

Crucible

Overview and Objectives of Crucible

This document provides a high level summary of the Crucible programme and can be used in part or whole to provide details to those involved with the organisation or support of a Crucible

Overview

In 2007, NESTA (the National Endowment for Science, Technology and the Arts) ran the first of a new style of collaboration-innovation programme for early/mid-career researchers: Crucible.

The Crucible Programme takes 30 junior academics and works with them through three, intensive, 2-3 day residential development workshops, called 'Labs'. The Labs combine skills enhancement, lectures, group exercises, self-examination and field trips. They are all designed to introduce new ways of thinking and working to participants, in the hope of creating long-term changes in attitude and working practice as well as practical collaborations between participants. Overall, the Labs are about creating the environment for the development of innovative individuals, and allowing them to develop their ideas, particularly in collaboration with others and across disciplines. They are also about developing a network of peers within the research community to fuel potential interdisciplinary working, learn about different areas of research and encourage personal and career development.

Since 2007, 90 researchers have taken part in UK-wide Crucible programmes. A further 30 participated in the Carbon Crucible in 2008-9, focusing on researchers in low-carbon energy research in industry and academia (co-organised by UKERC and NESTA and sponsored by the TSB and RCUK energy programme). A collaboration between the Scottish Universities and the Scottish Funding Council in 2009 provided an opportunity for an additional 30 researchers to participate in a Scottish Crucible.

NESTA has now completed its piloting of the programme and will cease to run a national programme. Through this resource and other activities NESTA hopes to encourage other institutions or groups of institutions to take up the model for their own researchers. The Scottish national programme will continue from 2010-2012 and it is hoped that a Welsh programme will be launched in the second half of 2010.

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What does Crucible offer participants?

Crucible isn't training. Crucible isn't a single discipline environment. Crucible isn't prescriptive. Crucible is a unique opportunity for ambitious, junior academics to understand the wider context in which they work and to develop a wider understanding of themselves, how they might operate within their longer-term career and, in particular, form lasting relationships for work-related collaboration and peer support. They are challenged to become collaborative 'outward-facing' researchers who seek opportunities to engage and have impact.

The three residential Labs run over a period of three to eight months and are spaced out between 4-8 weeks between Labs. A key differentiator of this programme is the inclusion of space between Labs. This allows participants to return to their research environment to reflect on the process or apply their new ideas and style of working whilst still on the programme, thus allowing the crucial changes sought to 'bed-in'. Meeting three times over a longer period also allows more long-term and normalised relationships to develop between participants and facilitates the formation of a longer-term network.

Above all, crucible offers participants three key things:

A cross-disciplinary working environment and a chance to form collaborations. NESTA's Crucible programme brought together all types of scientists, engineers, social and political scientists, with a small number of industry (both corporate and SME) employees. The cohort learns directly from the people delivering the programme and, significantly, from each other. The opportunities for collaboration through developing creativity and innovation in this multidisciplinary environment are key themes of the programme (and the subsequent alumni network).

A wider view of the world of research and the power it has to influence society and create change through working with both academic and non-academic communities. Participants are encouraged to become 'outward-facing' and think about the impact they can have through their work. This theme chimes well with the research council idea of impact, which considers both the economic and social impact of a researcher's work. The Labs aim to give participants a breadth of understanding of the wider ways they can have an impact through policy, media, public engagement as well as commercial innovations and enterprise.

Creation of a wider network. The Labs are about breadth, connections and generating opportunities for conversations where innovation can germinate. Through the group itself, the activities and also the external speakers and visitors, an expansive network is created. For example, on

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top of the group itself, Scottish Crucible 2009 gave participants access to over 70 academics, policymakers and journalists as part of the direct programme and supporting activities. In addition the immediate network formed by Crucible alumni has immense power and has been seen to act as an empowering force. By creating a like-minded peer group (whose different disciplines mean they are not in direct competition) participants are given the confidence to take risks in ways they would not have felt able to previously.

These three elements work together to encourage Crucible participants to take their research thinking outside their individual field and institution.

What makes Crucible different?

The Lab activities and development stretch talented researchers to consider other areas of their skills, abilities and career. The Labs foster creative conversations that have the opportunity to be developed, encouraged and turned into potential multi-disciplinary research proposals over the length of the Crucible (and beyond). Overall, Crucible is not a taught programme but 'an experience'. The early Lab activities facilitate access to other researchers, external influences and additional information. The latter part of the programme facilitates creativity, collaboration and self-determined research. Post-Crucible, researchers take responsibility for determining their own innovation and collaborative research with the wider understating of the environment they work in and the possibilities of doing something new.

Crucible is about improving leadership within already talented and ambitious researchers. It is about increasing breadth of personal and professional experience for able researchers. Overall, it is about interdisciplinary working, self-determination and growing innovation leadership for the future.

'What makes a researcher development event a Crucible?'

In order for a development event for researchers to be called a Crucible it must:

- Engage in a selective application process to offer 30 researchers from a cross section of disciplines (including at least social science, design, engineering, technology and science – but you may wish to widen this to include arts and humanities if you feel such collaborations will be fruitful).

- Give them the opportunity of (at least) three Lab experiences based on the Crucible programme and materials provided by NESTA over a minimum of a three-month programme. The Labs do not need to include all material from the NESTA resources but the core material should be covered.

- Include a residential element to each Lab (at least one night) to help participants immerse themselves in the programme and facilitate the conversations that happen outside the delivered elements of the

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programme. The Labs should have a 'retreat' feel and take participants away from their daily work.

Have access to a range of guest speakers to be able to supplement the video and PowerPoint materials provided for delivery.

Include a networking element for researchers participating in the programme to have access to academics and other potential role-models.

Provide a **minimum** of £7,500 available to provide seed-corn funding for up to 3 collaborative research projects that emerge from the collaborative nature of the Crucible programme (ideally greater funding would be available).