British Science Festival evaluation report
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1. Executive Summary

1.1 About this report
This report presents the findings of the evaluation of the British Science Festival 2017 and resulting conclusions and recommendations for the future.

The report details the work undertaken for the evaluation and presents findings in relation to the Festival aims, objectives and measures of success.

The analysis is based on data gathered via audience and stakeholder questionnaires, and a review of programme documents and data supplied by delivery partners.

1.2 Evaluation data
Evaluation data for this report has come from various sources:

1. Data about the number of people in attendance is by observation by association staff, Festival assistants and event organisers. Where this data was unavailable, figures were calculated using the number of people booked into events and the average drop-out rate.
2. Audience Questionnaires completed by Festival attendees which include demographic questions and questions about their experience of the events they attended.
3. Demographic questionnaires completed by Festival attendees focussing on the types of people attending events.
4. Short interviews were also conducted with attendees at specific events.
5. Speaker data was based on forms completed by event organisers before the Festival. Speakers were also sent a questionnaire after the Festival and quotes were taken from correspondence with speakers after the Festival.
6. Media impact was monitored through external agencies employed to detect print and broadcast coverage and estimate the Advertising Value Equivalent (AVE).

1.3 Evaluation process
We evaluated 137 of the 153 Festival events open to public audiences and received a total of 2,825 feedback forms from attendees at the public events.

The evaluation process is likely to have been affected by the increase in number of events taking place over three campus sites and in 45 venues across the city. The number of forms received is not much lower than previous years, however, unfortunately there were some events for which little or no feedback was collected.

This year we trialled a new approach to the audience demographic data. In previous years this was collected only once for all attendees. Although this gave an insight into the individuals attending the Festival, there was no data on the people attending specific events. As not all Festival events have the same target audience, this made it difficult to assess whether we had achieved our objectives.
We were also unsure whether this was an accurate reflection of the Festival audience as many people attend more than one event. For example, in 2015 and 2016 there was an even spread across age brackets, this has been questioned by stakeholders and staff based on their observations. This year we collected demographic data at all events to give us a more accurate assessment of the audience for that event and asked attendees if they had previously filled out an evaluation form so that we can compare data sets. The demographic analysis will use all the data collected, unless comparing the data to previous years.

We conducted interviews with Zone 3 attendees at some events to give us a greater insight into their relationship with science. These interviews, along with data from questionnaires, will inform programming for next year’s Festival when we hope to increase the representation of this audience in line with the BSA’s strategy.

1.3 Main Findings

1.3.1 Programme content
- There was a total of 224 events and activities, 153 of which were stand-alone events.
- 56% of events took place on campus, the remaining 44% took place in venues across the City.
- There were nine community events and five events for invited audiences such as stakeholders, education professionals and media.
- Local research made up a significant proportion of the programme and was well represented with one third (33.3%) of Festival events proposed and organised by researchers at the University of Brighton, the University of Sussex and BSMS.
- 20% of events were organised by the BSA’s Scientific Sections and a further 10% of Festival events came through the Open Call.
- 30% of the Festival programme was organised by the BSA.
- The male-female ratio of Festival speakers was 54:46, which is very close to our target of a 50:50 gender split, and slightly is more balanced than last year’s ratio.

1.3.2 Festival Impact
- The total attendance at Festival events was 18,489 which is just short of our ambitious target of 20,000 attendees and is 2,377 more than last year’s Festival.
- 91% of respondents were more aware of current research after attending a Festival event.
- Satisfaction rates from attendees were very positive with a 93% of respondents rating events as excellent or good.
• Festival attendees reported an improvement in their attitudes to science after attending an event with 62% of visitors stating they felt more interested in science after attending a Festival event and less than 1% stating that they were less interested. 51% stated that they were definitely more likely to look out for and attend science events and activities after attending a Festival event.

### 1.3.3 Audience demographic

- There was an even split across all age brackets, with 44% of attendees aged between 16 and 34. The largest age bracket was 25-34 (23.5%).

- 52% of respondents were female, 46% male. Just under 1% described their gender as other and 1.2% preferred not to state their gender. 2% of respondents reported a different gender than assigned at birth.

- The ethnic background of the Festival audience can be seen as roughly representative of the local population. 85% of respondents were white, 4% were Asian, 1% were black and 4% were mixed.

- 31% work in a science related job (Zone 1) and a further 67% stated that they felt connected to or interested in science (Zones 2 and 3).

- 64% of attendees live in a Brighton postcode area.
2. Introduction

2.1 The British Science Association
British Science Association (BSA) is a charity with a vision to make science a fundamental part of culture and society. Its mission is to support, grow and diversify the community of people who are interested and involved in science. Our programmes, including the British Science Festival, give public audiences a platform to access and enjoy science and strengthen their influence over science’s direction and place in society.

The Engagement team at the BSA organises a number of public programmes and events. The British Science Festival is one of the BSA’s flagship programmes.

2.2 The British Science Festival
The British Science Festival (BSF) is Europe's longest-standing national event which connects thousands of people with researchers from across the scientific spectrum. Thousands of people come together to celebrate the latest developments in science and to engage in open discussion about issues that affect our culture and society.

Each September the British Science Festival transforms a different UK city into a vibrant celebration of science, engineering and technology.

2.3 British Science Festival 2017
The 2017 British Science Festival took place in Brighton, co-hosted by the University of Brighton and the University of Sussex. Taking place from 5-9 September, this was the fourth time Brighton had hosted the Festival, the first being in 1872 and the most recent being in 1983.

This was the first time that two universities have co-hosted the Festival.
3. Festival aims and objectives

Since 2015, the British Science Festival has had a refined target audience of adults with a broad interest in science.

Building on the success of the 2015 and 2016 Festival, the 2017 British Science Festival followed a similar model. The aims and objectives of the Festival were adapted slightly to reflect recommendations made in the 2016 BSF evaluation.

The Zones referred to in the aims and objectives are taken from the BSA audience map which informs all of our programmes.

3.1 Aims

- To establish the BSA as a leader in science engagement in the UK science festival scene
- To reinforce Zone 2 audiences’ science identity
- To encourage Zone 3 & 4 audiences to feel more connected to science
- To encourage active researchers (Zone 1) to value and participate in public engagement activities
- To facilitate lasting relationships between the Universities, researchers, partner organisations and the local community

3.2 Aims and objectives

<table>
<thead>
<tr>
<th>Aim</th>
<th>Objectives</th>
<th>Target audience</th>
<th>Action / output</th>
<th>Measure of success</th>
</tr>
</thead>
<tbody>
<tr>
<td>To establish the BSA as a leader in science engagement in the UK science festival scene</td>
<td>The BSA will curate an innovative programme of over 100 events across the city that are aligned with the BSA’s vision. The British Science Festival will reach audiences that represent the diversity of the local and national population. Attendees will have a positive experience of the</td>
<td>ALL</td>
<td>Curate an innovative programme of over 100 events that show science as a fundamental part of culture and society. Programme events that showcase cutting-edge research happening in Brighton, Sussex and the rest of the UK. Programme events that will attract audiences that represent the diversity of the local and national population.</td>
<td>Review and evaluate programme. The Festival is well received by attendees, local partners, the media and the sector. Attendees report a greater awareness of current research Reach an audience of 20,000 people.</td>
</tr>
<tr>
<td>Objective</td>
<td>Zone 2 attendees will have a positive experience of the Festival.</td>
<td>Zone 2 (Attendees)</td>
<td>The Festival attracts Zone 2 audiences</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zone 2 audiences attend multiple events.</td>
<td></td>
<td>Zone 2 audiences have a positive experience of Festival events</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zone 2 attendees will have a greater awareness of current research.</td>
<td></td>
<td>Zone 2 audiences attend multiple events</td>
<td></td>
</tr>
<tr>
<td>To reinforce Zone 2 audiences’ science identity</td>
<td>Zone 2 attendees will have a positive experience of the Festival.</td>
<td>Zone 2 (Attendees)</td>
<td>Attendees report a greater awareness of current research</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zone 2 audiences attend multiple events.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zone 2 attendees will have a greater awareness of current research.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To encourage Zone 3 &amp; 4 audiences to feel more connected to science</td>
<td>Zone 3 &amp; 4 audiences have a positive experience of Festival events</td>
<td>Zone 3 (Attendees)</td>
<td>The Festival events attract Zone 3 audiences</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Zone 3 attendees will feel more connected to science and more receptive to attending science events.</td>
<td></td>
<td>Zone 3 &amp; 4 audiences have a positive experience of the Festival</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Disengaged communities (Zone 4)</td>
<td>Run a community grants scheme for groups to organise events for Zone</td>
<td>After attending a Festival event, Zone 3 and 4 audiences are more interested in science and attending science events in future</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>The Festival community events</td>
<td></td>
</tr>
</tbody>
</table>

Increase the number of events targeted at new audiences (Zone 3 & 4).

Increase the % of Zone 3 and 4 audiences attending the Festival.
<table>
<thead>
<tr>
<th><strong>To encourage active researchers (Zone 1) to value and participate in public engagement.</strong></th>
<th><strong>The BSA will provide diverse opportunities for active researchers to engage with the public.</strong></th>
<th><strong>Zone 1 (speakers)</strong></th>
<th><strong>Run formal training sessions for local academics and provide advice to other researchers on communicating their research to a non-specialist audience.</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>4) will increase their interest in and understanding of science, and confidence in engaging with it, through active participation in events that are tailored for them. Disengaged communities (Zone 4) will have raised awareness and interest in the wider British Science Festival programme.</td>
<td>The BSA will programme events that reflect the diversity of current research and the people involved. Researchers will have a positive experience of the Festival. Researchers will feel more confident engaging with the public and will engage with the public more frequently as a result.</td>
<td><strong>Programme and curate a range of events, activities and formats.</strong></td>
<td><strong>Review and evaluate programme.</strong></td>
</tr>
<tr>
<td>4 audiences that are embedded in the community</td>
<td>** researcher feedback questionnaire**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To facilitate lasting relationships between the University, researchers, partner organisations and local community</td>
<td>Provide a positive experience for venues so that they will be open to hosting future science events</td>
<td>Venues &amp; partner organisations</td>
<td>Partner with cultural organisations and venues across the city, making a special effort to involve local researchers in these events and activities.</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Partner organisations will collaborate and develop relationships with researchers</td>
<td>Venues &amp; partner organisation s</td>
<td>Partner with cultural organisations and venues across the city, making a special effort to involve local researchers in these events and activities.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Work with the BSA Brighton branch on a Festival event</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Put researchers in touch with the Brighton Science Festival.</td>
<td>Review and evaluate programme.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Anecdotal feedback from researchers, partners and venues.</td>
</tr>
</tbody>
</table>

### 3.3 Recommendations from 2016

- **Increase the number of events held in venues across the city** to reach wider audiences and ensure an innovative programme of events that reflect the BSA’s vision. Last year, just 9% of Festival events took place off campus.
- **Match event content and venue to target audience** to focus programming and reduce barriers to attending Festival events.
- **Review the audience journey and flow of people** to ensure that the Box Office(s) and any drop-in activities are located in busy venues with ‘through-traffic’.
- **Improve the return rate of speaker evaluation forms** to accurately measure the impact of the Festival on speakers and participants.
- **Increase the evaluation data collected from city events** to help us better evaluate success and improve our understanding of Zone 3 audiences.
- **Evaluate the Festival experience as a whole**, as well as collecting data on individual events.
4. Findings

The programme of events at the Festival was devised to meet the Festival aims and objectives listed in Section 3.1 and the evaluation was conducted to measure the success of the Festival against these aims and objectives.

4.1 To establish the BSA as a leader in science engagement in the UK science festival scene

4.1.1 The BSA will curate an innovative programme of events across the city that are aligned with the BSA’s vision

The 2017 British Science Festival programme was the largest and most ambitious since the new model of the Festival was established in 2015. There was a total of 224 events and activities for public audiences, of which 153 were stand-alone events, held across 4 university campuses and 45 venues across the city. In contrast to previous years, the Festival took place over five days, including a Saturday.

Programme breakdown – all events

There was a total of 153 stand-alone events at the Festival. This includes all ticketed and drop in events. Events and exhibitions that occur at multiple times on multiple dates are only counted once (the total for all showings of events and exhibitions would be 178). Activities that take place at larger events are not counted. This does not include stakeholder events such as the Festival Dinner, the STEM in Education evening or the Sci-com Social.

Table 1 showing all Festival events and exhibitions for public audiences.

<table>
<thead>
<tr>
<th>Organised by:</th>
<th>No. events at Sussex Falmer Campus</th>
<th>No. events at Brighton Falmer Campus</th>
<th>No. events at Brighton City Campuses</th>
<th>No. events at City venues</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSA</td>
<td>8</td>
<td>4</td>
<td>8</td>
<td>26</td>
<td>46</td>
</tr>
<tr>
<td>University of Brighton</td>
<td>5</td>
<td>7</td>
<td>2</td>
<td>6</td>
<td>20</td>
</tr>
<tr>
<td>University of Sussex</td>
<td>6</td>
<td>5</td>
<td>1</td>
<td>12</td>
<td>24</td>
</tr>
<tr>
<td>BSMS</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>Section events</td>
<td>12</td>
<td>5</td>
<td>5</td>
<td>9</td>
<td>31</td>
</tr>
<tr>
<td>Open Call</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Community groups</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>9</td>
</tr>
</tbody>
</table>
Table 2 showing all Festival events and exhibitions for public audiences by percentage.

<table>
<thead>
<tr>
<th>Organised by:</th>
<th>% events at Sussex Falmer Campus</th>
<th>% events at Brighton Falmer Campus</th>
<th>% events at Brighton City Campuses</th>
<th>% events at City venues</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSA</td>
<td>5.23%</td>
<td>2.61%</td>
<td>5.23%</td>
<td>16.99%</td>
<td>30.07%</td>
</tr>
<tr>
<td>University of Brighton</td>
<td>3.27%</td>
<td>4.58%</td>
<td>1.31%</td>
<td>3.92%</td>
<td>13.07%</td>
</tr>
<tr>
<td>University of Sussex</td>
<td>3.92%</td>
<td>3.27%</td>
<td>0.65%</td>
<td>7.84%</td>
<td>15.69%</td>
</tr>
<tr>
<td>BSMS</td>
<td>1.96%</td>
<td>0.65%</td>
<td>0.00%</td>
<td>1.96%</td>
<td>4.58%</td>
</tr>
<tr>
<td>Section events</td>
<td>7.84%</td>
<td>3.27%</td>
<td>3.27%</td>
<td>5.88%</td>
<td>20.26%</td>
</tr>
<tr>
<td>Open Call</td>
<td>3.92%</td>
<td>3.92%</td>
<td>0.65%</td>
<td>1.96%</td>
<td>10.46%</td>
</tr>
<tr>
<td>Community groups</td>
<td>0.00%</td>
<td>0.00%</td>
<td>0.00%</td>
<td>5.88%</td>
<td>5.88%</td>
</tr>
<tr>
<td>Total</td>
<td>26.14%</td>
<td>18.30%</td>
<td>11.11%</td>
<td>44.44%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Programme breakdown – all events and activities

There was a total of 224 events and activities for public audiences. This includes all opportunities for the public to interact with the British Science Festival: all ticketed and drop-in events; all showings of events and exhibitions that occur at multiple times on multiple dates; and activities that take place at larger events. This does not include stakeholder events such as the Festival Dinner, the STEM in Education evening or the Sci-com Social.

Table 3 showing all Festival events and activities for public audiences

<table>
<thead>
<tr>
<th>Organised by:</th>
<th>No. events at Sussex Falmer Campus</th>
<th>No. events at Brighton Falmer Campus</th>
<th>No. events at Brighton City Campuses</th>
<th>No. events at City venues</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSA</td>
<td>8</td>
<td>4</td>
<td>7</td>
<td>57</td>
<td>76</td>
</tr>
<tr>
<td>University of Brighton</td>
<td>5</td>
<td>10</td>
<td>2</td>
<td>14</td>
<td>31</td>
</tr>
<tr>
<td>University of Sussex</td>
<td>9</td>
<td>5</td>
<td>1</td>
<td>28</td>
<td>43</td>
</tr>
<tr>
<td>BSMS</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Section events</td>
<td>12</td>
<td>5</td>
<td>5</td>
<td>11</td>
<td>33</td>
</tr>
<tr>
<td>Open Call</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>11</td>
<td>24</td>
</tr>
<tr>
<td>Community groups</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>43</td>
<td>31</td>
<td>16</td>
<td>134</td>
<td>224</td>
</tr>
</tbody>
</table>

Table 4 showing all Festival events and activities for public audiences by percentage.

<table>
<thead>
<tr>
<th>Organised by:</th>
<th>% events at Sussex Falmer Campus</th>
<th>% events at Brighton Falmer Campus</th>
<th>% events at Brighton City Campuses</th>
<th>% events at City venues</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSA</td>
<td>3.57%</td>
<td>1.79%</td>
<td>3.13%</td>
<td>25.45%</td>
<td>33.93%</td>
</tr>
</tbody>
</table>
As can be seen from tables 1-4, the BSA organised around one third of events and activities (34%), these include the seven Award Lectures, any star speakers and evening and weekend events that aim to reach a broader audience (Zone 3). The host universities organised 37% of the Festival events and activities, and the BSA’s Scientific Sections organised 15%. The remaining events were chosen from proposals that came through the Open Call and Community Grants schemes.

All events are centrally selected by the BSA team, to create a varied programme that reflects the BSA’s vision of science as a fundamental part of culture and society. Examples include:

- events that showcase cutting edge research, its role in our daily lives and its impact on society;
- events exploring current social issues and global challenges, such as food security, mental health care, Brexit, citizen aid, climate change and clean eating;
- interdisciplinary events combining science and technology with music, dance, film, food, visual arts, history, etc.;
- interactive events and installations placing science in unexpected places such as pubs, cinemas, shopping centres, karaoke bars, churches, Brighton Pier and the high street.

33% of events took place on the Falmer Campuses of the University of Brighton and the University of Sussex between 11.30 and 17.00 from Tuesday 5 to Friday 8 September 2017. These were mostly talks, debates and discussions focussing on areas cutting-edge science and aimed at an audience that sees science as part of their identity (Zone 1 and 2).

From 16.30 each evening, and on Saturday 9 September, Festival events and activities took place in venues across the city. The talks programme continued, alongside a series of evening events in venues across the city exploring science and culture through interdisciplinary talks, performances, activities and installations. These events provided evening entertainment for Festival attendees and were intended to reach a local audience of people who might not engage with the daytime programme.

Almost 56% of events took place in venues across Brighton city centre, including the University of Brighton’s Grand Parade and Edward Street Campus. Over 44% took place in non-university venues. This is a huge increase from 2016 where just 9% of events were held off-campus, and addresses one of the recommendations made in last year’s evaluation report.

Programme breakdown - target audience
Events organised directly by the BSA focused on topics, formats and venues that appeal to a Zone 3 audience, with the aim of increasing engagement with this audience. The majority of these events took place outside of work hours and in non-science venues across the city to reduce barriers to attending. We also built partnerships with cultural organisations and venues which attract diverse audiences, such as Brighton Pier, the i360, the pubs and bars of The Lanes, the Jubilee Library, Brighton Museum and Picturehouse Cinemas. The BSA also curated a number of events to appeal to Brighton’s large and diverse LGBT community. These were held both on and off campus.

Table 5 showing all Festival events and exhibitions by target audience (Number of events)

<table>
<thead>
<tr>
<th>Organised by:</th>
<th>Zone 2 target audience (No. events)</th>
<th>Zone 3 target audience (No. events)</th>
<th>Zone 4 target audience (No. events)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSA</td>
<td>24</td>
<td>52</td>
<td>0</td>
</tr>
<tr>
<td>University of Brighton</td>
<td>19</td>
<td>12</td>
<td>0</td>
</tr>
<tr>
<td>University of Sussex</td>
<td>22</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>BSMS</td>
<td>5</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Section events</td>
<td>30</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Open Call</td>
<td>15</td>
<td>9</td>
<td>0</td>
</tr>
<tr>
<td>Community groups</td>
<td>0</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>115</td>
<td>100</td>
<td>9</td>
</tr>
</tbody>
</table>

Table 6 showing all Festival events and exhibitions by target audience (%)

<table>
<thead>
<tr>
<th>Organised by:</th>
<th>Zone 2 target audience (%)</th>
<th>Zone 3 target audience (%)</th>
<th>Zone 4 target audience (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSA</td>
<td>10.71%</td>
<td>23.21%</td>
<td>0.00%</td>
</tr>
<tr>
<td>University of Brighton</td>
<td>8.48%</td>
<td>5.36%</td>
<td>0.00%</td>
</tr>
<tr>
<td>University of Sussex</td>
<td>9.82%</td>
<td>9.38%</td>
<td>0.00%</td>
</tr>
<tr>
<td>BSMS</td>
<td>2.23%</td>
<td>1.34%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Section events</td>
<td>13.39%</td>
<td>1.34%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Open Call</td>
<td>6.70%</td>
<td>4.02%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Community groups</td>
<td>0.00%</td>
<td>0.00%</td>
<td>4.02%</td>
</tr>
<tr>
<td>Total</td>
<td><strong>51.34%</strong></td>
<td><strong>44.64%</strong></td>
<td><strong>4.02%</strong></td>
</tr>
</tbody>
</table>

Almost 45% of events and activities were aimed at a Zone 3 audience, with the majority of these being organised by the BSA directly. While we did not specify target audiences for individual events last year, this correlates with the number of events held in city venues and so there was a marked increase in events aimed at this audience.

This year the Festival provided grants of up to £500 to community groups and organisations in Brighton & Hove. In previous years, events for community groups have been organised by the Festival directly. The change to a grants scheme is based on the success of similar initiatives run by the BSA, and resulted in an increased number of events for underrepresented audiences (Zone 4).

This approach allowed us to empower and support groups to run their own science activities as part of the Festival, enabling new local audiences to engage with science through active participation in events that
were tailored for them, and raising awareness and interest in the wider Festival programme in underrepresented communities.

4.1.2 The British Science Festival will reach audiences that represent the diversity of the local and national population.

Overall Attendance
The total attendance at Festival events was **18,489**. Where possible the attendance was counted by a Festival Assistant, a member of BSA staff or event organisers. For large drop-in events, attendance was estimated using regular counts throughout the evening. Where this data was unavailable, figures were calculated using the number of people booked into events and the average drop-out rate.

Table 7 showing total attendance at BSF events and activities

<table>
<thead>
<tr>
<th>Organised by</th>
<th>Attendance at Sussex Falmer Campus</th>
<th>Attendance at Brighton Falmer Campus</th>
<th>Attendance at Brighton City Campuses</th>
<th>Attendance at City venues</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>BSA</td>
<td>603</td>
<td>208</td>
<td>892</td>
<td>8,059</td>
<td>9,762</td>
</tr>
<tr>
<td>University of Brighton</td>
<td>247</td>
<td>165</td>
<td>164</td>
<td>477</td>
<td>1,053</td>
</tr>
<tr>
<td>University of Sussex</td>
<td>681</td>
<td>195</td>
<td>99</td>
<td>3,211</td>
<td>4,186</td>
</tr>
<tr>
<td>BSMS</td>
<td>106</td>
<td>79</td>
<td>0</td>
<td>169</td>
<td>354</td>
</tr>
<tr>
<td>Section events</td>
<td>523</td>
<td>148</td>
<td>590</td>
<td>525</td>
<td>1,786</td>
</tr>
<tr>
<td>Open Call</td>
<td>343</td>
<td>309</td>
<td>97</td>
<td>359</td>
<td>1,108</td>
</tr>
<tr>
<td>Community groups</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>240</td>
<td>240</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,503</strong></td>
<td><strong>1,104</strong></td>
<td><strong>1,842</strong></td>
<td><strong>13,040</strong></td>
<td><strong>18,489</strong></td>
</tr>
</tbody>
</table>

The total footfall is an increase of 2,377 on the 2016 Festival and falls just short of our ambitious target of 20,000. This can be partly explained by a reduced attendance at our event on Brighton Pier. Poor weather conditions of wind and rain meant that the event closed two hours early and attracted significantly less visitors, reaching an audience of 400. On fine weather evenings Brighton Pier regularly attracts audiences of over 4,000.

The total footfall at events is not necessarily a reasonable indicator for the number of individuals who attended the Festival as many people attended more than one event.
Postcode data
The majority of attendees were from Brighton and the surrounding area with 64% of attendees having a Brighton postcode (BN). This is a similar finding to last year when 60% attendees were from the local region.

The Festival has a national reach, with attendees coming from across the UK, and a small number of visitors from abroad.

Figure 1 map showing reach of the Festival audience by postcode, n=1,333
4.3.1 Age

We achieved a relatively even split across the age groups, with a skew towards the younger age brackets. 44% of attendees aged between 16 and 34, which is the target audience for the Festival. Encouragingly the largest age brackets were 16-24 (20.4%) and 25-34 (23.5%) suggesting that attendance is high among young adults.

The age breakdown is similar to 2016 and 2015, with a marked increase in the 25-34 age bracket. In previous years it has been suggested that the evaluation data does not accurately represent the audience at the events as we collect demographic data only once and many people attend multiple events. One of the main suggestions was that the audience at events was older than the evaluation suggested, as older attendees were more likely to attend multiple events.

Figure 2 showing age breakdown of the Festival audience (all forms), n=2,494

Figure 3 chart showing age breakdown of the Festival audience 2015-2017 (first form)
This year, we changed the evaluation process to investigate this. While we did see a slight increase in the representation of audiences over 55, and a slight reduction in some of the younger age brackets, the overall spread is very similar. The largest age brackets remain 16-24 and 25-34 with an increase in the 16-24 bracket suggesting this audience went to multiple events as well as older attendees.

![BSF age breakdown chart](image)

**Figure 4 chart showing age breakdown for the BSF cohort (first form) vs. BSF audience (all forms)**

**Gender**

52% of respondents were female, 46% male. Just under 1% described their gender as other and 1.2% preferred not to state their gender. We were aiming for a 50:50 gender split and the results are very close to this, with a slightly greater proportion of the audience being female.

2% of respondents reported a different gender than assigned at birth. The Gender Identity Research & Education Society (GIRES) estimates that about 1% of the British population are gender nonconforming to some degree.
Sexual orientation

For the first time, we asked attendees about their sexual orientation. Just 78% of respondents were heterosexual, 13% were bisexual, gay or lesbian and 1.5% were other. This is much more diverse than the local and national population. 93.4% of the UK population identify as heterosexual and 89% people living in Brighton & Hove identify as heterosexual.

Figure 5 chart showing gender breakdown of BSF audience (all forms), n=2,516

Figure 6 chart showing the sexual orientation of Festival attendees (all forms), n=2,391
<table>
<thead>
<tr>
<th>Sexual orientation</th>
<th>BSF attendees (%)</th>
<th>England and Wales (%)</th>
<th>Brighton &amp; Hove (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisexual</td>
<td>5.9%</td>
<td>0.8%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Gay Man</td>
<td>4.8%</td>
<td>1.7%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Gay Woman/Lesbian</td>
<td>2.2%</td>
<td>0.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Heterosexual</td>
<td>78.1%</td>
<td>93.4%</td>
<td>89.0%</td>
</tr>
<tr>
<td>Other</td>
<td>1.5%</td>
<td>0.5%</td>
<td>&lt;1.0%</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>2.8%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Figure 7 table comparing the sexual orientation of BSF attendees with the local and national population. Sources: BSF evaluation, ONS, BHconnected

Brighton is known for its large and vibrant LGBTQ+ community and we programmed events which explored issues in this area, from an ‘Out Thinkers’ event showcasing the lives and work of LGBTQ+ researchers which was held in a queer venue, to an event on the relationship between legislation and quality of life for LGBTQ+ people across the world in a lecture theatre on campus.

Encouragingly, if not surprisingly, these events attracted a much greater proportion of people who identify as bisexual and gay than other Festival events.

Figure 8 chart showing the sexual orientation of Festival attendees by event target audience (all forms), n=2,391
Ethnic background
The majority of Festival attendees (86.7% of respondents) were from a white ethnic background. The ethnic background of the Festival audience is very similar to the local population, with less attendees from a White or Black ethnic background.

The low proportion of attendees from a Black ethnic background is disappointing and we should look to improve this next year.

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>BSF attendees (%)</th>
<th>England and Wales (%)</th>
<th>Brighton &amp; Hove (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>White (British, Irish, etc.)</td>
<td>86.7%</td>
<td>86.0%</td>
<td>89.1%</td>
</tr>
<tr>
<td>Black/Black British (African, Caribbean, etc.)</td>
<td>0.6%</td>
<td>3.3%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Asian/Asian British (Indian, Pakistani, Chinese, etc.)</td>
<td>4.1%</td>
<td>7.5%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Mixed (White &amp; Black Caribbean, White &amp; Asian, etc.)</td>
<td>3.4%</td>
<td>2.2%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Other</td>
<td>2.4%</td>
<td>1.0%</td>
<td>0.7%</td>
</tr>
<tr>
<td>Prefer not to say</td>
<td>2.8%</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

*Figure 9 table showing ethnic background of the Festival audience. Sources: BSF evaluation and 2011 census.*

Disability
6% of respondents consider themselves to have a disability, 90% do not and 4% preferred not to state an answer. This is well below the national level of 19% which is disappointing and perhaps this is something that we should look to improve next year.

Relationship with science
The target audience of the Festival was non-specialist adults with a broad interest in science and technology, with the community and city programme aiming to expand to an audience less likely to engage with science.

67% of respondents would describe themselves as interested in science (Zone 2 or 3) and 31% work in a science related job or study science (Zone 1), suggesting that we reached this target audience. Just 1.3% reported that science wasn’t for them (Zone 4). These findings are similar to last year with a slight increase in Zones 2-4 attendees and a decrease in Zone 1 attendees.
4.1.3 Attendees will have a positive experience of the Festival

**Event satisfaction rating**

Satisfaction rates from attendees were very positive with 93% of respondents rating events as excellent or good. This is the same as last year.
Looking at the comments from the very few people who rated events as excellent or poor, one of the main criticisms was a lack of scientific content. We take a very broad definition of science and perhaps we should look at how we market events on social science research.

**Impact on awareness of current research**

We asked attendees to talks and discussion events aimed at Zone 1 and 2 audiences about the effect on their awareness of research happening in the field/topic of the event. The results were very positive with 91% of respondents reporting an increased awareness, which is a slight increase on last year’s rating of 89%.

This high rating suggests that the Festival programme showcased cutting-edge research happening in Brighton, Sussex and the rest of the UK.
**Impact on interest in science**

Attending Festival events appears to have had a positive impact on attendee’s relationship with science, with 62% of visitors stating they felt more interested in science after attending a Festival event and less than 1% stating that they were less interested. This is a slight decrease on last year’s figure of 70%.

80% of respondents planned to attend multiple Festival events and 51% stated that they were definitely more likely to look out for and attend science events and activities after attending a Festival event. This is the first year that we have asked these questions.
Figure 14 chart showing the effect of attending a BSF event on respondents’ interest in science, n=2,583

How has this event affected your interest in science

- I’m much more interested: 46%
- I’m a bit more interested: 27%
- Unchanged: 37%
- I’m a bit less interested: 5%
- I’m much less interested: 1%

Figure 15 chart showing whether attendees are more likely to attend science events in the future, n=2,531

After attending this event are you more likely to look out for and attend science events and activities in the future?

- Definitely: 51%
- Probably: 26%
- Unchanged: 20%
- Probably not: 1%
- Definitely not: 0.5%
Word Clouds
As part of our attendee questionnaire we asked visitors to choose three words to describe their experience. We collected these words and visualised them in a word cloud which gave us some insight into the visitor response to Festival events.

As can be seen, the two most common words chosen to describe Festival events were ‘Interesting’ and ‘Informative’. ‘Fun’, ‘Engaging’, and ‘Thought-provoking’ were also selected by many Festival attendees. Interesting and Informative have been the most common words in previous years but it is great to see that ‘Fun’ is the third most popular word, suggesting that attending the Festival is. These words reflect our objectives to curate a programme of high-quality and dynamic events that engage an audience of interested adults.

Figure 16 word cloud showing the most common words chosen to describe all Festival events.
Anecdotal feedback

“Thanks for doing this in a pub. We would not have had a chance to see so much astonishing science otherwise.”
– Attendee at The Lanes after dark event

We do not have a section for free comments on the evaluation form as we do not have the capacity to analyse large amounts of qualitative data. However, we did collect some anecdotal feedback from attendees at community events and evening events.

“It was very good. Experience of a lifetime.”
– Attendee at a Community event

Although this feedback will not be representative of all attendees, the quotes that we received suggests that we reached our objectives of providing a positive experience for attendees and having an impact on their relationship with science.

“Oh, it was just brilliant. I learned so much. On the Sunday morning, after everything had finished, I realised that the washing up in my kitchen had been there since Monday. I had just been too engrossed in the festival to do it.

“Thank you so much for bringing science to us, for making a science event aimed primarily at adults, for the quality of every aspect of it and for making the whole thing free! I really value the festival and really appreciate all the work of everyone involved.”
– Feedback emailed after the Festival took place
One of the recommendations from last year was to collect feedback on the Festival as a whole. Due to the complexity of this year’s programme we were unable to build this into the evaluation process but it is something that we will look into for next year.

4.2 To encourage active researchers (Zone 1) to value and participate in public engagement.

374 event organisers and speakers participated in the Festival, 335 of those were speakers or facilitators at events. This is over 100 more thanks last year when 220 people took part in Festival events.

We asked all event organisers to provide the gender and other information about their speakers in advance and a short survey was sent to all speakers and event organisers after the Festival to find out more about their Festival experience. We received 70 responses to this survey which is an improvement on 25 responses last year.

4.4.1 The BSA will provide diverse opportunities for active researchers to engage with the public.

This year we worked with more speakers and event organisers and there were more opportunities for researchers to engage with the public. The increase in the number of events held in venues across the city and in informal settings provided more opportunities for non-lecture theatre engagement in unusual and informal spaces.

“The evening itself [The Lanes after dark] was excellent - I was wary of the venue but found that those who attended were interested and, in some cases, quite knowledgeable.”
- Host researcher

We provided formal training to the Award Lecturers and researchers from the Host Universities. Members of the Festival team worked closely with researchers from the host universities to develop their ideas. This resulted in researchers changing the format of their activities. For example, a research group studying the
human voice, worked with BSA staff to develop drop-in interactive demonstrations which took place in the karaoke bar Lucky Voice, instead of a lecture on campus. Another researcher developed an immersive digital artwork at Brighton Pier.

“The Lanes after dark] was a pleasure for us all. The crowd was keen and the experience was very rewarding once people started rolling in. I was happy to see such a diversity of people -- a range of ages, professions and motivations for coming along. They asked excellent questions and clearly really enjoyed the demos.”
- Host researcher

4.4.2 The BSA will programme events that reflect the diversity of current research and the people involved.
As can be seen from section 4.1.1 of this report, the Festival programme covers a diverse range of current research. Most respondents (78%) had not participated in the Festival before, suggesting that the programme is changing year on year, and looking at the variety of institutions involved in events and the postcode data from speakers and event organisers, research from across the UK was represented.

We also consider the diversity of people involved in research when developing or selecting events. We aim for an overall 50:50 gender split of speakers and, while we did not give preference to events with female speakers, there was a policy of no all-male panel events.

We achieved a 54:46 male-female split, with slightly more male speakers at the Festival. However, this is slightly more equal than the speaker gender at the 2016 Festival (55:45); and much more equal than the
gender breakdown reported in the 2014 WISE report (58:42); and the gender proportion for UK published researchers from 2011-2015 in the 2017 Elsevier Gender Report (60:40).

A demographic questionnaire was included in the researcher survey. This is unlikely to be representative but as can be seen from Figure 20, researchers of varied ages spoke at the Festival. The majority speakers and organisers (84%) who completed the survey were from a white ethnic background. 84% respondents were heterosexual and one respondent considered themselves to have a disability.

4.4.3 Researchers will have a positive experience of the Festival
Almost all respondents had a positive experience of the Festival with 93% rating their overall experience as excellent or good. 77% respondents would definitely recommend taking part in the Festival to a colleague and 20% would probably recommend it.

4.4.4 Researchers will feel more confident engaging with the public and will engage with the public more frequently as a result.
51% of respondents stated that they felt more confident engaging with the public after the Festival, with the remaining 48% stating that their confidence was unchanged. Confidence levels were already high before taking part in the Festival with 93% reporting that they were very or somewhat confident engaging with the public, so this can be seen as a very positive finding.

Taking out those researchers who reported being ‘very confident’ before taking part in the Festival, 75% of researchers felt more confident engaging with the public after the Festival.
4.4.5 Speakers will have increased awareness of public perspectives.
The majority of respondents (74%) reported being more aware of public views on their subject as a result of participating in the Festival. This is an increase on last year’s figure of 68%.

4.5 To facilitate lasting relationships between the Universities, researchers, partner organisations and local community
One of the benefits of the British Science Festival is the fact that it takes place in a different city each year and we hope that there will be some legacy to the many events that we run and the relationships that we build. While we do not collect formal evaluation data from our venues and partners we ask for informal feedback. The feedback that we received this year was universally positive and suggested that the Festival had a big impact on the city and that some partnerships will be long-lasting.

The BSA will continue to offer advice to both universities and support their public engagement in the future, including any involvement with the Brighton Science Festival.

5. Conclusions
Overall the Festival was a success and as can be seen from the evaluation data and the information detailed in the full evaluation report we met our aims and objectives for the British Science Festival and contributed to the BSA’s vision of a world where science is a fundamental part of culture and society.

To establish the BSA as a leader in science engagement in the UK science festival scene
This year’s programme was largest and most ambitious since the new model of the Festival was established in 2015, comprising over 150 innovative events and activities that showcase cutting edge research and reflect the BSA’s vision.

The creative events across the city were a particular success, reaching large audiences and allowing us to demonstrate how science festivals can work with non-science venues and partners. Last year, 91% of Festival events took place on campus compared to 44% this year.

The Festival audience can be seen as representative of the local and national population and events consistently received positive feedback and had an impact on attendees and their relationship with science.

To reinforce Zone 2 audiences’ science identity
Zone 2 audiences make up the largest proportion of respondents. Data also shows that Zone 2 respondents are more likely to attend multiple events. The Festival provides a platform for this audience to connect with other people interested in science and reinforce their science identity. Feedback from Zone 2 respondents was especially positive suggesting that they had a positive experience of the Festival.

To encourage Zone 3 & 4 audiences to feel more connected to science
Zone 3 and 4 audiences do attend the Festival, and Zone 3 audience made up nearly a third of all respondents. This year we increased the number of events actively targeted to Zone 3 audiences and increased the number of community events which aim to reach a Zone 4 audience. There was a slight increase in the representation of these audiences at this year’s Festival but we hope that changes in the
evaluation form will increase this figure next year. The community grants scheme worked especially well, empowering communities to organise their own events. Feedback from attendees for these events was especially positive.

To encourage active researchers (Zone 1) to value and participate in public engagement activities
This year the Festival included with more speakers and event organisers and there were more opportunities for researchers to engage with the public. The increase in the number of events held in venues across the city and in informal settings provided more opportunities for non-lecture theatre engagement in unusual and informal spaces. The feedback we received from researchers was very positive and taking part in the Festival resulted in an increased confidence engaging the public and an increased awareness of their views on science.

To facilitate lasting relationships between the Universities, researchers, partner organisations and the local community
Due to the increased number of events across the city, we developed relationships with more venues and non-science partners than in previous years. The informal feedback that we have received from partners, venues and researchers suggests that the Festival had a big impact on the city and that some partnerships will be long-lasting. We hope that the increased involvement of the Universities in the Brighton Science Festival will be long lasting.