

**THE ROLE OF PROFESSIONAL SOCIETIES IN
EFFECTIVE COMMUNICATIONS FOR
INTERNATIONAL SAFEGUARDS:
*How the Institute of Nuclear Materials
Management Supports Existing and
Emerging Nuclear Materials Stewardship
Communities***

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Abstract

The Institute of Nuclear Materials Management (INMM) is an international professional society dedicated to “the safe, secure and effective stewardship of nuclear materials and related technologies through the advancement of scientific knowledge, technical skills, policy dialogue, professional capabilities, and best practices.” The Institute executes its mission through six technical divisions, the largest of which is International Safeguards. While the contributions of the Institute’s members are high in impact and global in reach, a key aspect of INMM’s ability to promote the mission and identify the

needs of the nuclear materials management community is its ability to effectively communicate. INMM seeks to build and strengthen the relationships between policy and technical communities working in the nuclear materials management field, as reflected in the Institute's Strategic Plan. In the paper, the authors describe how INMM is working to broaden and enhance its communications platforms in service of strengthening international safeguards, developing effective messaging, and identifying methods to meet the evolving needs of the nuclear materials management community. The vision for INMM communications will be described along with how that vision will impact the existing and emerging nuclear materials stewardship communities.

1. INTRODUCTION

The Institute for Nuclear Materials Management (INMM) is an international professional society that is “dedicated to the safe, secure and effective stewardship of nuclear materials and related technologies through the advancement of scientific knowledge, technical skills, policy dialogue, professional capabilities, and best practices” [1]. INMM promotes this mission and engages its members through six technical divisions: Facility Operations; Materials Control and Accountability; Nonproliferation and Arms Control; Nuclear Security and Physical Protection; Packaging, Transportation and Disposition; and International Safeguards (which is the largest technical division based on membership affiliation). In 2018, INMM is celebrating its 60th anniversary, and has now grown to over 40 professional and student chapters around the world.

While the contributions of the Institute's members are high in impact and global in reach, a key aspect of INMM's ability to promote the mission and identify the needs of the nuclear materials management community is its ability to effectively communicate. This is reflected in the Institute's Strategic Plan [2], which includes building and strengthening the relationship between “policy and technical communities” working in the field. Many INMM leaders, individual members, and standing committees take part in effective and impactful communications for INMM, including the Communications Committee which is responsible for facilitating communications and outreach between INMM leadership, INMM members, and external parties interested in nuclear materials stewardship including international nuclear safeguards. The Communications Committee has four subcommittees through which it strives to meet INMM's communication missions [3]:

- Website Subcommittee. The Website Subcommittee is “responsible for the content and functionality of the INMM website ensuring its usability, accuracy, and timeliness. The web site is the primary repository for all information relating to the INMM organization, its activities, as well as for subject matter relevant to the technical disciplines within the scope of the INMM.”
- Communicator (newsletter) Subcommittee. The Communicator Subcommittee is “responsible for the preparation and release of the official newsletter of the institute, the INMM Communicator. ...The INMM Communicator serves as one of the main conduits for the Institute's communications with its membership. The objectives of the INMM Communicator are to inform INMM members of the activities of the Institute, report news about its members, announce conferences, and otherwise disseminate information to an interested audience.”
- Public Relations and Outreach Subcommittee. The Public Relations and Outreach Subcommittee is “responsible for providing public outreach for the institute as appropriate, to further the growth of the Institute and communicate Institute activities to the public and industry.”
- Social Media and Apps Subcommittee. The Social Media and Apps Subcommittee is “responsible for making recommendations regarding appropriate INMM use of these avenues for communication, such as Facebook, LinkedIn, and Twitter. These tools afford many opportunities for strengthening the organizational network for INMM, yet also introduce possible risks and challenge the INMM's ability to maintain multiple overlapping communication channels.”

In the paper, the authors describe how INMM is working to broaden and enhance its communications platforms in service of strengthening international safeguards, developing effective messaging, and identifying methods to meet the evolving needs of the nuclear materials management community. The authors describe the vision for INMM communications, and how that vision will impact the existing and emerging nuclear materials stewardship communities.

2. INMM STRATEGIC PLANNING AND COMMUNICATION

In 2016, INMM conducted strategic planning activities that resulted in the INMM Strategic Plan 2017-2019 [2]. The Strategic Plan identifies three high-level goals, which were then described by objective and priority:

Goal 1: Be recognized internationally as the leading professional society for the effective stewardship of nuclear materials and related technology;

Goal 2: Represent the breadth of the profession; and

Goal 3: [Build and sustain] a strong relationship...between the policy and technology communities.

From these goals, nine objectives were developed at three priority levels: high priority (five objectives); middle priority (two objectives) and later priority (two objectives). Many of these objectives were either directly tied to a communication and outreach activity, or indirectly associated with how INMM communicates with its current stakeholders and new communities. Examples include:

- Improve communications with stakeholders to increase awareness of contributions and activities (High Priority, associated with Goal 1)
- Make the INMM website a more effective tool (High Priority, associated with Goal 1)
- Reflect broad perspectives and interests when designing events and communications (High Priority, Associated with Goal 2). This objective included an important communications metric, to “identify new audiences and demonstrate increased engagement metrics on social media platforms and other communication channels.”
- Increase collaboration with policy-oriented organizations (Later Priority, associated with Goal 3)

The goals and objectives in the 2017-2019 Strategic Plan have aggressive communications targets. To better interpret the membership interests surrounding some of the goals and objectives, the Communications Committee issued an INMM Communications Survey to the membership, which was open between January and February of 2018. In addition, the Communications Committee developed a mid-term plan spanning the next three years, intended to be updated annually, in order to target and prioritize our response. The results of both of these activities are described below, specifically in relation to their strategies and insights on broadening communications and strategies for the nuclear materials stewardship communities.

2.1. INMM Communications Survey

The INMM Communications Survey was intended to gauge, in addition to its Google Analytics and email traffic statistics, how INMM members use, interact with, and prefer INMM communications products or activities. The survey included general communications questions as well as questions relevant for each sub-committee. While it is not possible to describe all the results of the survey here, significant results with an impact on how or what the Committee should communicate are presented below [4].

2.1.1. New Content

A majority of respondents to the Communications Survey (57.75%) indicated that they wanted some additional information to be provided from the Communications Committee. The most significant of those information requests included (not mutually exclusive): “reputable articles, sources, and analysis of current nuclear news events” (63.38%); “press releases on INMM activities” to share with one’s organization (42.25%) and training and educational materials (from two free responses). This need for training and educational materials was emphasized in another question which asked the type of content users seek when accessing the INMM website, to which 36.62% (not mutually exclusive) respondents noted they were seeking “educational materials about nuclear materials management.” Currently the website offers little educational material apart from INMM Annual Meeting proceedings or Journal of Nuclear Materials Management (JNMM) archives, but requests included introductory materials, articles, educational webinars, and documents describing research challenges in each of the technical division areas.

An unexpected but recurring information request was about the INMM members themselves—survey respondents were interested in having access to more biographical information about members (presumably searchable on fields other than name or organization), member highlights showcasing individual members and

their activities in the field of nuclear materials management, and member-supplied photographs to support professional networking.

2.1.2. New Media Types

The interest in multimedia content spanned beyond member photos and educational videos. Several respondents expressed interest in engaging with INMM over additional social media sites with an emphasis on photograph-sharing sites such as Flickr or Instagram.

Some of the Communications Survey questions focused on remote or interactive capabilities. Most respondents indicated an interest in recorded or streamed content from INMM Annual Meetings, topical workshops, or chapter events so that remote users or others who are unable to attend can also benefit from the content (over 77% of respondents indicated that having such capability available would not impact their decision to attend an event in-person). Survey participants also indicated an interest in “interactive” content that could be used for in-person or remote participants.

2.1.3. Extended Outreach

Survey participants contributed significantly to questions regarding INMM’s outreach to policymakers, nongovernmental organizations (NGOs), and other personnel. Member feedback indicated that any outreach should have a clearly defined purpose, and many respondents did not understand to whom or why INMM would be conducting outreach. An illustrative response to the question “How, if at all, would you like INMM to communicate with policy makers?” was “carefully.” Others suggested an independent lobbyist, to keep INMM members out of direct contact with government and non-governmental agencies. The role for INMM to outreach to policymakers or nongovernmental agencies was identified as one of providing education and perspective on technical issues, without political bias. It was also recommended that INMM achieve this outreach through white papers or other technical factsheets that provide critical nuclear materials management information. There were also recommendations for INMM to provide in-person technical training on nuclear materials stewardship issues to policymakers without that background.

Members suggested that INMM conduct outreach activities to the public, to promote INMM as a top professional society for those working in nuclear materials stewardship, and to coordinate with other organizations with similar interests such as the American Nuclear Society or the European Safeguards Research & Development Association. For any outreach, it was stressed that it not be US-centric.

2.2. Mid-Term Planning

The mid-term planning was divided by overall Communications Committee actions and Sub-Committee actions, and can be interpreted both as a “to do” list and a stretch-goal planning document. While some of the Communications Committee mid-term plan focuses on regular operations, planning, and preparations for the INMM 60th anniversary celebration for sub-committees, new and innovative communications strategies and approaches are highlighted below.

2.2.1 Communications Committee Membership Diversity

The Communications Committee has been highly focused on activities from the International Safeguards and Nonproliferation & Arms Control Technical Divisions, due to their large membership associations and active individual participants. However, the INMM EC and the Communications Committee team recognize that INMM covers broader areas and the lack of participation by other Technical Divisions leads to skewed communications products that do not reflect the full scope of our membership or technical divisions. As such, in 2018 the INMM EC encouraged all technical divisions to provide the Communications Committee with a member of their technical division to serve as Communications Liaison, to support broader and more encompassing perspectives in our INMM communication products.

2.2.2 Member Highlights

The results of the INMM Communications Survey indicated mixed readership of the INMM Communicator newsletter. Some members responded that they enjoyed getting updates on INMM and member activities, while others indicated that they do not read the newsletter. To provide broader outreach into the INMM membership and increase interest in the Communicator, the editors have started a Member Highlights section which will feature an interview with an INMM member or members about their career, the roles INMM has played in their professional development, and advice to newcomers to the field of nuclear materials stewardship. This new feature was kicked-off with an interview of the Communicator editors themselves, Katherine Bachner and Jay Disser, by Communications Committee chair Zoe Gastelum. Future Member Highlights might also include video recordings of interviews that can be shared with members via the INMM website.

2.2.3 Website Overhaul

In 2017, INMM launched a new website with updated graphics and layout. With this “new look” the website committee is continuously working to ensure that the website is up to modern standards, and recent additions have included a “contact the Webmaster” option. The website sub-committee has also been working to identify new content that has been requested by the INMM EC or from members through the INMM Communications Survey, such as links for training and educational materials, and information about the technical divisions’ working groups. This identification of relevant content is another reason why the Communications Committee requires broad participation from all technical divisions of INMM, to ensure the identification of appropriate, reliable and relevant content to share with members and prospective nuclear material stewards. Additionally, content reorganization activities will be investigated throughout 2019, and a more intuitive site organization may be rolled out sometime in 2020 depending on the results.

2.2.4 Enhancing our Social Media Presence

Social media was a strong and recurrent theme in the INMM Strategic Plan. Though INMM has had a social media presence for several years, the content has been largely the same as that from INMM email blasts or information available via the website. To boost social media impact, the social media and apps sub-committee has completed a review and broadening of entities to whom INMM is connected on social media. The social media and apps sub-committee is also working to provide additional content relevant for nuclear materials stewardship from trustworthy and unbiased sources that will serve to keep members updated and informed about happenings within the field and provide factual information for those outside of the nuclear materials management community who seek out INMM as a leader and reputable information source. The social media and apps sub-committee will also seek to optimize how INMM engages in each social media platform, in order to best utilize the unique capabilities and communication channels offered by each.

2.2.5 INMM News

While many survey participants indicated that they prefer to receive communications from INMM via email, there were multiple requests for member news, upcoming events, international and chapter news and leadership updates. Most of this information is currently disseminated (sans chapter leadership changes) either via the recurring INMM email blasts, or in the Communicator newsletter. However, in response to this request, as well as member interest in receiving press releases to share with their organizations (79.85% in favour of receiving these), the Communications Committee has added an “INMM News” section to the website that houses all the information sent to members via email blasts, as well as announcements on awards, leadership changes, etc.

2.2.6 Technology Reviews

As more communication platforms and products turn electronic, the Communications Committee will revise on a biannual basis its current communications technologies and the state-of-the-art. This will include an overview of the social media platforms on which INMM participates, as well as web capabilities and design, and optimizing content for the latest technology platforms such as mobile devices today, or holographic or 3D displays in the near future.

2.3 INMM Meetings and Workshops

INMM has a strong history of participation via its annual meeting held each July, and the regional and topical workshops and events conducted throughout the year. The in-person venues provided by INMM events support access to the latest research in the field of nuclear materials management, up-to-date information on current operations, challenges, and opportunities within national, regional and international bodies supporting nuclear materials management, professional networking with an international reach, and impromptu interactions with world-renowned experts in the nuclear material management field that can result in research ideas, intra- and inter-organizational collaborations, employment opportunities, and more. Investing in person-to-person interactions can provide unique opportunities that are key to developing sustaining the technical expertise the world needs. Upcoming INMM event information is available at <https://www.inmm.org/Events>.

3. THE FUTURE OF INMM COMMUNICATIONS

INMM seeks to be an internationally representative, multidisciplinary, inclusive organization recognized as one of the premier professional societies in the field of nuclear materials management. To adapt to the rapidly developing communication technology environment and the Institute's changing demographics (new young people becoming involved in nuclear materials management is one of the Institute's more significant success stories), INMM needs to adjust its communication style to accommodate both long-standing and incoming members.

The changing global climate regarding the use of online resources of education and news provides unique opportunity for INMM to provide factual, credible resources of information for those seeking nuclear materials stewardship-relevant information. Further, the plethora of do-it-yourself information and communication technologies now available means that INMM has more opportunities than ever to create and share information via intuitive, usable, and interactive online communication platforms. This cannot be a static activity—the rapid rate of development in computational capabilities and information broadcasting means that INMM must be continuously revising and updating its communications strategy to remain current and attractive for our current and prospective members, and those from outside the community.

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REFERENCES

- [1] INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT, About the Institute of Nuclear Materials Management (2018), <https://www.inmm.org/about.aspx>
- [2] INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT, INMM Strategic Plan 2017-2019, internal report, INMM, 2016.
- [3] INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT, Operations Manual (2017), https://www.inmm.org/INMM/media/Documents/INMM%20Policy%20Documents/INMM-Operations-Manual_May-2017-Final.pdf
- [4] INSTITUTE OF NUCLEAR MATERIALS MANAGEMENT, Results: INMM Communications Survey, internal report, INMM, 2018.