

Nuclear Regulatory Organisations, the Internet and Social Media: The What, How and Why of Their Use as Communication Tools

Working Group on Public
Communication of Nuclear
Regulatory Organisations (WGPC)

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**NUCLEAR ENERGY AGENCY
COMMITTEE ON NUCLEAR REGULATORY ACTIVITIES**

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Working Group on Public Communication of Nuclear Regulatory Organisations (WGPC)

**Nuclear Regulatory Organisations, the Internet and Social Media:
The What, How and Why of Its Use as a Communication Tool**

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The NEA Data Bank provides nuclear data and computer program services for participating countries. In these and related tasks, the NEA works in close collaboration with the International Atomic Energy Agency in Vienna, with which it has a Co-operation Agreement, as well as with other international organisations in the nuclear field.

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The Committee shall promote transparency of nuclear safety work and open public communication. The Committee shall maintain an oversight of all NEA work that may impinge on the development of effective and efficient regulation.

The Committee shall focus primarily on the regulatory aspects of existing power reactors, other nuclear installations and the construction of new power reactors; it may also consider the regulatory implications of new designs of power reactors and other types of nuclear installations. Furthermore it shall examine any other matters referred to it by the Steering Committee. The Committee shall collaborate with, and assist, as appropriate, other international organisations for co-operation among regulators and consider, upon request, issues raised by these organisations. The Committee shall organise its own activities. It may sponsor specialist meetings and working groups to further its objectives.

In implementing its programme the Committee shall establish co-operative mechanisms with the Committee on the Safety of Nuclear Installations in order to work with that Committee on matters of common interest, avoiding unnecessary duplications. The Committee shall also co-operate with the Committee on Radiation Protection and Public Health and the Radioactive Waste Management Committee on matters of common interest.

FOREWORD

“Social media” is a term referring to various activities that integrate technology, social interaction and content creation. Social media can also be thought of as a way of using technology to “enable conversations” that take place outside of the constraints of time and location – people can access the information any time of the day or night, from anywhere. Social media builds on the communication advances – and advantages of the Internet – but has increasingly become a communication vehicle far surpassing its predecessor. It is fast, cheap to the consumer, easily available and part of the fabric of people’s lives. Social media also magnifies information as it enables conversation that everyone can participate in. Videos “go viral” and are seen by millions of people, tweets are re-tweeted again and again, and information is “shared” to multiplicities of friends on Facebook.

Public relations practitioners around the world have been paying attention to social media as an important communication tool. Research done in 2010 by the public relations firm Burston-Marsteller found that eight of 10 Fortune Global 100 companies used at least one of the most popular social media platforms i.e. Twitter, Facebook, YouTube or corporate blogging. In the United States, virtually all of the major federal agencies use at least some of the “big four” platforms. Many, if not all, of the nuclear regulatory organisations (NROs) represented in the Working Group on Public Communication use at least some social media. At a minimum, they are monitoring social media as they are also monitoring traditional media. However, a post-Fukushima informal poll indicated many nations’ nuclear regulators are looking at broadening their social media use, although some may not know how to proceed, and everyone can benefit from the “lessons learned” by others.

This report outlines the most popular social media tools available today, provides tips and techniques that have worked for nuclear regulators around the world, and when appropriate, provides case studies and links to help regulators create, maintain or improve their social media usage. It is important to note that social media moves very quickly, and many of the statistics provided by the NROs for initial versions of this report are now outdated. In addition, in some instances, NROs not cited in this report are now using social media platforms as new additions to their communication and outreach programs. It is also expected that new social media platforms will be presenting themselves as future options, and some platforms may fall out of favour over time. With that in mind, this report will be fully updated with new information, statistics and case studies in a few years. To make it easy to access online, and to enhance readability, the websites cited throughout this report are embedded in the text rather than written out in their entirety.

ACKNOWLEDGEMENTS

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EXECUTIVE SUMMARY

This report was prepared by the OECD Nuclear Energy Agency (NEA) Committee on Nuclear Regulatory Activities (CNRA) Working Group on Public Communication of Nuclear Regulatory Organisations (WGPC). The topic of social media as appropriate for further study was proposed by WGPC to CNRA at its December 2010 meeting. At this meeting, CNRA approved the new task and identified it as of high priority and short-term task.

An informal survey conducted in 2012 reflected that nuclear organisations were aware of social media as an important communication tool, and many were using it or considering its usage. However, many organisations were unclear how to proceed in developing social media content, how to integrate the platforms into existing public communication programs and how to persuade reluctant management that social media was an important and credible tool.

The purpose of this document is to provide information and research for those nuclear regulators that may be interested in integrating social media into their public communication strategies. This document also provides “tips and tricks” to help public communicators who are not specialists in social media to begin developing successful and meaningful programs. Finally, this report delivers case studies and examples to provide “lessons learned” to member organisations interested in developing social media programs.

As with any new technology, there are benefits and drawbacks. The primary benefit of social media is the ability for regulators to reach out and talk directly to the public – and hear back – without the interpretation of a third party. However, social media can also lead to the quick spread of misinformation, and it takes tremendous resources to establish and maintain the platforms and produce content that builds a positive social media presence. Meeting the demands of social media speed can be especially challenging. It often means communicators must function with less management oversight and less formality in their messaging.

It should be noted that social media does not replace traditional means of communicating with the public. There remains a need for press releases, fact sheets and even public meetings to communicate to the public, special interest groups, other government organisations, industry and academia, and the media. These remain valid tools in a communicator’s tool box. But it can be argued that social media is no longer an optional endeavour.

Key findings

Conducting this study, WGPC members commonly recognised that Social Media Platforms offer benefits as they:

- Give regulators new, additional channels for information distribution;
- Can reach new information consumers, especially in certain demographic groups that might not access information in traditional ways;

- Allow for synergy between different platforms and agency websites, maximizing reach and audience;
- Promote discussions and dialogue;
- Allow regulators to hear what the public is saying and provide a timely feedback loop that allows tailoring of messaging or information to meet the identified need;
- Allow quick dissemination and repetition of messages during a crisis.

1. INTRODUCTION AND GENERAL CONSIDERATIONS

1.1. Benefits

Adding social media as a component to an existing public information/outreach program has many benefits. Among them:

- They provide new, additional channels for information distribution;
- They reach new information consumers, especially in certain demographic groups that might not access information in traditional ways;
- They allow for synergy between different platforms and agency websites, maximizing reach and audience;
- They promote discussions and dialogue;
- They allow regulators to hear what the public is saying and provide a timely feedback loop.

1.2. Social media risks – Content security

Despite the many benefits, there are risks for regulators embarking on a social media campaign. One of the main risks of social media, as identified by the Radiological Protection Institute of Ireland (RPII), is the inappropriate posting of content or unwise engagement with trolls, “ranters” and conspiracy theorists. This risk is particularly high if the regulator uses a decentralised social media model that allows “designated users” outside of the communications team to post content. In addition, since most social media will not reside on your organisation’s computer system, the content is at risk of being “hacked”. There is also a risk of information “spillage”, when information that should not be made public gets inadvertently posted on social media or a website.

It is important that nuclear regulatory organisations (NROs) recognise these risks and take steps, initiate policies and in other ways maximise the benefits of social media and limit the downsides. To combat the issues of posting inappropriate content, the Norwegian Radiation Protection Authority (NRPA) tightly restricts access to its social media. Only the Communication unit staff members are allowed to access and administer the Twitter, Facebook, YouTube and Flickr accounts. In addition, the NRPA has formulated recommendations or guidelines concerning NRPA employees’ private use of social media. Similarly, at the U.S. Nuclear Regulatory Commission (NRC), only members of the Office of Public Affairs are authorised to post on the agency’s social media platforms.

1.3. Social media risks – Cybersecurity

There are security concerns about use and access to regulators’ social media platforms and website. Facebook, given its popularity and the personal information it contains, is a popular target for hacking and viruses. No doubt, in time, other platforms will come under attack as well. Each regulator must work closely with their Information and Communications Technology and/or cybersecurity experts to develop

internal policies about the use of social media sites from work computers and during work hours. There are a number of best practices that can minimise risk and enhance security:

- Holding regular training (at least once per year) on cybersecurity for designated users or users with access to social media sites;
- Restricting access to social media sites on work computers where possible;
- Limiting the posting of content to work computers rather than home computers, which may be less secure;
- Implementing a policy of regular password changes;
- Reviewing content frequently to identify any information that may have been “hacked”.

1.4. The resource implications of social media

Most social media sites are free or nearly so, but that does not mean social media as a communication tool costs a regulator nothing. Personnel are needed to generate content, monitor discussions and comments and initiate responses, when appropriate. New platforms need to be evaluated and generating interest in the sites – both externally and internally – takes time and personnel. In addition, training may be necessary for existing communications officials who are not knowledgeable about social media. New personnel with these skills are often scarce and may demand high salaries. Adding social media as a responsibility to existing staff, rather than having dedicated staff, may limit social media activities due to workload realities.

A measured approach makes sense if there are concerns about over-reaching into social media when resources might be limited. Calling a social media initiative a pilot allows an avenue for regulators to try the waters without committing the resources until a cost-benefit analysis can be made. In addition, identifying those within your organisation who have skills in social media and a willingness to post on behalf of the organisation is one way to leverage social media with internal resources without hiring new workers. However, as pointed out by Ireland’s RPII, intensive training may be required to bring these “designated users” who are not part of the communications team, up to speed on the organisation’s communication strategy and culture.

1.5. Integrating social media

It is important that social media be fully integrated into an outreach/public relations/communication strategy. It should not be undertaken because “everyone’s doing it”. Social media is a tool. It should be assessed for its benefit to the organisation and undertaken in a sensible, cautious way consistent with the regulator’s goals, and the cultural norms and expectations of your stakeholder population. You may need to enact policies, offer training and even create enthusiasm for the usage within your organisation.

Social media builds upon itself. While having a blog may be all the social media your regulator wants to pursue, it should be underscored that having multiple social media sites, combined with your website, drives traffic between the platforms, creates enhanced dialogue and discussion via various venues and makes your regulator much more visible. The bottom line is your messages get magnified and reach multiple demographics when you expand the ways you are disseminating information.

You must also create social media that is visually and graphically consistent with your other outreach tools. Your social media platforms, to the extent possible, should be “branded” in such a way that all of your tools are clearly “owned” by you. Having consistent graphics to visibly link your platforms, within the confines of each platform’s design limitations, is ideal.

An example of consistent designs creating a visual bond between platforms:



Figure 1: U.S. NRC's various online platforms show consistent design

1.6. The importance of using social media icons on website.

It is important to use conventional icons for common social platforms so visitors can easily recognise them on your website, which, in most instances, is the gateway through which your audience finds your social media.

It is recommended that regulators:

- Label social media links with a clear call to action such as (Stay Connected, Connect with Us, etc.), which helps visitors understand that clicking on these links is a way to interact with the organisation; and
- Should provide a disclaimer page alerting users they are moving offsite once they click on a social network icon that is located on a different platform than the organisation’s website.

An example of using icons with a clear direction on a regulator’s website:



Figure 2: U.S. NRC’s web page showing icons for agency social media platforms



Figure 3: ASN’s web page showing icons for Authority social media platforms

1.7. The importance of listening

Social media is not just a vehicle for disseminating information. It is also a means for listening to the public. Social media allows the regulator to obtain real-time feedback about the success (or failure) of messages or communication endeavours. It is important to use social media as a listening tool – even if a regulator has initiated no social media platforms of their own.

As pointed out by Ireland’s RPII, monitoring social media is as important as scanning the newspapers in the morning. Monitoring social media is an on-going process. Even after establishing a presence on social media there is a need to monitor the platform being used and the platforms which are not. This can be a daunting prospect when one considers the number of social media platforms and the speed at which news can change.

Just some of the resources to tap into include:

- following key newsmakers or other people relevant to your organisation;
- tracking mentions, hashtags and establishing keyword searches on Twitter;
- setting up Google Alerts by keywords; and
- aggregating searched keyword content on Google News.

Monitoring social media will give you an insight into the sentiment about your organisation and issues or concerns about which you are unaware. However, the problem, then, can be too much information that needs to be monitored and evaluated. Tools to live-monitor, aggregate and curate content are particularly useful to cut down on the workload, such as Hootsuite, Storify, The Tweeted Times, Paper.li, Scoop it, etc. These can be used to curate content and provide you with a daily digest that is easier to scan.

Many traditional media monitoring contractors now also offer social media monitoring. While this adds cost to an existing contract, it does not burden existing communication staff.

1.8. Case Study – Ireland’s RPII Designated User rules

As a Designated User you should not:

- Use or disclose any confidential or secure information.
- Be the first to make an announcement unless specifically given permission to do so; (generally, the Communications Team releases information first on behalf of the organisation to an agreed schedule).
- Make any comment or post any material that might otherwise cause damage to the organisation’s reputation or bring it into disrepute.
- Use the organisation’s name to promote a product, service, cause, political party or candidate.

As a Designated User you should:

- Understand the “netiquette” that applies on any social media site.
- Use a profile linked to the organisation’s email address, publish in the first person; identify clearly who you are and what your role is in the organisation (e.g. “I am the engineer responsible for x”).
- Respond to posts and upload information in a professional, but friendly and efficient manner.
- Respect people’s right to give an opinion. Understand that content contributed to a social media site could encourage comments or discussion of opposing ideas.

- Remember that replies to someone can be seen by others, can become widely known and will be public for many years. Consider responses carefully in light of how they might reflect on the user and/or the organisation.
- Think twice before posting. If something is not appropriate to say at a public conference or to a member of the media, it's not appropriate to post it online.
- Be accurate, factually correct and review content for grammatical and spelling errors.
- Know your limitations. Only engage in social media comments or posts for which you are suitably skilled and experienced.
- Avoid escalating heated discussions or contributing to discussions when angry. Consider returning to the social media space at a later date when you can contribute calmly and rationally.
- If in any doubt about something you are about to publish, speak to other Designated Users or discuss it with your manager. You are not alone and they may have a different perspective.
- Respect the privacy of all users. Protect your own privacy by not disclosing personal details. Contact an individual outside the collaborative space if you want to take something off-line.
- Remember that photographs of people are deemed to be personal data. In any instance where people would have some expectation of privacy, seek their permission before posting, for example, employee photographs. Group shots of employees or stakeholders at organisation events should be fine; the key is to be respectful of employees' and other persons' privacy considerations.
- Manage user expectations by stating the timeframe in which the organisation is likely to respond to posts in an online policy. Although users of social media are used to fast response times it is acceptable to state that it will not be possible to provide timely feedback 24 hours a day, 7 days a week.
- Be the first to come clean and admit a mistake – honesty of this type builds respect.
- Engage in a professional and courteous manner.

Where unacceptable content or comments are posted to an organisation's site, take one or more of the following steps, as appropriate:

- Draw the attention of the author to the organisations online policy/rules of engagement and advise that the comment or behaviour is not appropriate.
- Delete the comments.
- Delete the comments and ban the author.

As a general rule, allow comments to remain on a site in the form and format in which they were input by the person making the comment, provided they are clear, appropriate and do not contain unsuitable content (e.g. are considered likely to provoke, attack or offend or break the law). In rare cases when it is considered appropriate, to remove a posting:

1. Either print off a copy or save a screenshot of the page that shows the posting before it is removed, so that there is a record of it; and
2. Where possible, send an e-mail to the author of the post advising why the comment was removed.

2. WEBSITES

2.1. Background

Websites are not, technically, social media, but they are the foundation for all computer-mediated communication. They were organisations' first forays into the new way of reaching an audience and are now, in virtually all cases, a fully mature part of a communicators' strategic outreach. Regulators' websites need to stand on their own as excellent communication vehicles and to serve as part of the synergy of social media. Links (more specifically graphic buttons) that lead to your social media sites need to be prominently displayed on the home page. Blog posts, tweets, even Flickr captioning need to use your website URLs to provide more information and to drive traffic among your various Internet-based communications.

2.2. Website trends – Redefining content

In some countries, there has been a push to expand website usage with educational material or content aimed at children, and the posting of more documents and/or data. (This is especially true in the United States under a White House-led Open Government initiative.) Other countries, including Canada, however, have initiatives that are reducing their number of web pages. Canada even has an acronym – ROT – to indicate their move to remove redundant, outdated and trivial information from their website. Germany's Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) pursues an approach that – while it does not aim at reducing the total number of web pages – ensures the BMUB's nuclear safety-related web pages are regularly reviewed and removed if redundant or outdated. Websites must also be continually reviewed to ensure their design is consistent with the ever-evolving expectations of the public and new technology.

2.3. Case Study: Redundant, Outdated and Trivial content (Canadian Nuclear Safety Commission, Canada)

To make sure that the Government of Canada's online information is always accurate and up to date, and to reduce the cost of hosting unnecessary information, all of Canada's federal government organisations were directed to undergo a thorough review of their online content, and to remove any redundant, outdated or trivial (ROT) content. Organisations were also tasked with developing policies and procedures for regular ROT reviews to keep information relevant.

The approach:

To meet Government of Canada requirements, staff was required to complete a content inventory of the current website, evaluate and assess the content, decide if content needed to be archived, removed, updated or reorganised.

Definitions:

“R” is for Redundant, content that is repetitious in expressing ideas, thoughts and concepts. Example: Having four web pages with similar and related content and information.

“O” is for Outdated, content that is no longer in use and could be inaccurate. Example: Content linked to PowerPoint presentations dating back to 2007 that are no longer relevant.

“T” is for Trivial, content that is of little importance or value and does not help the overall purpose of your website. Example: Local information for a conference which has passed.

The issue:

ROT creates confusion for visitors and erodes user confidence with multiple versions or outdated content. It can cause problems with searches resulting in multiple instances of the same or similar content. Another issue is that the authors of web pages often publish and forget them, so they need reminders from time to time to reassess their content for relevance and accuracy.

The process:

The Canadian Nuclear Safety Commission (CNSC)’s communications team got a comprehensive inventory of every web page and document that was sitting on the website server, then organised it into lists by content owner according to the CNSC’s organisation chart. Senior managers responsible for specific content were then asked to review all the content on the list, and to indicate to the communications team if the content should be removed, archived, updated or kept as it is. This process took several weeks to ensure that all content was reviewed and assessed.

To assist content owners, the communications team provided guidance to determine why the information is important to various audiences, as well as questions like “What message is most important?”, “What are your goals in posting this information?” and “How long should this information be kept?”. They were encouraged to look for ways to merge similar information, and to consider ways to increase visitors to the page.

Items marked “delete” were scheduled for deletion by the CNSC’s web team, making sure that the deletion did not result in broken links from pages linked to them. Items marked “archive” were marked with a consistent note so that users would know that archived items would not be updated as time went on; an example is an annual report from a past year. Items marked “Keep as is” were not touched, and items marked “Update” were divided into two types: minor updates that could be done quickly, and major updates that should be managed separately as a new project by the content owners.

Timely and consistent processes were then developed to ensure the proper management of information and prevent future growth of redundant, outdated or trivial content.

Recommendations:

Schedule regular ROT website content reviews to ensure that information is kept up-to-date. It should be a requirement, and be systematic.

Do not duplicate information that is already on another page, link to it. Having to update the same text in different locations takes more time and leads to errors.

Identify ROT content before major website restructuring or look-and-feel updates. This will ensure that your content is cleaned up and makes for an easier and faster transition.

Remove any web pages or files that are not visited often unless there is an important reason to keep them.

2.4. Case study: Renewal of PAA website (National Atomic Energy Agency, Poland)

The previous PAA website was built in 2006. Its information architecture was based on the PAA President's annual report, which meant mostly publication-like content arrangement.

The website content was very rarely changed (except for updating data and publishing news releases). The information architecture itself made it very difficult to publish new sub-websites.

The web design was outdated, which made the PAA look unprofessional. The website was also difficult to use from the technical point of view and thus a person editing the website had to have a lot of technical skills and editing could only be done from the computer in the Agency's building or via special software.



Figure 4: Former PAA's website

In 2010 the decision was made to create a new PAA website. The PAA Department of Science, Training and Public Information (after 2011 incorporated to President's Office) was chosen to be responsible for the project. The analysis phase went concurrently in two directions: technology choice and information architecture designing.

The technology choice was done under several principles:

- Website has to have administration panel allowing people with fewer technical skills to change website content.
- The administration panel has to be accessible from various places enabling the PAA communication team to react quickly in a crisis situation even when not at work.
- Website technology has to be open-sourced giving flexibility in making major changes by outsourced companies or PAA employees.



Figure 5: PAA’s new website

PAA also analysed website statistics and consulted publicly available opinion polls (including European Commission’s “Europeans and Nuclear Safety” report) to choose what information interested people the most. On this basis the list of content to be published on the new website and first proposal of information arrangement was made. This initial proposal was then reviewed by an “internal focus group” of employees, which offered many suggestions.

The contracting company selected to implement the new site was chosen on the basis of tender cost, contractor’s experience and cost of post-implementation support. The contracting company prepared a new CMS mechanism based on our requirements and prepared for new content structure. The company also implemented a new graphic design. Afterwards the content was migrated from the old website to the new one. One month after putting the new website online, the decision was made to prepare a Corporate Identity System for the Agency. The new Corporate Identity included, among other things, refreshed logo, font selection and new colour palette. This new identity was applied to the new website. Ultimately, the new website included the following sections:

- About us
- What we do
- Law
- For clients
- Announcements
- Contact

Some of the challenges of the website redesign:

- No analysis on the legal requirements towards government offices’ websites was done previously and it was a time consuming process.
- It took a very long time to find the agreement between public communication team and technical employees of the agency in terms of the site architecture.
- Fulfilling legal requirements on public procurement was difficult and time consuming.
- A lack of initial agreement on the set of colours and fonts for the Agency created long discussions on the final design of the website. Introducing Corporate Identity after the construction of the website created many technical difficulties.

- It was costly. The entire redesign, including cost of the whole Corporate Identity system was EUR 2 700 plus EUR 9 400 (euro).
- It took a long time. The project started in September 2010. The analysis phase lasted till May 2012. The contracting company was chosen in August 2012. The contract was signed in August 2012. The graphic design was accepted in October 2012 and the whole website was accepted in December 2012. The content migration and creation lasted till February 2013 and new website went online in March 2013. The English version was launched in June 2013.

Recommendations:

1. The project manager for the new website has to be equipped with the proper decision-making abilities and should have an important position in the institution.
2. The project team should consist of people employed in various departments and with various experience (or should seek advice from such people).
3. It has to be generally accepted that the phase of preparing procurement for the new website is time consuming.
3. The Corporate Identity System should be accepted before the procurement (or ordered in parallel at the same contractor). This shortens and simplifies work on the web design.

2.5. The challenge of multiple languages

Some regulators are challenged by the need to ensure their websites are in multiple languages. The Swiss Federal Nuclear Safety Inspectorate (ENSI) is working actively on its website (www.ensi.ch). Its website is running in four languages: the three main languages of Switzerland i.e. German, French and Italian. In addition, for international information, ENSI keeps a fourth website in English. Its website is used as the centre of the corporate communications strategy, orbited by social media channels, a newsletter service, back links from other pages as well as traditional media linking directly to ENSI website.

The Government of Canada's communication policy requires that all information be made available to the public in both official languages – French and English. When posting to the web, all web pages, including publications, must be posted concurrently. For smaller postings, this does not cause delay, even though the work must be done twice. But for posting of longer documents or annual reports, timelines need to take into consideration the need for translation, revision and preparing for the web. One of the challenges faced when needing to translate documents is version control, that is ensuring the document being translated is the final version. It sometimes happens that content changes are made to the original text without communications/translation staff being made aware.

2.6. The challenge of web accessibility

Some governments, in an effort to ensure those with visual or other impairments have access to online content, have enacted laws regarding web accessibility. In the United States, it is known as “508 compliance”, named for the section in the amended Rehabilitation Act of 1973. The law requires federal agencies to make their electronic and information technology accessible to people with disabilities¹. According to the Section 508 website, “Inaccessible technology interferes with an ability to obtain and use information quickly and easily. Section 508 was enacted to eliminate barriers in information technology, open new opportunities for people with disabilities, and encourage development of technologies that will help achieve these goals”.

¹ <http://www.section508.gov/>

More recently, in 2007, the issue came to the forefront in Canada. Donna Jodhan, a business consultant, could not submit an online application for a Government of Canada job, because she had been blind since birth. She filed a constitutional challenge aiming to grant visually impaired people equal access to the services and information on Canada's federal government websites. In November 2010, Canada's Federal Court ordered the Government of Canada to make all its websites compliant with WCAG 2.0 Level AA accessibility standards within 15 months.

2.7. Case Study: Canadian Nuclear Safety Commission strives for web accessibility

Accessibility standards have evolved over the past few decades and many of the accessibility solutions in place across Government of Canada websites were no longer acceptable. In the past, the World Wide Web Consortium (W3C) standards required an ability for screen readers for the visually impaired to simply "read" all content aloud. Newer standards introduce a range of strategies to allow people with other disabilities, such as motor or cognitive skills, to access content equally as well.

The approach:

A central agency took the lead to form a community of experts that developed tools, processes and standards for all others to follow. A Government of Canada-wide intranet was used to share progress and discussion forums arose to deal with specific issues. All distinct organisations of Government of Canada were then responsible for developing their own processes, tools and policies, and for meeting deadlines for compliance.

The obstacles:

Entire Government of Canada web content, in both languages – including text pages, tables, images, PDF documents, multimedia content such as audio or video files, interactive online content and software applications – had to be identified, assessed against WCAG 2.0 Level AA compliance, and repaired as needed to comply. Processes and policies needed to be developed, as well as awareness and training initiatives, new service standards for publishing content to websites (that include time to make content accessible) and tools to help ensure that content is made accessible as early in its development cycle as possible.

Since WCAG 2.0 Level AA was new to most Government of Canada staff, a great deal of effort was needed to develop common understanding of its definitions and expectations. Software developers needed to be engaged to ensure some functionality, such as the ability to use only keyboards (not a mouse) or the ability to use the tab key to navigate. Base coding for sites also needed to be adjusted to allow for text size scaling by users who need to use larger fonts.

Senior executives also needed to be fully informed about the impacts of the Federal Court order on staff resources and to act as champions to ensure that the required organisational change occurred to support the ongoing initiative. Since the CNSC is a nuclear regulator, strategies for rapid deployment of web information in times of emergencies or crisis also had to be developed.

It took about 24 months to develop, implement and normalise CNSC processes in support of the enhanced accessibility initiative.

Recommendations:

Any organisation that is striving to meet website WCAG 2.0 accessibility guidelines can take advantage of a lot of lessons learned, tools, processes and policies developed in a relatively short timeframe by Government of Canada organisations like the CNSC.

2.8. Websites and crisis communication

While social media is generally considered the crisis communication tool of choice, particularly Twitter, an important function of any website is conveying incident or crisis communication.

Several NROs have created so-called “dark websites”, which contain important links and pre-prepared generic incident communication information “in reserve”.



Figure 6: U.S. NRC’s Emergency Event web page

These pages are not made live until needed. Generating such pages in advance allow regulators to go live with them quickly, if needed. The Emergency Event web page of the U.S. NRC is augmented by a second page called “Rumor Control”. This page, also inactivated, creates a placeholder where rumours captured by social media monitoring can be refuted in a credible way.

2.9. Case study: France, ASN, the emergency situation website

In the event of a radiological emergency situation, the French Nuclear Safety Authority (ASN) must provide the general public with comprehensive information in real time using all the means of communication available, especially the Internet. The ASN website is not really suited to this particular context because it is too large and complex for the general public to be able to use it comfortably. In order to facilitate access to information in an emergency context, ASN wants to replace its “conventional” website with an “emergency situation” website, which enables it to give direct access to the information concerning the situation. The website administrators must be able to activate this website substitution as soon as an incident occurs.

Moreover, as the situation is liable to generate a larger number of visits than usual, the hosting organisation must be able to implement additional technical resources to cope with the increased traffic and enable the website to remain accessible with rapid response times. The administration platform must also remain accessible in all circumstances, even during the periods with large surges in website consultation.

Who the “emergency website” will target:

- The general public, which must be provided with assessments of the situation, the risks, the measures to take and whom to contact to obtain local updates in real time, reference guides to help put the information into perspective (key figures, authorised thresholds, explanatory diagrams, etc.);

- Journalists: they must find up-to-date reviews of the situation, the risks, the measures to take and a “who’s who” of contacts to obtain information that is useful for their own work (press releases, photos, information graphics, press department contact details, etc.);
- Institutions;
- The nuclear and radiation protection professionals (industrial or medical), public stakeholders, associations, and
- The international public (mainly the press, foreign counterparts and associations).

Content updating must be possible using a web browser from any computer connected to the Internet. It must be simple to use and suitable for people who have no knowledge of website administration. The technical architecture of the hosting organisation must be able to handle high peaks in visitor numbers (at least 150 000 visits per day and/or 1 000 visits per second).

The ASN emergency website must be informative (exhaustive information, real-time updates that are clear and understandable to non-specialists), ergonomic (but straightforward: simple and clear tree structure; use of links to other information websites) and present a simplified graphic chart, derived from the one of the main website for faster loading of the pages. It is planned to have an English version, at least for the press releases, with a dedicated ASN supervisor.

Figure 7: French ASN's crisis website dedicated to the Fukushima Daiichi nuclear power plant accident

When the Fukushima Daiichi nuclear power plant accident occurred, ASN activated its emergency system in order to handle the intense interest it aroused from both society and the media right from the outset. All the ASN teams provided the media with information that was both responsive and comprehensible. The ASN communication service was operational 24/7 for the first month of the emergency. An emergency website was opened on 13 March 2011 offering complete (maps, drawings, computer graphics, etc.) and responsive information (information notices, video press conferences, press releases) about the condition of the power plant. In the weeks and months following the event, the site received between 70 000 and 80 000 visits per day. ASN posted all its press releases on Facebook and Twitter and all its videos on Dailymotion. One of the lessons learnt from the Fukushima Daiichi nuclear power plant accident is the necessity to reinforce the presence on Internet and social media because they are an opportunity to disseminate information more widely and more quickly.

2.10. Mobile versions of website

An important reason to keep an emphasis on an organisation's website is the use of handheld devices, such as smart phones or tablets to reach the Internet. Some studies show that as many as 25% of visitors to websites use these devices. Smartphones, particularly, are often reached for first by users when there is breaking news or a crisis situation.

A "mobile" version of your website will have to meet a number of criteria:

- Be viewable on most handheld devices (rendered correctly);
- Contain the minimum amount of content consistent with fast download speeds;
- Contain essential information that needs to be shared with the public – bearing in mind that it may get heavy use in a crisis.

3. BLOGS

3.1. Introduction

Blogs, also sometimes called web-logs, began as online journals in the 1990s. People shared their own interests and thoughts online with self-expression as the primary goal. Jump forward 20 years and you have a blogging explosion that has moved the online journals into both news sources used by traditional and non-tradition journalistic enterprises and marketing platforms for everything from tech companies to government agencies. And while some social media observers believe Twitter and other social media might be spelling the end of blogging, it does not appear to be the case. In early 2013, in WordPress alone – a popular blogging platform – there were 42 million blogs with 329 million viewers looking at 500 000 new posts a day and leaving 400 000 comments.

Blogs offer a great opportunity for regulators to speak – in plain language – directly with the public. They also offer a great opportunity for comments and informal dialogue with the public. Blogs are an important component in an overall social media program. Blog posts, for example, can be announced via Twitter and posts can be shared by viewers via Facebook, giving your organisation a presence on that platform even if you do not have an organisational Facebook page. Blogs, however, are labour-intensive and they must have frequent and interesting content to be viable in the “blogosphere”.

3.2. The challenge of content



Content is king in blogging. Regulators should not start a blog if it cannot be kept well supplied with content. Having both “evergreen” posts in reserve and time-sensitive posts drafted quickly is important. The needed frequency of posts varies by country. In the United States, a blog should have a minimum of two posts per week (three is better) in order for it to have any credibility and traffic. Other countries may have less demanding publics. Front-loading content to drive initial attention and traffic when a blog is started is important. Blogging more often

initially to build an audience and then dropping back to a more management content level is a good approach. The U.S. NRC has created a blogging “series” to help create ongoing content. The NRC Science 101 series has its own logo and focuses on explaining basic science as it relates to nuclear power and materials – including what is fission and how does a nuclear power plant work. The NRC also highlights some of its YouTube videos with blog posts to push traffic to the videos while also helping to meet the content demands of the blog.

3.3. Questions to consider when starting a blog

What level of review do postings need? Blogs by definition are informal, individual communications, not organisational communications. Your organisation should be aware that the type of content expected in a blog is not the type of content that goes through a formal, time-consuming clearance process, although, of course, they need to be accurate and legally appropriate.

How will you adapt to a new style of writing? Web users generally want to get information from a first person perspective and tone. They prefer the intimacy of the “me-talking-to-you” in a loosely formatted structure over the stylised and formatted products that are traditionally used in government. Readers of blogs want to clearly see that it is been written by a real human, even if it is conveying what is essentially official information. The content also must be in plain language and consistent with blogging style, which emphasises personal viewpoints, short sentences, crisp writing and a lack of bureaucratic and acronym-filled language.

Will you allow public comments to be posted in response to your blog? If so, will you moderate or edit the comments? One of the reasons to create a blog is to solicit comments and generate direct feedback from the public. If you turn off the comment option, it will severely damage the integrity of – and interest in – your blog. On the other hand, allowing comments to be posted without review is a dangerous path with a real risk of highly inappropriate material being associated with your content. Moderated comments with a clear, but liberal comment policy, is an ideal middle ground. Note that having comments moderated (and responded to in a timely way) increases the workload of a blog. The U.S. NRC’s blog comment guideline points out that comments are only moderated during “normal business hours”, so there is no expectation that comments submitted in the evening or weekends would be promptly approved and posted.

Who is the Author? Blogs can be the voice of the head of your organisation or posts can be written by official bloggers from throughout an organisation, or can be authored by guest bloggers from partnering organisations. The U.S. NRC’s blog is managed by the Office of Public Affairs but the posts themselves are authored by staffers throughout the organisation. (The Office of Public Affairs assists with writing and editing the posts, and in suggesting topics. The NRC Chairman also occasionally contributes.) The heart of Switzerland’s ENSI communications is its corporate blog website. It is used actively and regularly to release news articles in German and French, although some are also occasionally published in English and Italian. Blogs have some advantage when seeking direct communication: articles are published quickly and easily, and content is well indexed by search engines. ENSI has social media push plug-ins to feed their social media channels directly and automatically – if needed – from the website.

3.4. Ten tips for writing blogs

1. Blog posts should be approximately 200-500 words long. If a post is much longer, consider editing it down or breaking it into two posts.
2. Posts should be written in a professional but conversational style that is easily read and understood by a lay public. Consider doing a readability test to check the comprehension difficulty of your post. For instance, referring to the Flesch–Kincaid Grade Level used for English language, it is generally accepted by social media communicators that posts should be between 9th and 12th grade reading level. That means roughly the text can be understood by a student entering high school.
3. Posts should limit technical terms and acronyms whenever possible. If necessary, define the technical term and the acronym.
4. Posts should “have a point”. Ask yourself: What am I trying to convey? Is this interesting? Does this information benefit the reader? Also ask: Does my opening paragraph accurately convey the content in the rest of the post or is there a disconnect?
5. Content should educate, inform, explain, raise awareness, generate dialogue or clarify NRO’s actions, procedures, etc.
6. Blog posts should be unique and not merely a cut and paste version of content found, for example, in a press release.
7. Content in a post should not announce “news” and does not replace formal communication. The blog is in addition to your regular modes of public communication.

8. Content must be accurate and timely, and must not contain sensitive information.
9. Posts may (and should) contain photos and links.
10. Include a headline and an author name and a title that makes sense to the public.

3.5. Challenges of blogging

Writing blogs can be time consuming and it can take time for a blog to establish itself. Remember, blogging is a form of publishing and most publications that do succeed generally take a long time to build up a sustainable readership. You must be willing to put in quality blogging time week in, week out. Finding fresh content, especially a year or so into a blog's tenure, can be challenging. The U.S. NRC's Office of Public Affairs, for example, has to do more outreach to staffers, recruit additional office-level bloggers and initiate more ideas in the blog's second year than the first.

There are also a number of legal and ethical issues that may arise as you develop your blog or as you manage it. Think ahead and develop a policy and procedure for reviewing posts for proprietary or confidential information, and develop a comment guideline that addresses defamatory language or violated privacy. In the United States, the NRC must adhere to the Children's Online Privacy Protection Act and is prohibited from accepting comments from children under the age of 13. This prohibition is spelled out in the NRC comment guidelines. At the NRC, blog posts and approved comments must be captured in a document archival system as well.

Moderating comments is another challenge. As noted in the Case Study that follows, the U.S. NRC blog has strict comment guidelines that must be followed before a comment is approved and posted. Comments that are "off topic" to the post are disallowed by the comment policy. However, the U.S. NRC found that an Off Topic area created where the public could post about anything related to the agency serves well as a place for these comments.

As informal as blogs are meant to be, they are still official government communications. They are on the record and fair game for being picked up in the mainstream media. That does not mean you should not have a blog – you just need to think carefully about how to use it as an effective communications tool that can benefit both your organisation and the public. Norway's NRPA, for instance, has discussed creating a blog, but has not yet done so. The regulator is not sure if the outreach will make the extra effort worthwhile. The need for frequent updates is also a challenge, as is the question of who should be the author of the posts.

Perhaps the most difficult challenge – especially for your top managers – is the level of criticism that comes with social media. Blogs, particularly, may attract critical comments that may be difficult to read, and hard to approve. Frequent posters, "trolls", anti-groups and others may often use your blog as a way to complain, criticise and vent. As long as the comments otherwise meet the blogging comments guidelines, they should be approved and published. It is important that critics be heard on the blog as it gives the blog credibility. Resist the urge to respond defensively to critics. You will find that other commenters can engage critics and a dialogue can occur on the blog that does not necessarily involve you!

3.6. Case Study: U.S. NRC blog comment guidelines

This is the text the U.S. NRC has posted on its blog to guide appropriate comments. These rules are largely followed by commenters with very few comments rejected entirely. On occasion, a comment may be edited to remove content that violated the policy before being posted. If that occurs, it is noted by the moderator.

The NRC blog is a place for constructive dialogue and information exchange between the agency and the public. We hope to see your comments! However, this is a moderated blog and all comments are reviewed before posting. Only comments that comply with the guidelines below will be posted.

Comment “Rules”

- Comments cannot contain vulgar, obscene, offensive or abusive language or personal attacks of any kind.
- Comments cannot promote commercial services or products or political candidates.
- Comments cannot be “off topic” or outside the mission and role of the NRC.
- Comments cannot include sensitive or classified information or personally identifiable information (other than your name).
- Children under 13 cannot submit comments per the Children’s Online Privacy Protection Act, but can send an e-mail to opa.resource@nrc.gov.
- All blog entries and published comments are subject to disclosure under the Freedom of Information Act and will be preserved pursuant to NRC’s Records Management Policy. If unpublished comments are retained, they are also subject to disclosure under the Freedom of Information Act.
- Comments on the blog do not replace formal communication with the NRC. Safety or security allegations should NOT be submitted via the blog. For more information, go [here](#).
- General questions and comments from the public or the media can be submitted to opa.resource@nrc.gov.
- Information about doing business with the NRC is available [here](#).
- Information on job opportunities with the NRC is available [here](#).

3.7. Leveraging bloggers as non-traditional media

Every industry has its resident bloggers and the nuclear industry is no exception. It is in regulators’ best interest to treat credible bloggers in much the same way as agency media officers treat traditional journalists. Bloggers should be added to media lists, should get news advisories and should be invited to press conferences. NROs, including the Swedish Radiation Safety Authority (SSM), take this action.

Bloggers may also be treated separately, as a sub-set of journalists. The U.S. NRC, for example, has held specific “Bloggers Roundtables”, during which the NRC chairman spoke via phone and email directly to bloggers – from both pro-industry and anti-industry stances. Social media users rely heavily on trusted sources outside of traditional news outlets for information, so established bloggers can have a significant positive or negative impact on the message an organisation is delivering. Canada’ CNSC closely monitors what is posted on other blogs.

4. LIVE DISCUSSION FORUMS

4.1. Introduction

Blogs function primarily as a channel of information from the regulator to the public because there is a lag time for comments to be submitted, reviewed and approved, which delays conversation. One avenue around this lag is the “chat” function. Similar to a blog – and often created on the same platforms – chats provide a real-time on-line discussion. Chats can be conducted via print platforms or increasingly in a video format using webcams to transmit live video.

4.2. How regulators use live discussion

Sweden’s SSM participates in online chats held by media. The initiative comes either from the NRO or the newspapers. Sometimes the communicators contact the editor to suggest topics to chat about. At other times, it is the other way around, with the editor contacting the NRO. The questions asked by the public on the chats can also be used as FAQs on their own website.

Norway’s NRPA participates in online web meetings held by the media, but on an ad hoc basis. During the Fukushima Daiichi nuclear power plant accident in 2011, the NRPA participated in six online web meetings, all of them during the first two weeks after the accident. Experience with NRPA’s participation in online web meetings is considered to be very good by the interviewees from the relevant editorial offices. This applies both in relation to practicalities, user response and performance of the experts in the NRPA. One of the editors said that the online web meeting was the largest that was ever held, with more than 3 000 submitted questions. Several pointed out that the case was particularly suitable because it was serious, while the need for information and expert reviews were great. It was expressed that the participants from the NRPA were knowledgeable and filled the role of experts in a good way.

Switzerland’s ENSI does not use online forums or chats to place information, but it arranges and attends real-life discussion forums to set up a dialogue with its stakeholders. These forums are called “technical forums”. In connection with the search for sites for deep geological repositories, the Swiss Federal Office of Energy has developed a “Technical Forum on Safety” which is led by ENSI. The Technical Forum on Safety discusses and answers technical and scientific questions asked by the public, communities, siting regions, organisations, cantons and authorities in neighbouring states. The forum is comprised of experts and representatives from each of the siting regions. A similar panel has been created by ENSI in 2012 for topics related to the safety of nuclear power plants. This “Technical Forum on NPPs” is also led by ENSI, and discusses and answers technical and scientific questions asked by the population, communes, organisations, cantons and authorities in neighbouring countries. The forum includes representatives of the nuclear power plants, non-governmental organisations, communities near power plant siting, cantons and authorities in neighbouring countries as well as experts.

4.3. Case Study: U.S. NRC chat <http://chat.nrc.-gateway.gov>

The U.S. NRC received feedback on its blog that the inherent delay in posting approved content did not allow for much real-time conversation. To address that need – and to provide a second venue for online discussion with the public – the NRC began chat as a pilot in April 2013. Chat is hosted on WordPress and uses many of the same guidelines as the main blog – including comment rules and disclaimer. It is also designed, within the confines of WordPress, to look consistent graphically with the agency’s other social media platforms.



All chats were one hour long, held once or twice a month. Topics included: resident inspectors, Japan lessons learned, hurricane preparedness, spent fuel disposal issues, history of nuclear power in the United States and security measures at nuclear power plants.

All Chats were promoted on the website, and the platform was initially publicized via a blog post and press release. All chats were also tweeted several times leading up to the event. Chats were archived after the live portion, so they remain visible to

anyone interested in the topic.

It is free to use WordPress to host chat. However, holding the chats was labour-intensive. Three members of the Office of Public Affairs and usually one member of the legal staff needed to be present, in addition to one or more experts to answer questions. One public affairs staffer reviewed the incoming comments, discussed answers with the expert, typed the answers and then approved both the comment and the response. A second public affairs staffer monitored the chat and noted the lag time between when comments and responses were posted (an individual can only type so fast) and filled in the gaps with pre-written interesting facts related to the subject or with “housekeeping items” such as reminders to refresh their screens periodically. A third public affairs staffer monitored the technical aspect of the chat and was there to advise if there are “bugs”.

The U.S. NRC assessed the success of the chat forums after five months and determined the platform was not meeting its objectives. The need to write short responses to questions seemed to do more harm than good for dialogue, and left many participants frustrated. It was also difficult to confine submitted questions to the actual topic at hand, leaving many unhappy when told their question could not be answered by that particular subject expert.

The U.S. NRC is now evaluating Google HangOut, which is a type of video version of the chat, as an option for spring 2014. Click [here](#) to see an example of how it is used by the U.S. Department of Energy.



5. TWITTER

5.1. Introduction

Twitter is an on-line social networking and micro-blogging vehicle that enables users to send and receive short text messages, called tweets. While there are other platforms that perform similarly, Twitter is the world's most popular. These 140-character messages are received by "followers" who have signed up for your messaging. The tweets can also be "hash tagged" in a way that makes it easy for people who are not followers to find the content. The tweets often contain a link back to a source for additional information, and this can be a very useful method of driving traffic to your website because they can be easily forwarded (or re-tweeted), they can quickly be spread by users, multiplying reach and amplifying the message very quickly.

Twitter can be used for both one-way and two-way communication. With one-way communication, tweets are simply disseminated as announcements. Two-way use of Twitter requires the organisation to monitor responses and answer questions also via Twitter.

5.2. Regulators' use of Twitter

Many regulators, including Canada's CNSC, closely monitor Twitter to "listen in on" and learn from the social media conversations about them. Switzerland's ENSI set up two language-specific Twitter accounts after the Fukushima Daiichi nuclear power plant accident. The German speaking account (@ENSI_ch) was created shortly after March 2011; the French one (@IFSN_ch) in January 2012. The German version has around 1 050 followers¹; the French one has 400¹. Both accounts push ENSI website content and occasionally retweet other posts or reply to stakeholders. Both accounts are ready to be used as live broadcasting channels for event response. The @ENSI_ch account has done so in fall 2012 at a public forum in order to discuss measures in nuclear safety after the Fukushima Daiichi nuclear power plant accident. Twitter is also used to post pictures from events. Poland's PAA uses a [Twitter account](#) to specifically transmit information from its spokeswoman.

Ireland's RPII established its Twitter account in May 2011. The strategy was:

- to communicate with the demographic that may not use traditional media;
- to gain notice and amplify its message;
- to gain credibility and authority by encouraging followers from other international regulators and agencies involved in radiation protection; and
- to drive traffic to its website.

¹ As for 14 April 2014.

This strategy has had some success and although the number of followers is currently very small they are of high quality. Key messaging on radon awareness has been amplified by direct messages to followers with very large numbers of followers – one national follower has 40 000 followers. As a result, a clearly defined increase in traffic to the website can be seen originating from referrals from tweeted messages. As with all social media the hurdle to overcome is generating a consistent volume of interesting content. RPII is currently rolling out a decentralised model for tweeting which will allow staffers to tweet from international conferences and other day-to-day activities.

France's ASN also uses Twitter. It has 3 480¹ subscribers to the Twitter account it opened in 2010. All its press releases and information notices are tweeted and then regularly retweeted by the ASN account subscribers (institutional, press, etc.). ASN is envisioning generating live tweets during press conferences given by its directors, and announcing national and international events attended by one or more members of the ASN staff, in the fields of nuclear safety or energy transition (see the debate on the energy transition held in France in spring 2013, for which the remarks of the ASN Chairman were widely taken up by ASN's Twitter account subscribers). ASN has noticed the effectiveness of information circulation and wants to widen its use of the tool.

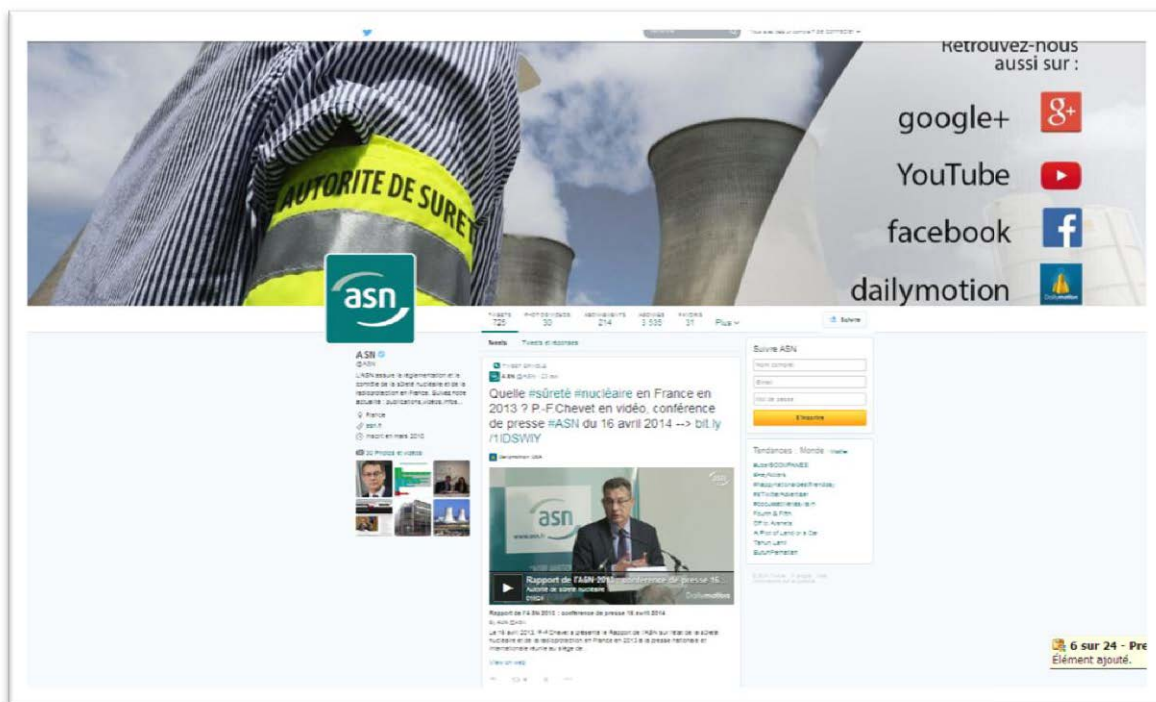


Figure 8: ASN's account on Twitter

¹ As for 14 April 2014.

ASN is currently examining three lines of action specific to social media/Twitter:

- a charter of good practices that will enable ASN staff to position themselves with respect to the communication strategy chosen by ASN;
- better appropriation of the conversational possibilities of the tool, notably with the government organisations which are very active on the social networks; and
- better appropriation of Twitter by the ASN press department to use it as a true communication vector (live tweets in press conferences, retweets from public stakeholders, etc.).

The creation of a Twitter account in English is currently being studied, to allow interaction in emergency situations with non-French speaking audiences drawn to the ASN's Twitter account (@asn) through international organisations and nuclear regulatory organisations (IAEA, U.S. NRC, etc.)

Sweden's SSM has been using Twitter since late 2010 (@SSM_Nyheter). During the first years it was only used as a one-way communication tool only "tweeting" agency news. But early 2013 SSM changed its strategy and now uses Twitter to inform about other things than just news, and also answers questions from some 700¹ followers.

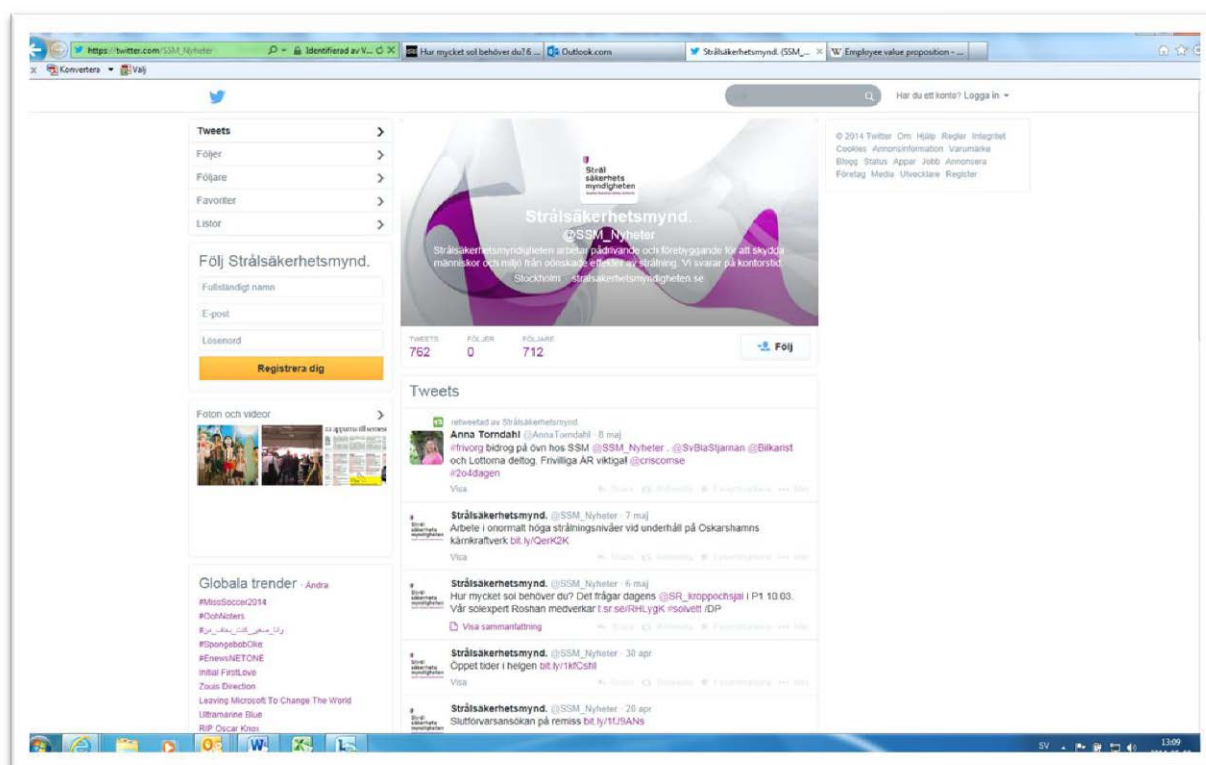


Figure 9: SSM's account on Twitter

¹ As for 14 April 2014.

Norway's NRPA mainly uses Twitter as one-way communication, but will respond to questions when they occur. NRPA has been using Twitter since March 2012 and the main target group is journalists.

The U.S. NRC only uses Twitter as one-way communication and has some 5 000¹ followers. Other federal government agencies in the United States, however, do "converse" with followers via Twitter, responding directly to their followers. In some cases, a type of town-hall meeting with the public is held entirely on Twitter, although with mixed success and after considerable planning and the need for a third-party tool to moderate.

Finland's STUK has been using Twitter since December 2010. Twitter is mainly for one way communication to promote spreading of press releases and other news material on radiation and nuclear safety issues. Whenever relevant questions occur STUK responds. STUK uses Twitter also for monitoring communication.

5.3. Twitter as a crisis communication tool

Twitter is particularly useful in a crisis. Many of the most important world news stories in recent years have been initially relayed by micro-blogs i.e. Twitter, including the landing of a U.S. Airways flight into the Hudson River of New York City and the Mumbai, India, terrorist attacks in 2008. Initial tweets from eye-witnesses were re-tweeted and rapidly spread information.

Twitter serves as a rapid response vehicle that allows short pieces of crisis communication information to be sent quickly to the public and the media and creates synergy with other content, such as that on the blog or an organisation's website. Some social media observers predict Twitter will overtake blogs (and traditional media reporting) as a primary source of news for the public.

The U.S. NRC sent 10 tweets to its 3 000 followers in fall 2012 as Hurricane Sandy threatened several East Coast nuclear power plants. Those Twitter messages were re-tweeted 130 times potentially reaching more than 210 000 followers.

In a 2013 airliner crash at the San Francisco airport, the first "tweet" with a photo was sent by an observer one minute after the crash. However, the complex and technical nature of nuclear regulation cannot be reduced to 140 characters so for most regulators this is unlikely to be true. See more in section 10.4 Regulator's use of social media in crisis communication.

Some regulators may see the need for more than one Twitter feed. The U.S. NRC, for example, does allow programs or offices that have a rather separate set of stakeholders to have their own Twitter accounts. These accounts must look stylistically consistent with the main NRC Twitter account and adhere to the same policies. This is most likely to occur in regulators or international organisations with many different branches, offices or locations for which a unique Twitter presence makes communication sense.

See chapter 10 on social media and crisis communication for more information.

¹ As for 14 April 2014.



6. IMAGES: YOUTUBE AND FLICKR

6.1. Introduction

YouTube is essentially a site for storing and viewing videos – a gigantic online video gallery. It is a bit like owning your own television station. It became possible thanks to major improvements to the Internet that allowed faster video streaming and in computer technology that allowed larger computer storage for video content. By July 2006, YouTube had grown into the fifth most popular web destination, with more than 100 million videos viewed and more than 65 000 new video uploads each day. Today, YouTube’s members are uploading more than 13 hours of video every minute and there are more than 1 billion video downloads per day. The viral video is a social phenomenon around the world, with some particularly popular videos skyrocketing to tens of millions of views and propelling their creators to stardom.

YouTube is a social media site that, while important and arguably necessary as a communication tool, requires significantly more planning, skills and resources to pull off successfully than even a blog. Videos require not just ideas, but scripts, narrators, videographers, video editors, and even graphics and design support.

While costly, videos are excellent ways to get information to the public and can prove to be resource-effective in the long run. Regulators with in-house AV departments or editing resources may be better positioned to take advantage of YouTube than those who must outsource all video production. While there are well qualified practitioners to whom the work can be outsourced, it can be expensive.

6.2. Recommendations related to YouTube

- Videos do not have to be Hollywood quality. A less-than-perfectly polished video might be more acceptable to the public than a slick, over-produced one.
- Videos need to be short. Less than five minutes is ideal; anything more than 10 minutes should be looked at very closely for ways to trim. There might be some cultural differences here, with some country’s publics more willing to watch longer videos.
- Videos need to be in clear, plain language, scripted “for the ear” and interesting enough to hold an audience. Liberal use of b-roll (i.e. background roll or general images to illustrate the content being discussed) and interviews should break up reliance on “talking heads”.
- Take advantage of the text description on YouTube to help people find your videos during searches. Be sure to tweet the URL for new videos and, when appropriate, write a blog post about each video.
- Be clear that you are the producer of a video. Do not try to hide your organisation.
- Create a series of similar videos to build audience.

- Brand all your videos.
- Strive to post a minimum number of videos each month. This is likely to be significantly fewer than the content posted to your blog. Decide if you will open your site to comments and “likes” or push comments to another social media platform.

6.3. Regulators’ use of YouTube

Many regulators use videos to communicate but post them on their websites or via various webcasting platforms. Technically, these other options are not social media but may be perfectly suitable for your particular message, public and regulator.

Switzerland’s ENSI uses YouTube as a satellite to its website. Technically it is much easier than embedding videos in the ENSI website. The account has been created in spring 2011 with currently over 250 000 views for over 33 videos. ENSI is using video content to underline important messages as well as to offer content digests of events.

In April 2013, Ireland’s RPII took its first foray into producing a YouTube video. A Video News Release (VNR) was produced and syndicated to news outlets. The subject of [this first](#) VNR was the RPII’s publication of a report on the impact of nuclear new build in the United Kingdom. The objective of the video was publicity outside of the normal press release distribution and press conference. A second objective was to gain some experience with the process and to communicate in a manner previously untried. While engaging third party videographers, one of the lessons learned was to keep tight control and focus on the script, key message and editing.

The experience and lessons learned were used in the development and implementation of a [second VNR](#) on the launch of the Irish National Radon Control Strategy on the 18 February 2014. This VNR benefitted from closer control of the script, key messages and editing.

In addition to producing VNRs, the RPII commissioned an [animated video](#) explaining how to measure your home for radon gas. The purpose of this video is to make the issue more accessible; to explain the process as simply as possible, without the need to read text. Besides being available on the RPII’s YouTube channel, it is also embedded in the RPII’s website along with other information on radon.

To disseminate its video content in Google search engine and YouTube channel linked to it, France’s ASN has opened a YouTube account in addition to the French DailyMotion network (see chapter 9.2).

Norway’s NRPA opened a YouTube site in March 2011, in connection with the Fukushima Daiichi nuclear power plant accident. However, the regulator has only a very limited experience with the platform and is currently studying how to use it in a successful, cost-effective manner.

Canada's CNSC not only posts its own videos on YouTube, but also links to third-party videos that highlight safety aspects of the nuclear sector.



The U.S. NRC posts approximately two videos per month to the site. Some of these videos are small segments of longer tapes meetings which are available on the website. Other videos are content created specifically for YouTube. This content includes a series called “Three Minutes With” which creates short Q&As on various subjects, and a series called “Moments in NRC History” highlighting such important events as Three Mile Island and Chernobyl accidents. The U.S. NRC has a consistent opening and closing slide for each video that clearly identifies the NRC as the

creator, and provides the URL for the website. All comments are directed to the YouTube section of the blog to reduce the number of sites the regulator must monitor for comments. This approach also drives traffic to the blog, which is considered the primary social media location for conversation with the public.

Finland's STUK has its own YouTube channel since November 2012. YouTube is the main platform for STUK's videos.

Sweden's SSM opened a YouTube account in December 2013. The main reason was to launch information films about ultraviolet radiation (UV). Other films, such as video recorded press conferences are also published on the account. SSM also uses Vimeo.

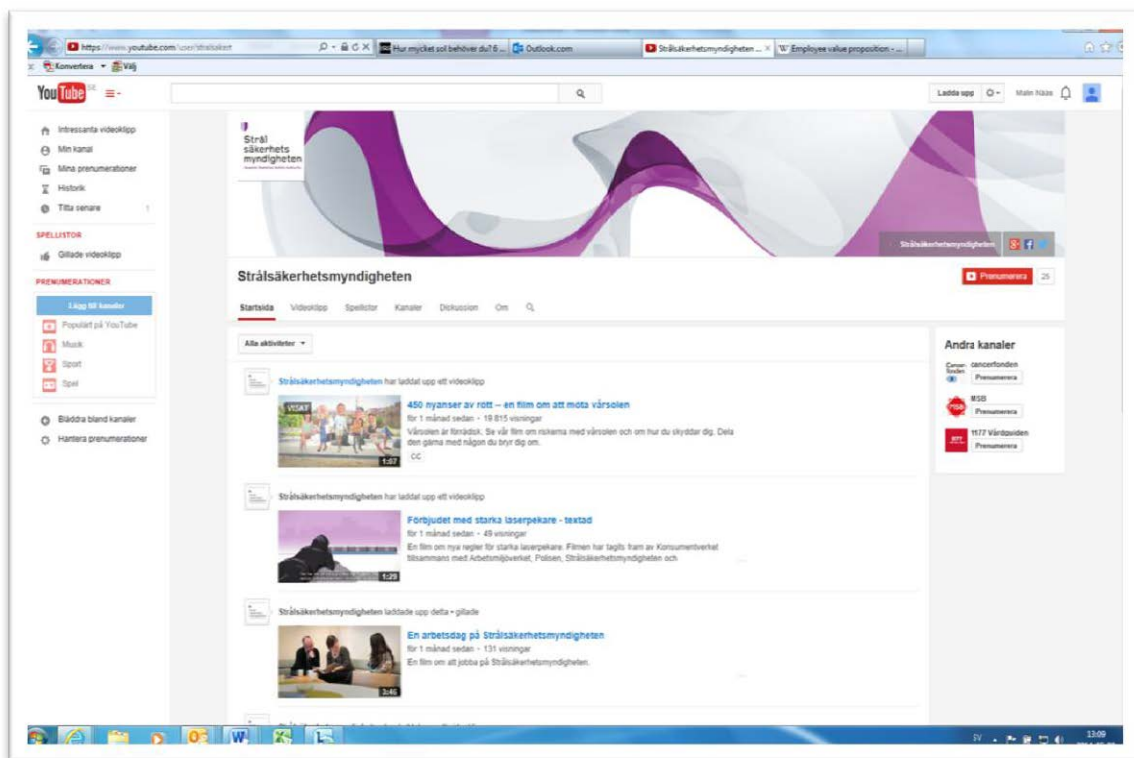


Figure 10: SSM's account on YouTube

6.4. The use of Flickr for Still Photos

Similar, though less popular and effective, is the on-line photo gallery Flickr. It is much less resource-intensive than YouTube, but photos also draw fewer viewers than videos. Flickr can serve well as an easy-to-use online photo gallery with links to other platforms, including your website and blog. You can enable comments or drive them to another platform, such as your blog or a dedicated email address.

Flickr can help “tell a story”. It can also reduce media calls for your images and the staff time of individually emailing photos on request. The U.S. NRC, for example, created a Flickr photo stream in March 2012. It has more than 1 500 photos posted with 430 000 visitors and 1.16 million views. New photos are added daily.



Figure 11: U.S. NRC’s Flickr page



7. FACEBOOK

7.1. Introduction

Facebook is the ultimate social networking site with some 1 billion users, at least half of whom claim to log on at least once a day. The site is a true world phenomenon with users from virtually every country in the globe. “Penetration” rates, which measure the percentage of people in each country on Facebook, are astonishing. The United States, the United Kingdom, Canada, Argentina, the Netherlands, Belgium, Israel, Denmark, Norway and Australia, among others, all have penetration rates around 50%. The highest penetrations in the world are in: Iceland (71%), Qatar (78%) and Aruba (74%)¹. With numbers like these, Facebook cannot be ignored as a possible component of a public information/public outreach program.

7.2. Using Facebook

Organisations and government entities of all types determine independently (based on their audience) the level at which they engage the public on Facebook. Some use the platform sparingly, essentially repackaging website information such as press releases, significant documents and statements from high-level management for posting on Facebook. Other organisations fully engage their audiences by offering a variety of content, including videos and photos, blog content, editorial calendars, interactive applications, recruitment and human interest material, and then provide multiple mechanisms for feedback on that content.

As with blogs, much of the commenting that transpires on Facebook is between commenters and does not necessarily require a response from the host organisation. Unlike a blog, however, comments on Facebook are unmoderated, but if necessary, can be removed. The caution with allowing comments on a regulator’s “wall” is that the page must be monitored frequently and inappropriate postings will be visible until removed by the regulator. Organisations can choose to assign responsibility for reviewing and posting Facebook content through one department, such as public affairs, or can decentralised, designated user system that empowers vetted and trusted individuals to post content on behalf of the organisation. Organisations must determine how to handle monitoring the page after hours and weekends and holidays, as inappropriate content remains on the page until it is removed by the organisation.

7.3. Regulators’ use of Facebook

The Ireland’s RPII has a Facebook page, which was initiated in May 2011, to communicate on radon awareness to a demographic that may not engage with traditional media. The page has had some success. Information is posted on radon awareness campaigns, such as event notifications, photos of public meetings, key messages, etc. Publication on the Facebook platform is less formal than on the organisation’s

¹ <http://www.socialbakers.com/facebook-statistics/>

website and there is an automatic feed of news from the website to the Facebook page. Overall, content is limited by the frequency of updates.

Sweden's SSM has Facebook pages that focus only on radon and UV. Posted guidelines tell users only questions about radon or UV will be answered. Comments that are insulting or otherwise inappropriate – such as marketing messages from companies – are deleted. Questions are answered on weekdays, between 8-16.

Norway's NRPA has had a Facebook page since June 2013, operated during office hours only. The regulator uses it to answer questions but will not comment on matters that are under consideration. Illegal or inappropriate comments are deleted.

Canada's CNSC uses its Facebook page to promote upcoming hearings or events, and tends to post links for new pages on its website, or any new posting the regulator feels might elicit comments from Facebook followers. Only comments that use profane language can be removed from the Facebook page. Government of Canada policy prevents other comments, whether related to a posting or not, from being removed.

Switzerland's ENSI uses Facebook to push website content as well as to reply to public and private queries if needed. The account is also used to monitor Facebook. ENSI started on Facebook in April 2013. It announces in its Facebook disclaimer that inappropriate content from other users and spam will be deleted.

The U.S. NRC is still analysing how to best use Facebook as an addition to its existing social media platforms. The first step was to open up access to Facebook to all employees on their workplace computers. The site was previously blocked by the Office of Information Services largely due to cybersecurity concerns. The Office of Public Affairs decided it could not pursue an external communication vehicle the agency's own employees could not access. Access was granted in September 2013, and the Office of Public Affairs has proposed a medium engagement model for an agency Facebook page for mid-2014. Medium engagement will include posting pre-packaged content such as press releases, links to blogs, images and Chairman and Commissioner speeches. The NRC Facebook page will also include abbreviated versions of popular blogs, videos and original content created specifically for the Facebook audience. The agency will allow general comments on the site in addition to comments on specific posts. The medium engagement model allows the NRC to actively engage on the platform without an excessive commitment of scarce personnel resources.

Finland's STUK started using Facebook actively in spring 2011 to support public communication during the Fukushima crisis. STUK uses Facebook to share press releases and other web site content. STUK also uses the platform to share third party radiation and nuclear safety information. Discussion is encouraged and STUK takes part in it when seen necessary. Questions are answered as far as possible.

7.4. Case Study: France's ASN on Facebook

France's ASN has been active on Facebook since 2010. It uses Facebook as a corporate tool. The ASN Facebook page is institutional. It has currently almost 800 "likes". The main feature used is the "wall" on which ASN proposes general information and photos, opens discussions, etc.

ASN plans on revamping its Facebook page in the future. Users of Facebook are more inclined to like a page dedicated to a product (a brand for example) than a page dedicated to an institution. The ministries and public institutions that have ventured onto Facebook have never managed to create a community that exceeds a few thousand fans. On Facebook, where recreational or teaching aspects are often predominant, it is not a foregone conclusion that a Facebook user will "like" the page of as serious-minded an institution as ASN.

Given these conditions, it would seem necessary to take into account the Facebook ecosystem by abandoning the institutional ASN page and considering having a broader spectrum page dedicated to nuclear safety. Although it is difficult to reproach Internet users for not wanting to like ASN, who on Facebook, on the other hand, could not want to like a page on “Nuclear safety” in these “post-Fukushima” times? To avoid losing its 988 fans, ASN would ask Facebook for authorisation to rename the current “ASN” page and transform it into a page on “Nuclear safety”.

As for the editorial bent of such a page, this remains to be determined but broadly speaking its vocation would be to inform the public of current news and topics in nuclear safety issues in France and in the world. This page would be presented as being supervised by ASN but its editorial scope would go beyond the strict institutional framework of ASN in order to make it more attractive to Internet users.

Its role would be to promote an educational approach to questions of nuclear safety and radiation protection whenever possible (by means of images – photo and video – in particular). The aim would also be to ensure targeted communication with the populations situated near nuclear sites.

7.5. Tips for using Facebook

- Customise the page as much as possible to be as consistent with your other social media platforms.
- Build your audience by asking individuals to “like” your page. Push information from Facebook to your other social media platforms by “sharing” blog posts and web content, and tweet new content on Facebook.
- The rules of the Facebook page are similar to the rules for effectively building an audience for a blog. Make sure you are adding content frequently – preferably at least daily. You want to provide a reason for the Facebook page audience to check in and see what’s new.
- Define a “Vanity URL”. Once your Facebook page has reached 25 “likes” you are able to claim your own unique Facebook URL. It means that instead of having an anonymous URL as an address to your Facebook page, your page will become www.facebook.com/YourChosenName. The conditions for granting a chosen name are determined solely on a “first-come-first-served basis”. It is therefore a matter of urgency to choose a name in order to ensure a simple and easily remembered “Vanity URL” and to obtain your own organisation’s name. Therefore, there is no policy that protects the companies or institutions’ using of names on Facebook.
- Vary the visuals of the profile in order to be noticed in the news stream by fans who would otherwise pay little or no attention to the posts.
- Provide a level of information that is both mainstream and educational to ensure that nuclear safety and radiation protection issues are understood.
- Publish a dialogue charter to clarify the conditions in which web users can express themselves on the page and in which the organisation can intervene as moderator.
- Answer comments.



8. WIKIPEDIA

8.1. Introduction

Wikipedia is an online, user-generated encyclopaedia. It is the epitome of social media's tenet of user-generated content and "the wisdom of crowds". But check it and you will see an entry about your organisation that you may or may not like. While traditional encyclopaedias have a review and editing process, Wikipedia allows anyone to weigh in on the discussion of what is correct and important enough to be published on a certain subject. Do not dismiss the site as simply a college student's best friend. According to a 2010 article in the Public Relations Journal, it ranks as the sixth most popular website in the world and the fifth most popular in the United States.

Wikipedia dictates that only neutral "editors" should add or remove information. It is frowned upon for regulators (or any entity) to make changes to its own page. Some organisations do go around these rules by hiding the identity of someone making changes. Another option is to object to content or suggest additions via the "talk page", which is the background page for each entry. This is where you can identify yourself as the regulator and dispute content that you believe is biased or inaccurate. It is best if you are able to bolster your argument with links to media articles and other sources of information that appear objective. This approach is not always successful, though, if there is an editor who is highly critical of your organisation and uses Wikipedia to further their own agenda.

8.2. Regulators' use of Wikipedia

Switzerland's ENSI is present on Wikipedia in four languages (German, French, Italian and English).

Norway's NRPA has so far written two articles in Wikipedia, one article about the NRPA's responsibilities and mandate, the second article about the General Director.

The page devoted to France's ASN in Wikipedia is updated annually at the occasion of the publication of the ASN annual report. It allows the public to know the responsibilities, status and key figures of the regulator.

The U.S. NRC has a section on Wikipedia that was not generated by the NRC. The NRC has been largely unsuccessful in getting desired updates to its Wikipedia page made, and inappropriate and biased verbiage removed. While one editor is supportive of the suggested changes, another consistently removed the neutral language and reinserts subjective statements. Challenges to the Wikipedia section are still ongoing.

9. OTHER SITES: LINKEDIN, DAILYMOTION, GOOGLE+, TUMBLR

9.1. Introduction

While the “big four” social media sites are usually considered to be: blog platforms, YouTube, Twitter and Facebook, there are a variety of other sites that attract users – and some that might grow in popularity and eventually unseat the reigning social media champs. Some of these second tier sites include LinkedIn, a social media network for linking and networking professional contacts, Dailymotion, Google+, Tumblr and others. Some regulators may already be using some of these sites. In all cases, though, they should be assessed periodically for potential usefulness in the future.

9.2. Regulators’ use of these sites

France’s ASN is one of the NROs using many of these additional platforms. ASN has a professional account on Dailymotion, which allows it to create a personalised page, propose an unlimited public space and use a private space for storage of videos dedicated to ASN’s in-house audience. ASN currently has 73 videos on Dailymotion and publishes an average of one video a month on this information channel. With more than 90 000 viewings, the Dailymotion channel is the most powerful platform in the ASN social media arsenal to date.

ASN is also present on Google+ (currently undergoing an observation phase) for which it strives to provide all its videos with English subtitles. ASN has 57 followers on LinkedIn.

Switzerland’s ENSI also uses LinkedIn and Xing. After a few months of experience, the interest appears rather little.

The U.S. NRC is assessing the use of Google+ for its Google Hangout platform, which allows an online video chat that is archived directly to YouTube. An example of how this is being done by the U.S. Department of Energy can be found [here](#).

Sweden’s SSM is using LinkedIn to promote the Authority as a workplace and to publicise vacancies.

10. SOCIAL MEDIA USE IN A CRISIS

10.1. Introduction

The need to provide information quickly and accurately during a crisis makes social media an extremely valuable tool for nuclear regulatory organisations. In addition, social media is increasingly taking on a crisis communication role – the U.S. Federal Emergency Management Agency, for example, monitors Twitter to help identify locations to which responders should be dispatched. Since much of the information on social media is likely to be incorrect, it is extremely important that regulators be adept at using social media during regular business in order to ramp up its usage during an incident. It is impractical to assume an NRO would be able to implement a new social media platform in the midst of responding to a nuclear incident.

10.2. Tips on social media use in a crisis

- Maximise social media platforms to repeat communication messages so that crisis victims can hear your message. (Stress reduces one’s ability to hear and comprehend information, so repetition is extremely important.)
- Reaction time in social media is swift and thus very challenging for regulators. Pre-packaged Tweets and other social media content developed ahead of time may help. (The U.S. NRC has pre-taped Public Service Announcements that can be posted quickly on YouTube, for example, simply by adding the name of the affected plant to the title page.)
- Tweeting small bits of information rather than waiting to collect sufficient information for a full press release needs to be a crisis communication concept integrated into your planning and accepted by your management. Twitter “traffic” is going to guide news coverage of the event and your organisation needs to be, as much as possible, in the front of the pack.
- Develop a mechanism for quickly monitoring social media. The U.S. NRC, for example, has an agreement with the U.S. Federal Emergency Management Agency to provide a team of trained and experienced social media monitors for use during an incident. These individuals would gather information about public concerns, issues, questions and needs and provide them to the NRC Office of Public Affairs. The quick feedback loop allows the NRC to develop outreach products that meet the needs of users, as expressed in blog comments and tweets.

10.3. More things to consider

- The reaction time with social media is very short. Social media have increased the difficulty for regulators of communicating quickly and accurately;
- Social media offer an opportunity to respond rapidly and to promote NRO messages;
- Social media messages in a crisis are also less formal and require less management oversight;
- Social media do not replace traditional press relations (press releases, conferences, interviews);

- Social media can spread misinformation, rumours and polemics; active vigilance is thus required for monitoring; and
- Re-tweeting or relaying by others multiplies impact of messaging.

10.4. Regulators' use of social media in crisis communication

The U.S. NRC includes social media in its Crisis Communication strategy, turns all crisis press releases into blogs and has pre-written Twitter messages. These strategies are tested virtually in exercises and have also been tested in small incidents, such as Hurricane Sandy.

Last summer, Sweden's SSM decided on a new crisis communication strategy. The strategy states that in a crisis SSM should communicate with the public through the channels the public uses, which means if there should be a crisis today they would use Facebook, Twitter and probably YouTube to send out information and answer questions from the public.

The German Commission on Radiological Protection adopted the "Guideline for the information of the public in case of nuclear accidents"¹, which offers recommendations to the competent authorities in Germany. It includes some social media, such as chats and blogs, and compares their purposes, advantages and disadvantages.

Canada's CNSC has both a Facebook page and YouTube channel to use if a crisis or emergency should occur. Since the Fukushima Daiichi nuclear power plant accident in March 2011, all emergency exercises have scenarios that involve social media inputs.

Switzerland's ENSI is preparing fast communication channels such as Twitter in order to act quickly in case of a crisis.

For more information on integrating social media into a crisis communication strategy see the *Road Map for Crisis Communication of Nuclear Regulatory Organisations – National Aspects* issued in June 2011².

10.5. Case Study: France's ASN and emergency response exercise with simulated media pressure: use of Twitter in real time

The nuclear emergency exercise that mobilised France's ASN and many other public stakeholders in 11 and 12 June 2012, provided the opportunity to gauge the power of Twitter as a tool for circulating information in major emergency situations and for interfacing with the public, as well as revealing its conversational and moderating value, along with the risks it can bring, due in particular to the speed of response it fosters and the dispersion of messages that characterise the conversation mode of this tool.

ASN's first press release was sent by the community managers early in the day, shortly after that from the licensee. The seriousness of the simulated events very quickly led to a large inflow of "false tweets". Having no relevant information to issue in the minutes following triggering of the exercise, and as it is generally during these first moments that the least reliable rumours circulate, the ASN community manager opted for tweets relaying the informative pages of the ASN website concerning the maps, the information graphics, the figures, etc. for the facility concerned by the exercise (namely Saint-Laurent-des-Eaux). Thanks to this information dissemination tool, the public and press had the results of ASN's last inspections

¹ This guideline is available [here](#) in German only.

² Final report [NEA/CNRA/R\(2011\)11](#)

of the nuclear power plant concerned by the emergency (notices to comply, inspection follow-up letters, latest news, etc.): valuable documentary backup material for the journalists' investigations in particular.

The journalists, who were present and active on the Twitter microblogging network at a very early stage in the exercise, immediately passed on the information received, knowing they had here a reliable source for contextualising and possibly consolidating their own information.

The configuration of the various participants in the exercise then became established on Twitter: the inter-ministerial nature of the emergency exercise of 11 June mobilised the public authorities in all the aspects imaginable at local and national scale: those responsible for safety, of course (ASN, IRSN, Prefecture), but also the health aspects of the emergency (Ministry of Health, regional health agencies), aspects relating to foodstuffs (Ministry of Agriculture and Fisheries), the movement of people and goods (Ministry of Tourism, Ministry of Transport), the informing of neighbouring countries, etc. Tweeter has rapidly become a forum where, like the telephone but with an absolute transparency, all questions – however varied in nature – can be raised.

As a consequence there was an intense flow of posts posing questions to ASN about various issues, such as the consumption of drinking water, authorising tourists to spend time at a historical monument situated near the event's venue, the consumption of natural foodstuffs produced in the surrounding area, etc. But it is not necessarily ASN's role to inform directly people on these issues, especially when the relevant Authorities are also present on the social media platforms. Using those platforms highlights the tricky matter of the distribution of roles and responsibilities.

10.6. Case Study: the U.S. NRC, social media and hurricane Sandy

Summary: On Sunday 28 October 2012, Hurricane Sandy hit the Eastern Seaboard of the United States. The first NRC action related to the storm was to cancel a meeting scheduled for the coming week. The Office of Public Affairs knew the agency's social media platforms would get significant traffic and was prepared to post information from home, even as public affairs staff itself was in the path of the storm. The first Hurricane Sandy-related blog post publicised the meeting cancellation. The subsequent tweet went to 3 000 NRC followers; re-tweeting reached another 8 000 potential followers. The NRC also pushed to the top of its YouTube channel a previously posted video on hurricane preparedness.

On Monday 29 October, three blog posts went up, providing updates on how the plants were faring in the storm. All posts were tweeted and then re-tweeted by many of the agency followers. The third post reached a potential audience of 131 000 on Twitter. The blog also got its single highest number of views on this day – 6 200. Total blog views for the crisis as a whole was around 20 000. The second of the three posts this day also got one of the highest number of Facebook shares in the blog's two-year tenure – 367.

On Tuesday 30 October, two more blog posts about the storm and its effects went up and were “tweeted” as well. Subsequent posts on the subject went up the following week, chronicling the return to normal.

The social media platforms allowed a relatively easy way for the NRC to keep the public aware of the storm impacts. While the impacts were, in the end, relatively few, even “no news” is important to disseminate to a public still worrying about a repeat of the Japanese nuclear crisis. By having the platforms in place before the crisis and NRC stakeholders familiar with their existence and location, the NRC was able to maximise information flow and reduce public concern. Also, by reading the blog comments, the NRC was able to understand what the public was most concerned about and could tailor their information to meet the public's needs.

Lessons Learned/Recommendations: Social media is a powerful source of information in a crisis. Even without power, residents of the Eastern Seaboard could easily obtain information about the status of their

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nuclear power plant via smartphones. The media also used information in the blog to augment their coverage of the storm.

11. MEASURING SOCIAL MEDIA IMPACT (ANALYTICS AND METRICS)

11.1. Introduction

While communicators generally agree in principle that social media is important and useful, gathering meaningful data to quantify how it is meeting your outreach objectives is challenging. Benchmarking against other organisations is helpful. However, independent regulators are so unique in their mission and purpose, it can be challenging to find appropriate entities to benchmark against. Regulators may need to consider comparison to other government agencies, non-governmental organisations and even small industry groups.

11.2. Data collection

Some basic data worth collecting and reviewing include:

- Tracking the number of viewers to your blog to gauge your reach and general interest. You can also track the number of comments to stay aware of the conversations taking place among your audience and to determine which posts spur the most discussion to guide future content development. Those interested in your blog can also “subscribe”, and tracking this number gives you a good idea of those particularly interested in your content. Depending on your platform, you may also be able to look at the list of subscribers and recognise online names or email addresses. Other blog measurements to track include the number of times each blog post is shared on other social media platforms like Facebook, Twitter, Google +, etc. and when other bloggers “like” your post. This will give you a sense of the relevance of your post when it is shared across platforms and marked by other blogs. A qualitative analysis of your blog is useful for determining if your content supports organisational goals.
- Wordpress offers built-in analytics providing information like number of views and unique visitors to your posts, views over a specific time period, referrers, top posts and pages, and search engine terms associated with your posts (see Appendix 1).
- Twitter Analytics is a native element of the platform, but it is not integrated into Twitter pages, and requires a separate login. It offers a method for tracking the number of times your tweets are re-tweeted and the frequency with which your organisation is mentioned in conversations on Twitter. This is a means of determining who is reading and sharing your message, and talking about your organisation. It also helps determine how many potential Twitter users see your message (impressions) and discuss your organisation on Twitter. Tracking re-tweets can also indicate your organisation’s social media impact during specific events. In addition, Twitter Analytics tracks the number of times users click your tweet links (see Appendix 1).
- Using the built-in analytics in YouTube and Flickr to assess information such as viewership, subscribers, video watch-time, audience retention, search terms and referrers (see Appendix 1).

- Use Google Analytics (or other products) to determine if your social media sites are sending traffic to your website, and if your website is sending track back to your social media platforms. This allows you to assess the synergy between your various platforms.

11.3. Social media metrics (measurement)

Social Media Metrics for Federal Agencies on Howto.gov¹ suggests a baseline group of social media metrics for U.S. federal agencies. They are measures of breadth, depth, direct engagement, loyalty, customer experience, campaigns and strategic outcomes of social media efforts (see addendum).

11.4. Regulators' use of social media measurement

Amon others, Switzerland's ENSI is measuring the number of its followers on Twitter, Facebook and YouTube.

France's ASN launched an "eReputation audit" from May to August 2012 in order:

- to draw the outlines of the territory of communication on social media;
- to evaluate the expectations of its audiences for communication;
- to know who are the influential ("influencers").

To do this, it is important to measure quantitatively the visibility and to answer the following questions: How is the tone of its communication? What is its impact? How is a NRO perceived? Why? To draw answers to these questions:

- Get a picture of what is said on the brand and where;
- Identify the conversation around the NRO (type of questions, subjects);
- Analyse the e-Reputation of the NRO;
- Identify opportunities and threats to build a social media strategy.

The mains results of the ASN's "eReputation audit" were the following:

91% positive or neutral mentions showed that:

- ASN plays its role as independent authority by providing reliable information on nuclear safety;
- The press but also key influencers relay its information.

9% negative mentions were mostly related to:

- A lack of responsiveness on Twitter during the Doel event in Belgium;
- A demand for more detailed information on sensitive topics: ITER, Fukushima Daiichi nuclear power plant accident, radiation protection, nuclear waste trains.

Greenpeace dominates the e-influencers. Besides Greenpeace, politicians, other green activists and people involved in radiation protection show the most interest in ASN activities.

The "eReputation audit" highlighted the following opportunities for ASN:

- More communication on nuclear waste trains, radiation protection, etc.;
- Fast answer to the questions on Twitter;

¹ <http://www.howto.gov/social-media/using-social-media-in-government/metrics-for-federal-agencies#part-three>

- Reach a larger audience by building relationship with key influencers.

Thanks to this work, ASN better understood its sphere of action on social network. Guidelines for social media use may be written.

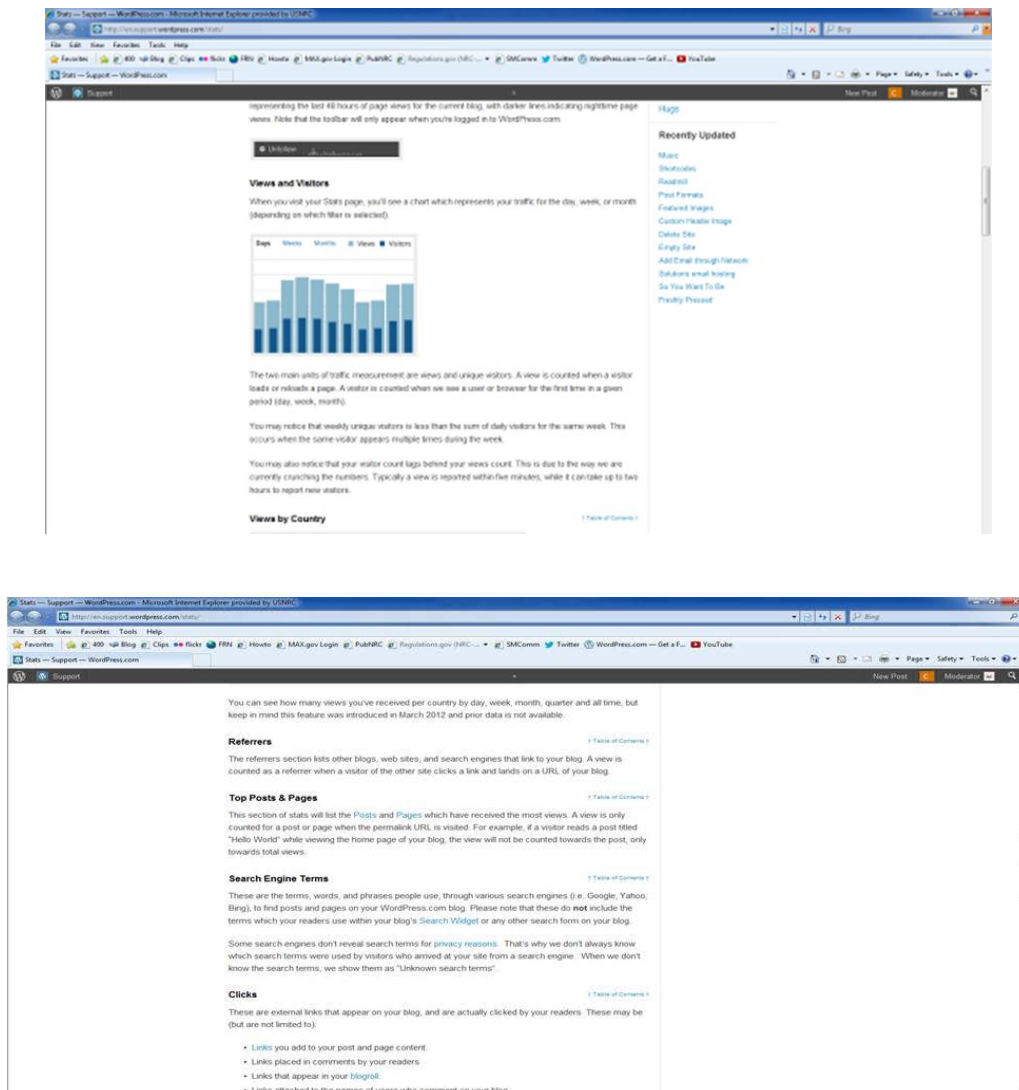
12. CONCLUSION

Social media is an important tool for nuclear regulatory organisations to use in communicating – both during periods of normal business and during an emergency. Each NRO, however, will need to review and analyse their own needs, take into consideration budgeting and staffing restraints, and determine which platforms will really serve their needs. Not all countries will find the same platform useful and cultural norms will have to, in part, guide the NRO’s selection of which platforms to use. It is also important to note that social media platforms should be fully integrated into an overall communication strategy and embarked on for solid, communication reasons. They are, after all, communication tools and not communication goals or objectives. In addition, social media platforms, generally speaking, should be not used simply because “everyone is doing it”.

This report provides insight into how social media can be incorporated into existing communication strategies and, hopefully, gives NROs some incentive to consider the use of these valuable tools. Building on the success that other NROs have had with social media reduces the time it takes to embark on a platform, and helps each NRO avoid missteps by learning from the lessons of other organisations. One caveat – social media is quickly evolving and NROs will need to constantly re-evaluate what platforms they are using and how, and what platforms they may need to consider in the future. It is clear that the communication landscape for NROs is not – and never will be – constant and unchanging. With that in mind, this report will need to be updated in the years ahead to prove useful to the NROs of the future.

APPENDICES

APPENDIX 1 – SCREEN SHOTS OF ANALYTICS AND METRICS TO MEASURE SOCIAL MEDIA IMPACT



**Figure 12: Screen shots in Wordpress defining some aspects of analytics
(<http://en.support.wordpress.com/stats/>)**

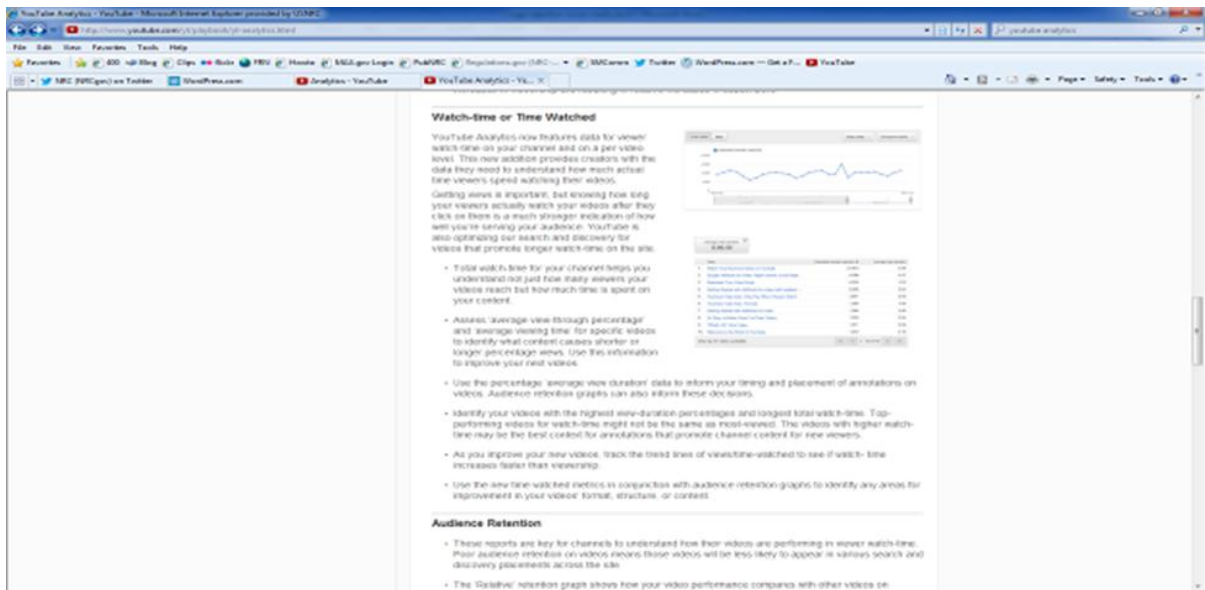
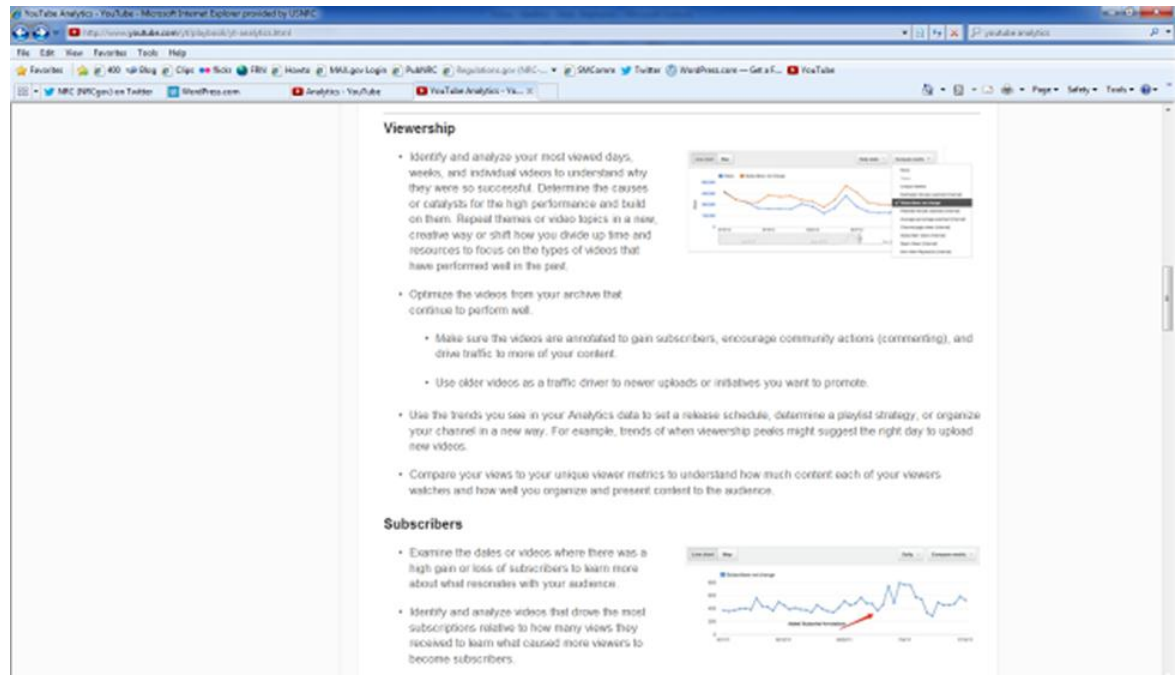


Figure 13: Screen shots in YouTube defining some aspects of analytics (<http://www.youtube.com/yt/playbook/yt-analytics.html>)

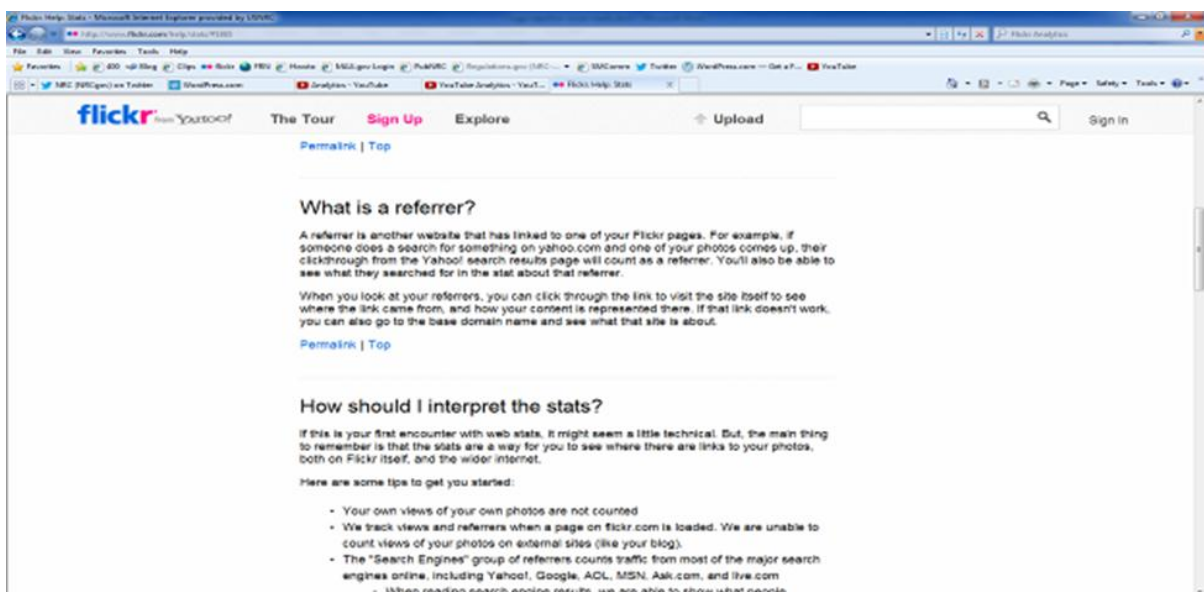
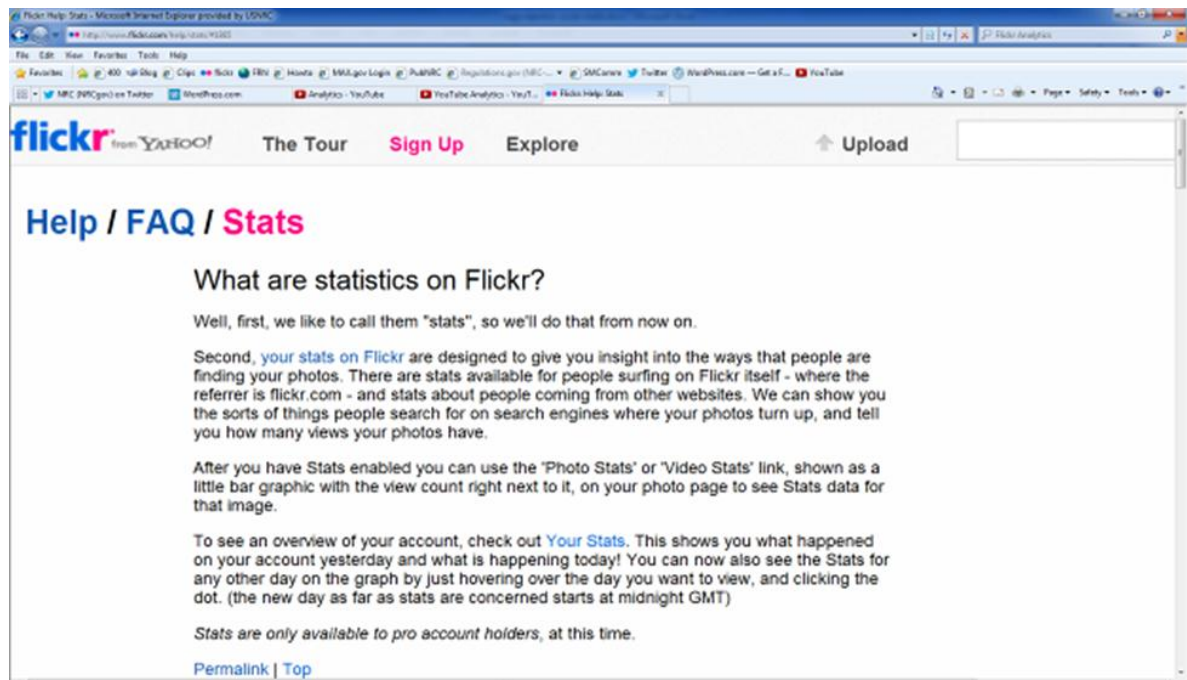


Figure 14: Screen shots in Flickr defining some aspects of analytics (<http://www.flickr.com/help/stats/#1865>)

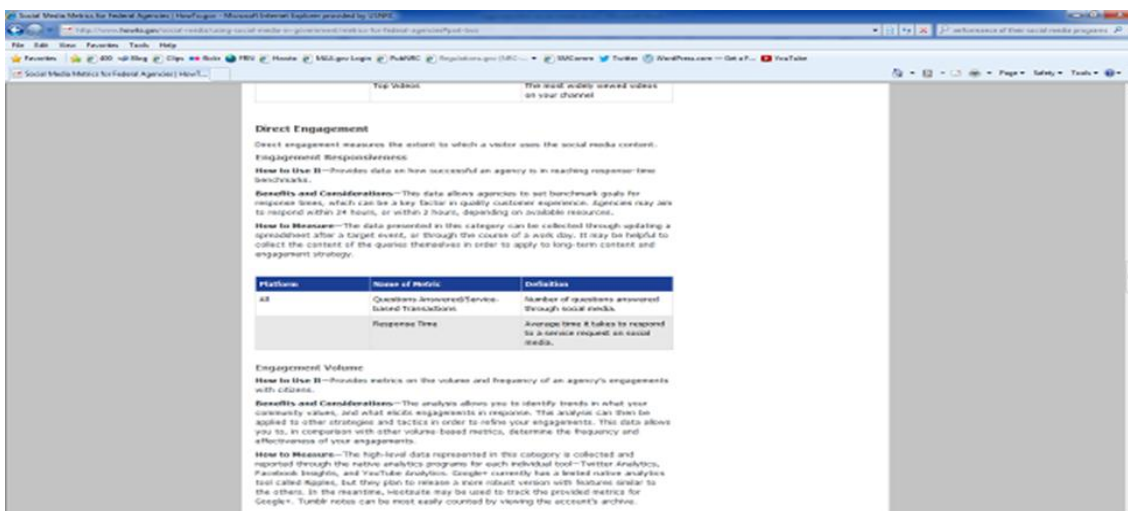
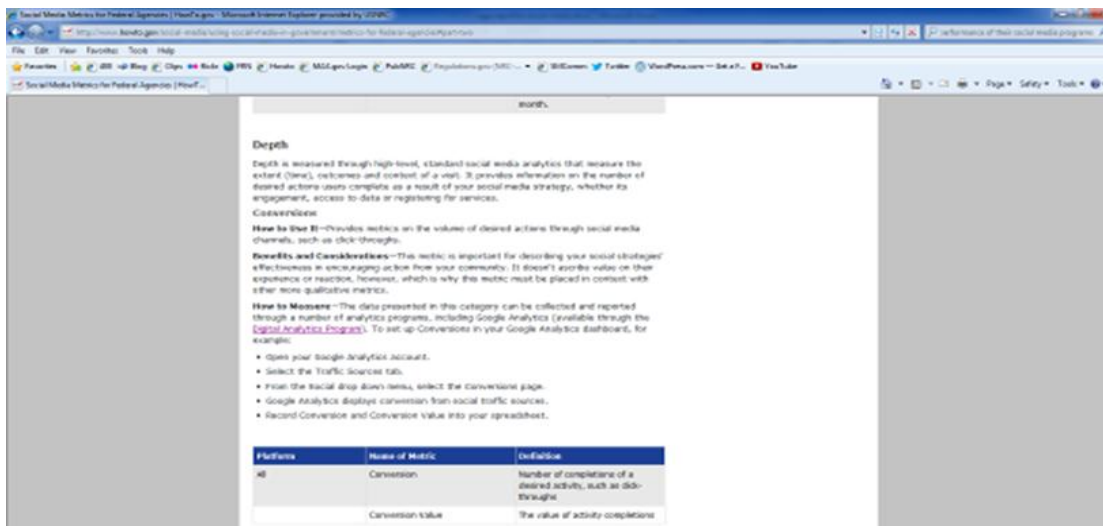
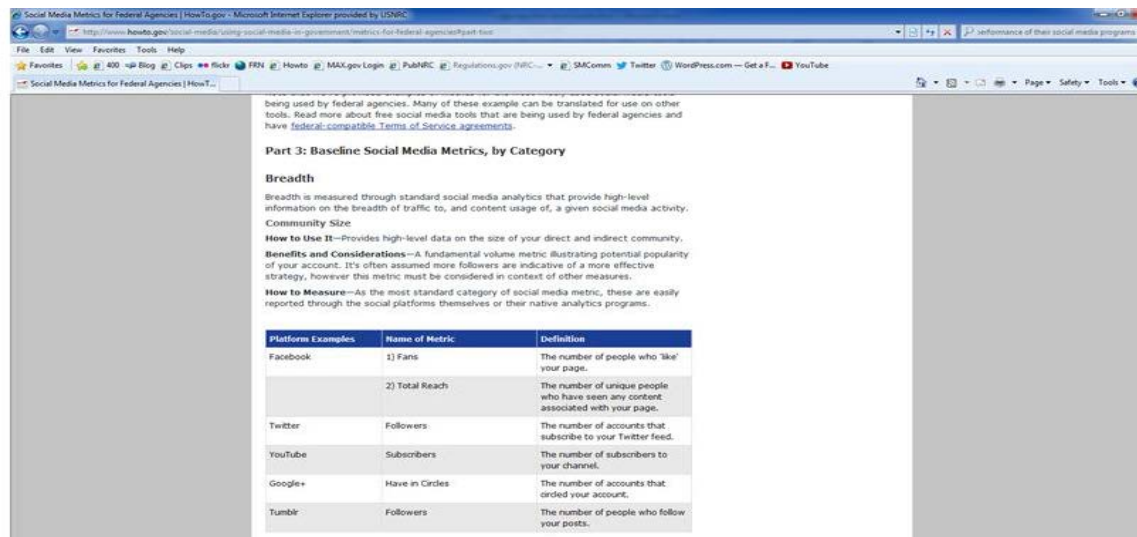


Figure 15: Screen shots of www.howto.gov Baseline social media metrics

APPENDIX 2 – LINKS TO NUCLEAR REGULATORY ORGANISATIONS’ WEBSITES,

Alphabetically, by country

Australia

Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) ([English](#))

Austria

Federal Ministry of Agriculture, Forestry, Environment and Water Management (BMLFUW) ([German](#)) ([English](#))

Belgium

Federal Agency for Nuclear Control (FANC) ([Dutch](#)) ([French](#))

Belgian Agency for Radioactive Waste and Enriched Fissile Materials (ONDRAF/NIRAS) ([Dutch](#)) ([French](#))

Canada

Canadian Nuclear Safety Commission (CNSC) ([English](#)) ([French](#))

Facebook ([English](#)) ([French](#))

YouTube ([English](#)) ([French](#))

Czech Republic

State Office for Nuclear Safety (SÚJB) ([Czech](#)) ([English](#))

Finland

Radiation and Nuclear Safety Authority (STUK) ([Finnish](#)) ([English](#)) ([Swedish](#))

Facebook ([Finnish](#))

Twitter ([Finnish](#))

YouTube ([Finnish](#))

France

Nuclear Safety Authority (ASN) ([French](#)) ([English](#))

Facebook ([French](#))

Google + ([French](#))

Twitter ([French](#))

Germany

Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB) (German) ([English](#))

Twitter ([German](#))

YouTube ([German](#))

Federal Office for Radiation Protection (BfS) ([German](#)) ([English](#))

YouTube ([German](#))

Hungary

Hungarian Atomic Energy Authority ([Hungarian](#)) ([English](#))

India

Atomic Energy Regulatory Board (AERB) ([Hindi](#)) ([English](#))

Ireland

Radiological Protection Institute of Ireland (RPII) ([English](#))

Facebook ([English](#))

Twitter ([English](#))

Italy

Department of Nuclear, Technological and Industrial Risk National Agency for Environmental Protection and for Technical Services (ISPRA) ([Italian](#)) ([English](#))

Japan

Nuclear Regulation Authority (NRA) ([Japanese](#)) ([English](#))

Republic of Korea

Korea Institute of Nuclear Safety (KINS) ([Korean](#)) ([English](#))

Mexico

National Commission for Nuclear Safety and Safeguards ([Spanish](#)) ([English](#))

Netherlands

Ministry of Infrastructure and the Environment ([Dutch](#)) ([English](#))

Norway

The Norwegian Radiation Protection Authority (NRPA) ([Norwegian](#)) ([English](#))

Facebook ([Norwegian](#))

Flickr ([Norwegian](#))

Twitter ([Norwegian](#))

Poland

Nuclear Atomic Energy Agency (PAA) ([Polish](#)) ([English](#))

Twitter ([Polish](#))

Portugal

DGEG Direcção-Geral de Energia e Geologia ([Portuguese](#))

Independent Commission for Radiological Protection and Nuclear Safety (CIPRS) (no website)

Romania

National Commission for Nuclear Activities Control (CNCAN) ([Romanian](#)) ([English](#))

Russia

Federal Environmental, Industrial and Nuclear Supervision Service of Russia (Rostekhnadzor) ([Russian](#)) ([English](#))

Slovak Republic

Slovak Nuclear Regulatory Authority ([Slovak](#)) ([English](#))

Spain

Nuclear Safety Council (CSN) ([Spanish](#)) ([English](#)) ([Catalan](#)) ([Basque](#)) ([Galician](#))

Twitter ([Spanish](#))

Sweden

Swedish Radiation Safety Authority (SSM) ([Swedish](#)) ([English](#))

Twitter ([Swedish](#))

Switzerland

Swiss Federal Nuclear Safety Inspectorate (ENSI) ([German](#)) ([French](#)) ([Italian](#)) ([English](#))

Facebook ([French and German](#))

LinkedIn ([German and English](#))

Twitter ([French](#)) ([German](#))

YouTube ([French and German](#))

United Kingdom

Office for Nuclear Inspectorate (ONR) ([English](#))

United States of America

Nuclear Regulatory Commission (NRC) ([English](#))

Blog ([English](#))

Flickr ([English](#))

Twitter ([English](#))

YouTube ([English](#))

International Organisations

Nuclear Energy Agency (OECD) ([English](#)) ([French](#))

Facebook ([English](#))

Twitter ([English](#))

YouTube ([English](#))

International Atomic Energy Agency (IAEA) ([English](#))

Note: All efforts have been made when compiling this listing. However, links may be incorrect or have become outdated.