

National Science & Engineering Week 2007 Evaluation Report



Contents

Overview.....	2
Aims and Objectives.....	3
Methodology	4
Impact Objectives	5
Demographic Objectives.....	18
Process Objectives	23
The Engineering Dimension to National Science and Engineering Week.....	26
NSEW Small Grant Scheme for Schools.....	27
Recommendations for NSEW 2008	29
Did NSEW 2007 meet its objectives?.....	30

Overview

National Science and Engineering Week (NSEW), coordinated by the BA (British Association for the Advancement of Science) and funded by the DTI (Department of Trade and Industry), is a celebration of science, engineering and technology that consists of hundreds of events running in parallel throughout the whole of the UK. With no restrictions on who can organise events, the topics on which they are focused, the audience or the venue, the resulting programme is a hugely varied and eclectic mix suitable for people of all ages and abilities.

In 2007, the week changed its name from National Science Week to National Science and Engineering Week to recognise the BA's partnership with the Engineering and Technology Board (ETB). The aim of this partnership, and name change, was to specifically increase the awareness of the contribution of engineering to our society and a target of generating an extra 500 engineering focused events within the programme was set.

This report has been produced by Joanna Rooke.

Aims and Objectives

The National Science and Engineering Week evaluation will look at three main areas:

Impact – assessing the effects of NSEW

Demographics – who is organising, attending and presenting in NSEW

Process – looking at ways to improve the ways in which NSEW is delivered

The main aim of National Science and Engineering Week is to stimulate and support scientists, engineers, science communicators and the general public to produce the largest range of accessible and self-sustaining events across the UK in order to engage as many people as possible with science, engineering, technology and their implications.

The DTI, as the funder of National Science and Engineering Week, judges the success in 2007 against the following general criteria, in the context of climate change as an important theme for the Week, while also having its own DTI-specific objectives, which are not assessed here:

- involving more events with more participants
- engaging constructively with the engineering community and the social science community (beyond just ESRC),
- wider media coverage
- broader and deeper reach into the public, particularly reaching more young people in difficult to reach areas.

A summary of the performance against these broad criteria and the attention to climate change is given at the end of this report (p30). The BA's specific objectives, designed to help the Week meet the DTI's success criteria, are as follows:

Impact objectives

- To increase the number of events, specifically 500 engineering focused events, organisers and attendees
- To increase the participation of scientists and engineers within NSEW
- To increase awareness amongst the general public of NSEW
- To increase traffic to the BA/NSEW website
- To increase regional and national media coverage in print and broadcast
- To improve branding and recognition of the BA and NSEW within the week
- To inspire currently non-engaged members of the public to become involved in science communication/education
- To promote the organisation of successful science events
- To generate national attention for NSEW through innovative and media friendly mass participation activities

Demographic objectives

- To increase participation in NSEW within all audiences through external communications and the generation of new partnerships

Process objectives

- To provide clear, informative and inspiring resources, marketing materials and communications for potential organisers in order to engage them and encourage participation
- To recruit increasing numbers of organisers through consistently professional and informative briefing evenings

Methodology

Organisers who registered an event before 21st February 2007 were sent an evaluation pack containing questionnaires.

537 organisers received the evaluation pack. 162 organisers, 841 adult attendees, 1501 child attendees and 260 presenters completed and returned questionnaires.

This report includes data from four main sources:

- the National Science and Engineering Week database.
- completed and returned evaluation questionnaires¹.
- printed and broadcast media data supplied by Romeike².
- a National Opinion Poll omnibus survey³.

This evaluation will list each of the National Science and Engineering Week objectives and will take information from each of the sources above to provide evidence to say whether it was achieved.

All statistics are taken from the questionnaire data unless otherwise stated.

¹ All questionnaires received by 23rd March 2007 were compiled in this report.

² Romeike is an independent media monitoring service (0800 289 543 for further information).

³ This survey was conducted by NOP World over four weekends (2 – 4 March, 9 – 11 March, 16-18 March & 23 – 25 April).

Impact Objectives

- To increase the number of events, specifically 500 engineering focused events, organisers and attendees

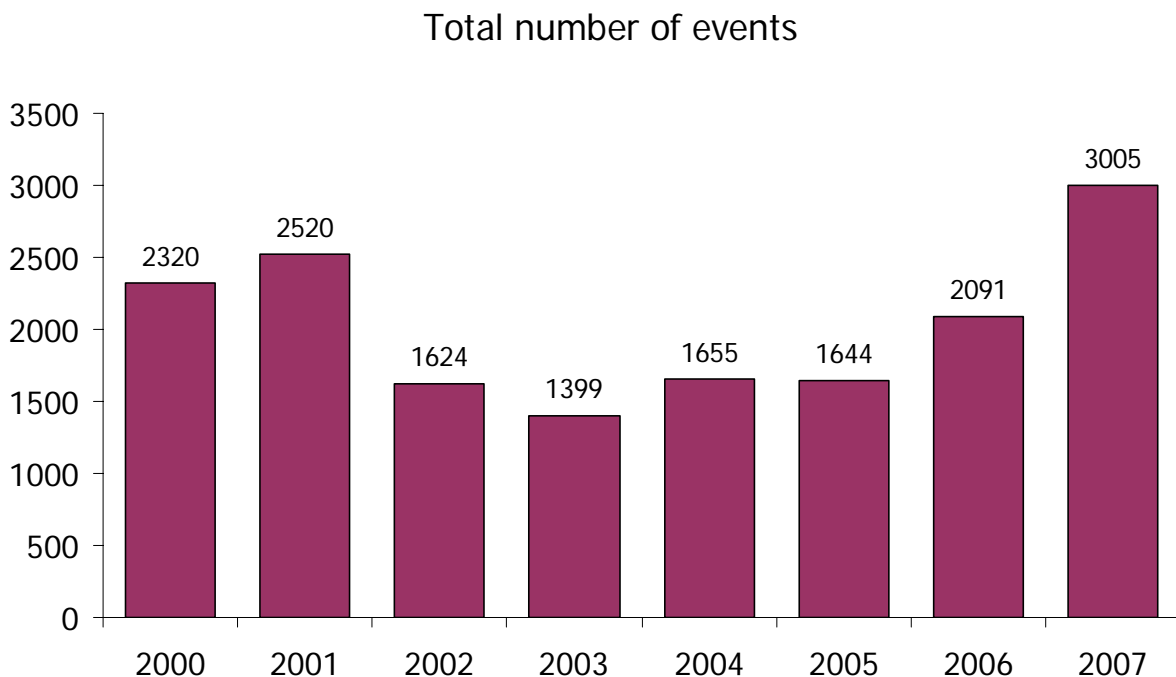
Event numbers

2007 figures

Events registered in the NSEW database	1466
Unregistered events that we are aware of (e.g. events funded by the school grant scheme and Sheffield NSEW events)	537
Unregistered events uncovered by the media trawl	401
25% increment to take into account other non-registered events	
TOTAL= 3005	

Total number of events in 2006 = 2091

Total number of events in 2005 = 1644



In 2006 there were 82 events with the keyword "Engineering" and 203 events with one of the keywords "Engineering, Technology, Construction, Electronics, Mining or Transport".

In 2007, there are 426 events with the keyword "Engineering" and 568 events with one of the keywords "Engineering, Technology, Construction, Electronics, Mining or Transport".

Organiser numbers

650 organisers registered an event or events in 2007 up from 484 in 2006. 434 of these organisers had not registered an event before for NSEW compared to 216 organisers that had.

Only 170 organisers from 484 who registered an event in 2006 went on to register an event in 2007 as well. The main reasons for this high drop out level could be staff turnover, another member of an organisation registering the events or organisations discontinuing events.

Attendee numbers

If we look at registered events and the number of expected attendees for these events there were 303,657 people expected to attend 1189 events. If we extrapolate this figure to the estimated number of 3005 events, then we can estimate the expected attendee numbers for National Science and Engineering Week as a whole as 767,500 people.

162 organiser questionnaires were returned giving an estimate of 51,883 attendees at their events. If we extrapolate these figures to cover our estimated number of events we have a ball park estimate of around 950,000 people for National Science and Engineering Week as a whole.

We would expect the true number of attendees to National Science and Engineering Week events to be somewhere in the region between these two figures.

The estimated figure of attendees for NSW 2006 was around 660,000 attendees.

- **To increase the participation of scientists and engineers within NSEW**

Presenters

Estimated number of presenters: 162 responding organisers used 1052 presenters; therefore we can estimate that 650 organisers used 4220 presenters.

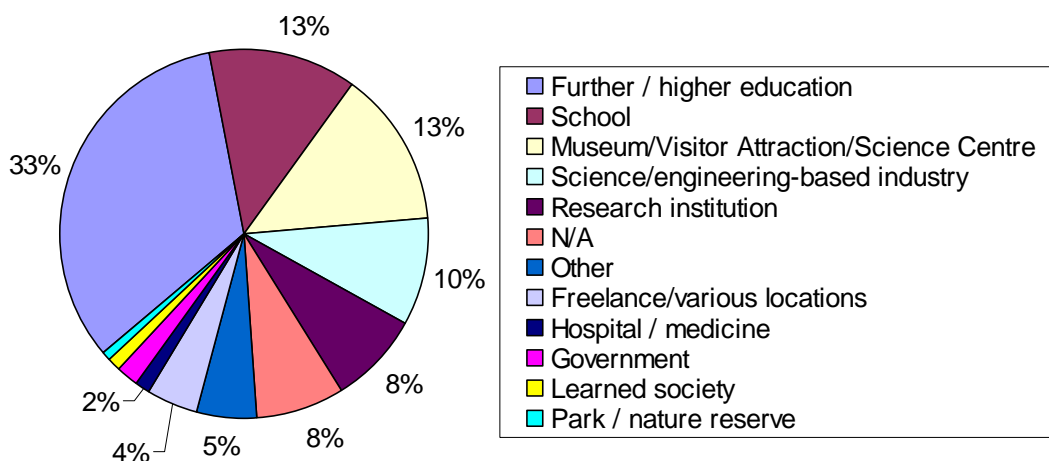
In 2007, 260 presenters completed and returned an evaluation questionnaire (compared to 301 in 2006).

Of the responding presenters, 102 (39%) stated that they were employed as a scientist, the same level as 2006. 104 presenters (42%) stated they had studied science to a postgraduate level and 72 (29%) had studied science to undergraduate level, down by 6% overall.

If we extrapolate the percentage of presenters who are scientists to the estimated number of presenters, we can estimate that there were around 1650 scientists presenting at NSEW events.

According to the evaluation, the majority of presenters were employed in either further or higher education, schools, museums, or science/engineering based industries. The profile of presenters has significantly changed since 2006 with a lower number of presenters working in research institutions, museums and science centres, and a much higher number of presenters coming from further and higher education and schools.

Place of work - Presenters



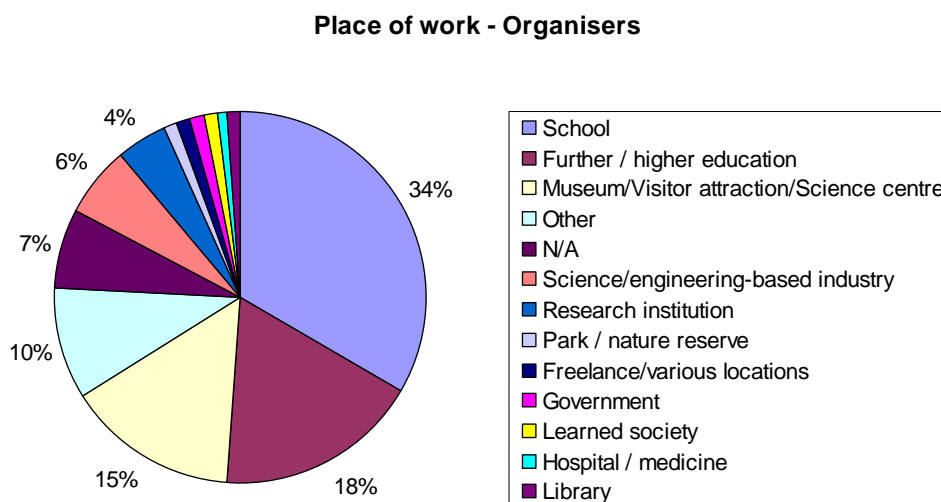
Organisers

In 2007, 162 organisers completed and returned an evaluation questionnaire (compared to 127 in 2006).

Of these organisers, 45 (28%) stated they had studied science to a postgraduate level and 59 (36%) had studied science to undergraduate level, down by 3% overall.

According to the evaluation, the majority of organisers were either employed in schools, further/higher education, or museums/visitor attractions. The profile of organisers has significantly changed since 2006 with the main change being an increased number of school respondents and a lower number of organisers from museums/visitor attractions and science centres.

N.B. The shift in the place of work of organisers can be explained by the increase in the amount of teachers responding to the evaluation as a result of receiving a small grant from the BA.



Adult attendees (14 years and over)

In 2007, 841 adult attendees completed and returned an evaluation questionnaire (no direct comparison to 2006).

Of these attendees, 100 (12%) stated they had studied science to a postgraduate level and 168 (20%) had studied science to undergraduate level.

Engineering Organisations

The number of engineering organisations involved in National Science and Engineering Week has risen from 24 to 52.

- **To increase awareness amongst the general public of NSEW**

Attendees

When asked if they had heard of National Science and Engineering Week before attending their event, 393 out of 841 (47%) adult attendees, and 615 out of 1501 (41%) child attendees said that they had.

In 2006, the data for adult and child attendees were collected together and the overall figures for awareness of NSEW were at 47%.

NOP Survey

GFK NOP Consumer carried out a random survey of 1000 adults aged 15 years and over to determine the level of awareness of National Science and Engineering Week amongst the public.

Over the past three years, since this evaluation technique began, figures have generally placed awareness of National Science and Engineering Week somewhere between 30-40%. In 2006, awareness rose significantly for the first time from 30% before the week to 37% after the week.

Fieldwork was done on the weekend prior to, during and after National Science and Engineering Week and the questions "Have you heard of National Science and Engineering Week?" and "When is National Science and Engineering Week?" were asked.

Results from 2007

Have you heard of National Science and Engineering Week or not?

If yes: When is National Science and Engineering Week?

Date questioned	% Yes	% (of yeses) March or in Spring
2-4 March	11	21
9-11 March	12	24
23 – 25 March	11	23

As a result of the large drop in awareness of the week (from an average of 33% to 11%), a supplementary question was asked to determine whether this could be due to the name change from National Science Week to National Science and Engineering Week.

When asked whether people had heard of National Science Week, 45% of those questioned indicated that they had, a 12% increase from 2006. This strongly indicates that the huge fall in awareness was due to the name change and is not a true reflection of the level of recognition of the week.

- To increase traffic to the BA/NSEW website

Web statistics

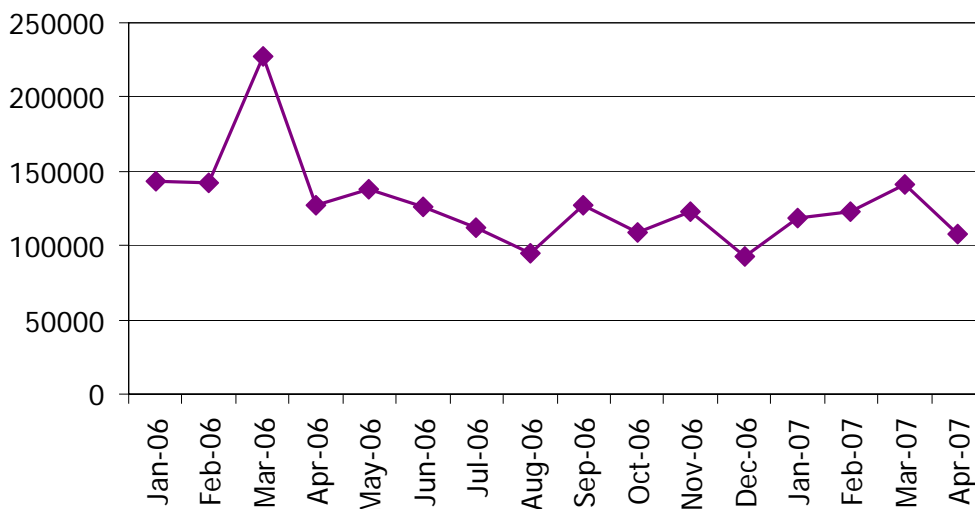
<u>Date</u>	<u>Number of visits to the BA website</u>
March '05	105,827
March '06	227,827
March '07	141,411

Although the number of visits was significantly down on 2006, it was the highest number of visits to the BA website in the past 12 months. High web traffic in 2006 was largely due to the online "Click for the Climate" campaign, which had over 12,000 visits.

The National Science and Engineering Week homepage was the most visited page on the BA website during March, including the home page, with 14,958 visits.

The Nation's Favourite Experiment web pages hosted on the BA site received 9,530 visits and, in addition to this, the 9 video clips hosted on YouTube were viewed on average 2,830 times each (25,470 views in total).

Website visits by month



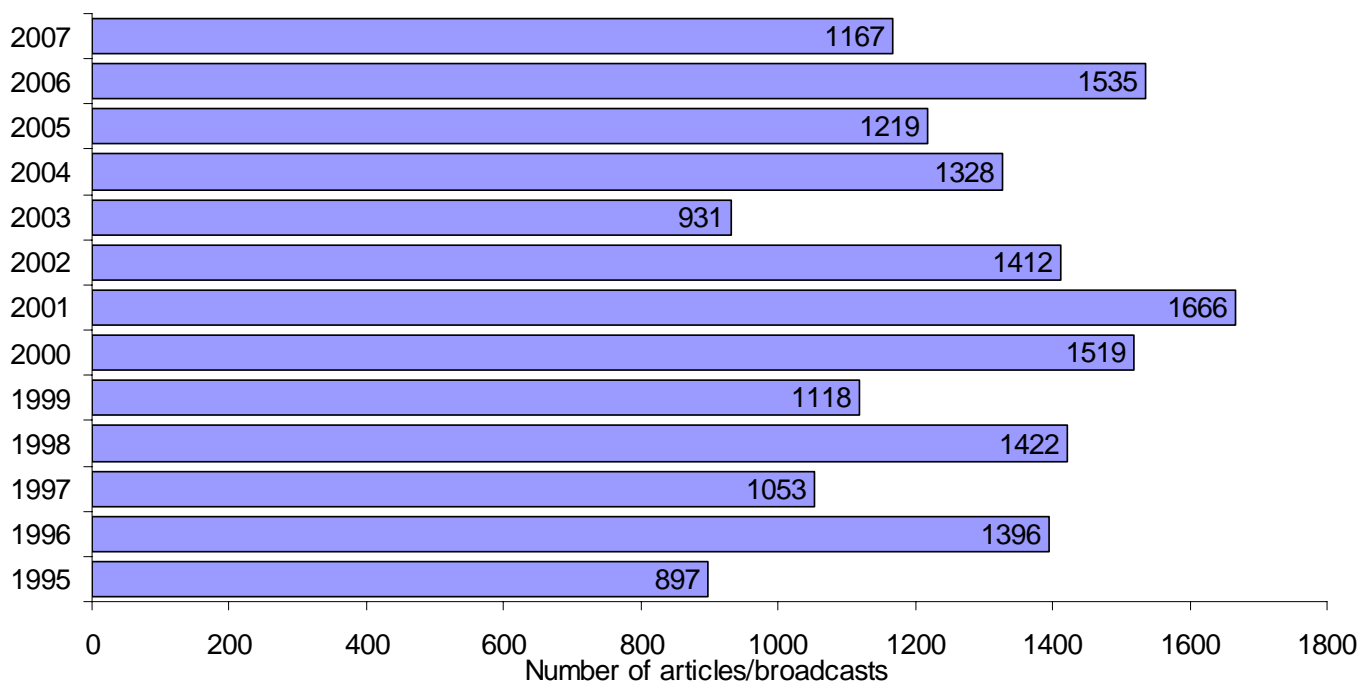
- **To increase regional and national media coverage in print and broadcast**
- **To improve branding and recognition of the BA and NSEW within the week**

National Science and Engineering Week aims to attract media coverage in both the national and regional media. The graph below depicts the total number of articles and broadcasts for each National Science and Engineering Week (NSEW). Coverage for NSEW 2007 has fallen from 1,562 pieces in 2006 to 1,167 pieces in 2007.

The 1,167 pieces breaks down into 1,129 articles in newspapers, general consumer press and trade and technical press (104 national, 1025 regional) and 38 broadcast pieces on TV and radio (3 national, 35 regional). All these figures have dropped since 2006.

The number of general consumer and trade and technical pieces, however, significantly increased rising from 67 articles in 2006 to 129 articles in 2007.

National Science and Engineering Week Media Coverage (printed and broadcast)



493 written publications covered National Science and Engineering Week (falling from 719 in 2006), 52 of which were national publications and the remaining 441 being regional press. 9 daily national newspapers featured National Science and Engineering Week including 4 tabloids and 5 broadsheets.

A total of 27 TV channels/radio stations covered National Science and Engineering Week in 2007, falling from 51 in 2006.

There could be many explanations for the fall in press coverage in 2007, for example, this could be due to the choice of mass-participation activity, a lack of hard news stories included at the press conference or could be due to the change in press conference venue.

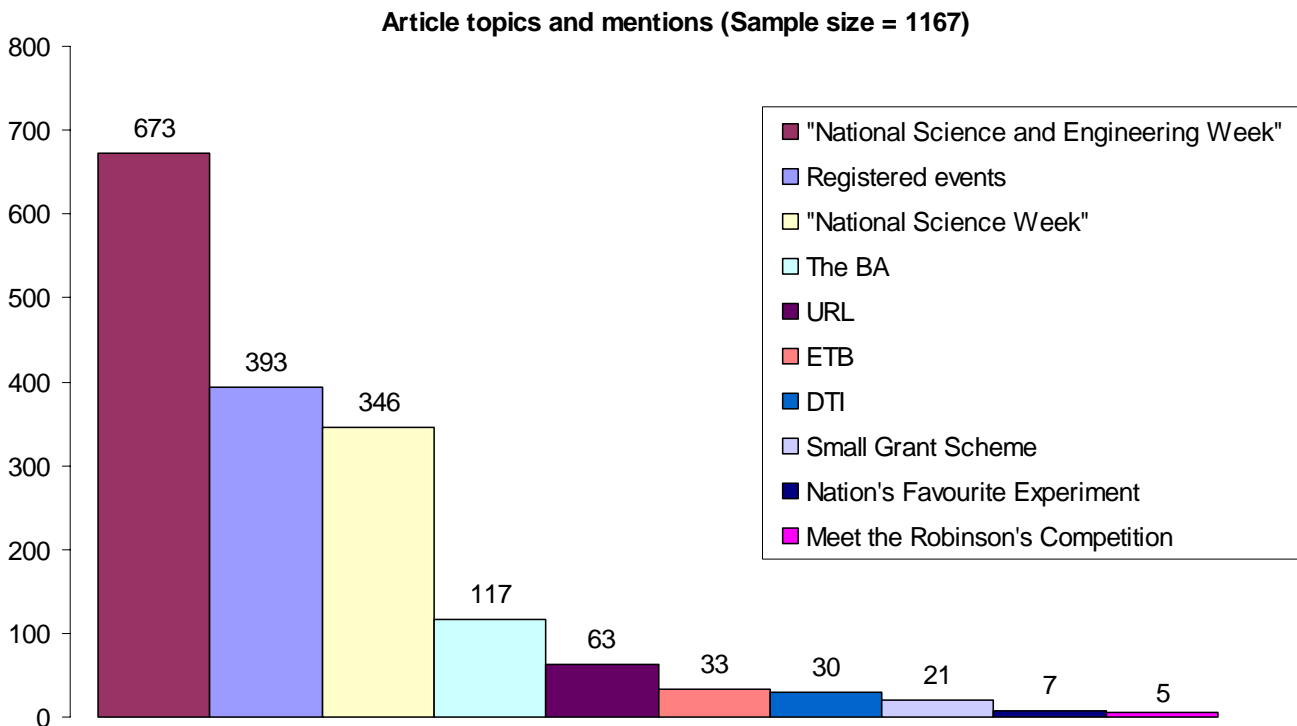
The graph below refers to the number of articles that refer to either registered or non-registered events, general articles on NSEW, mentions of sponsors and also our awareness raising campaigns.

It can be seen that the majority of newspapers are adopting the new name for National Science and Engineering Week, and an increasing proportion of articles are referring to the BA and using our URL. However, a large proportion of articles are still referring to the week as National Science Week.

The number of articles referring to our funders and sponsors has also gone up significantly this year with DTI receiving mentions in 30 articles compared to 3 in 2006 and ETB receiving mentions in 33 articles compared 22 in 2006 for ESRC and BP combined.

The number of articles referring to the Meet the Robinson's Competition and the Nation's Favourite Experiment campaign was very low with only 12 articles mentioning either.

About a third of the articles referred to events registered on the NSEW database whilst a further 400 unregistered events were uncovered by the media trawl.



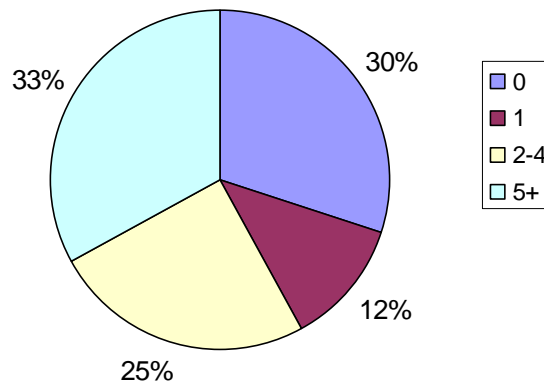
- **To inspire currently non-engaged members of the public to become involved in science communication/education**

Organisers

When asked if they had organised an event for National Science and Engineering Week before, 49% of responding organisers said that they had not.

When asked how many other science events organisers produced throughout the year, 30% of respondents only organise events for NSEW.

How many other science events do you organise during the year?



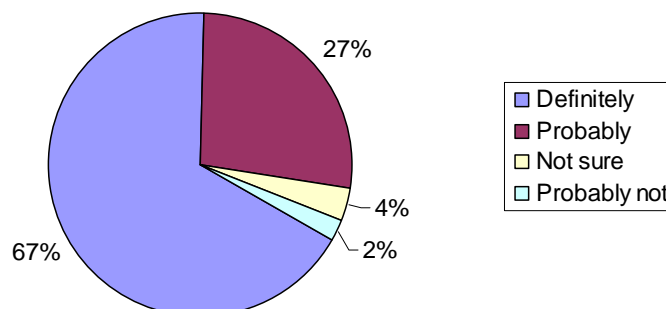
When asked whether they would like to run another NSEW event in the future, 92% of respondents said yes, with the remaining 8% saying they were unsure.

Presenters

Of the 260 presenters to respond to our evaluation, 140 of them (54%) had not presented at a National Science and Engineering Week event before.

When asked whether presenters would consider being involved in other NSEW events in the future, 94% of respondents said either definitely or probably.

Would you consider being involved in other NSEW events in the future?



Adult Attendees

When asked whether attendees had been to a National Science and Engineering Week before, 69% of people said that they had not, and 9% of people said they were unsure.

42% of the attendees had never been to any science event before.

84% of attendees said they would attend another National Science and Engineering Week in the future.

Child Attendees

When asked whether attendees had been to a National Science and Engineering Week before, 59% of children said that they had not.

69% of children said that following the event they would like to attend another National Science and Engineering Week in the future, 26% were unsure.

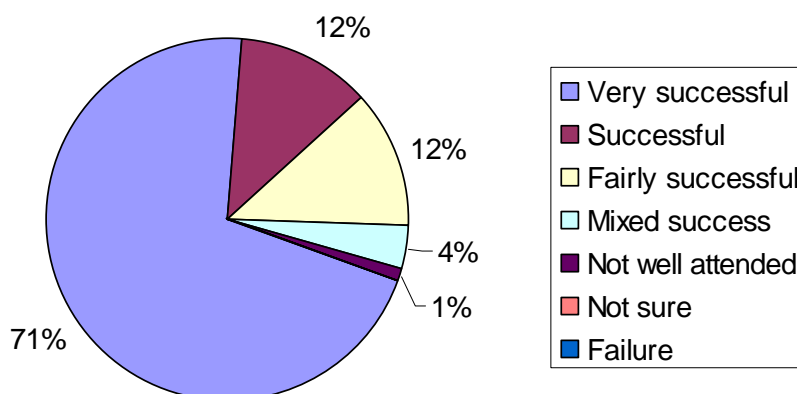
• To promote the organisation of successful science events

Organisers

Each organiser was asked how successful they thought their event had been. The resulting comments were condensed and translated in one of the following categories: Very successful, successful, fairly successful, mixed success, not well attended, not sure, failure.

The vast majority of organisers felt that their event had been a success.

How successful do you consider this event to have been?



Comments from organisers included:

"A highly recommended event where children of all abilities enjoyed. Even the adults were excited & enthused by it."

"Great fun- there was a real buzz. Went very well. Yr6 leaving event were overheard saying "wow, never knew science could be so much fun" "what an amazing afternoon"

"Very successful. Everyone concerned- organisers & attendees fully enjoyed themselves. We will be running an event next year!"

"Very enjoyable. It raised the profile of Science in the curriculum."

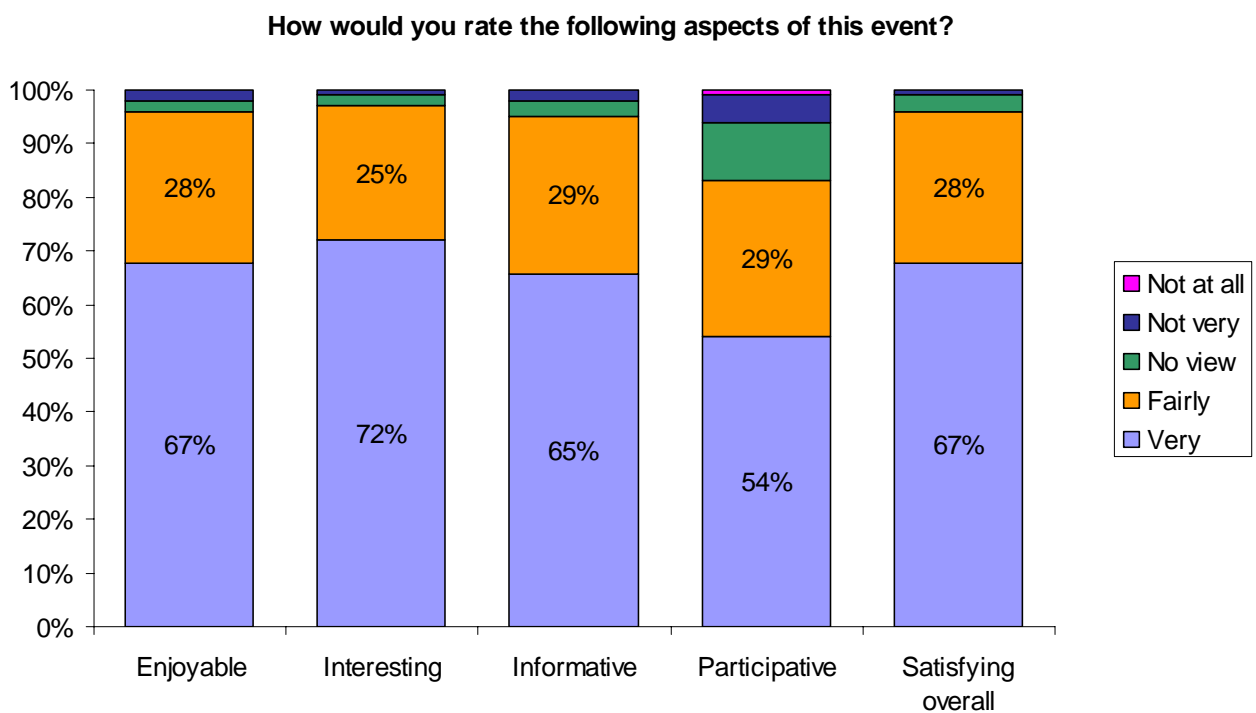
"The event was split into two eventually, to accommodate primary and secondary pupils. The primary event was extremely successful. Due to weather conditions and the fact that the secondary pupils had not dressed appropriately, the second session was not so successful in part."

"Less attendance than predicted - clashed with Mothers Day."

Adult Attendees

As a measure of success of National Science and Engineering Week events, attendees were asked to rate different aspects of the events they visited.

The events rated extremely highly for all of the different aspects that were evaluated with 95% of people being very or fairly satisfied overall with the event.



Child Attendees

1480 children marked the event they attended out of 10. The average mark was 8.4.

We asked the children what they thought of science and engineering after their NSEW event. Some of the comments included:

"Amazing!"

"Better than before"

"Engineering is fun"

"Fabulous, I like science a tiny bit more"

"Fun and interesting"

"Hard but enjoyable"

"I am considering a Physics/Engineering degree"

"I thought science week was going to be really boring but after the talk and activities I find it really interesting and I might even consider being a scientist when I grow up."

"It is fantastic and fun and I enjoy it"

"It's a really smart thing that saves hundreds of lives every day"

"Wicked!"

- **To generate national attention for NSEW through innovative and media friendly mass participation activities**

Meet the Robinson's Competition

In January 2007, the BA launched a schools competition to design an eco-friendly city of the future, in conjunction with Disney, to promote both National Science and Engineering Week and the launch of Disney's new film "Meet the Robinsons".

Disney provided competition prizes of three private screenings of "Meet the Robinsons" for up to 50 people and one trip for four people to Disneyland Paris. They also contributed towards printing costs of an advertising flyer and postage to send these out to schools.

The competitions main aim was to raise awareness of National Science and Engineering Week amongst schools, to provide an activity for schools to take part in and to attract new participants in the week.

The competition was a huge success, attracting over 3000 entries, adding hundreds of new teachers to our database, and received a large amount of positive feedback from teachers. However, there were areas which could have been improved.

Some teachers felt that the competition was too difficult for younger children to grasp so an adapted version of the competition for Key Stage 1 pupils may have been a valuable addition. Also, as we had to wait for approval from Disney for all of the advertising artwork, the mail shot to schools was received too late for some teachers to participate. Information regarding schools competitions should ideally go out before the Christmas break so that teachers have time to incorporate this into their lesson plans.

Nation's Favourite Experiment

As part of National Science and Engineering Week 2007, the BA ran a poll to find out the "Nation's Favourite Experiment".

The "Punk Scientists" were filmed demonstrating various scientific experiments, ranging from making slime to hydrogen rockets, and the resulting clips were seeded on YouTube, Google Video and a number of private video sharing websites that were accessible to schools. The clips were all accessible via the BA website.

The poll attracted over 1,200 votes online and each video was viewed on average 2,830 times on YouTube. It was also featured as a full page article in the Metro, as an article in the Financial Times and as an item on Newsnight.

The videos also attracted a large amount of positive feedback from those participating, for example:

"Love these experiments, and we can we use them to pep up science at school! Yes, i never had rockets at school...but we do now!"

"Loved the experiment because it was so simple and easy to do and therefore applicable to all ages - nippers to nannas"

" ... As far as I can see from my sons science at primary school is very worksheet heavy - one more weekend of having to write about a 'fair test' and I will scream. Try to make up the difference at home. Things like your activities very helpful with this."

However, a number of other members of the public felt that the experiments were too dangerous to promote to children:

..." We all know what children are like. They will copy what adults are doing, whether or not you warn them not to try it at home. Some children can't even read very well so why didn't you include a warning out loud? Are you going to take responsibility when somebody gets injured..."

In anticipation of comments relating to health and safety, as above, external advice from CLEAPSS was taken, risk assessments of all the experiments were undertaken by the demonstrators and all possible precautions were taken in advance of this project. We were also very clear that none of the experiments should be attempted at home.

Demographic Objectives

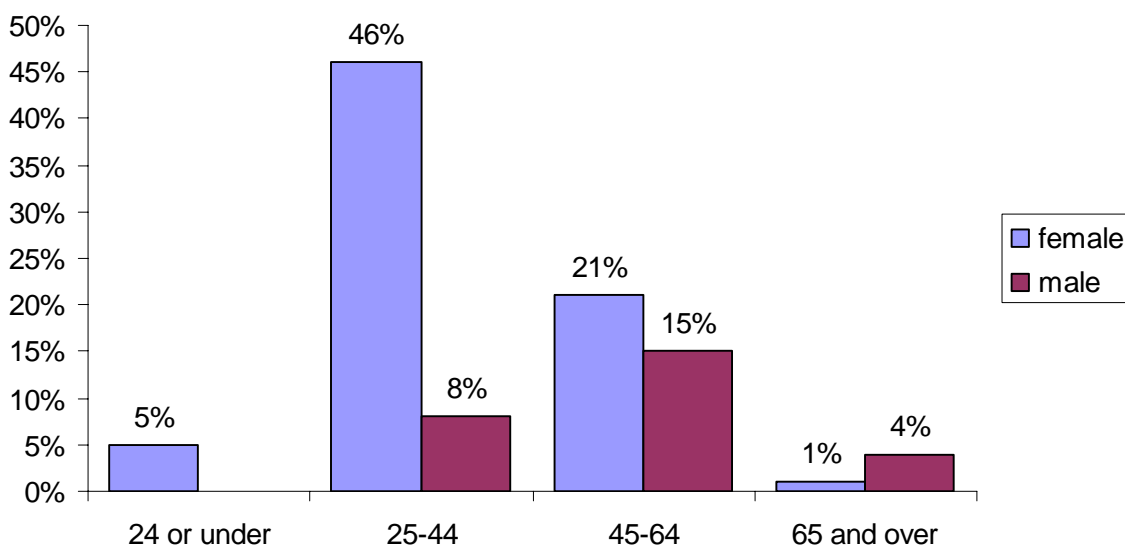
- **To increase participation in NSEW within all audiences through external communications and the generation of new partnerships**

Organisers

It can be seen by the graph below that the vast majority of the organisers that responded were female and were predominantly in the 25-44 year old age bracket.

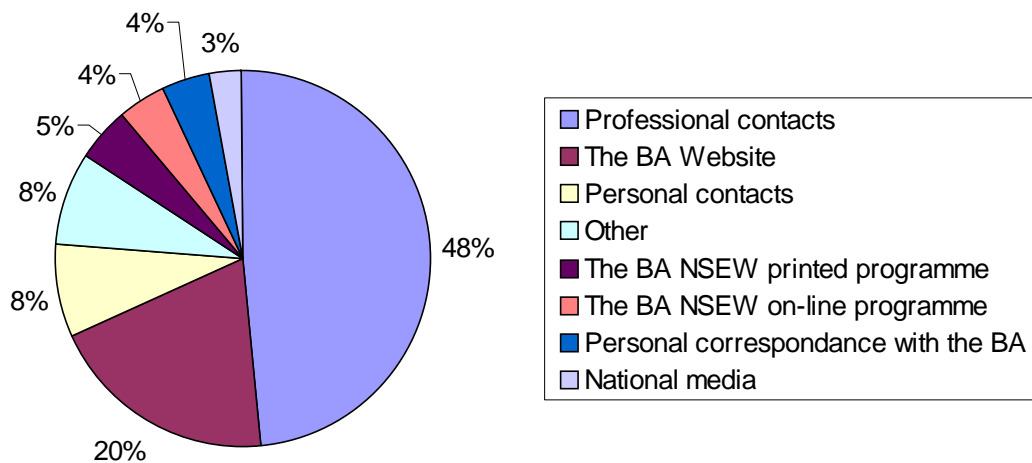
The increase in the number of female organisers from 61% - 72% could be explained by the increase in the number of school organisers. Out of the 54 school organisers which responded this year, 46 of these were female.

Organisers age and sex



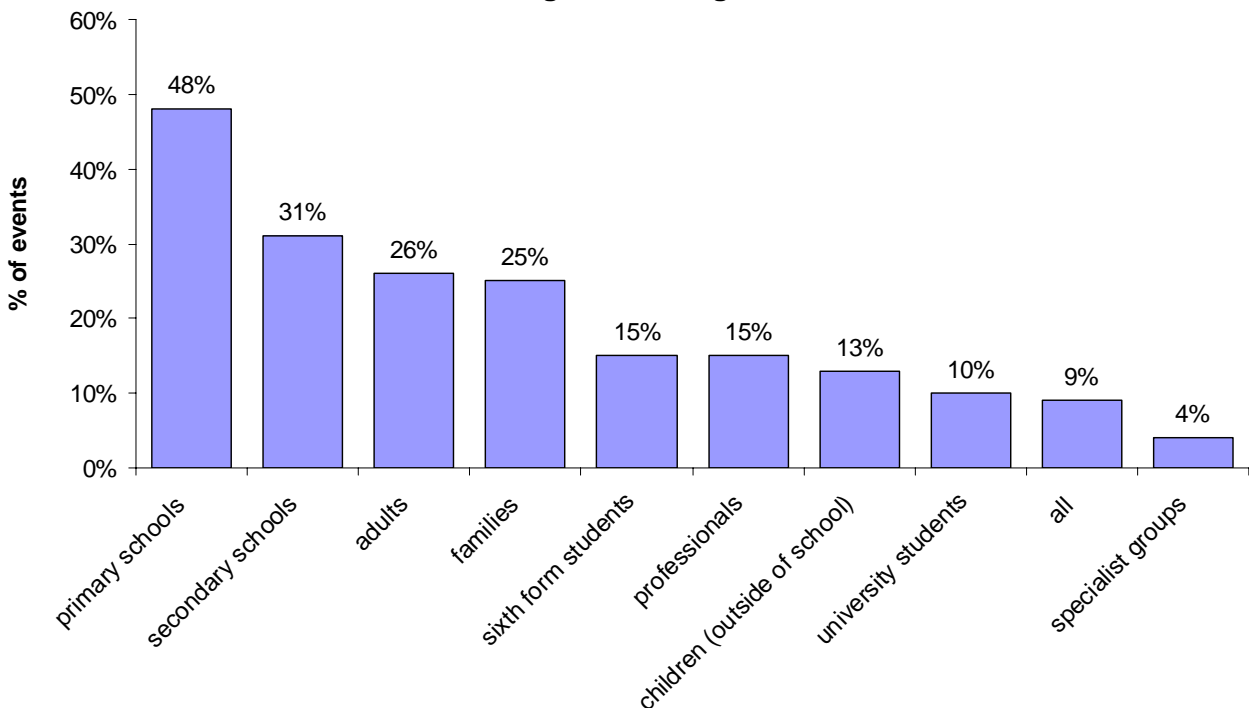
When organisers were asked where they first found out about National Science and Engineering Week, the majority of organisers indicated that they had found out about it through professional and personal contacts. However, 20% of organisers said that they had found out about it via the BA website (up from 9% in 2006). The proportion of organisers that found out about NSEW via the printed and online programme has also increased from 2% of organisers (for both) in 2006 to 5% and 4% respectively.

Where did you hear about NSEW?



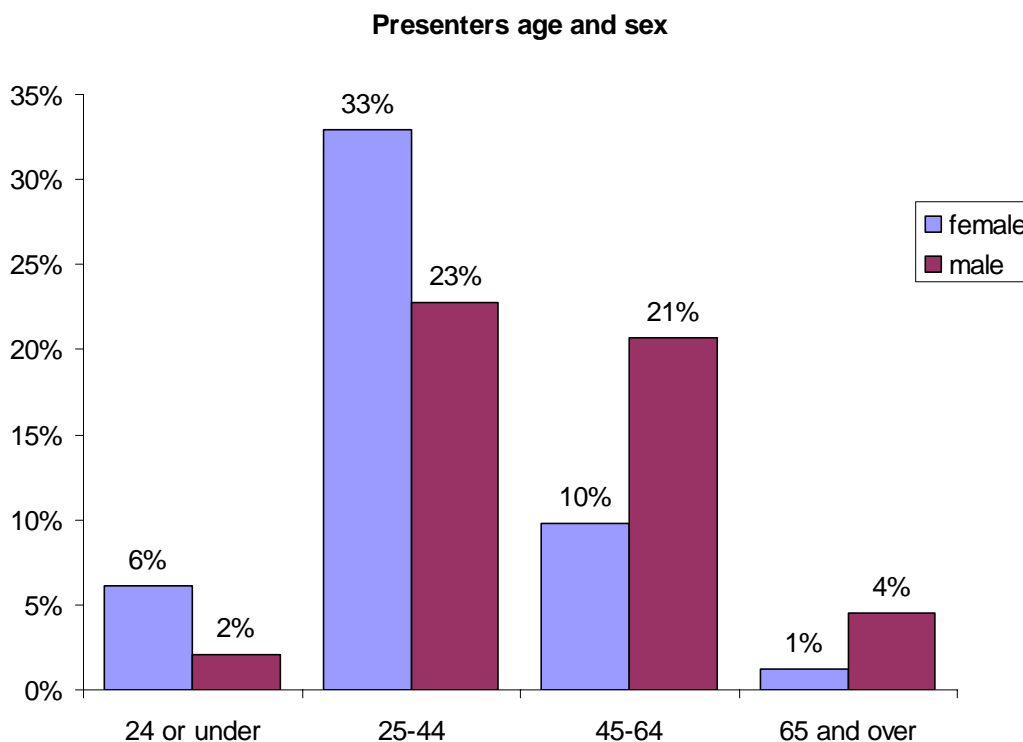
Organisers were also asked to specify which types of audience they targeted for their events. The largest variations from 2006 were an increase in the number of primary schools and professionals targeted (up by 22 and 12% respectively). The only group targeted to decrease was "All" which suggests a more focused approach towards attracting event audiences.

Organisers' target audience



Presenters

There are an equal proportion of both male and female presenters although the age demographics are very dissimilar, with a larger proportion of females in the 25-44 year category and a larger proportion of males falling in the 45-64 year old category.



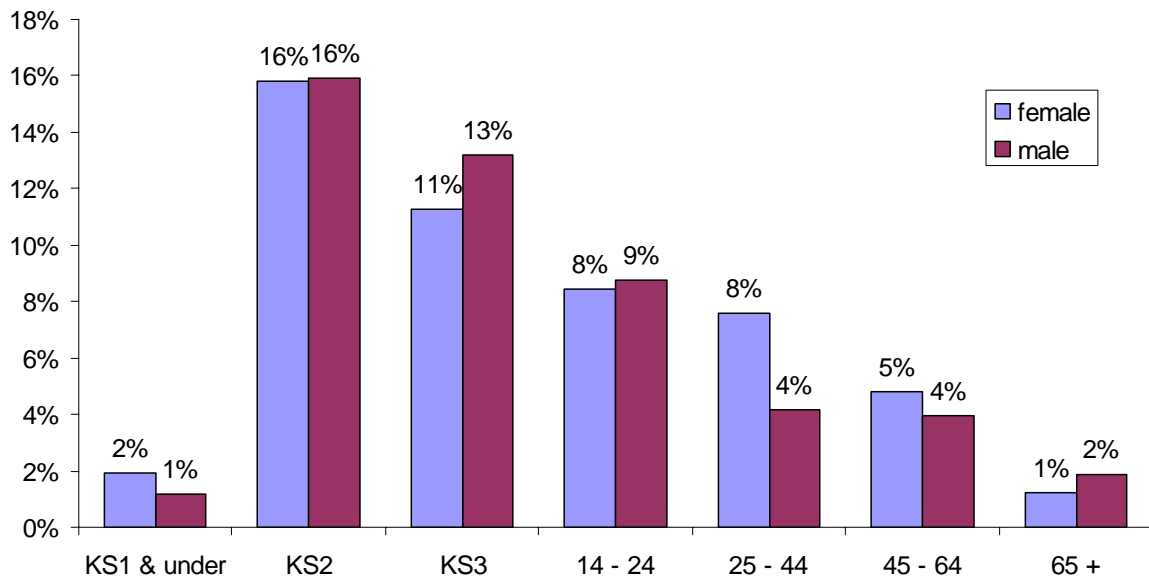
Attendees

Overall, there were slightly more female than male attendees (51% compared to 49%). The only age group in which there was a large disparity between the number of males and females was in the 25-44 age bracket, where twice as many females than males attended events.

According to the evaluation, the largest proportion of attendees was in the Key Stage 2 bracket (aged 7-10 years old). This has shifted from 2006 where the highest proportion of children were aged between 12 and 15.

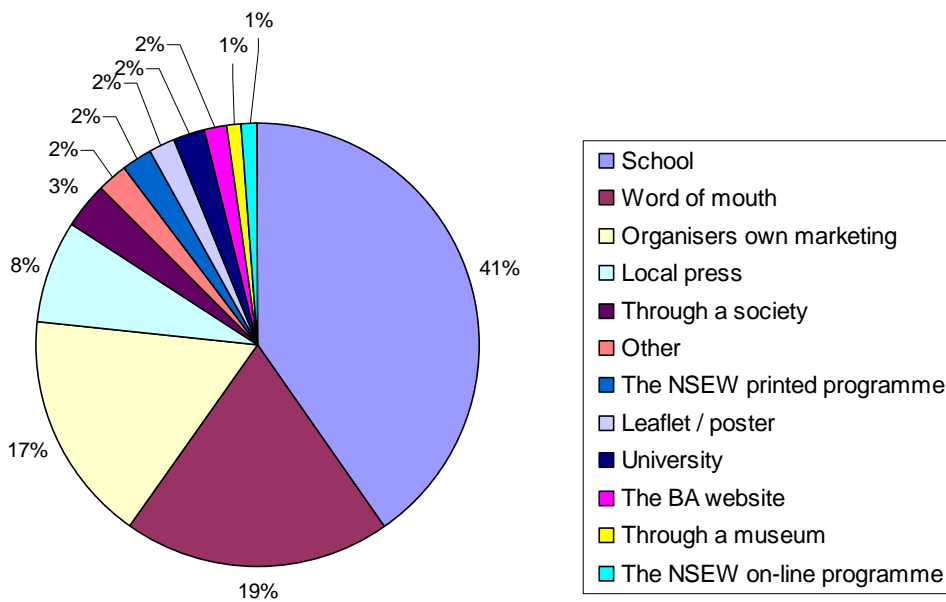
NB: The higher number of attendees amongst the lower age brackets is probably a selection bias due to teachers getting their pupils to fill out evaluation forms.

Attendees age and sex



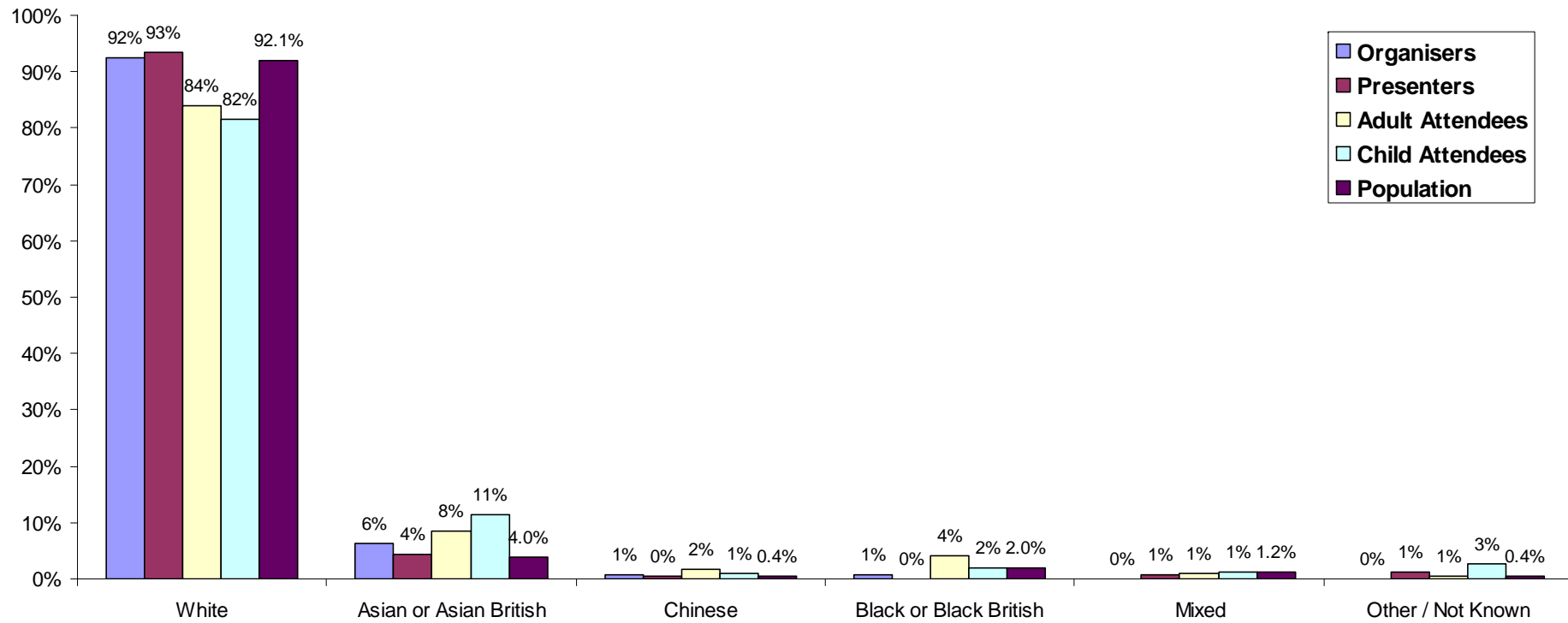
Older attendees were asked where they had heard about the event they attended. The majority of organisers either found out through their school, through word of mouth, the organisers own marketing or the local press. A total of 5% of attendees had heard of their event through the NSEW printed/online programme or from the BA website (down from 10% in 2006).

How did you find out about the event?



Ethnicity

Ethnicity of NSEW participants



The organisers and presenters of NSEW events are primarily white, however, the proportion of Asian (Bangladeshi, Pakistani, Indian, other) or Asian British people in this group also exceed or follow the national profile.

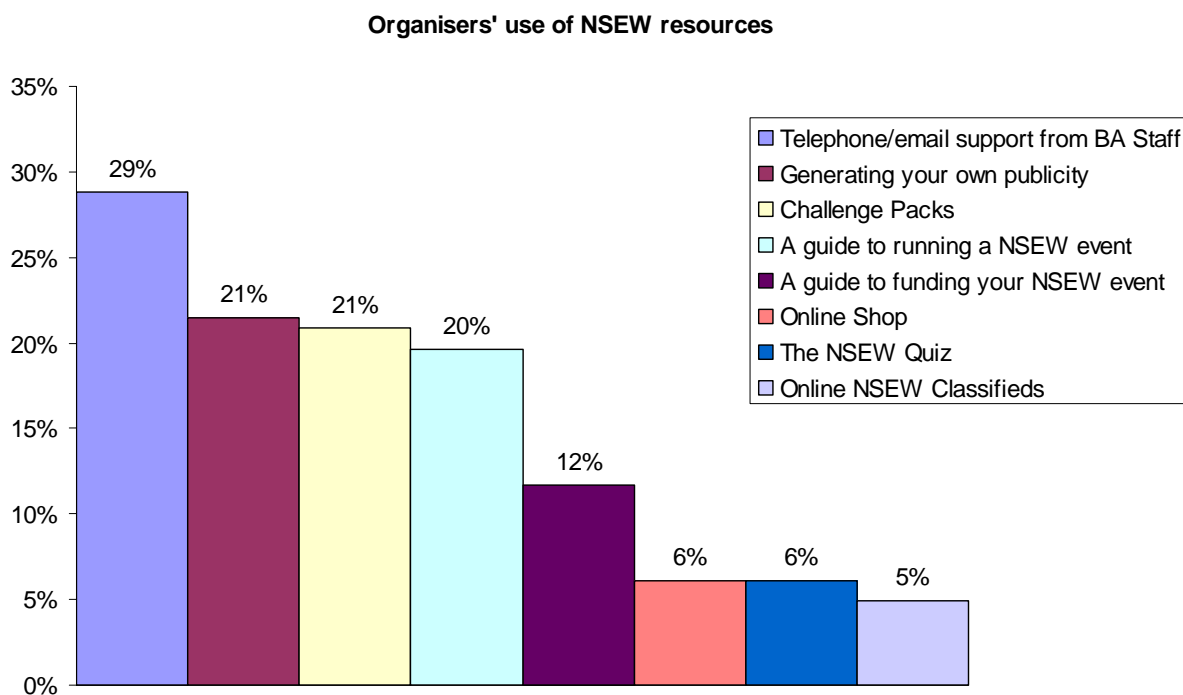
Chinese presenters and Black or Black British organisers and presenters are all under represented amongst NSEW participants.

The proportion of attendees from all of the ethnic minorities are now over-represented compared to the national profile.

Process Objectives

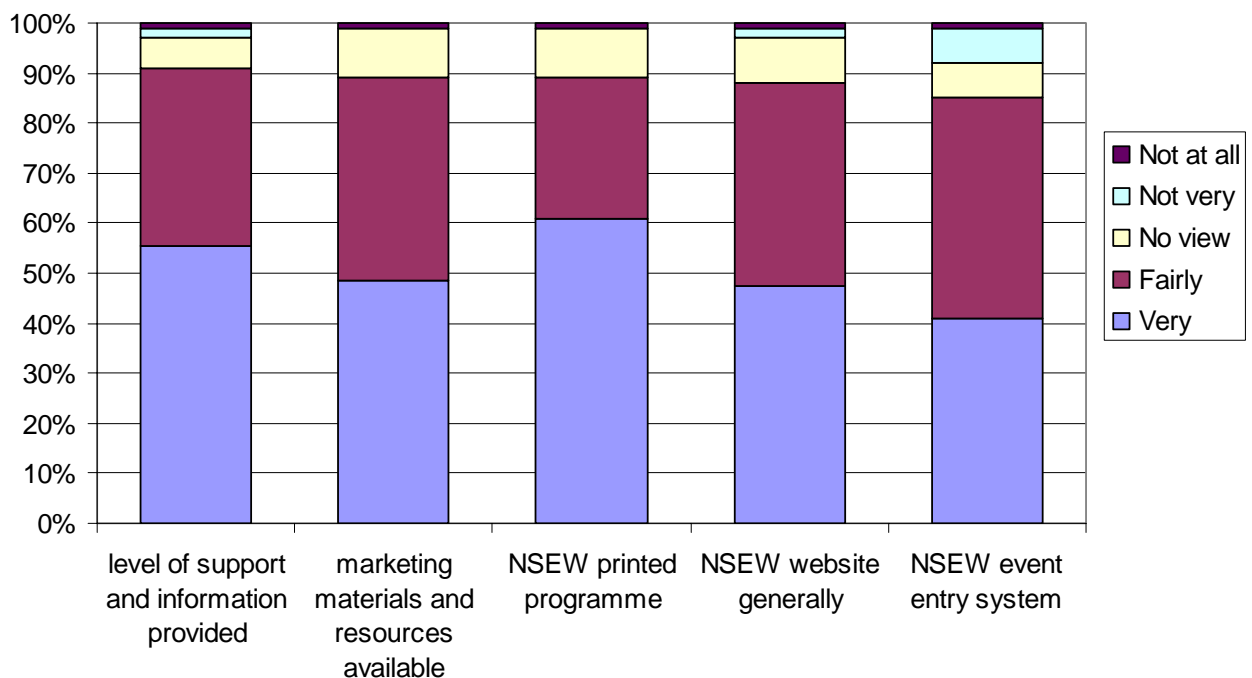
- **To provide clear, informative and inspiring resources, marketing materials and communications for potential organisers in order to engage them and encourage participation**

The BA provides a number of different resources for organisers in order to make running their events as easy as possible. We asked organisers which resources they had used in their preparations



We asked organisers how satisfied they were with different aspects of support and resources the NSEW team aimed to provide. Overall, organisers seemed happy with each of the different points with the greatest level of satisfaction being recorded for the overall level of support and information provided. The organisers were least satisfied with the NSEW event system with 8% of organisers stated that they were either not very or not at all satisfied with it.

How satisfied organisers were with the support from the BA



Organisers, presenters and attendees were all asked for comments or suggestions as to how the BA could improve National Science and Engineering Week or for any other resources we could provide. The responses we got were almost exactly the same as in previous years, a summary of these are listed below:

Organisers felt that national publicity of National Science and Engineering Week should be improved to aid with the promotion of their own events.

Many people said that the programme should be printed and distributed earlier but also that the event submission deadline should be later.

The timing of the week seemed to cause problems with some schools, and organisations relying on schools bookings, as it clashed with exam preparation and was also too close to the Easter holidays.

Extra NSEW resources and merchandise were suggested, both for free and to be offered on the online shop. Online shop merchandise was received with very little time to spare this year.

Evaluation forms could have been simplified further, especially for schools. Some organisers found the online events system and programme difficult to use and a more user-friendly design would have been beneficial.

There was a comment that the evaluation questionnaires were biased towards science rather than engineering.

Everything possible will be done to try to action all of the above comments.

- **To recruit increasing numbers of organisers through consistently professional and informative briefing evenings**

Briefing Evening Attendees

A random selection of briefing evenings were selected to look at the number of organisations attending and the conversion rate to NSEW organisers. Below is a summary of results:

Manchester briefing evening - 10 out of 22 organisations represented went on to register an event. 3 of these organisations had never registered an event before.

Swansea briefing evening - 8 out of 14 organisations represented went on to register an event. 5 of these organisations had never registered an event before.

London briefing evenings - 23 out of 44 organisations represented went on to register an event. 16 of these organisations had never registered an event before.

Just over 50% of the organisations attending these briefing evenings went on to register an event as part of National Science and Engineering Week and 59% of those who registered events were new to the project. 30% of the organisations attending were converted from non-organisers to organisers – the target set in our briefing evening guidelines is at least 10%.

Out of the 17 locations hosting a briefing evening, 9 showed significant increases in the number of NSEW events in that area. Briefing evenings which did not precipitate a significant increase in event numbers were in Norwich (as part of the Festival of Science), the West Midlands, Aberdeen, Inverness, Irving, Dundee and Newcastle. This can generally be explained with poor attendances with the exception of Newcastle.

The Engineering Dimension to National Science and Engineering Week

Following early conversations with John Morton (Chief Executive – ETB) in October and November 2005 we met with Keith Read and Philip Greenish in early January 2006, and agreed to pitch to the G15 Engineering Institutions at the end of February 2006. At this meeting, the Engineering and Technology Board (ETB) was named as the leader for all Engineering input to NSEW and tasked with developing a proposition for increasing the amount and breadth of engineering activities within National Science Week.

An agreement was set amongst the groups and ETB was recommended as the “facilitator” and channel for securing the extra events necessary to provide weight and endorsement to the week. The name of National Science Week was also changed to National Science and Engineering Week to highlight the extra involvement with the engineering community.

The main aim of the partnership was to increase participation of engineering organisations and institutions and the target of an extra 500 engineering focussed events was set.

In order to help achieve this aim the ETB provided a secondment to help promote the week and engage and inform the engineering community through the main institutions (ICE, IET, IMechE and RAeS) and other engineering organisations. The responsibility of filtering this information down through the organisation’s networks and to the other smaller institutions was that of the nominated member of staff from each of the large institutions.

The ETB also provided extra funding to enable to BA to re-brand the week as National Science and Engineering Week and to create extra branded resources.

Effects of the change to National Science & Engineering Week

Awareness and participation

The partnership with the ETB has definitely led to an increased awareness amongst engineers and engineering organisations of NSEW and has helped expand the audience significantly.

In the past year, there was an increase in the number of:

- registered events with either engineering, technology, construction, electronics, mining or transport as an event keyword. This rose from 203 in 2006 to 568* in 2007.
- events overall from 2091 to 3005
- engineering organisations that registered events from 24 to 52

* If we take into account unregistered events and groups of events registered under one entry, this figure is likely to be in the order of 800 events.

There has also been significant positive verbal feedback from the engineering institutions and organisations about the name change and the increased opportunities for participation. From verbal feedback, it would seem that the majority of these organisations would not have participated in the Week without the addition of engineering in the title as they would have felt the Week to be irrelevant to them.

However, the change has not necessarily precipitated an increase in the level of awareness amongst other sectors of the public.

According to an independent NOP Survey, public awareness of "National Science and Engineering Week" was at the level of 12% on the 9-11th March and at 11% on the 23-25th March. This was a drop of around 25% from 2006. However, the awareness of "National Science Week" was at a level of 45% on the 16-18th March. This would suggest that there is still a long way to go in order to embed the name "National Science and Engineering Week" in the minds of the general public.

NSEW Small Grant Scheme for Schools

The NSEW Small Grant Scheme for Schools was a new initiative for NSEW 2007 funded by the DTI (Department of Trade and Industry). The aim of the scheme was to provide small amounts of money to schools, with either a high proportion of pupils from disadvantaged backgrounds or from ethnic minority communities, in order to run some sort of activity or event for NSEW.

In total, 303 schools were successful in obtaining a grant and around 60,000 pupils attended events. There were typically types of events organised by schools, these were internal schools events, such as quizzes, challenges and hands-on activities or workshops, visits to near by science centres or museums, or inviting an "expert" to come and speak or present at the school.

Each successful applicant was asked to fill out an evaluation form and, in addition to this, the scheme was independently evaluated by the Susie Fisher Group.

An overview of the independent evaluation stated that:

The Small Grants Scheme was extremely effective in helping BME and deprived schools to mount a NSEW event.

- It triggered support from inside the school.
- It funded both core activities and extras which contributed to the fun and memorability of the events.

Many students were clearly thrilled by their experiences and retained vivid memories of events, objects, facts and principles. This, in turn, motivated and validated the efforts of the teachers.

Teachers were greatly relieved that the grant application process had been very simple. Notwithstanding, there is still confusion over the selection criteria. Teachers assume that the quality and depth of their applications will work in their favour when it comes to allotting the grant amount. Selection criteria need to be made unambiguous, otherwise this will lead to bitterness amongst those teachers whose extra effort is not taken into account.

The scheme works best as a simple, low effort means of distributing trigger amounts of money to a specific (deprived) target audience.

When asked how the grant money made a difference, three main strands of response were made. Firstly, the grant lent psychological support to the teachers as it was a demonstration of belief in the organiser and it was recognition from an external funder. Secondly, it expanded the possibilities of what could happen during the week, making the impossible, possible, and thirdly, the grant often acted as a trigger for further funding to be found from other areas.

Recommendations for the future

- Hold onto this funding scheme.
 - It is appropriately used by teachers, apparently with big benefits to students.
 - It levers up the good effects of £150 by attracting further support in school.
 - It appeals to its target audience of deprived schools.
- Features to carry through to next year.
 - Simple, one page application form.
 - Small grants £150-200.
- Improvements to reflect on.
 - Make socio-demographic recruitment criteria clear and unambiguous, % Free School Meals, % BME, number of students.
 - Make it clear that events must have a structure and an aim (minimum) but that a long, detailed, 'quality' application will not receive priority treatment.
 - Marry up application and evaluation forms. Do not ask for repeat information on evaluation forms.
 - Reduce the two tier selection process to one tier
 - Consider creating a ring fenced fund for detailed, quality applications, over and above the small grants fund. This would be open to deprived schools of many kinds. 'Deserving' will be judged on the quality of the application, not on demographics. Deprived status will be a criterion for eligibility but not success.
- Consider how to reap the benefit of the model used by 'The Deep' in Hull. The venue takes the initiative in contacting the schools in its own area and applies for the grant on their behalf. The grant covers entry fees to the venue. If therefore becomes a 'free' visit for the school.

Recommendations for NSEW 2008

According to the evaluation, a number of recommendations can be made in order to try to improve National Science and Engineering Week for the future.

- Improve national press coverage, media profile and public awareness of National Science and Engineering Week through a multi-pronged approach, including the mass-participation activity, a national science competition, hard-science news stories and collaborative PR and press activities. The BA to continue to develop the relationship with DTI, the Engineering and Technology Board, RCUK and other external organisations in order to action this.
- Increase the amount of local press coverage generated by issuing a larger number of general press releases earlier in the year; encouraging organisers and participating organisations to promote their own events more vigorously in the press, and establish the BA as a point of contact for interviews or as a way to contact event organisers.
- Investigate ways to evaluate web based news coverage of NSEW.
- Further simplify for the evaluation of NSEW, especially for teachers and those in receipt of the Small Grants. Online evaluation to be investigated and implemented depending on affordability.
- Seek extra resources, in terms of funding for advertising and marketing materials, in order to build the brand awareness of "National Science and Engineering Week" as opposed to "National Science Week".
- Explore further ways of driving traffic to the NSEW website during March e.g. online voting/pledges/competitions.
- Repeat of a high profile collaborative science competition in order to raise awareness of NSEW to schools.
- Although programme distribution was better in 2007, than in previous years, speed up the distribution process, for example using a number of distribution points.
- Make online shop orders and merchandise distribution faster and more efficient –schedules to be drawn up and agreed upon by the BA and the online shop host.
- Make the online events entry system more user-friendly for registering organisers by simplifying the information requested, especially for schools and those adding multiple events.
- Make refinements to the application process for the Small Grant Scheme in line with the recommendations from the evaluation.
- Increase the amount and breadth of free resources we offer organisers via our website and the online shop.
- Investigate the timing of future NSEWs in order to try to avoid exam clashes and busy revision periods as much as possible.

Did NSEW 2007 meet its objectives?

Taking each of the DTI's broad success criteria in turn:

- **involving more events with more participants**

The estimated overall number of events rose from 2091 in 2006 to 3005 in 2007. Likewise the estimated number of direct participants rose from 660,000 to around 800-900,000.

- **engaging constructively with the engineering community and the social science community (beyond just ESRC)**

As described above (p26) there was a step change in the involvement of the engineering/technology community in 2007. The number of registered events with either engineering, technology, construction, electronics, mining or transport as an event keyword rose from 203 in 2006 to 568 in 2007. Taking into account unregistered events and groups of events registered under one entry, the true figure is likely to be in the order of 800 engineering-related events. 54 engineering organisations registered events, compared to 24 in 2006.

The number of registered events with "Social Science" listed as a keyword rose from 47 in 2006 to 84 in 2007. This is due to the expansion of the ESRC Festival of Social Science to include a wider variety of social science organisations and also due to a greater number of social science organisations registering their events directly with us.

- **wider media coverage**

Coverage for NSEW 2007 was substantial at 1,167 pieces, though this has fallen from 1,562 pieces in 2006. This may be due to factors such the high success in 2006 of the mass-participation activity or a lack of hard news stories included at the press conference. A high profile national activity or story is essential for capturing the national coverage.

New media coverage in 2007 included the feature on Newsnight and one in The Voice (arranged by the DTI media features office), a publication aimed at members of the black community aged 18-35. In addition, 30 trade & technical publications ran articles about National Science and Engineering Week that didn't cover the week in 2006. These were predominantly connected with engineering.

Other examples of new and wider coverage this year included a large piece on page 3 of the Metro (nationwide), and 2 half-page articles in First News - the weekly, award-winning national newspaper for children (the only national newspaper for children aged 7-14).

There were 21 articles that overtly mentioned small grant funding - suggesting this was coverage of an event run by schools with a high proportion of pupils from disadvantaged backgrounds or with a high proportion of pupils from BME communities.

- **broader and deeper reach into the public, particularly reaching more young people in difficult to reach areas**

Over 300 schools, with approximately 60,000 school pupils in difficult to reach areas, were specifically targeted in 2007 with the Small Grant Scheme for Schools. Recipients of the grants were either schools with a high proportion of pupils from disadvantaged backgrounds or schools with a high proportion of pupils from BME communities.

An independent evaluation stated that the scheme was extremely effective in helping BME and deprived schools to mount a National Science and Engineering Week event and found that often the grant money triggered extra support for National Science and Engineering Week from inside the school. The percentage of BME groups amongst under-16s has risen from 6% in 2006 to 17% in 2007 as a result of the scheme.

Climate change

In 2006 the BA ran "Click for the Climate" as a mass participation exercise. This pledge project aimed to find out what people were prepared to do to combat the effects of global warming. Major supermarkets were simultaneously persuaded, by the BA, to reduce the prices of efficient light bulbs. Many people pledged and the project was translated into 19 different languages and used across Europe and as far afield as Israel. "Click" is still running in the Czech Republic as part of the British Council's climate change focus.

For 2007 the situation regarding climate change awareness in the UK was considered carefully in order to maximise the beneficial effect that National Science and Engineering Week could have. After "Click for the Climate" many pledge systems had followed, including further energy saving and water saving examples and many carbon calculators. A further example of how far we had travelled in awareness and sophisticated responses was the strategy associated with carbon offsetting, which was the subject of a seminar in the Scottish parliament in 2006 and in full swing in 2007. It was decided that an approach which tackled aspects of climate change by less obvious but engaging routes was needed, so the following plan was put in place:

- The "Just add Water" Challenge pack. This focused on many aspects of the importance of water and water conservation, a significant dimension of climate change and the environment. From experience we know that many schools and clubs rely on the challenge pack for activity ideas and that it is used by many of the "silent" organisers, who put on events which do not feature in the programme. It is also much copied overseas by "sister" Science Weeks.
- The "future cities" competition. This encouraged about 3,000 children to actively engage in thinking about the effects of climate change and technology on cities of the future and to submit ideas.
- High level input – we also anticipated high level input from the following sources:
 - 1) the visit of Al Gore for the Zuckerman Lecture on "An Inconvenient Truth"
 - 2) Presidential input to the week from Lord Browne – the message being that young people need to become scientists and engineers in order to grapple with the solutions to climate change

This approach provided a more sophisticated consideration of the aspects of climate change which were important to the UK people in 2007.

More generally:

From the evidence above, NSEW 2007 has met its impact and demographic objectives in relation to increasing the number and breadth of events, organisers, attendees and non-engaged members of the public. NSEW 2007 was also very successful in promoting the organisation of successful science and engineering events, and feedback from all parties relating to individual events was overwhelmingly positive. Although the number of scientists has remained relatively constant in comparison to 2006, the number of engineers and engineering organisations has significantly increased.

The coordination of the BA's schools competition and mass participation was an overall success in attracting new participants and raising awareness, however, despite a few significant exceptions, press coverage for these was generally low.

Awareness of National Science and Engineering Week has remained at a similar level, according to our own evaluation; however, an external evaluation noted a large drop in awareness of the Week. When investigated further this appears to be due to the change in name, as awareness of "National Science Week" had risen by approximately 12%.

In terms of increasing traffic to the BA website, although March had the highest number of visits over the past 12 months, this was not as high as the level of visits during the same period of last year. Similarly, the level of press coverage for NSEW 2007 was down on 2006.

From feedback relating to our process objectives, organisers are generally happy with the level of support, the resources and the marketing materials for NSEW, however, as always, many suggestions of improvements were made and will be addressed for 2008. Briefing evenings also appear to be a success overall and further steps to evaluate these should be taken next year to assess this more closely.

Overall, National Science and Engineering Week 2007 has been successful in increasing and broadening its audiences and engaging and inspiring the general public with science, engineering and technology. However, further improvements and development should be made for next year, especially with regard to increasing media coverage for national impact, web traffic and level of awareness amongst the general public.