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Designing tools to communicate the everyday global transport of radioactive materials

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Abstract

The transport of radioactive material is an activity that takes place outside of licensed facilities, and interfaces with several stakeholders in the transport chain. Research reveals that many of these stakeholders have a negative perception towards this cargo, regarding it as an exceptional category of Dangerous Good, which is troublesome to accept. Members of the World Nuclear Association's Transport Working Group, for whom communicating on Class 7 transport is a core activity, identified a need in 2017 to speak more consistently and proactively on the topic of radioactive materials transport. It embarked on a process of devising a communications strategy, as well as communication tools, for use in outreach. This Paper outlines the process for developing a communications strategy, the messages and tools devised, and the results of external piloting.

Introduction

The World Nuclear Association's Transport Working Group (WG) acts as a forum for communicating industry developments, exchanging leading practice, and for identifying and resolving issues related to the shipment of nuclear material. One of the continuing and persistent issues with which the Group is involved is the delay and denial of the shipment of radioactive materials. Group investigations into the underlying causes of denial and delay have shown that – alongside economics and complex regulations – negative perceptions about radioactive materials held by stakeholders in the supply chain are an important contributory factor. These stakeholders can have little concept of the goods' beneficial applications, and often see them as being too much trouble for the small volume of business / additional revenue.

Two years ago, the Transport WG accordingly decided that it should itself address the matter. It would do so not – as it already did – as individual organisations and companies involved in Class 7 (radioactive material) transport, but in a collective way. From the start, it was agreed that – while the Transport WG would take the lead in developing the strategy – the views of other industry bodies involved in Class 7 transport would be sought during the development process. In terms of skill-sets, the WG was well placed to take the lead. Its members included some of the leading players in the nuclear transport industry. Moreover, a number of these had considerable communications' experience; and an external communications

consultant with a background in nuclear communications was retained to support and advise the Group.

Research into attitudes to Class 7 Transport

Effective communications activities are rooted in an understanding of the attitudes and knowledge of those whose views – and actions – need to be influenced. Here the WG was in the fortunate position of being able to build on a study undertaken for the World Nuclear Association into denial and delay. Alongside desk research, this comprised 24 interviews in the UK, Europe, US, South America and the Far East with carriers, consignors, port authorities, legislative bodies and cargo handlers. The group included individuals and organisations responsible both for the acceptance and rejection of Class 7 goods. Among acceptors, Class 7 was viewed as an exceptional category of dangerous goods, and a troublesome one. Nevertheless, it was properly regulated, its movement had an excellent safety record, and the risk associated was manageable. Amongst those responsible for delay and denial, it was again an exceptional category of dangerous goods, was generally treated with suspicion, and its movement was rarely given the benefit of the doubt. It was over-regulated, involved a great deal of bureaucracy, was often or generally viewed as problematic to deal with and – overall – was simply not worth the effort and expense. Among both groups, pragmatic attitudes prevailed. Acceptance, delay or denial was generally not a matter of principle or rules but one of practicality. Ignorance – amongst all groups – over what the material would ultimately be used for prevailed. As a default position, all those interviewed associated Class 7 principally with nuclear waste. This level of ignorance suggested that much might be achieved by filling this information vacuum with knowledge and dispelling misperceptions about Class 7.

Developing the communications strategy

A workshop was convened in London in January 2017 to establish the foundations of the programme. This enabled the Chair, the Deputy Chair and the Secretariat of the WG to draw on the expertise of its members, and to develop the Group's views on the basics of the programme. The debate was marshalled under four headings: communication objectives, target audiences, key messages, and the communication tools – the means by which the key ideas can be got across to the target audience (e.g., a TV documentary, print advertising campaign, etc.).

Firstly, given the controversy that continues to surround Class 7 shipments, the Workshop identified the overall objective of communications as **shifting perceptions of the transport of Class 7 from the negative to the positive.** Under this umbrella, a series of subsidiary communication objectives were identified:

- To create awareness of the **scale** of the transport of Class 7
- To convey the necessity and importance of such shipments – the **rationale**
- To give a sense of the wide **variety of purposes** to which Class 7 are put
- To communicate the extensive precautions taken to ensure such **transport is both safe and secure**
- To highlight the **safety record** of such shipments.

Secondly, the Workshop of course saw that the more widely an understanding of the value of the transport of Class 7 existed, the better. However, achieving any such widespread public understanding would be expensive and time-consuming. By way of **targeting,** it was accordingly agreed that it was best to look to those directly involved in Class 7, notably those whose understanding could either help or hinder its movement. The Workshop identified a number of stakeholders including senior managers in companies and governmental organisations involved in the transport of Class 7, ships' captains and airline pilots.

It was apparent that even this list represented a challenge. This was partly because it was quite diverse; partly because its constituents were – virtually by definition – scattered all over the world; partly because – as a corollary – they spoke all sorts of different languages. It was accordingly argued that the industry, given its limited resources, should restrict itself to targeting professional bodies that represented the target audience. These were essentially conduits through which larger numbers of individuals involved in Class 7 shipments might be reached.

Discussion then turned to the **message** – by which was understood a short, concrete piece of information which is intended to support one or more of the communication objectives. One of the givens of communications is that the messaging is tailored to the target audience. The underlying assumption is that a message persuasive to one will not necessarily be so to another. In this particular case, it was thus advantageous to be focusing fairly tightly on those more or less closely involved in the shipment of Class 7, and specifically on professional associations. Although it was agreed that the messages would need to be finessed for each particular group (i.e., a master mariner was not a target identical to an airline pilot), the core messages could be identified. These were:

- **Scale of movement**. About 20 million transports of Class 7 take place around the world every year.
- **Rationale.** Class 7 are moved because they are mined, refined, manufactured, reconfigured and packaged in relatively few countries, but used – especially to diagnose and treat disease – in every single country worldwide.
- **Uses and benefits.** 95% of these movements are not related to the nuclear fuel cycle: they arise from the use of Class 7 in research, industry, agriculture, mining, non-destructive testing and medicine.
- **Record.** Radioactive materials have been transported over a period of almost 60 years in accordance with the IAEA Regulations for the Safe Transport of Radioactive Material. During this time there has never been a transport incident that has caused significant radiological damage to people or the environment.
- **Safety and security.** To ensure the safe and secure movement of Class 7, a range of protective measures are employed. They include design of the package and the vehicles used, access control, employee screening, satellite tracking of shipments and co-ordination with local and national security authorities.
- The facts that the transport system **is constantly improving**; and that the transport of Class 7 **compares very well** with the transport of other (hazardous) goods.

Discussion was then channelled to the issue of **getting the messages across**. It was agreed that the messages needed to be presented in a way which would attract attention, and which

would be readily understood and remembered. The consensus of the workshop was that this was best achieved by using approaches including using:

- Simple concepts
- Images as much as words
- One voice/personal/personalised appeals.

In practical terms, it was agreed that an umbrella theme for the messaging needed to be developed, under which individual messages could shelter. This could be a memorable creative device, such as a slogan or acronym.

This material then needed to be exposed to the target audience. It was agreed that precisely how this was to be done depended on the number and location of bodies identified and – ultimately – targeted. It was thought that the best way of getting traction with such organisations was through face-to-face meetings. If a dozen key players were identified, this would be a viable strategy. A presentation on the transport of Class 7, based on the thinking set out above, would be at its heart. Should the associations needed to be reached run to a larger number of individuals and organisations, that would obviously be impractical. They would have to be reached by repeated mailshots – perhaps in the form of a newsletter, or by seeking meetings at the transport conferences they attended.

Developing the tools

The original London workshop and one successor in April 2017 firmly established the groundwork for the communications programme: its objectives, messaging, target audience and means of deployment. At this point the work was devolved from the whole of the Transport Working Group to a smaller team comprising: a) those members with a particular expertise in drafting communications material; and b) communications professionals working with or for the World Nuclear Association – led by the WG Secretariat and overseen by the Chair and Deputy-Chair.

In an approach endorsed by the WG as a whole, this much smaller group:

- Determined that the overarching tone of the communications should be to normalise the movement of Class 7. This meant positioning it not as it was frequently seen as a newsworthy event (cf. the transport of high-level nuclear waste) but as an unremarkable, commonplace and every-day activity, part of the normal run of human affairs
- Agreed that this tone would guide both the visual (non-technical, human) and verbal (jargon-free) elements of the work
- Conceived a slogan that summarised the most important aspect of the strategy: *Goods Worth Shipping/ Systems You Can Trust*
- Settled on the presentation as the lead tool of the communications package, supported by a ‘leave-behind’ and a piece of ‘merchandising’ taking the form of a lapel badge (an idea originated elsewhere - by the Transport Facilitation Working Group – the TFWG)
- Agreed to follow the mantra that ‘the medium is the message.’ This famous phrase of the Canadian philosopher Marshall McLuhan was taken to mean that the ‘production

values' – loosely speaking the professionalism of the tools - spelt out a message in its own right about the professionalism of the Class 7 transport industry
- Set to work developing materials adhering to these guidelines and expressive of the agreed strategy.

The result was a package of communications tools comprising:

a) A 12-minute PPT presentation, entitled: *Everyday Global Shipment: Radioactive Material Transport.* This explained the need to transport radioactive material, the benefits of so doing, and how it was done safely and securely.
b) A 'leave-behind' acting as an *aide-memoire* of the presentation, a leaflet making seven key points about Class 7 transport entitled *Seven about 7*
c) The TFWG safe transport lapel badge, combining the radioactive materials trefoil with the slogan *life-saving.*

The drafts of these materials, notably the presentation, were subjected in the course of 2018 to the scrutiny of the WG as a whole. The thrust of the materials was very much accepted, as was the creative approach. Debate emerged over a) the choice of the nuclear fuel cycle as a lead example of transport (as opposed to – for instance – radio-therapy sources); and b) the level of detail that was appropriate. It was resolved that the fuel cycle was the most suitable example, and that the length and detail of the presentation should be sufficient to start a conversation rather than to complete it: this in the sense that it was desirable to engage the audience in discussion rather than simply download information. This scrutiny also enabled a back-check to be taken to ensure that the materials remained expressive of the agreed strategy. This examination resulted in some revisions of the tools.

Trialling the tools

The work having reached this point of development in autumn 2018, it was agreed with the WG that it would be wise to explore how it was regarded by members of the target audience. Testing of this nature is commonplace in the development of 'creative work' (e.g., by advertising agencies and film production companies). It is always sensible to ensure the message intended is actually the one conveyed, and experience suggests that even if it is, there is often much that can be finessed.

The substance of this work-stream comprised:

- An objective: to ensure that the communications tools are achieving their desired effect/communicating message
- A method: to expose the tools to representative members of the target audience and gauge response using a structured questionnaire/feedback form
- An action: refine communications tools in the light of this learning.

Those interviewed included representatives of a shipping line, an airline pilots' association, a national nuclear regulator, a national freight transport association, a national nuclear energy organisation, a nuclear transport organisation, a national trade organisation and a leading insurance company. The nationalities of those concerned were Japanese, Korean, Chinese, Finnish, UK, US and Brazilian. The audiences also comprised male / female and a range of ages and seniorities.

As an overview, the initiative to develop communication materials by the WG, was warmly welcomed by those interviewed. It was information that was seen as meeting a clear need and filling an information vacuum. The message was wanted. The content was very much along the lines required and expected; its form was seen as persuasive and professional. Particularly appreciated was the stress laid on the wide uses of radioactive materials, the coherent, accurate and measured 'narrative'/commentary, the 'clock' creative device, the 'leave-behind' (*Seven about 7*), and the lapel badges. On the feedback forms the work received an encouraging overall score of 4.5 out of a possible 5. This level of endorsement should also be seen as supportive of the original communications strategy and its subsequent expression in the communications tools. The lapel badge, perhaps to be dismissed as a novelty, was widely applauded; the *Seven about 7* was seen as clever and useful as a leave behind and *aide-memoire.*

There were, however, a few reservations and concerns about the core presentation. Some of those spoken to were not familiar with the UN categorisation of Dangerous Goods and were uncertain about the Class 7 nomenclature; they were also unclear about the level of risk posed by radioactivity, and the clarity of the message on the slides in the presentation covering the crucial issue of packaging. Others felt that there was too much jargon, that some of the language was too sophisticated for those who did not have English as a mother tongue, and that the commentary/narrative accompanying the presentation slides might be better recorded (as opposed to spoken by the individual making the presentation). Finally, there were those who queried the wording of the safety record, and who felt that these slides (highlighting the safety record) might also give the impression of complacency.

This was clearly useful and constructive feedback, and feedback which was of course acted upon. The tools – very largely the presentation – were accordingly adjusted. In a general way it was recalibrated to take into greater account the level of knowledge of the target market. Specifically, the opening slides were revised to explain the basics of radioactive materials, the packaging slides were revised, some of the images were changed, the slides on the safety record amended, and the commentary was recorded. By the time of the publication of this paper, the materials will have been completed in line with any final comments from WG members, and will have been deployed in the field.

Conclusions

This was a satisfactory process which generated some tools which may be expected to do what they were designed for.

The work was made possible by the WG Secretariat having at its disposal the considerable human resources of the WG members themselves. This was buttressed by the creative resources of the in-house team at the World Nuclear Association's London office, and the services of the external communications consultant.

Also effective was the iterative nature of the development of the tools. Creative development is a process and effective communication platforms or tools do not spring fully formed from the drawing-board. The repeated reversion to the WG at its tri-yearly meetings for feedback and comment on the work in progress was an important element in the process. It was a significant part of quality control.

So too was the trialling. The importance of devising work not simply satisfactory (e.g., factually accurate, persuasive) in its own right but of a nature suited to the target audience was understood from the beginning. It was nevertheless salutary that the work slightly overestimated the knowledge of the target audience and had to be accordingly adjusted; some very good points about the imagery were also picked up in the pilot interviews.

Finally, though, it was reassuring that the work produced does appear to meet a need. For the global Class 7 transportation industry it is an important one. Denial and delay is a significant issue for the industry, with ramifications that go beyond the simply economic to the humanitarian. At its roots lie considerable levels of ignorance and misunderstanding of radioactive materials and why they need to be moved. The overall objective of the WG's work will be widely shared: **shifting perceptions of the transport of Class 7 from the negative to the positive.**

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