval mechanism.

- If you are paying undergraduate and/or postgraduate demonstrators, remember to include the cost of their time in the budget. Limits to the budget may directly limit the amount of available delivery time.
As with research and teaching in a university, outreach and public engagement need funding – effective programmes that have impact require investment of time, people and money.

We create a breakdown of all events expected in a year, based on our divisional strategy, and the expected costs of these – this gives us the best idea of the budget required for our department’s outreach and engagement activities. We try to allocate a portion of the budget for unexpected events and new opportunities that may present themselves throughout a year – invitations to science festivals, requests from schools, equipment replacement, etc.

There are multiple costs we consider when planning our budget. The most important of these is paying for people’s time – including time to develop content, deliver it and evaluate it. The majority of costs related to engagement are allocated to outreach ambassadors, postgraduates, external partners, and other staff involved.

The other key things we allocate funds for within the outreach budget are: training – for outreach ambassadors and internal staff/students; travel; equipment, evaluation; media/marketing; subsistence; and external speaker/partner fees. An important lesson I’ve learned is that reserving some budget for the small things can make a big difference to the quality and culture around engagement – a coffee when meeting with academics or potential partners, lunch for ambassadors working a long day, branded t-shirts to look like a team, etc.

External funding obtained through research or outreach grants is a great way to expand the reach of your engagement work and fund new projects, but an outreach programme should not rely entirely on these as they are often short term and success of bids is not guaranteed. Ideally, a department should commit to funding an outreach programme; seeking external funding from grants should be highly encouraged, but not required. Reviewing our budget is something we do continuously; checking throughout the year but also making time each year to review spending from the previous year. Adjusting our plan for the next year’s programme ensures the allocated budget is sufficient to support our engagement activities as programmes develop and grow.

Hannah Tonry, Engagement Officer, Division of Natural Sciences
University of Kent
Evaluating outreach

Given the investments of time and resource into outreach, you need to be able to demonstrate the success of your activities. Evidence of impact will be useful to make the case for activity, to promote the department externally and for the Research Excellence Framework (REF). All activities should be monitored to know who you are reaching and to check the quality of activities.

Evaluation should be considered at the start of a project and not just put in retrospectively. The plans for monitoring and evaluation should be included when initially planning activities. Ensure that your strategy and activities are reviewed and revised based on the evaluation and monitoring. Prioritise events that have a greater impact and consider discarding activities that do not suitably contribute to the goals of your strategy.

Everyone involved in delivering your outreach should be open to feedback to help them develop their skills – whether that is in content creation, designing practical activities, liaising with teachers, delivering workshops or talks, or more – and to ensure a consistent quality of delivery. Each person involved should get some feedback from your evaluation process. This may include external feedback from your participants, such as teachers or community groups, or from peers who have been working alongside them or observing their work.

Publish the evaluations to share practice across the sector. This leads to improvements in outreach more broadly and you can learn from the experience of others as well.

Types of feedback

- Monitoring – keep track of what has happened. What events have taken place, how many people attended, who delivered the event?
- Formative evaluation – feedback that helps to develop the activity for the future. How could we do this better?
- Summative evaluation – what effect has the activity had? Has it achieved its aims? Has it changed your class’s perception of physics, have they spoken to friends and family about the activity?
- Quality assurance – feedback about whether the activity has happened as it should. This may include feedback on deliverers, observation of activities and more.
Top tips

Have a clear aim for your activities. If you know why you are doing it, it will be easier to consider what data and measurements you will need to see if the activity has been a success.

Work out who you are reporting to and why. What is it they are interested in and what are you able to measure? What are you going to monitor, what needs to be tested for quality and what can be evaluated more thoroughly? Think carefully about what impact is it possible to show and don't gather extra data that you won't be able to use.

Think carefully about what impact is realistic – don’t gather happy data for no reason. Pick a few potential high impact projects to focus evaluation on.

There are lots of resources out there to support evaluation, including the Ogden toolkit for capturing impact. Look through these to get ideas of what is possible and build on work that has already been done.

For bigger projects, budget to have external evaluation. A deep evaluation is time consuming and an independent review is often valuable for external audiences. Five to ten per cent of your project budget is a good ballpark when considering how much this might cost.

When monitoring what activities are taking place across the department, consider what the best system is to make sure people submit the information. It needs to be as easy as possible to complete. You may have an internal system, or you may be able to input through a system that people have to use anyway such as Research Fish.
At NUSTEM we believe that research and evaluation should help inform and shape the nature of our outreach and public engagement (OPE) activities. This is why we have developed a Theory of Change (ToC), a blueprint document which outlines the attitudinal and behavioural changes (Davenport et al., 2020) in small, medium and long term goals. Periodically matching OPE activities against a ToC helps validate their contributions towards a departmental OPE strategy. ToC also helps with embedding an evaluation framework at the core of OPE activities.

At NUSTEM we use our ToC to put into practice the Ogden evaluation toolkit in programmes such as our Physics Experience Week, a week-long programme offered to local Year 12 students who are doing A-level physics. On the top panel of the figure below we show how we match the programme against our ToC; the middle panel has some examples of questions featured in our evaluation framework; and finally, in the bottom panel, we show how some practical aspects of this week-long programme are aligned with both ToC and the evaluation framework.

**Short term:**
Students experience success at being a physicist (at HE)

**Medium term:**
Students have understanding of ‘usefulness’ of physics for other pathways (incl. degrees)

**Long term:**
Increased number choose to study physics at Level 4 or equivalent

**Evaluation of short term:**
My friends think of me as someone who is good at physics. (Likert scale statement on pre and post surveys)

**Evaluation of medium term:**
A science qualification can help you get many different types of job. (Likert scale statement on pre and post surveys)

**Evaluation of long term:**
Did taking part in Work Experience Week change your mind about your study/work plans at all? (Open-ended question on post survey)

**Success at being a physicist**
On campus experience; engagement with UG students and researchers; attendance to a real first year physics lecture

**‘Usefulness’ of physics for other pathways**
Interviewing researchers and design of conference-style research poster

**Increased number chose to study physics**
Talk from head of subject which includes degree information; student recruitment talk

For the past few years, we have chosen to collate our evaluation findings in a report which is disseminated amongst the department and other stakeholders. The data analysis and draft report is put together by a senior research assistant; I validate the results and provide subject specific context. Having a designated specialist team member focusing on our data analysis provides robust evaluation and research output (but I know we are lucky to have them).

Dr Antonio Portas, NUSTEM Outreach Specialist & Ogden Outreach Officer
Northumbria University
Sharing your outreach

Share stories of your outreach success to celebrate things that have gone well and to recognise and reward contributions; this raises the profile of outreach across the department and encourages participation. Sharing more detailed stories of your work, including the things that went wrong, can help to share practice and ideas. This improves the quality of your outreach and, although it is counterintuitive, will promote your department for being thoughtful in its outreach work.

Regular communication of your outreach programme and achievements will help you keep a high profile for your work both internally and externally. You should also consider applying for awards to recognise those working on outreach and their projects. There are a number of external awards and there may be appropriate internal awards too.

With a little thought and preparation, outreach is also something that can lead to publications. As you develop your outreach ideas, take a look at the existing literature out there for projects like yours; see if your plans lend themselves to generating new knowledge. As well as physics-related journals, consider looking at those from other research areas, as well as science communication and public engagement journals.

There are plenty of public engagement and outreach conferences and workshops where you can share your experiences and learn from others, including the NCCPE’s Engage conference and the biannual Interact conference run by the Science and Technology Facilities Council, Institute of Physics, SEPnet, The Ogden Trust and the Royal Society of Chemistry.

Think about the audience you are communicating with, and what information you might want to share; for example, you might want to demonstrate inclusivity and effective partnerships; or share lessons learnt or exciting and inspirational content.

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<th>Audience</th>
<th>What to share</th>
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<td>Department</td>
<td>Share and celebrate the successes of those across the department. You should also create an environment where people are able to share failures and learning from activities.</td>
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<tr>
<td>University senior leadership</td>
<td>Share success stories, particularly those which link to university priorities, to maintain high level support for your outreach work.</td>
</tr>
<tr>
<td>Outreach and engagement sector</td>
<td>Share honest evaluations of your work so that others learn from your experiences.</td>
</tr>
<tr>
<td>Community audiences</td>
<td>Collaborative sharing of experiences will help to develop understanding of the learning and successes from all perspectives.</td>
</tr>
</tbody>
</table>
Top tips

- Consider the target audience for your communications. You may want to communicate with your department, to senior leadership in the university, to local schools, or across your community – different methods and messages are needed for the different audiences.

- Give the outreach team opportunities to talk about and share their work. This may be at department all staff meetings, advertising opportunities to undergraduates in lectures, offering department seminars, university events or external conferences, for example.

- Outreach team members could join other department or university committees or projects where they can share their experience and the department’s outreach work.

- Create various forms of communications such as videos and posters to display around campus. Outreach could also have a section in department newsletters, email and websites.

- Social media is a useful tool in communicating about your events and activities. It is also a good place to engage with peers and learn from each other.

- Local media may well be interested in some of your work.
I am part of the communications group for the physics department along with representatives from each research strand and other important areas such as the student team. Each member of the group is responsible for producing regular updates, articles and information in line with our communications strategy which has been developed by the Head of Department and the rest of the group.

The strategy lists each channel of communication: staff/student bulletin, live display screens, departmental website and social media. Each channel has information to guide the process – main editor, frequency of updates, content, contributors, and target audience.

I contribute to the communications group by providing outreach news to the bulletin, and by sharing promotional and informational materials and news updates on the live screens and physical notice boards. The materials produced are mainly in electronic format since the installation of live display screens throughout the building, these enable us to not only make posters but also videos with animated content allowing more information to be communicated.

Tips for creating posters (PowerPoint)

• Clear information, bold title, images, summarised details (less is more – they can contact you for more information).
• Use department template.
• High resolution images (especially for large screens).
• Well contrasting text.
• Always have contact info clearly shown.

Video posters/screens (create MP4 of PowerPoint)

• No longer than three minutes in total.
• Allow enough time for any text to be read before moving on.
• Don’t have too many fancy animations (they make it difficult to render video and can lock the screens).
• Check all animations, timings, transitions, etc. before creating the MP4.

Sarah Annand, Ogden Outreach Officer
University of Liverpool
Further information

There are lots of further resources, publications and websites providing additional information that you might want to consider as you develop your own strategy for outreach.

Outreach and public engagement

UCL, The Engaged University: turning words into action
The National Co-ordinating Centre for Public Engagement and UCL Culture have partnered on a report into strategic support for university public engagement.

National Co-ordinating Centre for Public Engagement, Culture change – embedding a culture of public engagement
A report on the Beacons for Public Engagement initiative.

STFC, Public Engagement: attitudes, culture and ethos
A review of STFC public engagement.

Sense about Science, Public Engagement
A practical guide for researchers on public engagement.

Creating a strategy for outreach

National Co-ordinating Centre for Public Engagement, Develop a strategy
Tips on developing a public engagement strategy.

Advance HE, Higher education outreach to widen participation: toolkits for practitioners
Learning methods and resources developed by Aimhigher and the Lifelong Learning Network programmes.

NUSTEM, Implementing the Tomorrow’s Engineers Code
An evidence-based, practical guide from NUSTEM.

Academic leaders in outreach

National Co-ordinating Centre for Public Engagement, Champion change
How can you effect change in your institution and support public engagement long term?

Outreach committee

Athene Donald, How not to chair a committee
Advice from Athene Donald in her blog.
**Staffing outreach**

National Co-ordinating Centre for Public Engagement, *Working with student volunteers*
Working with student volunteers can make your public engagement activity come alive for the people involved.

National HE STEM programme, *Student involvement in STEM activities*
A guide to good practice for involving students in outreach.

**Evaluating outreach**

STFC, *Public Engagement evaluation framework*
This document sets out how STFC will evaluate its programme of public engagement activities.

The Ogden Trust, *Capturing impact evaluation toolkit*
A toolkit to guide and inform your thinking about the evaluation process.
This publication has been written by The Ogden Trust in consultation with the Ogden outreach officers who provided case studies and insight on the development of this guide (thank you).

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