

# Outrageous Outreach — Unconventional Ways of Communicating Science

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## Summary

The golden rule of communication, advertising, public relations and marketing is “*follow your target group*”. In this article, we look at how this mantra is applied in science communication and public outreach. Do we *really* follow our target groups? Do we regularly research the behaviour, interests and preferences of the individuals behind the demographic categories? Or do we just *believe* that we are following them when in fact we are “preaching to the converted” — the demographic group that is already intrinsically interested in science and actively scours the science sections of the national newspapers?

As science communicators, it is not only our social duty and moral *obligation* to communicate scientific results to laypeople, but it is also a *necessity* if we want society to approve continued funding for scientific research and also to inspire young people to become scientists. In today’s fast-changing world of the new media it is no longer sufficient to walk the safe and well-trodden path. We need to ensure that our organisations “follow the target groups” by following the latest social trends, by being present in pop culture, teaming up with commercial partners, and engaging in other activities that build a bridge between the often isolated scientific world and the “real world”. This article deals with these types of communication, here called unconventional or “outrageous” outreach.

## Introduction

The phrase “knowing your target groups” also means trying to predict future trends in their behaviour. Looking ten years into the future, the advertising agency PHD introduces us to tomorrow’s adults. Watch the video<sup>1</sup> or read the script excerpt below.

*[...] you’d better start upping your game. ‘Cause you haven’t seen anything like us yet. In just ten years from now, we’ll be buying and influencing buying in ways that will confound you. We won’t just watch your ads. We’ll expect smart, tailored content. Based on our social graphs. Tailored for me, me, and me! We want to interact with it as we watch it, but not just with touch. With voice, gesture, with intent. You’d better embed everything that is featured with additional information. [...] and we mean everything, Everything! [...] Because we expect to double tap on anything to get more information. Don’t worry [...], we’ll spread*



**Figure 1.** The ESO Residencia in the Atacama desert is blown up in the James Bond movie, *Quantum of Solace*. This movie brought significant visibility to ESO, and the Paranal Residencia in particular gained extensive coverage in architecture magazines and books, bringing the ESO brand to a target group that could not otherwise have been reached. A blockbuster movie reaches the global market, especially the younger audience and through such a movie, the science brand can make its way into popular culture, reaching people who are not always aware of astronomy news. Credit: QUANTUM OF SOLACE/© 2008 Danjaq, United Artists, CPII., 007 TM and related James Bond Trademarks, TM Danjaq.



## PHD Worldwide We are the Future



Figure 2. Screenshot from the video "We are the future" from the advertising agency PHD, USA, February 2011. Credit: PHD, USA Source: scaryideas.com.

*it through our networks and co-create with you. And when we do buy, there are normally more of us than there are of you. We can change your business in one trade. As long as the deal is on. Augmented reality will become the new reality. AR aps will almost function like special skills to help us navigate reality more effectively. [...] And you'd better get used to paying us. Our browsing influencing and purchasing data. Will make some of us ... pretty rich. But don't overstep the mark; otherwise we'll block you. Mass blocks kill brands over night and keep you up all night. [...] you'd better start upping your game, cause you haven't seen anything like us yet."*

Are you ready to communicate science to these individuals, inform, educate and inspire them to appreciate science or become scientists themselves?

### A new model of communication

Just a few years ago communicating science was relatively straightforward and linear; both the process and the flow of information were clear and well-defined. Organisations sent out press releases to the mass media, which acted as gatekeepers and decided whether to distribute the news directly to the general public or to reserve it for more specialised audiences. Consumers were then either indifferent or

interested in the information offered. Everyone knew their place in this scheme and surprises were rare.

Fast-forwarding to today, we are experiencing a chaotic explosion of alternative information channels, such as RSS feeds<sup>2</sup>, social media and other online platforms, which send waves of uncontrolled information towards us. Social media channels exist in the territory of dialogue, where any action is bound to have reactions, good or bad, that spread quickly. We are certainly long past the one-way communication of the *Mad Men*<sup>3</sup> era. One-way, two-way? Where are we today?

The traditional mass media channels are losing ever more ground to new or unconventional channels of communication. As an example, social media are becoming *mainstream* (and no longer just *new media*), opening a way into a fascinating territory — one where "the public" is now made up of individuals with personal opinions, ideas and preferences. Each individual connects with hundreds of other individuals and has his or her own sphere of influence. Information spreads rapidly across this complex landscape, travelling from one group to another. The power of socially fuelled word of mouth is incredible, but extremely hard to monitor (Usher et al., 2011). Through the social media the individual is empowered to become an opinion

leader and a gatekeeper for his community, and sometimes for the traditional media. He can be approached directly by organisations and approaches them directly. He is simultaneously the consumer, producer, evaluator and influencer. The power is in his hands!

Communication continues to take place in the traditional public spaces, but it also happens in private, where personal experience is the key to ensuring that information is passed from one individual to another. Seventy eight percent of consumers now trust the opinion of their peers more than those of journalists or advertisers. Twenty four of the 25 largest newspapers are experiencing record declines in circulation because we no longer search for the news; the news finds us (Boxhill Institute, 2010).

In this immense chaos, we know one thing for certain. As science communicators we need to reach our target groups. But are we sure we actually know our audience? Do we read teen magazines or glossy magazines? Do we know the hottest gadgets on the market? The latest trendy leisure activity? Have we followed our target group to the places that they regularly visit? Have we checked the keyword trends of Google searches (Google Trends, 2011)? Have we checked the latest studies on consumer habits? And adapted our communication habits accordingly? Or have we — when faced with restricted budgets and manpower — just done what we have been doing for decades? Publishing press releases, making print products and arranging exhibitions for a target group that exists in our minds only as a result of our own suppositions, practical needs, likes and dislikes?

In a world where both public and private spaces are invaded by both information and noise, where the entertainment and gaming industries are the main attractions for many, and especially for the younger generation, traditional ways of communication and branding are no longer sufficient. We can no longer afford just to send out press releases, we need to adapt to the new communication landscape. It becomes vital to search for today's individuals and find unconventional channels, or at least unconventional approaches for traditional channels, in order to stand out and make our message heard.



Figure 3. Advertising a new Audi model at ESO's Paranal Observatory. Credit: Audi GmbH.

With tongue in cheek we have named this new type of communication “outrageous outreach”, as it is often viewed with scepticism and mistrust. Since our field of experience is astronomy outreach, our examples come from this area, but the ideas can be applied to any type of science communication.

### Unconventional outreach

Unconventional outreach is the process of communicating science with the public in an environment where individuals are most open to receive information because this medium is frequented by the target by choice and for pleasure, and not as a result of a call for action from the science communicator. In this context, information takes familiar forms that individuals can relate to or enjoy, while the message is integrated naturally and in context, and communicated in a language that the target understands.

There are several features that characterise unconventional outreach. These can be one or more of the following. Unconventional outreach:

- proactively goes after the target to meet him on his own “territory”;
- is niche-targeted, and not addressed to the masses;
- is personalised, with a human touch and direct;
- tells a story and creates a bond;
- is interactive and engaging;
- is unexpected and original;
- is passed on by word of mouth and can often be controversial;

- adheres to the targeted individuals’ beliefs (e.g., partnerships with entities that share the same values; for example teenagers who drink Red Bull associate it with energy, meaning that Red Bull’s communication needs to express energy);

### Why do unconventional outreach?

Science communicators have a public duty to communicate the results of scientists’ work, which is most often funded with public money. Therefore, unconventional outreach should not *replace* traditional communication, but *complement* it. While traditional means of communications are still important parts of any communication plan, the fact that they are becoming ever less effective should be a strong enough reason for looking into alternative ways of engaging with the public. Scientific organisations are responsible to the taxpayers, and in principle they should not say no to opportunities that come from the outside world, unless they can be proven to be detrimental to the work of the organisation. Scientific organisations are not independent ivory towers that can decide whether science communicators (for instance, through proxies like the entertainment industry or commercial companies) “give” the taxpayers what they request. In principle Science communicators are obliged to communicate as part of our “contract”, as long as it does not disturb the primary functions of our organisations.

A recent article in *Nature* (Russo, 2010) explains how the head of NASA’s Mars Rover

science team, Steve Squyres, handles the issue of balanced transparency. In the article Squyres explains that since the progress of the rovers would be slow as compared to the frantic pace of real life, a different and more involving process was needed. “*What our rovers do in one day, a field geologist can do in 30 seconds,*” he explained. But since the project had a budget of 800 million US dollars from the taxpayer he decided on a fully open and transparent operation for the Mars rovers. “*I didn’t feel we had the option to say, ‘No, we don’t feel like doing media today.’*” And understandably the public-relations personnel were nervous. As Russo (2010) states: “*Admitting uncertainty could make scientists look uninformed or unprepared. But before long, they saw the value of Squyres’s approach. The researchers could present a clue uncovered by a rover, offer possible explanations, and then say, ‘Tune in tomorrow to see whether we can find the answers.’*”

It is important to present to the management in charge of a given organisation’s image that there is a need to show the human side of science and that the process by which results are achieved is often as interesting to outsiders as the results themselves. If we engage people by making them part of the dilemmas and problems that scientists and engineers face every day, rather than presenting a perfect facade of omniscience, we make scientists look like real people, and this can help to build a bridge between the scientific world and the “world outside”.

Among the flood of information and noise, unconventional outreach is necessary also to position an organisation as “a thought leader” (Weinberg, 2009) in the sector it operates in, and to transform the organisation to the number one source of knowledge in that area. For this to happen, people need to know that the organisation exists, receive relevant and timely results from the organisation and, not least, like the organisation.

- **How do we make sure that people know that we exist?** By following the trends of the target groups and constantly trying to expand the audience that we reach, while retaining the current target groups. Some of the best new methods are direct interaction via social media, exposure in popular culture and contextual interactions.



- **How do we make sure that people receive relevant and timely results?** By effectively harvesting the information available within the organisation and the closed community and by having efficient workflows for disseminating it to the target groups.
- **How do we get people to like us?** By communicating on their terms — their topics, their timing. For instance by reaching out to people and engaging in conversations with them whether through a movie, a book, a contest, a blog post, or an exchange of tweets.

### Examples of effective unconventional outreach

#### #Meteorwatch

Meteorwatch<sup>4</sup> was a Twitter event organised in 2009 by the Newbury Astronomical Society as part of the International Year of Astronomy 2009 (IYA2009). Initiated as an entertaining way for people to experience astronomy at first hand by watching the Perseid meteor shower and sharing their impressions via Twitter, it quickly became a global phenomenon.

Meteorwatch started at 21:30 BST on Saturday 30 May 2009 in the UK with @NewburyAS<sup>5</sup> twitterer Adrian West<sup>6</sup> tweeting and it lasted until Sunday morning. #Meteorwatch<sup>7</sup> was the Twitter hashtag used by the organisers to keep track of the tweets,



**Figure 4.** Milky J poses in his homemade spacesuit. Credit: Maggie Masetti.

which began to pour in. After the first hour, the number of people following the event had gone beyond all expectations, and the Newbury Astronomical Society blog<sup>8</sup> had received over 3000 hits. People from all around the world were being encouraged to go outside and look at the sky with friends and family, and for many of them this was the first time that they had seen meteors. Thousands of messages were posted by people of all ages and from all around the globe. Nearly 300 000 followed the event on Twitter, downloading photos, commenting live, asking questions, describing what they were seeing in their own words and many of them were even excited enough to think of taking up astronomy as a hobby.

*"It was the most talked-about website in the USA, Europe and Asia and all co-ordinated from our little chunk of West Berkshire."* said Adrian West to newburytoday.co.uk<sup>9</sup>.

The event attracted the interest of the traditional media as well. Meteorwatch was reported nationally by the BBC, by local radio and television stations, by most of the major newspapers, as well as by websites and blogs worldwide. Just after midnight on the first evening, Meteorwatch became the most popular topic on Twitter, while on the second evening the event was still one of the top trending topics. Meteorwatch undoubtedly demonstrated that astronomy can be entertaining and accessible and that social media can create events that can go viral.

#### Hubble Gotchu@NASA Goddard

On 26 April 2010, *Late Night with Jimmy Fallon*, a popular talk show from NBC<sup>10</sup>, was "interrupted" by a member of the audience, under the name of Milky J<sup>11</sup>, who started talking and rapping about the Hubble Space Telescope, while showing famous Hubble images. The moment was organised by show producers on the occasion of Hubble's 20th anniversary and it quickly went viral, while the tag line "Hubble Gotchu" entered the vocabulary.

NASA responded creatively, by welcoming Milky J to the Goddard Space Flight Center to debate with the James Webb Space Telescope (JWST) team<sup>12</sup>, taking advantage of this opportunity to generate awareness of

the successor to Hubble. A second video<sup>13</sup> filmed at NASA was presented again during the night show.

According to *Goddard View, 2010*, the JWST Observatory Manager, Paul Geithner stated: *"I think the sketch is great for NASA and huge for JWST because it exposes us to a broader, hipper audience."*

#### Racing Green Endurance@VLT

The Racing Green Endurance (RGE) team<sup>14</sup> and Radical Sportscars worked closely to produce the stunning SRZero electric sports car. The team drove the 400-bhp twin-motor supercar the full 26 000-kilometre length of the Pan-American Highway with the aim of communicating their core values of sustainability, education and the promotion of science, engineering and adventure to the widest possible audience.

On their way from Alaska to Ushuaia, the electric car team wanted to visit ESO's site at Paranal, where the world's most advanced visible-light telescope has its home. ESO welcomed the team to La Residencia, and gave a tour to the crew, also allowing them to drive the electric car around the four



**Figure 5.** The Racing Green Endurance electric car speeding away after visiting ESO's Paranal Observatory. Credit: RGE/ESO.

Unit Telescopes of ESO's Very Large Telescope<sup>15</sup>. The event was promoted via the social media, and mass-media representatives were invited to the site as well. Moreover, the BBC accompanied the RGE team and documented the whole trip, and as a result, ESO was featured in the BBC documentary, reaching a wide audience. The RGE team also produced a YouTube video about their stay at Paranal and wrote a delightful blog post about their experience<sup>16</sup>.

The RGE project targeted a niche that ESO normally does not reach — ecologists, engineers interested in electric vehicle technology, and sports car enthusiasts. By partnering with them, ESO managed to create a natural link between the technology used by the electric car and the technology used at Paranal. Moreover, the ESO brand was exposed to the Chilean community and far beyond thanks to social media and the BBC.

### Angels and Demons @CERN

Dan Brown's bestseller *Angels and Demons*, which was later filmed, centres on CERN in Geneva. The "bad guys", the Illuminati, steal a canister containing antimatter — with considerable destructive potential — from CERN and the "good guys" go on a dramatic chase to recover it. The book and movie are both examples of a highly successful "science in pop culture" cam-

paign exploited by CERN<sup>17</sup> and of the unavoidable compromises involved in such a cross-over project, as there were inevitably scientific errors and artistic license taken in the book and movie.

*Angels and Demons* gave CERN impressive worldwide recognition and received no brand damage despite the fact that CERN was the identified in the book and movie as an institution that made a global disaster possible. CERN seized the opportunity to use the massive media coverage of the movie to explain to the world exactly what they are doing: they had a special website dedicated to this collaboration and ran in-school tours to explain the science background as well as facts and fiction in the movie and the book.

### Other examples of unconventional outreach

Michael J. West (in a talk at the Communicating Science with the Public (CAP) Conference in 2005) describes other unconventional examples of outreach such as podcasts, music events such as the Astrocapella project, or through non-traditional movie screenings such as Sci-Fi Movie Nights: "a monthly community outreach programme based on the premise that 'everything we know about science we learned from the movies'". There are more examples of unconventional outreach in West (2005).

### How to reach the hard-to-reach?

We have seen that the trends in society today point away from traditional ways of communicating and we have also seen examples of how powerful unconventional outreach can be. The question remains: how do we implement unconventional outreach? How can we grab the attention of all those targets who have not yet been converted? A three-step process can be outlined:

#### Step 1: Know your target: research, research and research

When thinking about target groups, intuition or personal opinions are definitely not enough. Research, studies and focus groups are the core information sources. Consult your target groups to gain insights into your audience's habits: where do they spend their time, what do they eat; when, where, and which pastimes do they enjoy etc. Specialised companies can provide this information for a fee, but there is also data freely available. Consult the social media (especially for insights about young people), and look out for studies in the media/public institutions/specialised agencies for all types of target groups, and for events and magazine profiles to identify target audiences, their profiles and lifestyles.

Identify several target groups that you want to reach and make a mock-up for a representative individual in each category: The Teenager, The Young Professional, The Business Man, The Common Man, etc., and include short descriptions of lifestyle, education, leisure pursuits and interests. Include such variables as: nationality, education, culture, society, habits and lifestyles. This will improve your understanding of your audience and identify ways of reaching it in a natural context, an important feature of unconventional outreach.

#### Step 2: Choose the right channel: where are the target groups?

The right channel is the one *used* by your target group and not the one *you* use or you *think* they use. The right channel can be identified, based on your research and the profiles outlined in Step 1.

When communicating science with people, relying on the science sections of newspapers is no longer enough. Instead methods that we may previously have considered to be pure entertainment or superficial have

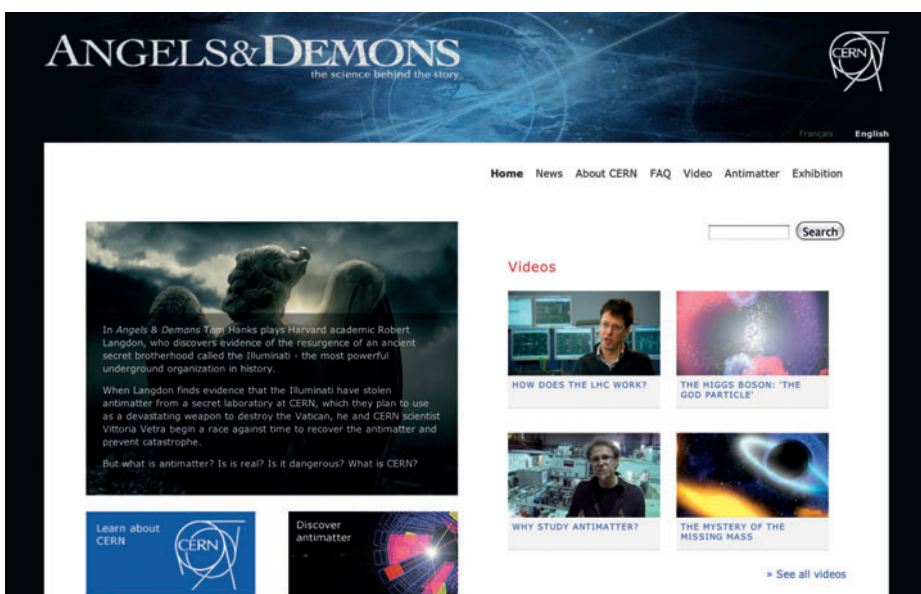


Figure 6. Screenshot from the CERN website explaining the science behind Angels and Demons.

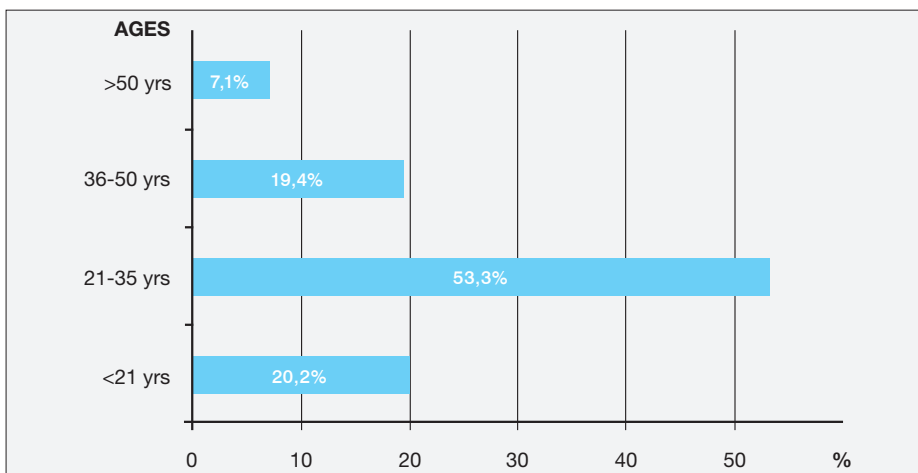


Figure 7. Age distribution for bloggers. Credit: Sysomos.

a better chance of being an efficient way to reach our audience and accomplish our mission of informing people of our results. Given the incredible amount of information and noise, the competition for grabbing the attention of the public has become fiercer than ever. If we want our message to stand out from the crowd, we need to approach traditional channels creatively, and also start using unconventional channels, which have a growing audience. One such example is the social media.

A 2010 Eurostat survey<sup>18</sup> found that 80% of web users aged 16 to 24 years old had blogged, posted a message to a chat site or used a social network like Facebook during 2010. This proportion rose to 94% in Poland — the top-ranked nation — and hit 90% in Portugal and Slovenia<sup>19</sup>.

As of 2011, 1 in every 13 people worldwide is a Facebook user (OnlineSchools, 2010). In February 2011, Facebook passed 637 million users globally. The top three continents that use Facebook are North America with 201 million users, Europe with 189 million and Asia with 146 million. In the three to six months prior to February 2011, there have been interesting developments in terms of how fast continents are accumulating users. The fastest was Africa, gaining more than 50% of its Facebook users in six months. The second most dynamic was Asia, whereas South America is placed third, with Brazil growing enormously (+ 7.1 million users). The fastest Facebook growth in Europe occurred in Germany (+ 5.2 million users), Poland (+ 2.45 million users) and Spain (+ 1.8 million users), (socialbakers.com, 2011).

More than 346 million people read blogs, and 184 million people are bloggers themselves (Zarella, 2010). 53.3% of them are aged between 21 and 35 years old, 20.2% are less than 20 years old and 19.4% are 36 to 50 years old. (Figure 7, Sysomos, 2010)

At the end of 2010, Twitter had more than 175 million registered users (TGDaily, 2010), while in May 2010 YouTube exceeded two billion views a day. Twenty-four hours of video were being uploaded every minute, which means that more video was uploaded to YouTube in 60 days than had been created by all three major US networks in 60 years. The average user spends 15 minutes a day on YouTube (Website Monitoring, 2010).

Social media are not the only channels. Among other contemporary channels accessed by our target groups are: IMAX movies, iPhone and iPad applications, virtual and augmented reality, but also evergreens such as movie festivals, concerts etc.

### Step 3: Choose the right approach

When in Paris, you speak French, when a mother of a toddler, you use baby talk and if you want to talk to a person who cannot hear, you use sign language. Every time we communicate with another person we seek a common channel and adapt to the status of the interlocutor. We role play in every conversation (Goffman, 1959). We should not forget this when communicating science. If we want our target groups to listen to us we need to find the appropriate language and adapt our tone to theirs. Use the words and style that your target uses, the



Figure 8. Poster used by Astroclub Bucharest to promote the IYA2009 Cornerstone project, She's an astronomer. Despite the obvious gender-specific connotations (which also have a negative side) the poster helped to attract a new audience segment — the predominantly female readers of glossy magazines. Credit: Alex Conu for Baneasa Shopping City

images, characters and situations that are familiar to your target group.

The AIDA principle (Attention, Interest, Desire, Action) sums this up:

- Choose the right language so your interlocutor can understand you and pay *attention* to you.
- Focus on his areas of *interest*.
- Offer him *desirable* benefits (entertainment, useful information, practical).
- Make it easy for him to take *action* (discover more, share the information, sponsor).

### Managing outrageous outreach

Imagine the opening sequence of a 200 million dollar science fiction blockbuster. We see a space shuttle ready on the launch pad. The launch sequence proceeds to the climatic finish. With a rumbling roar of the engine's booster rockets the shuttle lifts off. The wing of the shuttle pans in slow motion across the cinema screen displaying a house-sized version of NASA's recognizable emblem prominently for several seconds. This scene could be from any mod-



ern science fiction movie, and the exposure that the NASA emblem gets through these unconventional partnerships with Hollywood pop culture is almost invaluable and helps to forge a close link between society and the American space programme.

However there is a flipside. Movies are reviewed and also judged on their scientific correctness. The textbook example of bad Hollywood science is *Armageddon* (see Plait, 2011, for a debunking). According to *Armageddon*'s Wikipedia article (Wikipedia, *Armageddon*, 2011) this movie contains at least 168 scientific inaccuracies and is used in NASA's management training programme. Although there are lots of fairly accurate science fiction movies using NASA's emblem this naturally presents a managerial risk.

"Outrageous outreach" is, as the name says, outrageous and controversial. Science communicators may take a while to accept it as a valid method and gain the experience necessary to spot which approaches are likely to encourage word of mouth distribution and which are likely to cause trouble. To minimise the risks and get the most out of such partnerships, a plan is needed:

- have SMART objectives for your unconventional communication: Specific, Measurable, Achievable, Realistic & Time-constrained;
- design a tool to assess the pros and cons on a case-by-case basis;
- set up a decision tree;
- implement, evaluate and record.

There are other issues as well:

- managerial buy-in;
- buy-in from colleagues who are "puritan" scientists;
- traditional methods/channels will not disappear, so the unconventional approaches effectively mean a broadening of the outreach portfolio, or palette, which translates into more work, or more pressure on staff and resources.

Managerial assessment of the involved risks is possibly the biggest obstacle for moving towards unconventional outreach. From the side of management potential legal issues obviously play a major role. In the case of *Armageddon*, NASA elegantly handles the legal aspects with a disclaimer in the end credits: "*The National Aeronaut-*

*ics and Space Administration's cooperation and assistance does not reflect an endorsement of the contents of the film or the treatment of the characters depicted therein.*" (movie-page.com, 2011).

When approached by the "world outside" or when coming up with ideas for how to do unconventional outreach it is vital to ensure full management support, and to involve management in the assessment process. A rigorous scheme for the assessment of positive and negative outcomes of the activity, including the potential risk of image damage is a good idea. The assessment should contain the following points:

A section with the **basic facts**. Use, for instance, the classic six "W"s to cover all areas:

- What?
- Why?
- When?
- How?
- Where?
- Who?

and be particularly careful to cover the following:

- the logistics involved;
- the number of people involved from the outside and inside;
- the costs for the organisation;
- a possible programme for the event;
- the timeframe;

Also needed is a section that takes a deeper look at the **pros and cons**. This can be done as a classic SWOT analysis (looking at the Strengths, Weaknesses, Opportunities or Threats), or simply by addressing the following questions. What is the:

- **Brand compatibility:** An indicator of the level of similarity between the values and mission of the external company and those of your organisation. Compatibility is achieved even if the means of reaching the mission might be, or often are, completely different from those your organisation regularly uses.
- **Brand reputation:** An indicator of how the general public and mass media perceive the external company.
- **Purpose compatibility:** An indicator of how closely in line the aim of the collaboration is with the aim of your organisation. A high compatibility rating indicates that by collaborating, your organisation will achieve one or more of its goals,

even if the means may not be those usually employed by the organisation.

- **Potential brand damage:** An indicator of the risk that this collaboration could have a negative impact on your organisation's brand. This generally refers to visibility risks and potential negative media coverage. Note that a movie with, for instance, bad reviews, will never (or at worst, only in extremely rare cases) have a negative brand impact for one of the locations in the movie represented by your organisation. There is naturally a risk that the quality of the product would not be up to the usual standards of your organisation, but for a real negative effect to result from this exposure depends on the nature of the collaboration and on how much the two brands are associated in the public perception.
- **Possible exposure:** An indicator of the increased awareness of your organisation's brand generated by the collaboration. Since it is an "unconventional" activity, the partnership will usually generate exposure that the organisation could not reach on its own due to budgetary constraints, lack of time and/or expertise.
- **Other benefits:** An evaluation of additional benefits that your organisation could gain from this collaboration. Depending on the situation these could be: fund-raising opportunities, reaching key opinion leaders and decision makers, gaining access to valuable products such as high quality footage for your own use, funding, improving media relations etc.
- **Operational impact:** An indicator of how this collaboration affects your organisation's core operational activities.
- **Final recommendation:** A combined evaluation of the pros and cons of the collaboration and a recommendation for your management.

A score chart with values from, e.g., 1–10 is recommended to quantify the final conclusion more easily.

## Agreements

When entering into a partnership with another brand, especially a commercial one, it is important to set up a written agreement addressing operational constraints, expectations on both sides and ensuring that your organisation and its real purpose do not go unnoticed, as commer-

cial partners often invest a lot in advertising and might overwhelm the smaller partner. Therefore several visibility benefits should be negotiated and included in the eventual written agreement with the partner. Examples of such benefits are:

- credit at the end of a movie both in cinemas and on the DVD;
- mention of the organisation's brand on the DVD, in the "making of" and/or in a bonus section detailing the locations of the movie;
- the permission to exploit the synergy publicly by, e.g., opening a dedicated web page for this collaboration (for an example, see ESO's Bond@Paranal site<sup>20</sup>);
- branding at the partner's events through banners, special displays;
- including informational material and/or branded gimmicks in the gift bag for the media or attendees of an event;
- mentioning of the organisation in the partner's press releases;
- offering information about the organisation on the partner's Facebook page;
- providing the organisation with management access for the premiere/event;
- special screening for the staff of the organisation.

## Evaluation

Evaluation is a highly important component of the communication process, but for unconventional outreach it is vital, as it will provide solid arguments that the methods were effective and that they are an experience worth repeating. Try to monitor anything that can give an estimate of your impact: website traffic, social media activity (number of Facebook friends, Twitter followers, number of views, comments and shares or re-tweets), attendance at an (online) event, types of audiences reached, number of blog posts gained, trackbacks<sup>21</sup> (one of three types of link-back methods for Web authors to request notification when somebody links to one of their documents), number of RSS subscribers, number of downloads in iTunes, views of videos posted online, search results in Google and Google News, number of movie or concert tickets sold, number of movie DVDs sold etc.

Among these indicators, the potential of viral information is enormous and hard to

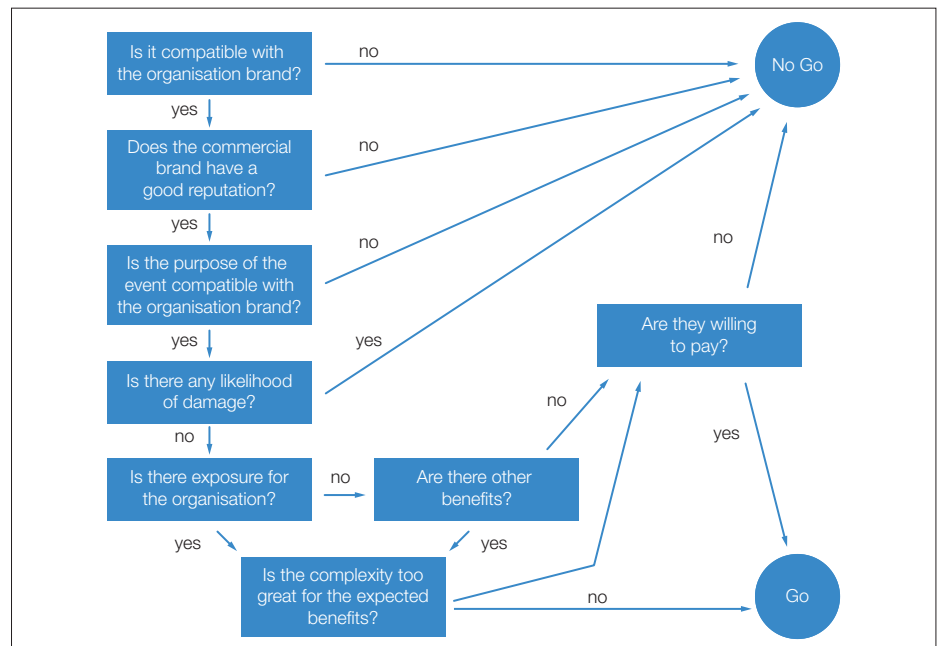


Figure 9. An example workflow for how a non-traditional assessment can work. Credit: Authors.

keep track of, but not completely obscure. There are a number of indicators that reveal results and how many resources should be invested in them in the future. Most social media platforms have integrated evaluation tools that make it easier to estimate the impact at the communicator's end. However, it is not possible to grasp the full scope of the contact generated via such channels precisely because the information is distributed through powerful individuals who act as influencers in their own online communities.

Try and monitor the evaluation status before and after an event to make sure that the influence of your unconventional outreach can be pinpointed. When monitoring social media, be sure to take a lot of screenshots as many of the things there are volatile. Also try to always calculate a cost per impression (CPI) — the price you have to pay for each individual you reach. This is obtained by estimating the total number of people reached through all your efforts, divided by your total costs. A few cents is a good CPI if you reach a mass target, but a few Euros can also be a reasonable CPI if the people are influential or high-level.

## Conclusions

The new model of communication, which has unique individuals that intercon-

nect at its core, forces science communicators to think outside the box and find complementary ways of reaching their target groups and accomplishing their duty to communicate scientific results, to educate and to inspire people.

One way to reach your target groups today is by proactively and creatively going after them and creating tailored, interactive, engaging, easy-to-access and easy-to-share experiences in places that people already choose to visit. This will often mean venturing down unexplored paths and doing unconventional communication that can sometimes be perceived as "outrageous" by your management and others. When exploring this new territory, care will have to be taken to establish clear workflows, have executive decisions by management supporting these initiatives, have a rigorous assessment process and make agreements with potential partners before starting.

In today's world, more and more people are connected, finding and generating information, influencing and being influenced by peers and opinion leaders in their communities. Every second that an organisation is not properly represented in this landscape is a wasted opportunity and every second that is not present in this new context, is a step down in the effort to climb the ladder of interest and grab the attention



of the individuals against competitors such as the entertainment and gaming industry.

Doing “outrageous outreach” is no longer an option, but a necessity. On the one hand, as science communicators it is our duty to bring science to the people that support our research and therefore we will have to learn their “language” and adapt to their lifestyle. On the other hand, the “outside world” will soon, if it has not already, arrive at our door step ever more frequently, offering non-scientific partnerships and we have no other option than to respond.

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## Notes

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- Milky J, played by Bashir Salahuddin, is a writer on the Jimmy Fallon show, as well as a Harvard graduate and NASA enthusiast. During the World Science Festival in New York, Salahuddin had the opportunity to view the JWST model and meet Nobel Prize winner and JWST Lead Scientist, John Mather. Salahuddin and the Late Night crew jumped at the opportunity to film a sketch at Goddard alongside the JWST team.
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## Biographies

Oana Sandu works as community coordinator for ESO's education and Public Outreach Department (ePOD). She is responsible for the promotion of outreach products or events and the social media presence of both ESO and ESA/Hubble. With a degree in Communication and Public Relations and a Master Degree in Marketing, she worked for two years in a leading Eastern European PR agency from. As a volunteer, she was involved in projects such as Global Astronomy Month, the Space Generation Congress and World Space Week. She keeps a blog on astronomy communication at [www.astronomycommunication.wordpress.com](http://www.astronomycommunication.wordpress.com), tweets on [twitter.com/oanasandu](http://twitter.com/oanasandu) and posts on [facebook.com/oana.sandu](http://facebook.com/oana.sandu).

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