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Communicating Science in a Policy Context to a Broader Audience

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Key takeaways:

- Evidence does not speak for itself – it must be communicated.
- Communicating science for policy impact to non-scientific audiences requires a very different approach from communicating science to scientific audiences.
- Communication must be adapted to the desired objectives and audiences.
- To succeed, scientists and communicators must work hand in hand from the beginning to shape the message and narrative together, identify opportunities and prepare the right tools.



Evidence does not speak for itself – it must be communicated. This much is already clear from other chapters of this book which discuss how policymakers and scientists communicate with each other about societal challenges and policy objectives, how they communicate about the role of science in policymaking and how they tap into diverse sources of knowledge and share it.

This chapter looks at the more institutionalised aspects of communication, in other words the processes and practices that may improve getting the message across to broader audiences affecting or affected by policymaking. Given the authors' background, there is an additional focus on political communication as practiced in the JRC, which is a scientific institution inside a political body, the European Commission. This unique setup means that its work must be aligned with the broader political and policy responsibilities of the Commission and its communication activities must be aligned with those of the Commission which ultimately serve political objectives. As evidence providers work closer and closer with policymakers, it is important they realise the importance of getting also the broader communication right in order to build trust with policymakers and politicians.

The Motivation to Communicate to a Broader Audience

Communication by a science for policy organisation will have multiple objectives. First and foremost, the objective is to provide evidence in an understandable, timely and contextualised form to policymakers, primarily those responsible for preparing decisions. This is the purpose of the organisation's existence.

Most organisations will also want to communicate their science more broadly to strengthen cooperation with and improve their image among their peers. Research shows that scientific articles featured in the media and on social media go further even among scientists, as opposed to research that stays within the confines of peer-reviewed journals, and this also increases their impact.

A third objective can be to inform more senior policymakers and politicians not merely to provide them with evidence tailored to their specific needs but also to demonstrate the value of 'science for policy' to them and their constituencies and thus advocate for evidence-informed policymaking.

Last but not least, in a democracy, a scientific organisation will also have to communicate directly with various segments of the general public, for example, to justify its funding to taxpayers, to inform people about how the science behind the policies impacts their life or simply to improve public understanding of science and fight the tide of fake news, among others. More often than not, these audiences will be very different from the traditional audience of science for policymaking organisations.

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Some organisations will exclusively focus on the first two objectives. Others will do more, which in the current sociopolitical climate is a legitimate aim for scientific organisations wishing to become more closely involved in policymaking to help tackle the challenges our societies face. Given the JRC's specific situation, our communication activities also aim to highlight the importance of evidence-based policymaking to citizens and to policymakers. The ultimate objective of this is to demonstrate the value of EU policies, and the science they are based on, in the eyes of citizens and to strengthen the case for the use of science in policymaking in the eyes of politicians and policymakers.

Apart from these explicit objectives, nurturing and encouraging communication beyond the circle of policymakers and scientists can also support the transition to Science for Policy 2.0 by exposing researchers to novel ways of communicating and thinking about their research, for example, through questions from the media or the public. This promotes culture change in the organisation, helping scientists practice 'dialogue', requiring them to be proactive about and aware of the impact of their research from the beginning and also keeping them aware of the wider political and policy context that can impact the usability and value of their research.

Different Kinds of Audiences

The communication objective defines the audience to be reached. Again, beyond the traditional audiences of policymakers and scientists, many others can be considered, such as political parties and opinion leaders, members of parliament, regulators, religious bodies, donor organisations, businesses and civil society, the public at large in a given area (such as the host community of a research institute), etc. More on this can be found in [Chapter 5](#).

Often these audiences, especially citizens, can only be reached indirectly, via multipliers like the media or social media influencers. Furthermore, the co-creation and continuous engagement approach that Science for Policy 2.0 calls for with policymakers is only possible to a lesser extent with broader audiences as those approaches rarely scale to the level needed to reach them, and even if they do, they can be very resource intensive and thus out of reach for most organisations. Communication activities will thus vary according to the objective, the intended audience and the resources available.

The following subsections provide a few examples.

Senior Policymakers, Members of Parliament and Other Politicians

High-level political communication should focus on the most sensitive and most valuable activities of the organisation. It should not merely focus on the science but also include narratives about how science plays a helpful role in resolving difficult

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policy issues and improving the lives of citizens, as well about the most newsworthy, cutting edge research coming out of the organisation.

This communication will often be highly tailored and resource intensive and it may be channelled through policy briefs, case studies, conferences, high-level briefings or laboratory visits. It will aim to build trust and increase the credibility of the organisation as well as to drive coverage of the organisation in the media that senior decision-makers read.

Case Story: Science meets Parliaments

The JRC regularly organises 'Science meets Parliament' events to bring together JRC researchers and management with senior policymakers from the European Parliament, one of the key stakeholders and customers of the organisation. The multi day event includes not only lectures by senior experts and politicians, panel discussions, workshops but also demonstrations of some of the scientific achievements of the JRC and the services it offers to policymakers. It provides an opportunity to share knowledge and network and raise awareness of the value of the JRC's work for policymakers.

Local Communities

Research institutes do not exist in a vacuum and they interact in various ways with their host communities. In their everyday activities as well as under extraordinary circumstances (for example, an incident involving hazardous materials), they must rely on the cooperation of local authorities and the good will of local citizens. This can be promoted by engaging them regularly and offering them opportunities to interact with researchers and familiarise themselves with scientists' work in the interest of citizens.

Case Story: Open days and local media outreach

Spread across six sites across the European Union, the JRC has a unique opportunity to reach local citizens directly in a way that is difficult for other departments of the European Commission. In order to capitalise on this unique feature of the JRC and also to engage the host communities in a continuous dialogue, the JRC regularly organises open days when local citizens can visit laboratories and meet scientists. We also cooperate with local media, keeping them informed of our activities, providing them with interesting scientific and policy relevant news stories and organising regular media visits of our laboratories. Targeted online coverage of these events via web and social media allows the JRC to connect with local audiences who cannot attend the event in their region.

Journalists and Social Media Influencers

The knowledge that science for policy organisations create, manage and provide to policymakers is also valuable for journalists and the media. And while science organisations traditionally target science media, science for policy organisations can aim for a much broader reach because their work will have direct influence on legislative and regulatory outcomes that shape the economy and society. Beyond the traditional tools of press releases, laboratory visits and technical briefings, journalists can also be engaged in activities that help them better understand the role of science in policymaking and learn to use the tools and databases put at the disposal of policymakers to enhance their reporting.



Science and research ‘gurus’, well-known entrepreneurs and policymakers active on social media with many followers are important for the success of a digital communication campaign. Social media influencers can be multipliers of the knowledge produced by science for policy organisations; they can reach audiences that would not be reachable otherwise.

Case Story: European Commission tools for the media

The JRC regularly organises media visits to its laboratories and media seminars for interested journalists. Beyond talking about our research and its impact on EU policies, one of the objectives is to raise awareness of journalists of the tools and databases the JRC makes publicly available, and help them learn how to use them to find new stories and enrich their reporting. In the past, JRC tools mapping surface water on earth, population density or wildfires, among others, have been used by top tier media in their reporting.

Citizens

Publicly funded organisations are accountable to taxpayers, and even more so if they are involved in shaping the policies that affect people’s life. They may also consider it their responsibility to educate the public about science in general and its role in policymaking in particular. Last but not least, as a public service, they can aim to popularise results and engage citizens with recent scientific findings that they can use to improve their lives or better understand certain important phenomena. While traditional and social media communication remains important for these audiences, in the case of a science for policy organisation, public engagement with a view to strengthening participatory democracy is equally important (see [Chapter 8](#)).

Case Story: ARTEFACTS exhibition coorganised with the Museum für Naturkunde in Berlin

The ARTEFACTS exhibition is coorganised with the Museum für Naturkunde in Berlin. It experiments with new ways of using art and science to bring facts to the hearts and minds of citizens. The exhibition aims to provoke a dialogue about environmental issues that connects politics, science and society by engaging citizens in key topics of public concern under the themes of food, energy, climate, air and water. The JRC worked with the Museum in developing the content, ensuring scientific accuracy and also providing ‘meet the scientists’ sessions, with JRC scientists engaging with visitors through live video link. The exhibition attracted 46,000 visitors in its first 3 weeks.

How to Do It?

A higher level of ambition in providing scientific advice to policymakers and the strengthened focus on communication that it inevitably entails will require changes in organisational culture, structure, procedures and skills. The key to understand about communication in this respect is that everyone has a responsibility to communicate, and communication should be the result of close cooperation and co-creation. While there is no silver bullet, there are a number of options to consider.



Structure and Procedures

The structure and procedures of the organisation will be determined and constrained by various factors, including its mandate, its governance and its history. Even when a complete restructuring is not feasible, steps should be taken to promote closer cooperation between scientists and communicators; to increase the feeling of ownership and responsibility for communication among scientists right from the beginning of their research and to ensure that senior management takes an active role in the strategic orientation of communication.

Case Story: Cross cutting projects to enhance cooperation

One way to promote closer cooperation of scientists and communicators is to involve them in cross cutting projects that do not entail changes in structures and procedures but require both sides for securing organisational objectives. Be it participation at science conferences, the organisation of outreach events or the creation of communication campaigns around specific deliverables, such activities build rapport between scientists and communicators and help each side appreciate the contribution of the other to shared goals.

Understanding Audiences

The characteristics of the various audiences, and their difference from traditional scientific audiences, must be clear to all participants when designing communication activities, right from the beginning. Politicians and senior policymakers require short, actionable information and a focus on what is in it for them in the given political and policy context. Experts and less senior policymakers are prepared to deal with more information to understand the wider context, but it must be conveyed in plain, non-scientific language, and offering a degree of certainty that may be difficult for a scientist to provide. The media looks for a hook or a story that makes sense for their readers and links to the issues of the day. Local authorities and citizens look for what is in a story for their immediate environment.

Case Story: The importance of timing and relevance for audiences

At the time of its publication in Nature, the media showed little interest in a JRC scientific article on the Mediterranean Sea. Later, in cooperation with the responsible policy department and the Commission's communication service, some of the key findings of the article – not necessarily the most relevant ones from a scientific perspective – were used to produce a Commission press release in time for a ministerial meeting addressing the Mediterranean fisheries crisis. Focussing on one specific aspect of the research with the title 'Saving our heritage, our future: The worrying state of Mediterranean fish stocks', it resulted in strong media coverage, including top tier media and tabloids that do not typically report on science and policy issues, thus increasing the visibility of the issue to citizens and policymakers.

Tailoring the Message

Depending on the objective, the audience and the medium, the same underlying evidence can provide the basis for different messages. In developing the messages, we must ensure that they do not contradict each other, but they are relevant and appropriate for the target audience.



Not all research will lend itself to creating messages for all audiences – in some cases we want to restrict communication to policymakers and experts, in others we may want to focus on various segments of the public.

Understandably, scientists are prone to keep their traditional audiences in mind when thinking about messages and they may be wary of focussing on other aspects of their research. Trust between scientists and communicators must be built up over time to put scientists at ease about using their research for communicating messages that they themselves may find irrelevant from a scientific perspective.

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Case Story: JRC flagship reports

JRC flagship reports cover broad policy areas such as the future of transport or the role of AI, aiming to distil the current state of knowledge and present policy options from an EU perspective. With over a 100 pages in length, their primary audiences are policymakers and experts. For senior policymakers and politicians, the most relevant findings for policymaking purposes are repeated in short, easy to understand executive summaries or communicated in person. The findings most relevant for citizens and the media are summarised in an accompanying press release which focuses on real-life examples and the possible impacts on citizens' lives, while putting them in the context of existing EU legislation. Last but not least, the most eye catching insights, messages, etc., supported by easy to understand visualisation, are turned into social media content for attracting the attention of all potential audiences and inspiring them to read on.

Clear Writing

Science often has to be communicated in writing. Therefore, scientists must be able to write about their work in a way that non-scientists can understand without excessive mental effort. This is often a challenge even if they are highly experienced in writing articles for scientific journals.

Raising awareness of the importance of clear writing is a start. Clear writing trainings and regular cooperation with communicators provide learning opportunities and feedback to scientists. Organising communities of practice, creating opportunities to demonstrate the value of clear writing and recognising best performers in the organisation provide additional ways to strengthen this important skill among scientists.

Case Story: Clear writers' network

The JRC's clear writers' network focuses the challenges of communicating science clearly for various audiences. Its members are JRC scientists who dedicate up to 25% of their working time to the network and who benefit from specially designed training modules plus individual mentoring. The emphasis is on understanding the difference between writing for a scientific



audience and writing for others. For example, whereas in a scientific article the methodology must be explained, this will only be of interest to policymakers if the methodology is questioned by certain stakeholders. The work of the network led to a noticeable improvement in the quality of briefings and other communication material from its members.

Visual Communication, Visual Identity

Just like clear writing, visualisation of knowledge is key for communicating it to various audiences. Visualisations are not just nice pages, they are about information, not decoration. The way in which a report or key results will be visualised and disseminated should be determined at the project planning stage – it is not an add-on outsourced to communicators at the end.

Furthermore, consistent use of visual communication and the creation of a visual identity provides an added value to the organisation by signalling that the communication comes from a reliable source. Visual identity must be recognised by managers and scientists alike as a key part of the communication strategy if we want our audiences to immediately recognise our brand and be inclined to engage with our products.

To prepare meaningful communications certain key questions have to be clarified in advance:

- Who is your target audience: the more specific you can be, the better you can focus the message, i.e., what is their environment, what are their interests, biases and communication habits.
- What do you want to achieve with this audience, and what can you produce with the available resources that help you get there? Assess the strengths, weakness, opportunities and threats (SWOT analysis) of using visual communication to achieve your goal.
- Which format serves the objective best? Digital, print, animation, motion graphics, etc.?
- What kind of interaction is desired with your target audience? What kind of interaction can you expect?

In order to get the message across, we need to leave out a vast amount of information. Condensing a 100 page scientific report into 2 pages is a major culture change. It goes against the principles of most scientists, and most often meets with resistance. However, getting rid of clutter is essential to pass the messages effectively. Clutter is every piece of information that distracts your audience and increases the cognitive load. Clutter can also mean visual elements that take up space but do not increase understanding. For a multiauthor report, there could be a need for compromise on the overriding key messages depending on the objective, target audience, the opportunity in the policy cycle and the timing of the communication.

Culture change will be reinforced through demonstration, such as when a one-pager lands on the desk of the decision-maker and is used. Smart workflow helps to achieve the desired objectives. First and foremost, all actors need to be involved: all key scientists, communication specialists, editors, graphical designers. They should work together in a well-planned process with many iterations.

A well-designed briefing template is key to save time. In it

- Keep asking the question ‘what’s it all about’: what is your objective, what do you want your audience to learn or do?



- What is the communication environment like? Is my message relevant right now, or is there perhaps a better moment coming in the political, media cycle?
- Remember who you are talking to, why it matters, with three to five key issues or results, explained as if it were your next door neighbour.
- Create a story board: a visual outline of your story.
- Effective data visualisation is critical for your message; always mention the source of data.
- Consistent guidelines for style, colour palette, line thickness in graphs, a data base of icons help with coherence.

Your visual information should tell a story, one you should be able to explain in a few minutes. The beginning should give the context and the plot, bringing everyone on common ground. The end, a call to action. Test the infographic with a non-expert as well, to make sure it is read the way you intended.

Bear in mind that visualisation of knowledge can be just as resource intensive as the production of knowledge itself. Therefore, it is necessary to assess 'what works' and develop metrics to measure the impact. The benefits of knowledge visualisation and the processes behind it must be communicated clearly internally. Visualisation needs and processes must be defined clearly and effective team work for visualisation must be cultivated to enhance its communication potential.

Case Story: Translating complex messages about global supply and demand of cobalt in the transition to electric mobility

As a science for policy organisation, we aim to ensure that JRC knowledge and scientific evidence land on the desks of policymakers, can be easily understood and trigger policy thinking. Visual storytelling helped communicate key issues, results and prospective innovations related to global supply and demand of cobalt for the electric vehicle market today and in the future.

Key scientific evidence visualised within one page is a form that easily attracts attention and, hence, is more likely to achieve policy impact. The objective was to create an infographic and one page of a stylised synthesis of a detailed report (100 pages). The infographic had to tell a story literally within less than 2 minutes as our typical audience has to deal with an increasing number of very complex problems and often have very little time. Even when we have sound recommendations for them, the competition for attention is enormous.

Visual storytelling has been used to condense, edit and visualise this complex scientific report into two pages of 'bit-size' relevant knowledge. By following the principles discussed above, JRC achieved policy impact: our evidence was featured in the Commission Communication on the Implementation of the Strategic Action Plan on Batteries: Building a Strategic Battery Value Chain in Europe.

This was achieved primarily by involving all experts – scientists, communicators, designer, editors – in an interactive process from the first sketches to the final product. On top of the final product, we also prepared graphic elements for social media, to further disseminate the results (Figs. 1 and 2).

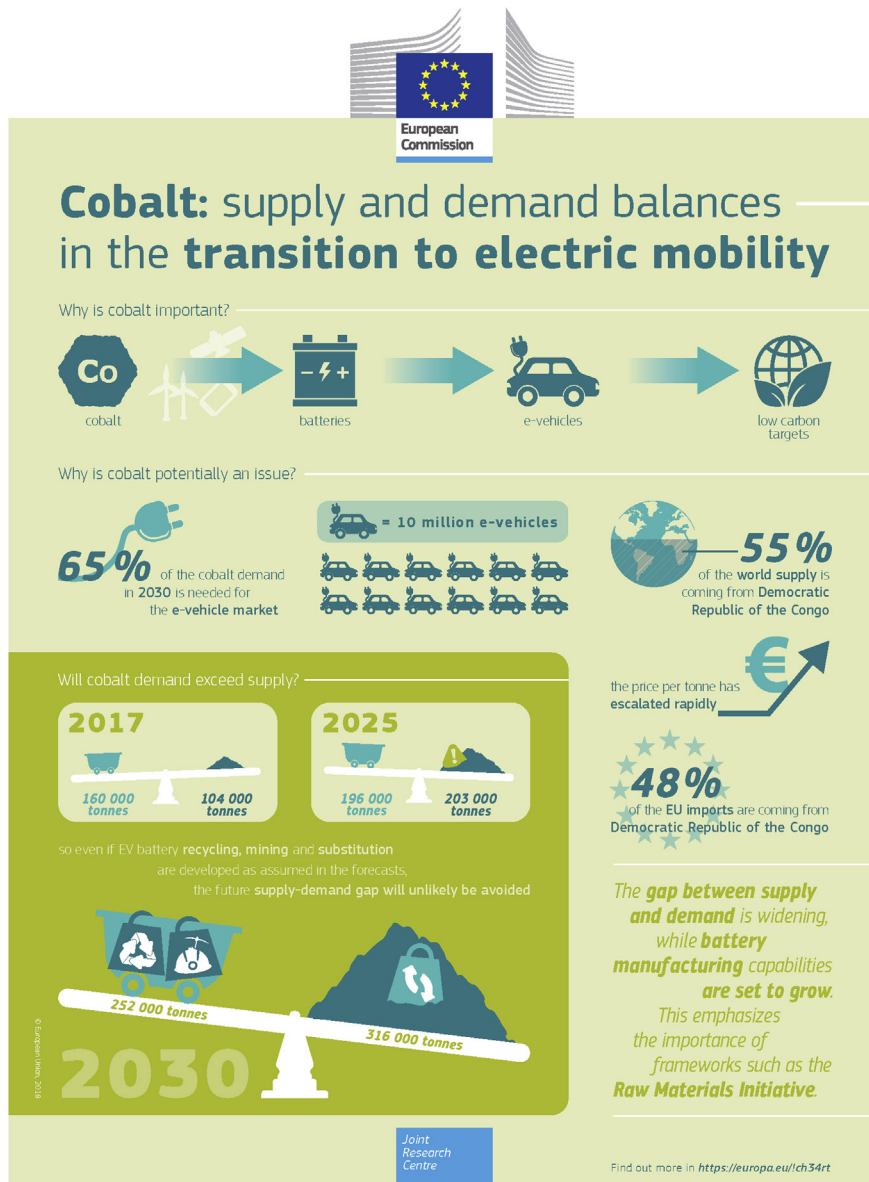


FIGURE 1 Cobalt infographic, distilling a story from a detailed report.

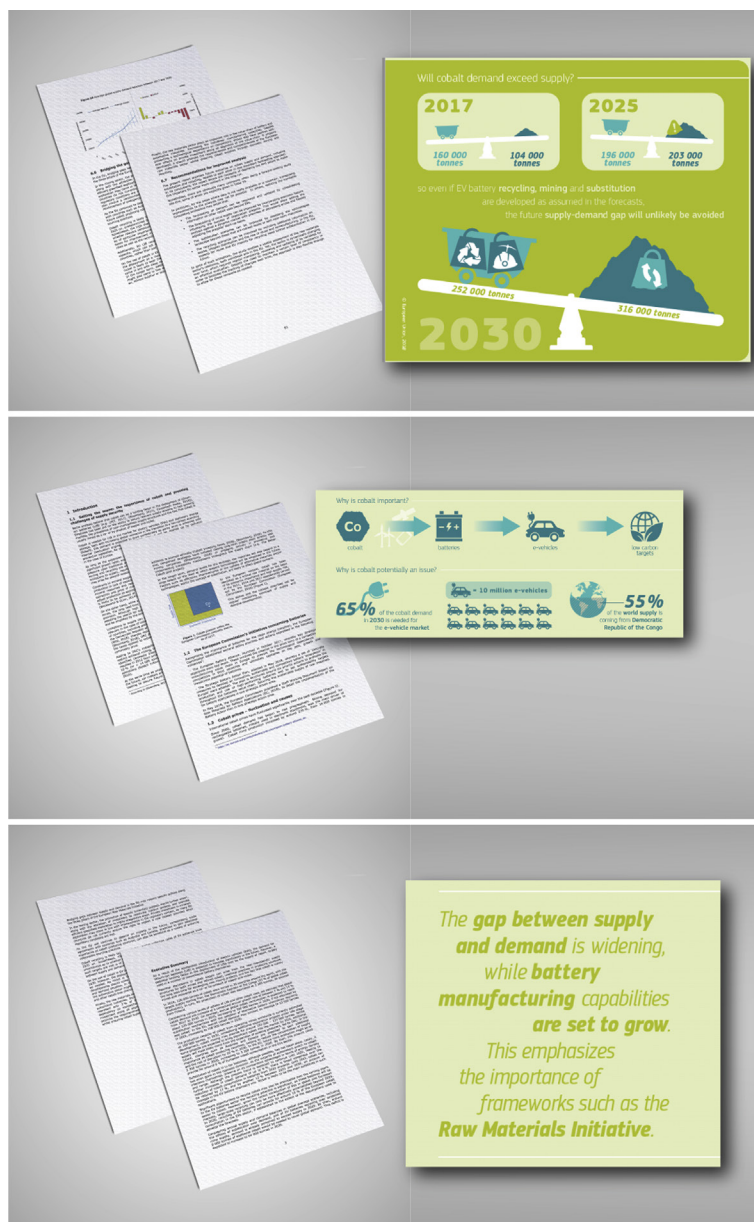


FIGURE 2 Condensing a scientific text into visual key messages.



Coordination, Co-creation

One of the most critical aspects in the culture change in communication is ensuring that it is seen by all as a joint effort between communicators and scientists right from the onset of a research project. In other words, communication must not be a mere afterthought but it must be mandated by management to be included already in the planning phase.

Procedurally, requiring a communication brief early on is the ideal approach. This brief can be used to address fundamental communication questions, such as ‘what problem does our research intend to address’, ‘how does it fit into the policy landscape’, ‘why does it matter’, ‘to whom does it matter’, ‘who will be interested’, ‘who do we want to talk to’, ‘how does it make my neighbour’s life better’, etc.

Based on this brief, the content, narrative, visualisation and packaging can be developed in parallel with the project, leaving ample time for creative thinking and exploring various options for dissemination. It can also be used to flag high value communication opportunities to senior management and the political leadership, thus maximising the value of the work for political purposes.

From an organisational perspective, bringing scientists and communicators regularly together can help bring about this culture change and pairing scientists with communicators to work together on messages and communication products can lead to mutual learning and trust.

Skills

Chapter 4 deals more in depth with the skills scientists need for effective communication with policymakers. Many of the same skills are also necessary for effective communication with other audiences, such as talking with visitor groups, briefing journalists, drafting communication summaries or talking on stage at public events.

Traditional formal training opportunities play an important role in building those skills, for example, on public speaking, storytelling, visualisation, etc. Furthermore, the close involvement of communicators in research projects provides scientists with hands-on experience in communicating their work beyond their peers. Last but not least, involving scientists in ‘cool’, innovative communication activities can increase their motivation and provide them with opportunities to exercise their communication ‘muscles’.

Case Story: Unlocking new communication powers in scientists

The JRC encourages its scientists to try novel communication methods and invests into their our colleagues training. For example, we regularly organise events around PechaKucha and TED-style talks, science coffees and live ‘date a scientist’ initiatives at large public events. Participation, which is voluntary, includes preparation with communication experts, and calls for expression of interest have brought forward not only scientists already recognised for their communication skills but it also allowed discovering hidden talents. In a virtuous cycle, the success of such events encourages more and more scientists to volunteer and showcase their work to various audiences, while gaining valuable communication experience. In parallel, we strongly encourage the scientists to be digital ambassadors. The concept of digital ambassadorship is based on our colleagues actively promoting their own work to their own networks with their own voice and expertise on the web and social media. The goal is to amplify the visibility, brand and reach for both them and the organisation itself. Therefore any JRC staff active on the web and social media can act as ambassadors.



Motivation

Ultimately, the culture change to engage in communication hinges on motivation. Motivation may be intrinsic, coming from the personality and drive of the scientist, or extrinsic, rooted in the desire to earn a reward or avoid punishment.

Communicating with non-scientific audiences is often challenging for scientists as it involves having to strip one's own science down and rewording it, peeling away the layers of scientific complexity and expressing it in layman's terms. It also means leaving one's comfort zone and doing things differently, through trial and error, to find the best approach.

Therefore, management must make sure that the right incentives are in place to spur as many scientists as possible to engage in communication.

As an example of leveraging intrinsic motivations, cultivating a pool of scientists with an inclination and skills for communication and giving them high-value communication opportunities can provide an example for others to follow. For others, the mandatory inclusion of communication planning in research activities and setting aside a certain percentage of their working time for communication may be necessary.

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Case Story: Measuring and recognising communication results

The wisdom of ‘what gets measured gets done’ is especially true in a scientific organisation. Measurement, reporting and public recognition of good results can be significant contributors to motivation. Using its expertise in indicators, the JRC is in the process of developing and deploying more sophisticated ways of measuring the results of its communication activities. At the same time, continuous recognition of and feedback on communication activities is required from managers to staff to signal the importance that management attaches to successful communication.