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Science communication and AI in Flanders

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Science communication plays an important role in making artificial intelligence (AI) accessible to a broad audience, including policymakers and citizens. This policy brief shares insights, based on research conducted with 130 AI scientists in Flanders, regarding the opportunities and challenges of science communication around AI.

Highlights

Self-perception as an expert and media training are key factors for media participation
The likelihood of a scientist participating in media communication significantly increases when they consider themselves an expert. Additionally, scientists who have received media training appear in the media more often. However, there is uncertainty about the sequence: whether media training leads to a higher self-perception as an expert or whether experts are more inclined to undergo media training.

Social media increases the likelihood of media participation
Active participation on social media, particularly LinkedIn, increases researchers' visibility and raises the chances of media attention. Journalists are increasingly using platforms like LinkedIn to find experts, providing valuable opportunities for researchers to share their scientific knowledge.

Challenges in communication between scientists and journalists
There is a gap between scientists and journalists, with scientists often struggling to simplify complex AI concepts without losing scientific accuracy. Journalists, on the other hand, face time pressures and are looking for experts who can provide clear and concise information. Media training is seen as a potential solution to bridge this gap, but participation in such training remains limited. Many scientists also indicate that they lack the time or interest to engage in science communication or take media training.

1. The importance of science communication regarding AI

Science communication has an important societal role by making scientific knowledge accessible to a wide audience, from policymakers to citizens. A researcher speaking in a news article, a debate with scientists on television, a workshop given by a researcher, or an informative video on social media – these are all examples of activities that fall within the domain of science communication. Such activities ensure that important research findings, technological innovations, and their societal implications become understandable to non-

specialists. Especially in an era where technology increasingly influences daily life, it is important that people understand what these developments could mean for them.

Artificial Intelligence (AI) is one of those technologies that increasingly affects our daily lives. AI is increasingly applied in various sectors such as healthcare, policymaking, education, and industry. Due to the complex nature of AI and its potentially far-reaching consequences, it is crucial that science communication about AI goes beyond merely explaining the technology itself. Reports about artificial intelligence are often accompanied by exaggerated claims and (doom) scenarios. Therefore, it is essential that well-trained experts are given a voice in journalistic coverage of AI. They can explain nuances, prevent misunderstandings and misinterpretations, and separate fact from fiction. By presenting science communication in an accessible manner, citizens and policymakers can make better-informed decisions about how AI should be implemented and regulated. At the same time, this can also inspire more young people to pursue a STEM career, which aligns with Flanders' goal of improving the flow into STEM professions and increasing STEM literacy among all citizens (Flemish Government 2022).

Science communication, however, is not without its challenges. Both scientists and media makers experience stumbling blocks in translating complex AI concepts into accessible and understandable information for the general public. To better understand these challenges, a survey was distributed to AI researchers in Flanders in the spring of 2024. This survey seeks to identify their experiences with science communication, including the specific stumbling blocks they experience when communicating about AI to the broader public. Some insights from this survey are discussed in this policy brief and complemented with findings from interviews with (science) journalists, in order to draw a complete(er) picture of science communication regarding AI.

The sample was composed by selecting AI researchers through the websites of Flemish universities or through the AI labs of Flemish universities. Thus, 426 AI researchers, research institutions and science communication services of universities were contacted via a personal e-mail with an introduction to the study and the link to the survey. In addition, the questionnaire was also distributed through the communication channels of the Fonds voor Wetenschappelijk Onderzoek in Vlaanderen (FWO) and further shared individually by the AI researchers themselves. In the end, the survey was filled in by 130 researchers from 9 different institutions who consider themselves researchers in the field of artificial intelligence. There is self-selection in this case and thus not a representative sample. Nevertheless, variation is present within the respondents in terms of age, gender, position and institution. This allows us to conclude that even though our results are not based on a representative sample, we can still draw meaningful conclusions from the conducted research.

2. AI-experts in media in Flanders

130 respondents participated in this survey, the vast majority of whom (92.4%) work as PhD students, postdocs or professors at a Flemish college or university (Figure 1).

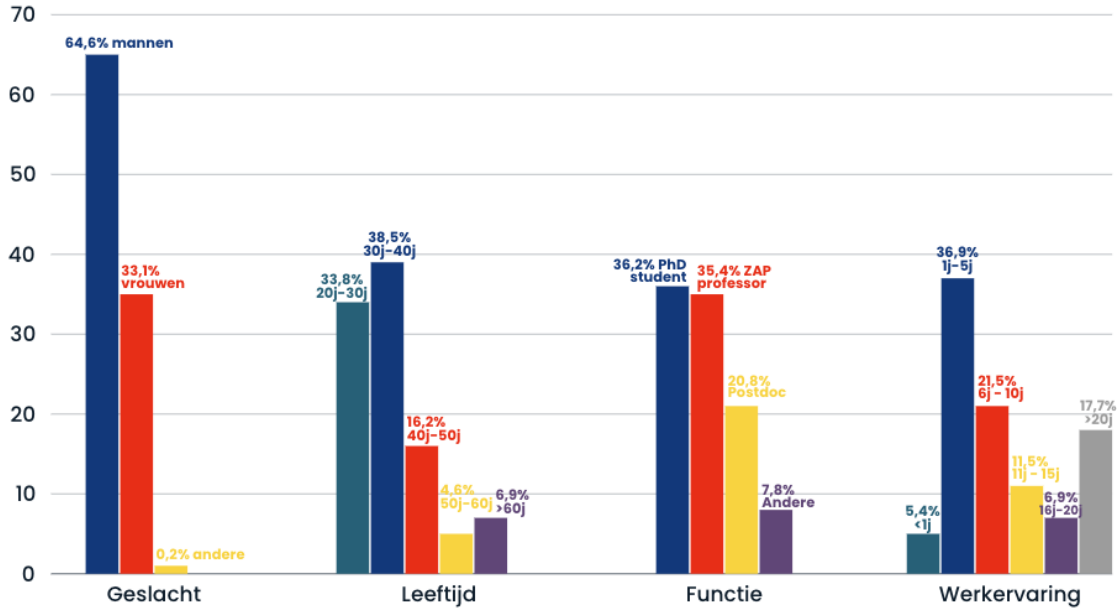

Figure 1: Demographic characteristics of respondents (N=130).

Only 26 of the 130 respondents (20%) in this survey indicated that they had already appeared in the Flemish media regarding AI. What is the profile of these people? Looking at gender, age, position and attitude, we see the following: 73% of the interviewees who already participated in media were men, 58% are younger than 40, half are professors (ZAP) and almost 85% of those who already participated in Flemish media work at the 1 of 5 universities in Flanders (UA, VUB, UGent, UHasselt and KU Leuven). Yet none of these variables appear to have a predictive value for whether they appear in Flemish media.

If we look at in which traditional media channels in Flanders the experts mainly get their say, we see that newspapers come out on top, with just under 70%. Radio comes in at number 2 with 61.5% and magazines & weeklies at 3 with 58%. Television seems to be a more difficult medium for AI experts to get the word out. TV appearances (both live and pre-recorded) only come in at place 4 with 46%.

Survey respondents named several benefits of participating in science communication. For example, media participation can provide greater name recognition within their professional network and promote contacts with industry. In addition, it can also lead to new professional opportunities, such as collaborative proposals and even opportunities for funding.

3. Wat stimuleert of verhindert wetenschapscommunicatie rond AI?

One-fifth of the respondents in this survey indicated that they had already appeared in the Flemish media regarding AI. Two factors in particular appear to influence media participation from the survey results. Contrary to what might be assumed, in this sample there is no significant difference in media participation about AI between men and women, nor on the basis of age. However, we do see a positive significant relationship with the extent to which **scientists consider themselves experts**. This suggests that the stronger a scientist sees himself as an expert in artificial intelligence, the more likely that scientist will appear in the media.

Moreover, the survey shows that scientists who consider themselves experts often also have received **media training**. Although a positive correlation occurs, however, it is not entirely clear

whether media training leads to a higher self-perception as an expert, or whether scientists who see themselves as experts are more likely to take media training. Within the respondents of this study, 23 already attended media training. Respondents who had already taken media training were then asked what influence media training had on the preparation process for appearing in Flemish media. Of these, 87% indicated that such training had a positive influence on their preparation process, and the remaining 13% felt that media training had no influence. In other words, no one indicated that media training had a negative influence. Remarkably, 43.5% of those who received media training have already appeared in the media. This compares to only 15% of those who have not received media training. However, based on the data, it is not possible to find out whether those who have already received media training have appeared in Flemish media after the media training (because they obtained the right tools in the media training) or whether they received the media training after an experience with media participation. When respondents were asked why they have not yet taken media training, three main reasons were mentioned: lack of time, lack of an offer from their institution, or simply a lack of interest.

In addition to the influence of self-perception, it also appears that those who **are active on social media** are more likely to participate in media communications. We see that 28% of researchers who actively communicate on social media about their research also have prior media experience, compared to only 12% of researchers who do not use social media. In other words, social media is a good method to go public as a researcher and inform journalists of their expertise.

Indeed, interviews with science journalists also reveal that they are increasingly turning to LinkedIn these days to find experts. Presence on LinkedIn therefore increases a researcher's chances of being picked up by a journalist. Just over half of the respondents (53.1%) said they use social media channels to share their scientific knowledge with the public and/or to participate in debates with experts. Interestingly, 78.3% of these social media users cited LinkedIn as their main platform for science communication, while only 17.4% identified X as such. Of the respondents who indicated they do not use social media (N = 61), half indicated they have **no interest in doing so** (50.8%) and over a quarter (26.2%) said they **do not have time** for it.

Lack of time also plays a role in whether or not they participate in science communication per se. In addition, the biggest, but also least surprising, stumbling block is the lack of invitations; 50% of respondents have not yet had a chance to appear in the media. In addition, a small minority (7%) expressed concern about **possible damage to their scientific image from participating in the media**. Also, over a quarter of the researchers surveyed indicate that they have no interest at all in appearing in the media (28%).

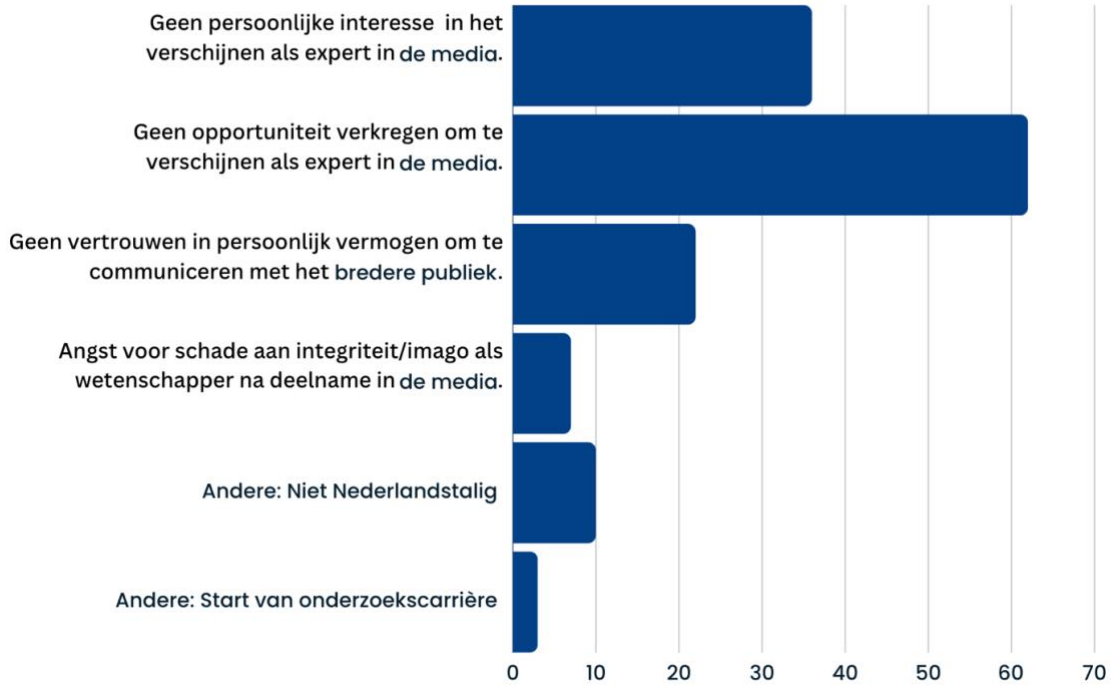

Figure 2: Main obstacles to participation in Flemish media.

4. "My research is not suited for a large audience"

An important aspect of science communication is the ability of experts to explain complex concepts in an accessible way. This can be a stumbling block for researchers, as 30.8% of respondents reported always or regularly having difficulty explaining complex AI topics. As many as 47.7% of respondents experience difficulty occasionally, while only 21.5% never experience difficulty in making AI-related concepts understandable.

Researchers report that their research is often too complex or technical and therefore not **suitable for the general public.** In media training, researchers are often advised to find a "hook" to make their story more accessible, such as linking it to a current or recognizable social issue. In some cases, however, this requires researchers to be willing to let go of a certain amount of nuance, a practice that scholars often find challenging.

This **tension between scholarly rigor and public relevance** is particularly evident in more traditional media, such as radio, television and print. These media formats often require concise, immediately understandable messages, with little room for lengthy or complex explanations. The journalists interviewed for this study also point to the importance of speaking in "bite-sized information" and experts who may or may not provide "good quotes." This includes scientists who use overly academic or technical jargon, making it a lot of extra work for journalists to process it into understandable and accessible content.

> *"It brings visibility, but requires a lot of pedagogy with journalists who are usually not knowledgeable about AI. Further, they often want to put a twist on a story that requires more nuance to be presented correctly."*

Journalists are often under great time pressure to finish an article. It is therefore not unusual for them to turn to experts who they know will provide them with relevant information and a

clear explanation in a short time. This often involves scientists with whom they have had contact in the past.

Moreover, among the scientists surveyed there is often the idea that journalists are not interested or not sufficiently informed about the subject matter, so that they do not always make the - in the scientists' view - relevant connections. Consequently, there seems to **be a gap between scientists and journalist**s: scientists expect journalists to understand the subject matter enough to see its relevance and engage the experts with relevant questions, while journalists are just looking in the direction of the experts to make their expertise appear in the media in an accessible and relevant way.

In that regard, it is noteworthy that a large majority of respondents (72.3%) expect media training to (somewhat) help them learn how to explain AI topics to the general public in a comprehensible way. This contrasts sharply with the relatively low participation rate in media training. Thus, while much potential is seen, there are several stumbling blocks at play that prevent and/or insufficiently motivate scientists to fully exploit this potential.

5. Science communication is not self-evident

Although science communication is considered by many to be an essential part of research, in practice it turns out to be anything but self-evident. Scientists are first and foremost expected to be (and remain) experts in their field and to conduct research with thoroughness and integrity. On top of that come numerous activities such as scientific dissemination and service, as well as managing projects, writing new project applications and, in many cases, teaching activities. In other words, scientists must possess a diverse set of skills and balance different responsibilities, making the integration of science communication especially challenging. Universities, colleges and other organizations offer various support initiatives and communication channels, such as *Let's Talk Science*, the *Universiteit van Vlaanderen* or *De Dag van de Wetenschap*. Nevertheless, the substantive responsibility for science communication remains largely with the individual researcher. Indeed, it is impossible to expect that such organizations would handle the complete communication of all researchers.

Given the importance of sound science communication - not only for artificial intelligence but for any research discipline - it is worth considering how science communication can be integrated into research in a systematic and sustainable way. This includes asking critical questions, such as scrutinizing the role of both scientist and media maker. Are the experts themselves always the right person to be in full control of the communication process? Should we expect that every scientist can emerge as a skilled communicator? How can research institutions and policy makers create the structures needed to professionalize science communication? And what is the role of the media?

Recommendation 1 – Make science communication an integral part of research proposals

As early as the project application stage, consider how results can be communicated. In doing so, provide resources, especially time and budget, for science communication in project applications. That way, there are opportunities to attend relevant training courses and/or engage other professional support.

Recommendation 2 – Adopt a broad definition of science communication

Science communication includes more than just visibility on television or radio. It can also include conducting workshops for specific audiences, such as the sessions organized by VAIA, or participating as an expert in initiatives such as amai! Highlighting such forms of science communication can lower the threshold for scientists to participate.

Recommendation 3 – Build bridges (with bridge builders)

As a researcher, there are numerous ways to build relationships with journalists, such as social media or platforms like the *Expertendatabank*, which increases your visibility and reach. Researchers (as well as media makers) can also collaborate with intermediaries such as professional science communicators. Initiatives such as *the Belgian Science Communication Network* can play a role here.

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