

# Hot Stuff Royal Society Summer Science Exhibition 2018

## Overview and Context

This case study outlines the learning from Hot Stuff, a hands-on exhibit at the Royal Society Summer Science Exhibition 2018. The project was led by Dr Samantha Terry, Lecturer in Radiation Biology. Hot Stuff was run by the Wellcome/EPSRC Centre for Medical Engineering and delivered by the School of Biomedical Engineering and Imaging Sciences at King's College London. Hot Stuff aimed to introduce exhibition visitors to a number of concepts and ideas about radioactivity.

Hot Stuff was funded by the Centre for Medical Engineering and a Public Engagement small grant from King's College London with support from Lightpoint Medical. This case study identifies key findings from the project and highlights learning for any similar projects of this nature.

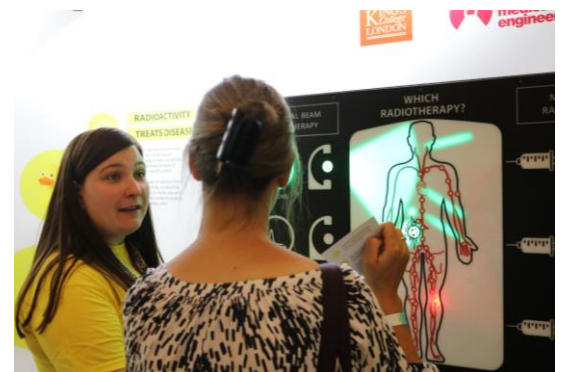


The specific aims of the Hot Stuff exhibit at the Royal Society's Summer Science Exhibition were to:

- engage visitors with the key messages in a hands-on, interactive way;
- visitors to have a more positive perception/attitude about radioactivity;
- offer visitors a chance to meet and engage with our researchers, with their questions and understanding of what radioactivity is, in a two way dialogue;
- improve visitors' understanding of radiation's effect on the body and its uses;
- increase researchers' confidence to showcase their research, gaining public engagement experience and the tools to reuse this exhibit.

Activities undertaken as part of the Hot Stuff project included:

- the formation of a core project team to collaboratively plan, design and produce the exhibit stand and activities, led by Dr Samantha Terry;
- photography/image competition to generate interest in Hot Stuff within the Centre;
- workshops, talks and events over a period of 9 months to develop the stand (i.e. with schools and various patient and public involvement groups);
- design of a radioactivity rap song;
- training sessions for the researchers;
- creation of a handbook to guide those manning the stand during the exhibition;
- making a video about Hot Stuff for the Royal Society website.



## Facts and Figures

86% of respondents rated the content of the exhibition as "Great" or "Good".

71% of respondents agreed that they learnt how radioactivity is used to treat disease.

91% of researchers said that taking part in Hot Stuff has helped them to prepare for or encourage their involvement in other public engagement activities.

## Emerging themes from the evaluation

The evidence indicates that the initial aims of Hot Stuff have been achieved. The evaluation has identified the following key findings:

- 1. Hot Stuff offers an enjoyable, novel model of public engagement.** There is a vast range of approaches to engage public audiences with science, or scientific concepts. The evidence indicates that Hot Stuff offers something new: the communication of scientific research and ideas, messages about the researchers behind the research, in an accessible, creative format. The blend of facts, dialogue and activities allows the visitors to gain and interpret information in an unusual, distinct format.
- 2. Hot Stuff provides opportunities for learning.** There is evidence that some visitors learnt and developed new knowledge on the subject of radioactivity and its use to treat disease. Hot Stuff is valuable for people who have only a basic understanding of the subject in order to learn about radioactivity, however, the findings also suggest that the exhibit is beneficial to those with a knowledge of the subject as it can encourage reflections on and reinforce existing knowledge.
- 3. Multiple levels of impact.** The project's main impact is upon those who were directly involved, leading the project and volunteer researchers. They feel that they have developed or gained certain skills and knowledge as a result of being involved in Hot Stuff (e.g. subject specific knowledge, project management experience, and team work and communication skills).
- 4. Catalyst for further activities.** The development of the exhibit involved a range of engagement activities, trialing and testing the engagement mechanisms. Thus the acceptance into the Royal Society exhibition was a catalyst for a range of activity in the year leading up to the exhibition, each of which will have its own impacts. Furthermore, there is incredible enthusiasm and interest in creative, enjoyable public engagement opportunities from the volunteer researchers. A positive outcome of Hot Stuff is that taking part in the exhibition has inspired nearly all the researchers to be involved in other activities. The next question is how does the Centre build on this enthusiasm to create and support opportunities to do further engagement.

## Learning from the Process

### What worked well?

-The range and mixture of activities organised (i.e. the aprons, radiotherapy game, time trial). These activities provided a great way in for members of the public to ask questions, take part, and have conversations with researchers about the exhibition and radioactivity.

-The large, supportive team. A key factor of success was the large team of researchers who were involved in the planning and delivery of Hot Stuff. The stand was manned by 8 people at any one time, and this was critical to entice people into the activities and ensure that the interactions were meaningful and framed around the key messages of the exhibition.

### What could be done differently?

- There was a lot of "hidden tasks" behind the exhibition: the week's exhibit took a year to plan. For those leading the project, this was undertaken on top of existing research commitments. The time taken to organise such public engagement activities needs to be acknowledged.

-A lot of activities fed into the development of the exhibition, including other public engagement activities (i.e. workshops with patient groups, school groups). These activities and interactions themselves were valuable activities for the development of the exhibit. However there is also an opportunity to explore how to continue these interactions.

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