Science Communication Events in Europe

EUSCEA

WHITE BOOK

Science Communication Events

"I wish this book success
and many inspiring Events for the enthusiastic
and professional organisers of science
weeks and festivals."

Janez Potočnik
EUROPEAN COMMISSIONER FOR SCIENCE AND RESEARCH

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About this "White Book"...

Since spring time 2001 in Göteborg, a group of people, who organise something like science weeks, science festivals or science days, determined that it is time to put together ideas, guidelines, recommendations on how to organise such "Science Communication Events (SCE)", as these events were called.

Soon after, the European Commission agreed to fund a project (acronym EUSCE/X) for this group to visit, analyse and record many of the European SCEs. One of the results should be a "White Book" with the following objectives:

- To assess the state of the art of SCEs in Europe
- To summarize strategies on how to start new SCEs
- To structure recommendations on how to improve existing SCEs
- To collect "best practices" and valuable ideas
- To enhance the Science Communication Event community in Europe

This White Book turns mainly to the professional organiser, but also to other science communicators like teachers, journalists, to scientists, also to pupils, in general to those people, who want to improve the "public awareness and understanding of science, technology and the humanities" especially in Europe – and at last, but not the least in our minds were European politicians and managers of companies.

The White Book was written by the team of the project EUSCE/X (Magdalena Fikus, PL; Annika Lotzman-Dahl, S; Annette Smith, UK; Janneke Voltman[1], NL; Mikkel Bohm, DK; Joachim Lerch, D; Peter Rebernik, A; Jan Riise, S). Every member of the team has visited 6 to 8 SCEs, mostly together with another team member.

The process to write this book started with the appointment of a coordinator (me: Peter Rebernik, A) and with a list of chapters and assignment of chapters to the team members. These authors wrote the first version of each chapter according to their experience and their analysis of the visited SCEs. Then, these chapters were sent to all other authors, who included their experiences. The authors collected these amendments and wrote a new version of their chapters. But, since our authors speak diverse mother tongues, Annette Smith and Victoria Picknell from London did the Shakespearianisation, as we called it according to Annette's special adoration of William Shakespeare and his mastery of the English language. Finally, Jan Riise, S, and his colleague Johanna Åkerberg designed the book and shaped the final texts and book.

[1] With the exception of Janneke Voltman from the "Weten Week" in the Netherlands, because her organisation changed its structure and could not participate further in this project.

...and thanks.

Therefore, a very special "thank you" goes to all the authors of this White Book:

Mikkel Bohm Denmark
Magdalena Fikus Poland
Joachim Lerch Germany
Annika Lotzman-Dahl Sweden
Peter Rebernik Austria
Jan Riise Sweden
Annette Smith United Kingdom
Janneke Voltman Netherlands

Thanks also to the officials of the European Commission, to our first contact persons, Steve Parker and Kitty Fehringer, and to the current ones, Catherine Audouze-Ouannes and Michel Claessens for their support.

Our thanks go also to the organisers of the visited SCEs (see Appendix B, where all visited SCEs are listed) for their patience, the lively discussions and the experiences they shared with us. We hope that also they will profit from our effort to write this White Book.

And now thanks to you as the reader for your interest.
May you enjoy the White Book.

If you have any comments, ideas, additions etc., please send them directly to me.

Peter Rebernik
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Coordinator of the White Book
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1.
Purpose and Philosophy

Annika Lotzman Dahl & Jan Riise International Science Festival, Göteborg, Sweden

1.1
General overview

The first question to address when looking at Science Communication Events across Europe is "Why do such an event?" Historically, there have for many years been celebrations and festivals with a religious and artistic basis, but the idea of a Science Communication Event is relatively new. Likewise, the science museum is well-established, although the science centre which is not collection-based but communicates using interactive and hands-on exhibits is quite new. In this context, the first concern for the EUSCE/X team was to examine the purposes and the philosophy behind the individual Events.

The Science Communication Events of this study all share basic values, ideas purposes and philosophies about why one should communicate science via Science Communication Events like science festivals and science weeks. They also share a conviction, based on experience and observation, that these projects are valuable and they also share huge enthusiasm and creativity.

Of course, the purpose and philosophy of a Science Communication Event also determines a number of aspects of the Event: budget, marketing and evaluation, to mention a few. They also reflect the context of the Event, its political environment and the relationship to research institutions, museums, media and others active within the science communication field.

Almost all of the Events have some specific purposes, related to the geographic location, the economic situation of the country or the region or the general context of the city. These could be to do with national policy or local developments.

The most widely recognized objective of a science communication event is to "raise public awareness of science". This is either explicitly said or implied in the presentations of all of the Events' purpose and philosophy.

The next most important objectives are "to promote the dialogue between science and society" and "to encourage young people into science".

Scientific culture

The notion of "scientific culture" is mentioned in some Science Communication Events' purpose statements. The idea is to communicate and discuss not only the results of scientific work but also the way science is carried out as a wider concept. This is also something that is supported in the European Union's objectives.

The most commonly used expressions of objectives imply that a Science Communication Event exists in order to market science positively. The general idea is to increase the status and attraction of scientific work and to recognize scientific results. Even though there are plenty of meeting-places and efforts to increase the dialogue between science and society, the principal idea is not to criticize or scrutinize the science itself, or to present alternative findings in other respects than as a counter-weight to the scientific results.

This is generally no problem at all. No one denies the scientific world the right to present itself to the public, it is rather most welcome – as all the successful stories of Science Communication Events can tell. However, it may be valuable

to keep in mind that there may be differences between scientists presenting their science to their peers and professional Science Communication Events presenting science on behalf of the scientific community.

1.2 Different models and their analysis

Many of the Science Communication Events studied have a number of different objectives. This is not unexpected; the Events have all developed individually and have become subjects for this study in their capacity of "raising awareness" for Science Communication Events.

Some of these may be useful for new Science Communication Events to consider when planning the organisation, presentation and contents of the project.

Specific objectives related to science and/or science communication

Several of the Science Communication Events visited have, in addition to the general objectives discussed above also some specific objectives. They may express ambitions regarding the Event's geographic coverage, its aims towards cross-disciplinary activities, the role of science in relation to industry, society and economy or the implementation of a European dimension.

- to contribute to the establishing of sustainable relationships across the scientific sector (Denmark, Danish Science Week)
- to cover the entire country (Denmark, Danish Science Week)
- to open ways to European collaboration (France, Fête de la Science)
- to highlight the connections between research, innovation and industrial activity (Norway, Norwegian Science Week)
- to humanise science and bring it close to the society (Spain, Catalan Science Week)
- to celebrate science and importance to people's lives (United Kingdom, National Science Week)

Specific objectives related to the situation of the city, region or country

The individual objectives of Science Communication Events also reflect the situation in which the actual Event takes place, for example:

- [the objective is] to make people realise that the position of Poland in the European union depends on high standards of education and science, technology and innovation (Lower Silesian Festival of Science, Wroclaw, Poland)
- In Luxemburg there was until recently no university at all; higher education had to migrate to other countries. In order to compete internationally and gain a new position in the science society, a Science Festival has been introduced to raise awareness among the inhabitants (Luxemburg Science Festival).
- In Göteborg, Sweden, the on-going transition from an industrial city to a university centre needed further manifestation. Furthermore, the city also markets itself as an event city – a concept that the Festival fit well into at the time it was initiated (and still does).
- [---] to offer youngsters a learning platform which will meet their urge for experience and action (Science Days, Freiburg, Germany). The Event's role and importance for informal learning is specifically mentioned.

- The Edinburgh International Science Festival was initially started to balance the city's many art festivals. The success of the Festival has slightly changed the Event towards a set of professionally performed Activities that sponsors and public are prepared to pay for. In this way, the Scottish SCE organisers may have travelled the furthest towards being professional event managers.
- To demonstrate the achievements in science and the importance for young people to start careers in science to the new EU member states – as in Ljubljana, Slovenia.

Specific objectives related to the media

Some Science Communication Events also express as an objective the wish to support the media in their reporting on science or more generally to enhance the scientific journalism.

Analysis

An enterprise's business idea is often expressed as to explain the "what, how and for whom" of its activities – and the "for how much and what results", of course. This makes things quite clear, and the business idea may also serve as some guidance for the company management when faced with new opportunities or challenges.

Quite often, this is completed with other statements in the forms of visions, long-term objectives or short statements encompassing the spirit of the company ("Connecting people", "We try harder" etc).

Finding inspiration in the ways that businesses express their purpose and philosophy may be of some support in preparing the Science Communication Event's objectives.

"The Science Festival communicates science to the general public and the schools in an accessible and interest arousing way, and offers the scientific community a meeting-place" (International Science Festival Göteborg, Sweden)

1.3 Best practises and outstanding ideas

The following mission statements, or excerpts from mission statements, from European Science Communication Events are chosen to show some of the varieties in expressing the objectives and philosophy.

	SCIENCEWEEK @ AUSTRIA
	Vienna, Austria
	URL: www.scienceweek.at
	Institution: Science Week@Austria
	Contact: Peter Rebernik
	E-mail: office@scienceweek.at

SCIENCEWEEK @ AUSTRIA aims to arouse and/or reinforce interest, enthusiasm, curiosity and pleasure in the sciences, by means of lively and even humorous presentations, which don't just focus on facts, figures, and dates. People's emotions and feelings will be targeted, as well as their intellects. Albert Einstein could serve as a model: the 'beauty' of formulae impressed him, and he was not afraid of explaining even complicated concepts to a larger public in a lively and illustrative way.

This Science Week's statement mentions explicitly that it aims to reinforce the interest in science, meaning that a specific target group is those who had an academic interest, such as alumni, students and teachers in other scientific fields. It also talks about the "emotions" of people, which is in line with the practice of many Science Communication Events, but not always accepted as a part of the scientific culture. Such expressions should be carefully considered.

	DANISH SCIENCE WEEK
	Denmark
	URL: www.naturvidenskabsfestival.dk
	Institution: Danish Science Communication
	Contact: Mikkel Bohm
	E-mail: mb@formidling.dk

The main purpose of the Science Communication Event is to create a wider and deeper understanding of science and technology in Denmark. Therefore the Activities of the Event target three different groups: (1) children and teenagers, (2) adults, and (3) families. The ambitions are stated in six clear goals, among which are found
- to involve a broad range of potential organisers
- to be nationwide
- to enhance communication skills among scientists and professionals

The Danish Science Week clearly defines its task as to cover the whole country, which means that resources will have to be allocated for this purpose. It also says that it values a wide network of organisers rather than developing the organisation's own skills and finally also that the organisation, in addition to organising a Science Communication Event, occupies itself with training opportunities for those participating as presenters.

	INTERNATIONAL SCIENCE FESTIVAL GÖTEBORG
	Göteborg, Sweden
	URL: www.goteborg.se/vetenskapsfestivalen
	Institution: Internationella Vetenskapsfestivalen Göteborg
	Contact: Annika Lotzman-Dahl
	E-mail: annika.lotzman.dahl@goteborg.com

The Science Festival communicates science to the general public and schools in an accessible and interest-arousing way, and also offers the scientific community a meeting-place.

The Swedish Festival adds an aspect of the Event saying that it should also be an interesting forum for scientists to meet. Special Activities are arranged to this end, open only to scientists.

	NORWEGIAN SCIENCE WEEK
	National, Norway
	URL: www.forskningsdagene.no
	Institution: The Research Council of Norway
	Contact: Anne Riiser
	E-mail: ari@forskningsradet.no

The national Science Week is designed to fuel the public's curiosity, interest and understanding of research activities and results, convey the important role that science and research play in everyday life and highlight the connections between research, innovation and industrial activity.
The Norwegian mission statement puts the focus on the design and format of the Activities: they are supposed to illustrate science in everyday life. Furthermore, Activities of the Event are to bring insights about the relationships between research and industry, meaning that applied science results may have a priority position in programme presentations etc, compared to basic science.

	SCIENCE FESTIVALS IN POLAND
	Warsaw and Wroclaw, Poland
	URL: www.icm.edu.pl/festiwal and www.festiwal.wroc.pl
	Institution: University of Warsaw, Association of Academic Schools
	Contact: Magda Fikus, Aleksandra Kubizc
	E-mail: magdaf@ibb.waw.pl, kubicz@bf.uni.wroc.pl

[the objective is] to make people realise that the position of Poland in the European union depends on high standards of education and science, technology and innovation (Lower Silesian Festival of Science, Wroclaw)
[---] the methods used by scientists to attain the results, and the potential benefits and limitations should be clearly understood by all of us, both scientists and non-scientists. We must also confront the possible dangers which may result from their improper use and the responsibility our society must undertake to adequately control them
Both Polish Events in this study clearly put science and scientific culture in a society context, thus placing a very well defined quality control task on the Science Communication Event management and organisation.

1.4 Summary

A clear and well defined mission statement not only makes it easier to communicate the Event's idea to possible sponsors and partners, it is also intended to serve as guidelines for the Science Communication Event organisation. Resources must be allocated and the choice of Science Communication Activities for the Event should all meet the criteria and objectives expressed in the overall purpose and philosophy statements.

The business idea's simple rule of "what, how and for whom" is a good start. Many Events will however need complementing statements reflecting the political, societal or education policy context of the city, region or country.

2. Organisation

Mikkel Bohm Danish Science Week

2.1 General overview

Science Communication Events are created and administered by a wide variety of organisations – governmental and non-governmental, regional government or universities. Some are small, informal ad hoc groups, others are well-established units with a large staff.

Science Communication Event organisations – like all other organisations can be of different types.

The main different types to the outside world are:

- legal construction: direct (national, regional or city) or indirect (University, research council) governmental body, private agency for profit, non-profit organisation, association
- size: small organisations with two to four people to large bodies with dozens of people

The main internal differences of these types can be:

- tasks: inbedded within a larger organisation (e.g. for research, science communication at large, city government, ministry) or determined organisation just for the Science Communication Event
- permanent or semi-permanent working for the Science Communication Event, meaning that the staff works permanently for the Event or starts (bi)annually, sometimes even with new people, to work for the new Event
- staff mainly full-time or part-time or mixed
- responsible for "nearly everything" (including marketing, fundraising, accounting, designing and organising Activities etc. With specialised staff "in everything") or outsourcing most of the tasks (like engaging marketing and/or sponsoring agencies, leaving the design of the Activities to the participants etc. – with either "generalised" staff or staff, which only specialises in a few certain areas)
- internal organisation: administrative or scientific board (sometimes just "honorary" with VIPs, sometimes manned with sponsors and government officials) or board of "trustees"

The organisations reviewed for this project varied very much in size, from 1–2 to over 10 staff. Some organisations have dedicated full-time staff, including specialists in marketing and fundraising, others are only formed ad hoc to take care of the Science Communication Event and the staff may not even be employed for a full year. There are also differences regarding the independence of the Science Communication Event organisations. Some are formally organised by universities, research councils or ministries with people assigned to the Event from within the organisation. Other Events are organised by independent organisations, often in the form of foundations or other non-profit project groups.

The background of the staff will also vary. Some Science Communication Events are organised by scientists who have turned to doing science communication, others are staffed by communication professionals who promote science using marketing tools.

Some organisations have strong scientific advisory boards, others have not. Some have influential VIPs placed on a board of trustees, others have not.

No Science Communication Event organisation can work without a number of subcontractors that are responsible for one or more of the Activities during the Science Communication Event. In some cases, the central Science Communication Event organisation is mainly a co-ordination and marketing unit, leaving the organisation of the actual Activities to subcontractors (i.e. universities, companies, schools and others). In other cases, the central organisation handles a large number of Activities themselves.

2.2 Different models of organisation and their analysis

In the following paragraphs, an overview will be given on the:

- types of organisations
- types of staff
- relations to subcontractors
- relations to the scientific community

Types of organisations

Below, the 21 visited Science Communication Events are listed sorted by their organisation type. An important point to note is that all Science Communication Events are made on a non-profit basis, either by governmental bodies such as research councils, ministries or governmental financed agencies or by universities or non-profit organisations.

National festivals in Norway, France and the Catalonia (which can be regarded as regional) are organised by groups directly under the Ministry of Science or the research council. These festivals are hence very closely linked to government policy on science communication.

Other national Events in Denmark, UK, Netherlands, Portugal and Austria are organised by independent non-profit organisations.

In Edinburgh and Göteborg, the Science Communication Event is a part of the marketing of the city as a cultural centre. A Science Communication Event in these cities is organised in a similar way to an arts or music festival.

In Poland, the Science Communication Events visited by the team are managed by organisations directly based at universities.

Below are the Science Communication Events visited divided by types of organisation:

	Local single-venue	Local multiple-venue	National/regional
Ministry/research council			Norwegian Science Week (Norway) Fête de la Science (France) Catalan Science Week (Spain)
Government-based agency		Science Festival Luxembourg (Luxembourg)	Science & Technology Week (Portugal) National Science Week (Ireland)
Local government/city councils	Madrid (Spain)	Edinburgh International Science Festival (Scotland) International Science Ffestival Göteborg (Sweden)	
Non-profit organisation (association or agency)	Science Days (Germany) Science Festival (Ljubljana)	BA Festival of Science (UK) Summer of Science (Germany) Festival of Science, Genova (Italy)	Danish Science Week (Denmark) National Science Week (UK) ScienceWeek@Austria (Austria)
University-based organisation		Lower Silesian Festival of Science (Poland) Warsaw Science Festival (Poland)	
Others/mixed		Science Festival, Vilnius (Lithuania)	Weten Week (The Netherlands)

Even though all of the Science Communication Events are organised by non-profit organisations, the different kinds of organisations call for very different ways of maintaining funding for continuing the activities. Organisers based in ministries can be vulnerable to political change, whereas independent non-profit organisations have to fight every year for funding (see chapter 10).

Different circumstances in different countries make different types of organisation relevant. It is not possible to recommend one type of organisation as the perfect base for creating successful Science Communication Events. The persons involved certainly play a very big role. One will hardly ever find a successful Science Communication Event without also finding a team of very dedicated, creative and hard working people behind it.

Another reason for differences lies where the starting ideas come from, either from inside or outside a government, a university, from an existing association or agency or even from a private person.

However, certain elements are certainly useful for a well-tuned organisation:

- A strong board of trustees, with VIPs from the scientific community, from politics, from industry, from the educational system and from media. The trustees help to raise funding, create political influence, get media attention and engage the scientific community.
- Continuity. A system for keeping the lessons learned for each Event within the organisation
- A good balance between independence for the organisation and a strong integration with the scientific (universities) and political culture (government)
- Long term funding strategies - to help to keep experienced and creative staff members

- Strong (and favourable) relations with media and educational institutions
- Sustainable relationships with all organisations involved, such as universities, research institutions, and other authorities necessary for the carrying out of a successful Science Communication Event.
- A mechanism for sharing good practice with other similar organisations e.g. with a local science centre, with science communication professionals in other countries

Types of staff

The type of staff involved in the Science Communication Event organisations are very different from Event to Event.

However, experience from the organisations reviewed shows, that at least the following expertise needs to be in the organisation (or maybe outsourced):

- Management, organisation
- Accounting, controlling
- Marketing (advertising, media connections, internet, computers, brochures)
- Popular science, communicating science, creating experiments
- Education, teaching

In a university-based organisation, the initiative to make a Science Communication Event comes from the scientific community itself. The organisers are thus strong in scientific background, but communication skills remain to be learned. A succesful Science Communication Event often needs to be organised quite differently from a normal science conference or symposium. Dialogue, hands-on and demand-driven communication to a lay audience is somewhat of a different situation to a classical peer-to-peer scientific communication. All scientist-based organisations acknowledge the fact that they need assistance in marketing to professionalise their Event.

On the other hand, some Science Communication Events employ no scientists at all in their secretariat, but rely on professional communication, marketing and event management staff. A staff like this will certainly be very successful in getting a high profile for the Science Communication Event, but it is vital for them to keep a close and trusting relationships with the scientific community for example by the use of a scientific advisory board.

After some years' experience the difference between communicators and scientists will tend to level out, and we can today see scientists with excellent communication and marketing skills and communicators with a profound understanding of the scientific community.

For new organisers, it is very important to realise that the skills of a successful Science Communication Event staff include both a strong bond to the scientific community AND good communication and marketing skills.

Relationships with subcontractors

None of the Science Communication Events visited for this project was organised completely by the central organisation. Both local and regional/national Events rely on the participation of a large number of organisers of the individual Activities.

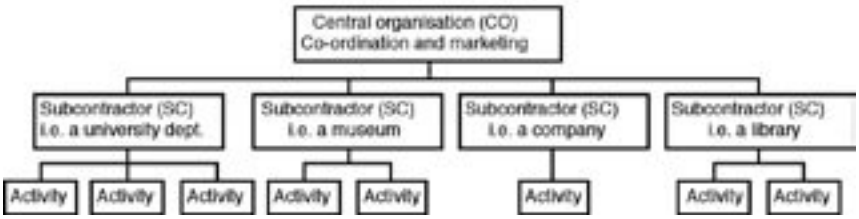

Fig 2.1.
Science Communication Event – organising local event

The central organisation (CO) leads the organisers of the individual Activities, here called subcontractors (SC), sometimes also called participants. The organisational structure could look like the simplified diagram below.

Many different types of SC are chosen for Science Communication Events. Some organisers work only with universities and publicly funded research institutions, whereas others involve companies, libraries, media and schools to play an active role, not only as consumers of Activities but also as organisers in their own right.

Regional and national Events will involve a more or less formalised system of Regional Coordinators (RC) in order to cover the country, whereas local Events can usually manage most of the Activities from the central secretariat (see below)

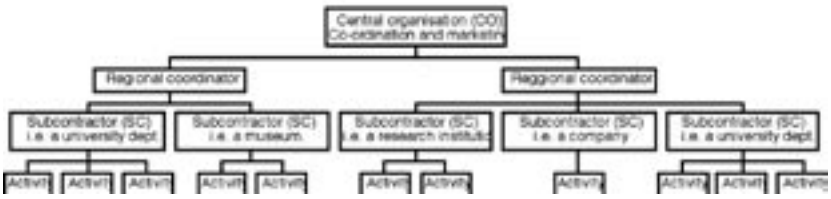

Fig 2.1.
Science Communication Event – organising national event

This means, of course, that a whole layer of communication is added to a regional/national Event by organising the regional coordinators (RCs). At the same time the difference in scale will make it very hard for a national organiser to have the same central control of content and quality as a local organiser, no matter how well the regional structure is managed. Obviously, additional staff would make more detailed control possible.

For regional/national Science Communication Events, the relations to the RCs must be very good in order to maintain quality on a local level. The central organisation must "nurse" the RCs in order to provide them with "ownership" of the Science Communication Event. Some organisations (eg. Denmark) manages to supply the RCs with funding for marketing and activities. In this way, it is easier to ensure a common "look" of the marketing (branding) and quality of the Activities and also to ensure that the RCs take part in the evaluation of the Science Communication Event.

Below is a "checklist" for relations between the CO and the RCs:

- Writing a contract describing the relationship between CO and RC
- Maintaining good communication links through newsletter and personal meetings for planning and evaluating
- Clear (SMART) objectives on what is to be achieved (see purpose and evaluation chapters)
- Clear responsibilities (for example on local marketing with local media, only approaching local sponsors, using the logos of national sponsors)
- Marketing: displaying the common brand and logo at pre-determined locations with places for the local and/or institutional look and logo (university logo etc.), responsibility for press communication
- What kind of Activities, openings (making sure there is no clash of events for the media and VIPs) or other special events
- Reporting on the monitoring data from the Event (sending standardized reports on the number of visitors, pictures or videos for marketing the next Event etc.)
- Financial control (reporting back on the budget needed and spent)
- Evaluation (participating in the general evaluation, discussion, plan how to improve or include new ideas or drop other ones)

The staff of the CO often have a communication background or at least a long experience of organising Science Communication Events. Subcontractors may not have the same experience, and therefore it is an important job for the CO to train the SCs to become successful science communicators.

One example is an institute of a university that wants to take part in an exhibition at the town hall square. Or a library, whose non-scientific staff want to present science for the local population. Or a company that wants to open its doors to school children during a science week.

Experience from the Science Communication Events visited shows that the communication skills of subcontractors increase very much after participating in a Science Communication Event for a few years. Also, that communication experience learned by participating in a Science Communication Event will be used at other times than at the Science Communication Event. It is therefore an important point, that Science Communication Events, apart from creating dialogue between science and society, also help in raising the overall communication skills of the scientific community.

Relationship with the scientific community

Science Communication Events are, by their nature, closely related to scientific institutions. It is the very purpose for most Science Communication Events to facilitate the meeting between scientists and the public in an informal and discursive manner.

Therefore, the organisation behind the Science Communication Event must maintain a very close relationship with the scientific community.

This can be done in a number of ways:

- get University rectors elected to the board
- invite renowned scientists and their local science community
- organise pre-conferences with the rectors, deans and scientists on how to structure their contribution

- have (ir)regular meetings with scientists or science administrators
- include comments (and pictures, logos) from scientists into the marketing information material
- issue (or fund) separate brochures for the Activities in science institutions
- sell books of national scientists in the Science Communication Event shop
- reserve some place for science and scientists and their institutions on your website

2.3 Best practices and outstanding ideas

	LOWER SILESIAN FESTIVAL OF SCIENCE
	Wroclaw, Poland
	URL: www.festival.wroc.pl
	Institution: Association of academic schools in Wroclaw
	Contact: Kazimiera A. Wilk
	E-mail: kazimiera.wilk@pwr.wroc.pl

Engaging universities. In Wroclaw, the festival organisation consists of representatives from 15 local institutions that each has a representative on the Executive Committee. Furthermore, all institutions have a general coordinator and with local and regional coordinators, the total network of coordinators sums up to 51. This creates a strong community feeling around the festival, and one sign of this is, that the festival Activities are very visible (posters and flags) in all of the participating institutions.

	DANISH SCIENCE WEEK
	Denmark
	URL: www.formidling.dk
	Institution: Danish Science Communication
	Contact: Mikkel Bohm
	E-mail: mb@formidling.dk

Danish Science Week: Strong board open doors. The Danish Science Week is managed by Danish Science Communication, a non-profit organisation supported by the Ministry of Education, Ministry of Science and a number of companies and foundations. The organisation employs 5 FTE, of which roughly half work with the science week. Danish Science Communication has a board of trustees with VIPs from industry, universities, organisations, science centres and the media. The board members are individual "ambassadors" for the Science Communication Event and help to promote it. For instance, the confederation of Danish Industries has a seat oin the board and has actively supported the Event financially and through opening doors to companies.

Best practises: staff

Vetenskaps festivalen	**INTERNATIONAL SCIENCE FESTIVAL GÖTEBORG**
	Göteborg, Sweden
	URL: www.goteborg.com/vetenskapsfestivalen
	Institution: Göteborg & Co
	Contact: Annika Lotzman-Dahl
	E-mail: annika.lotzman.dahl@goteborg.com

Marketing professionals with the aid of scientists. The organising group of this Science Communication Event is based in Göteborg & Co., a promotional office for the city of Göteborg. As such, the organisation gets easy access to use much of the marketing infrastructure used for other big city events. The staff of the festival consists of 7 FTE's, all non-scientists, but experts in communication and education. The expertise of the secretariat makes the festival extremely well marketed in the city and its surroundings. The secretariat does not view their lack of scientific training as a big problem, as the project management has very strong formal and informal connections to the local scientific community and appoints scientifically trained people to have certain responsibilities in relation to the themes of the festival.

	EDINBURGH INTERNATIONAL SCIENCE FESTIVAL
	Edinburgh, Scotland
	URL: www.sciencefestival.co.uk
	Institution: Edinburgh International Science Festival
	Contact: Simon Gage
	E-mail: simon@scifest.co.uk

Edinburgh International Science Festival: Committed, professional staff. In Edinburgh, the staff is carefully selected for skills in the most important areas. Of the 8 FTE, two are permanently engaged in fundraising! A year round project involves taking science festival Activities out to schools all over Scotland.

Best practises: relationships with regional coordinators/subcontractors

	NORWEGIAN SCIENCE WEEK
	Norway
	URL: www.forskningsdagene.no
	Institution: The Research Council of Norway
	Contact: Anne Riiser
	E-mail: ari@forskningsradet.no

Norwegian Science Week: strong network of regional coordinators.
In Norway, the Science Communication Event organisation does not organise its own Activities, but leaves it to the regional coordinators to recruit the individual subcontractors. The regional coordinators recruit participants. It is their responsibility to make sure that participants have appropriate qualifications. The Event organisation issues guidelines on the quality of the Activities, recommending interactive events before "old-fashioned" lectures and urging participants to consider their audiences carefully. In addition, the Event organisation invites the regional coordinators to travel to other countries to have a closer look at the Science Communication Events there. As an example, the group visited the UK to see the National Science Week, organised by the BA (British Association for the Advancement of Science). The National Science Week manager froorm the BA visited the November meeting of coordinators to talk about evaluation of Events. The Event organisation keeps in touch with participants and co-ordinators by sending out about 30 letters and newsletters each year. The last email, just a day before the start, is called the "good luck"-mail.

	SCIENCE DAYS
	Rust, Germany
	URL: www.science-days.de/kinder
	Institution: Förderverein Science und Technologie e.V.
	Contact: Joachim Lerch
	E-mail: j.lerch@t-online.de

Guidelines for exhibitors.
Participants at the Science Days are carefully chosen and must follow a set of guidelines described in a manual. The organisers of the Science Days urges participants make their Activities interactive and a lot of hands-on experiences are preferred. In addition the topics should have a large variety. Learning with all senses is likewise recommended like the reduction of the level of difficulty of facts. The manual ends with tips for a good design of the stand and the correct representation of text labels.

Best practises: relations to the scientific community

	SCIENCE FESTIWAL, WARSAW
	Warsaw, Poland
	URL: www.icm.edu.pl/festiwal
	Institution: University of Warsaw
	Contact: Maciej Geller
	E-mail: m.geller@icm.edu.pl

Organised by scientists themselves.
3 FTE in the Central Office and more than 100 local coordinators are responsible for all of the Activities in their institution. The Scientific Board initiates main debates and evenings under the title "Meet contemporary science and scientists". The Board also initiates new Activities and contact with new scientific communities. Coordinators are responsible for the content of their Activities. According to evaluation procedures the number of failed Activities constitutes no more than 1–5 percent of the overall program (circa 800 activities in 2003, 2004 and 2005).

	INTERNATIONAL SCIENCE FESTIVAL GÖTEBORG
	Göteborg, Sweden
	URL: www.goteborg.com/vetenskapsfestivalen
	Institution: Göteborg & Co
	Contact: Annika Lotzman-Dahl
	E-mail: annika.lotzman.dahl@goteborg.com

Using a scientific board. The Scientific board has proven to be of great benefit in three ways: Firstly the board members represent a broad range of scientific fields and are all asked to join the board with their general interest in science and science communication as basis. The board members often come up with ideas and suggestions – and they are discussed among them, which gives further input for the staff to arrange Activities. Secondly, the board members have the integrity, knowledge and courage to say no, or at least question, proposals that may be doubtful. And finally the members have extensive networks, both within scientific fields and among potential sponsors.

2.4 Summary

Type of organisation	Possibilities	Problems	Recommendation
Part of university	Clear connection to science, easy access to lecturers and university facilities.	Danger of Science Communication Event being very "internal" university "conference-style". University staff may not be well-trained in marketing	If targeting a broad audience, remember to also use venues outside of the university. Events specially designed for schools (by people who knows the schools) will be very successful.
Independant non-profit organisation	Independent from specific interests. Will usually be respected for "working for a noble cause". Will often work like a professional cultural event organisation.	Will usually have difficulties attracting long-term funding.	Must have a strong board in order to keep contacts with sponsors and politicians.
Governmental organisation	Has a strong background in governmental science communication policy. Can usually get long-term funding.	Vulnerable to political change. Can be closed down easily.	Must show very good evaluation results in order to keep the political support.

3. Management

Joachim Lerch Science Days, Freiburg, Germany

3.1 General overview

Project Management can be defined as the "full responsibility of executive duties, organisation and technology, from the conception to the realisation of the project", The Project Management Institute (PMI: http://www.pmi.org/info) describes the concept of project management as follows: "Project Management is the application of knowledge, skills, tools and techniques to project activities to meet project requirements."

Roughly outlined, the Project Management of a Science Communication Event corresponds with other big events. However, Science Communication Events prove to have unique features, which we will address within the framework of this chapter. During a Science Festival for example, many individual presentations with different formats and requirements need to be co-ordinated and prepared.

The Event organisations within the framework of the EUSCE/X project developed completely different procedures to organise and conduct their individual Events, since the format and requirements of the Science Communications Events differ considerably. However, the project management of many Science Communication Events was influenced by one, or more of the following factors:

- The number of staff participating in the planning and how many are available.
- Whether the institution is responsible for the organisation of a local or a national event
- Whether the presentations of a local Science Communications Event are conducted at several venues or at a central site
- The size of the Event (e.g. number of partners, number of visitors)
- Whether the budget extends to the employment of subcontractors
- Whether subcontractors are available for certain tasks (e.g. setting up computer networks)

The tools observed in use for project management span from simple to-do-lists up to a strong reliance on project management software. If the Science Communication Event project management is not operating on a professional basis, because the organisers lack experience, the management of a first Event, is often not structured very well. If the Events take place regularly, the project management of the Event improves with each successive year that it takes place. Evaluation of the Event is particularly useful for improving future project management strategies.

Since Science Communication Events include many participants, the communication skills of the project team are of great importance for the success of the project. Since unexpected situations are likely to arise in every project, successful project management needs to produce situations which are crisis and challenge-proof.

The following factors are extremely important for successful project management of a Science Communications Event:

Integration Management	The individual steps and tasks of a project are defined and co-ordinated here.
Scope Management	The management of contents and scope is responsible for the realisation of determined project goals and for providing alternative solutions in the event of deviation from these goals.
Time Management	Setting and meeting deadlines e.g. those related to target groups, while continuously referring to the project plan.
Expenses Management	Aims to follow the budget precisely. Recording of expenses is essential. If there are deviations, counter measures must be initiated.
Quality Management	By studying the documents about the tasks carried out and their results, they can be analysed and evaluated. This helps to improve and standardise the way tasks are carried out in the future.
Resource Management	The efficient assignment of staff for individual tasks of the project.
Communication Management	Extensive and co-ordinated communication between all project participants is an important component of the project management.
Risk Management	The estimation of risks, connected to the project. This may concern a financial risk, or one related to technology. Risk management is of considerable significance for large and complex projects.
Procurement Management	Co-operation with partners and suppliers

Project management can be divided roughly into four phases:

- *Objectives:* To begin with, a project analysis is conducted, which next to the intended targets (contents, costs, extent and time) will also include potential problems. For very big Science Communication Events a feasibility study is recommended.
- *Planning:* During this phase, the team is assembled and it plans tasks and courses of action to be taken. Dates, costs and risk management are also worked out, which is where the 'milestones plan' plays an important role.
- *Implementation:* This is the phase when the plan becomes reality. This phase is characterised by the control of project progression. Any deviations within the project plan are corrected when put into practice.
- *Conclusion:* The results are presented, every phase evaluated and significant conclusions documented.

3.2 Different models of management and their analysis

The project management of Science Communication Events can not be presented extensively within the framework of this White Book, because the objectives and locations differ considerably for each Science Communication Event. The concepts presented in this chapter must therefore be adjusted accordingly. The following information merely serves as a list of suggestions and is by no means exhaustive.

As already mentioned, some details concerning the project management of local Science Communication Events differ from national ones. Because of this, the individual characteristics will be treated as supplements in a special section.

A comparison can clearly be exemplified here:

	Organisers of local SCE	Organisers of regional/national SCE
Contact with participants	direct contact	usually no personal contact
Technical planning of locations	responsible	usually not responsible
Quality control	possible	usually not possible
Press contacts	direct contact	normally no direct contact

Project Management of a medium-sized local Science Communication Event

For all Science Communication Events, it is useful to carry out thorough assessment and planning at the beginning of the project and allocate preliminary responsibilities. Furthermore, it is essential to clearly designate interim targets (milestones). The most important factors to be addressed during the project management of a Science Communication Event are outlined below.

Setting objectives

If a Science Communication Event is conducted for the first time, clear objectives need to be set. This will, amongst other things, dictate the future development of the project. Questions to consider when setting targets:

- For what reasons would you like to run a Science Communication Event ?
- Which topics and formats are to be used primarily?
- Which target groups would you like to reach?
- Should admission be charged or not?
- Will groups have to make reservations?
- Which participants should and could participate in the realisation of a Science Communication Event (only scientists, or also companies, schools, teachers, NGOs etc.)?
- At which locations will your Science Communication Event take place (in the rooms of a university, in big exhibition halls, on a public site, etc.)?

The experiences of many Event organisers in Europe, shows that the basic decisions relating to locations, partners, target groups, means of communication etc., are difficult to change during the latter stages of planning. If, for example, a Science Communication Event is strongly targeted at a certain group (e.g. pupils), an extension to reach other groups may only be possible through considerable expense on marketing. The image of a Science Communication Event therefore tends to be established during the first few years that it takes place.

Clarifying and designating responsibilities

The work rotas and the responsibilities of staff must be clarified by the Science Communication Event organisation. The team should be highly flexible to adapt to any changes that may arise during the planning process. It is therefore advisable, not to allocate the individual tasks to one person, so that work on the project could continue in their absence. Member of staff who are able to put their mind to a variety of tasks are especially desirable.

Financial Plan

The realisation of a Science Communication Event is not possible without financial planning. Financial problems are the main causes of failure in Science Communication Events . A much longer planning period is needed for the preparation of a new Science Communications Event rather than if it is being held for the second, third time etc. This particularly applies to the handling of sponsors, who will generally be more willing to offer financial support, if they are already familiar with the Science Communications Event.

It is highly recommended that you draw up a financial plan, especially for a new SCE. This can then be used as part of the Sponsorship Proposal. The master plan could be of the following structure for example:

1. Summary

2. Description of the plans

- 2.1. Starting situation
- 2.2. Vision
- 2.3. Relevance
- 2.4. Success factors
- 2.5. Strategy
- 2.6. Capital requirement
- 2.7. Risks

3. Organisation Management

- 3.1. Organisation structure
- 3.2. Personnel

4. Plan: The Science Festival in….

- 4.1. Overview of entire plan
  - Activities
  - Pedagogic-didactic concept
- 4.2. The location
- 4.3. Selected examples of Activities
- 4.4. Co-operation partner
- 4.5. Participation of sponsors
- 4.6. Participants
- 4.7. Preliminary time schedule

5. Requirement analysis (Market)

- 5.1. The Science Communication Event in general and its social context
- 5.2. Comparable projects in domestic and foreign countries

6. Target groups

7. Marketing

- 7.1. Marketing measures
- 7.2. Sponsorship-Partner

8. Financial scenario and planning

- 8.1. Calculation of the Science Communication Event
- 8.2. General assumptions, scenario

9. Complete evaluation

A budget plan must consider all of the necessary expenses and should include a risk surcharge of up to 10%. Extensions of the project (e.g. build-up of an additional tent, or an additional science show etc.) should be planned only after the financial means have been secured. See chapter 10.

Finalising the financial plan will allow for the rest of the project to move forward.

Participants: recruitment and selection

When a Science Communication Event takes place more than once, it is advisable to seek help from former participants. In some cases, sending a letter or an email will be sufficient. However, if writing to potential participants about a new Science Communication Event, you will need to provide a much more detailed description of the Event. Before the Science Days in Freiburg, Germany, first took place, the organisers had to conduct hundreds of individual meetings to convince participants to engage themselves. The advantage of such a thorough approach is that the organisers will meet and get to know all of the participants and can consult with them on matters of design and the selection of Activity themes.

To simplify the procedure, a special website for the potential participants should be set up. It should include general descriptions of the Event, application forms, timetable of key dates, information regarding the room plans and other advice.

The biggest challenge during the preparation of a Science Communication Event is ensuring communication with the large number of participants. By putting all of the information on a webpage for the participants, the responsibility for informing themselves on issues relating to the Science Communication Event lies with them and not the organisers. Nevertheless, regular newsletters to participants may help them in their responsibilities.

Selection procedure

The organisers of Science Communication Events will run a selection procedure to decide on the individual Activities that they want to include at the Science Communication Event. Regional and national Events tend sometimes to resist such a selection procedure, because it would be very expensive.

Proposals are evaluated and selected by the organisers, or a scientific advisory council. In some cases, they may re-consult with the participant and come to a mutual agreement over the idea. This way the organisers of Science Communication Events input their valuable experience into the projects – especially if the participants are taking part for the first time.

Developing marketing plans

Once the details of the Science Communication Event have been decided, a marketing plan should be worked out immediately. See chapter 11.

Media campaign

For the media campaign, all of the activities which are proposed for public communication should be planned, including press conferences and media partnerships. Possible media partners must be identified and contacts approached.

Finalising plans and logistical considerations

When a Science Communication Event is conducted for the first time, the planning process is likely to include new courses of action, so it is difficult to have an overall picture of the detailed planning steps before the process is fully complete. In order to aid the project management process of future Events, it is essential that each course of action taken is documented. Written decriptions of proce-

dures, as well as flow-diagrams, have proven to be the most effective methods for explaining specific actions. Year by year, they should be adjusted accordingly. These reference documents should include information detailing the most important factors of an event, for example:

- Responsibilities of participants (who is responsible, who participates and who must be informed?)
- Times (when does the procedure begin, when does it end and what are the intermediate steps?)
- Material requirements (which materials, devices, utensils are required; who provides them and when?)
- Personnel requirement (staff needed during the Event? When and where are they in operation?)
- Which tasks must be carried out?
- What is the planned course of action?
- How is communication during the Event achieved? (radio equipment, mobile phones, etc.)?
- Vital information (plans, telephone lists, ID samples etc)

Example: Procedures at the Science Days in the Europa-Park

- Implementation of the on-site-inspection partners
- Application procedures for partner
- Implementation of the teacher-information-presentation
- Application procedure for visitors
- Staff meeting, helper briefing
- Entry on build-up day, parking regulations, control
- Opening event
- Organisation office
- Dismantling, parking regulations, control
- Exhibitor passes
- Safety (fire protection, child missing, etc.) -> security check
- Press conference
- Entrance (ticket control, visitor guiding etc.)
- etc.

Room planning

Depending on the type of SCE, a room plan should be drawn-up and the space allocated to particpants. Requests from the participants in the application procedure should be considered and negotiated where necessary. Common room requirements:

- Size (drawing of the stand with measurements, location of sockets etc)
- Location
- Conditions (temperature, light, accessibility etc.)
- Power availability
- Water and sewerage
- Internet access
- Furniture
- Additional material (gases, ice, etc.)

The information about rooms and a draft room plans should be made available to view on the participant's website. Generally, several versions will be generated leading up to the start of the Science Communication Event. While considering room allocations, details regarding insurance should also be clarified. (N.B. there should be a general liability insurance available for organisers.)

Initial marketing strategies

When the date of the Science Communication Event has been set, the first advertisements (including posters and flyers) should be sent out. Mailing campaigns aimed at specific target groups (schools) can be particularly effective. Preliminary information for the press e.g. press releases, should also be drafted. See chapter 11.

Printing of programmes

The final programme should only go to print when no further major changes are expected. There should be a system to communicate late changes to the visitors. Some Science Communication Event organisations distribute their programmes exclusively via the Event's website, which also can be used for late changes in the programme.

Recording of technical needs

The participants' technical requirements for the presentation rooms should also be recorded. Depending upon the size of the planned event, this may generate a large amount of data. The recording and administration of this data using an online-database has proven to be very effective.

Example: database of the Science Days in Freiburg. With this database the following information is recorded:

- Contact data (institution, contact person, postal address etc.)
- Activity (title, theme, description)
- Requested location (building section, room, requested surface, etc.)
- Technical needs (power, water, sewerage, gas, Internet, furniture etc.)
- Names of staff (times of presence, for printing of passes)
- Hotel reservations (if an overnight stay is needed)

The database has several export functions available to convert the data into suitable EXCEL-charts (e.g. for mailing activities, name lists, pass printing, technology lists etc.).

Planning of Special Events

The time for the preparation and implementation of a special Activity within a Science Communication Event largely depends upon the intended size of the Activity. Examples of special Activities include:

- Opening presentations
- Press conferences
- VIP tours for sponsors
- Information presentations for teachers

Logistics Action Plan

To ensure that the Science Communication Event runs smoothly, Events that take place at central locations require careful logistical planning, based on accurate data. All of the available data should be sorted and used to write an action plan, which should then be made available to all participants (participants' website). This plan may include the following information:

- Beginning and ending of construction, assembling and disassembling
- Opening hours of the organisation offices
- Communication at the Event site and during the days of the Event (mobile phone, fax, etc.)
- Presence of security personnel (after Event closing)
- Provision of certain working objects (fork-lift)
- Dates for certain controls (security check)
- Dates for certain services (setting-up tents, rooms, Internet access, sign posting, utilities, etc.)
- Larger set-up activities
- Delivery times for materials
- Arrival of large vehicles (laboratory trucks etc.)
- Dates for meetings and rehearsals (briefing for helpers, sound check etc.)
- Catering dates
- Dates for the filling of control positions (e.g. entrance control, pass control etc.)
- Dates for cleaning personnel
- Arrival time and collection of VIPs
- Provision of information material
- Cashier hours
- Parking information

Event implementation

I Set-up phase

When setting-up central Events (e.g. inside an exhibition hall) difficulties may arise from the participants arriving at the venue at different times. It is therefore recommended that the larger rooms, where there are many things to be moved in and out of, should be dealt with first. It is particularly important to have a well-staffed loading area, to ensure unloading and loading is carried out swiftly. It is also important to set and display clear parking rules (when, where and how long one can park for), because illegally parked vehicles can quickly cause problems. Parking tickets with the driver's mobile phone number, institution and room number printed on them should be clearly displayed.

At medium-sized and large Events, all of the staff and participants should be supplied with and carry passes (with photo) so unauthorised people can be quickly recognised. The possibility of thefts can thus be reduced considerably.

When all of the equipment and rooms have been set-up, a safety check should be carried out. Here are some examples of the things that should be considered:

- Are the gas bottles sufficiently secured?
- Are the gas burners secured from overturning?

- Are the cables secured so nobody will trip over them?
- Can you be sure that no power conducting lines can be touched?
- Are enough fire extinguishers available and are their locations marked as such?
- Are the escape routes clear and well marked?
- Are movable parts around which could cause injuries?
- Could any of the experiments be dangerous in any way? (fire, explosion, glass breaking, chemicals, radioactivity, other radiation, burning, electric shock etc.)
- Is the personnel equipped with gloves, goggles and appropriately trained for emergency cases?

II Opening and implementation

At the begin of an Event, most of the plans have been finalised. Nevertheless, additional staff ("stand-ins") should be available to solve any unexpected problems that may arise.

Having an organisers' office has proven to be very helpful. A storage place for material and equipment can also be provided there.

Visitors can easily recognise staff if they are wearing a highly visible uniform (coloured T-shirts, Logo on the jacket, or similar).

During Events lasting several days, short discussion meetings with all the staff and helpers are recommended every day after closing time, to discuss any problems and devise possible solutions. Taking minutes of these daily meetings will serve to improve future projects beyond the current event.

A photographer should take photos of every room and activity for the organisers' records and press material. He/she should ideally be briefed, in order to obtain good quality photographs for use at the next event (advertising, poster and flyer design). Corresponding agencies could be employed to collect press clippings and log TV coverage.

III Dismantling and afterwards evaluation

At the end of the Science Event, all of the equipment should be dismantled and moved in an organised fashion. (N.B. checking passes at this stage is very important to avoid any thefts.) Examples of suggested post-event evaluations:

- Collating press clippings to produce a summary document
- Writing a financial statement
- Producing a summary report
- Collating photos and TV coverage

It is recommended that a summary CD of photos, press reports, TV-broadcasts, the evaluation results and other information about the Event is sent to the staff, sponsors, other stakeholders and to the participants of the Science Communication Event. It can also be mailed to future sponsors. (See chapter 12 on Evaluation).

Science Communication Events demand skilled project management, since they often consist of many individual presentations and involve a lot of people. The plan must be clearly structured and responsibilities allocated effectively.

General Management	Financing	Marketing	Media	Evaluation
Establish general data: dates, theme concentration, sites (renting of rooms and halls)				
Staff: testing competence and responsibilities	Establishing a budget and financing plan; securing finances			
Website for participants; Call for proposals Selection procedure; establishing program		Drawing up the marketing plan	Working out the media approaches	
Developing procedures, flow diagrams				
Booth and room planning, recording technology needs - traditional (fax, form) - Online database	Calculation for each activity			
		Flyer and Poster mailing; Public website, advertising	First press information	Preparing evaluation and monitoring
		Programme printing, mailing		
Planning of individual Activities: - Opening - Press conference - VIP tour Mailing with invitation		Mailing to schools and specific target groups		
Final schedule for partners: - Construct				
Briefing staff and other helpers				
Opening implementation		Venue designing	Press conference;.Assembly of press clippings and TV-participation	Questioning of visitors and participants and other monitoring activities
Draw-up of summary	Draw-up of finance statement	Summary-CD finishing and mailing	Press clippings	Evaluating the Evaluation