

Deliverable 4.3

Report on the ENJOI Labs

Version 1.4

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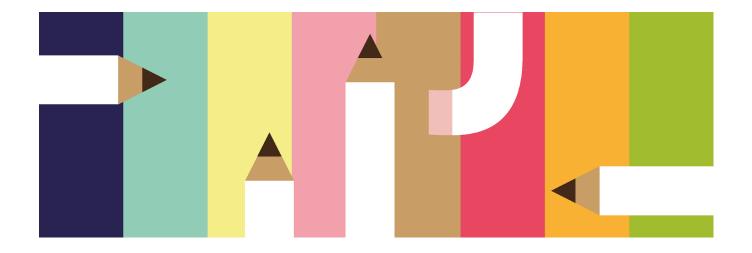
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REVISION HISTORY

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v1	09.12.2022	Science for Change	First version
v2	18.12.2022	ENJOI consortium	Document reviewed by partners
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QUALITY ASSURANCE

To ensure the quality and correctness of this deliverable, we arranged an internal review and validation process. The deliverable was drafted by the work package leader (formicablu). All partners contributed and reviewed the overall draft. Finally, the final version was submitted to the project coordinator for final review and validation.

DISCLAIMER

This deliverable contains original, unpublished work except where clearly indicated otherwise. It builds upon the experience of the team and related work published on this topic. Acknowledgment of previously published material and others' work has been made through appropriate citation, quotation, or both.

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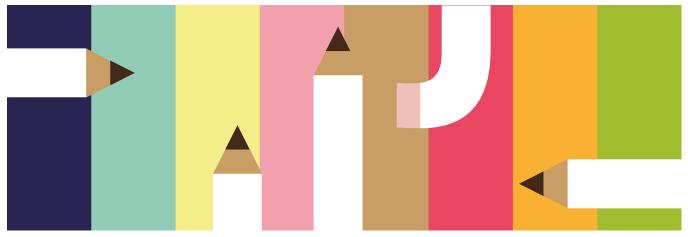


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- 10.7 Presentation Mutual learning Italy
- 10.8 Presentation Mutual learning Portugal

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1. SUMMARY

Engaging and empowering communities is key to fighting disinformation, as shown by the Covid-19 infodemic and other global challenges. In ENJOI, we are tackling this issue with a specific focus on scientific information: our goal is to co-create with scientists, journalists, communicators, activists, teachers, policymakers and various other representatives of civil society a set of Standards, Principles and Indicators (SPIs) to improve the quality of science communication and journalism.

After the first round of ENJOI Engagement Workshops (EWs) in Italy, Belgium, Spain, and Portugal (detailed in D4.2), we developed another round of participatory events in the four selected countries. These were denominated the ENJOI Labs, aimed at refining the list of SPIs and co-creating the ENJOI tools.

The ENJOI Labs were an opportunity to bring the ENJOI SPIs of outstanding open science communication to a new audience. The methodology to involve the quadruple helix stakeholders was connected with the NEWSERA project (a related Swafs-2019 project) bringing to ENJOI the view of citizens, industry & SMEs, career scientists and policymakers.

To successfully achieve the necessary results, each one of the ENJOI European labs targeted a specific group to collect different perspectives and improve science communication and journalism in a practical way.

This report informs about the process of the Labs. It contains the guidelines, materials, development, results and actions that promote the project beyond the labs.

2. PROJECT OVERVIEW

ENJOI (ENgagement and JOurnalism Innovation for Outstanding Open Science Communication) is exploring and testing engagement as a key asset of innovation in science communication distributed via media platforms, with a strong focus on journalism.

Through a combination of methodologies and in collaboration with producers, target users and stakeholders of science communication, ENJOI is co-creating and selecting a set of standards, principles and indicators (SPIs) to produce a Manifesto for Outstanding Open Science Communication (OOSC). ENJOI is deploying a series of actions via Engagement Workshops, Labs, field and participatory research, evaluation and testing phases.

It will also build an Observatory as its landmark product to make all results and outputs available to foster capacity building and collaboration of all actors in the field. ENJOI is working in four countries: Belgium, Italy, Portugal and Spain, taking into account different cultural contexts.

ENJOI's ultimate goal is that of improving science communication by making it more consistently reliable, truthful, open and engaging. Contextually, ENJOI will contribute to the active development of critical thinking, digital awareness and media literacy of all actors involved in the process.

3. INTRODUCTION

The ENJOI Labs were created in order to conduct a process of validation of ideas, connecting the ideation phase developed along the Engagement Workshops (EWs) with a concrete phase. It was the moment for ideas to take shape and the project to progress in the co-creation of tools for scientists, journalists, researchers, citizens and policy makers.

The Labs were composed of diverse stakeholders, making the assessment of the Standards, Principles and Indicators (SPIs) more responsive to the needs, expectations, skills and knowledge of different targets.

In ENJOI the stakeholders from the quadruple helix involved were:

- active citizens groups, such as citizen scientists and activists at local level that are concerned about the information they interact with and how it responds to their needs;
- career scientists that want to focus on their interest, incentives and disincentives towards direct involvement in science communication through the media;
- the media industry that includes journalists, startups, science communication outreachers and social media experts. These target stakeholders are directly interested in better science communication that can improve the impact of their jobs and the engagement with their audiences;
- Policymakers who are particularly interested in using science facts to inform political decisions at all levels –from local to international– and who require Outstanding Open Science Communication (OOSC) to engage citizens in taking positive actions on proposed plans and regulations.

With the collaboration of NEWSERA (Citizen Science as the new paradigm for science communication), ENJOI brought the methodology of the quadruple helix into the labs. NEWSERA creates communities of practices involving specifically quadruple helix stakeholders. As some of the ENJOI partners also participate in NEWSERA, which is in a more advanced phase (one year more advanced), ENJOI is incorporating new knowledge and benefiting from the lessons learned.



Three of the ENJOI Labs were held locally and in person while the final one in Brussels was held online and involved key actors at the European level. This Deliverable provides a more detailed explanation of each Lab.

4. MATERIALS

The materials for the Labs were developed taking into account what was co-created in the previous Engagement Workshops (EWs) and needed to be validated by the new stakeholders.

In order to achieve an environment where participants could freely brainstorm, different materials were created to promote engagement in co-design dynamics. All the materials were shared with the partners in English and then translated and adapted to the local languages considering the specific needs. They are described in section 4.1.

4.1 Guidelines

For each step involving the event and the dynamics, guidelines were created (Annex 10.1) so all the partners who ran the labs could find the proper instructions.

4.1.1 Before the lab

Following the methodology elaborated by Stickydot and detailed in "D3.1 Developing a roadmap" each partner responsible to run a lab could do a stakeholder mapping and a stakeholder priorisation in order to choose the participants for each lab. To contact the selected participants there was a template email (Annex 10.2) and an invitation in a PDF format to explain the project and the advantages of being in the Lab (Annex 10.3). Once the participant replied confirming their attendance at the Lab, a work-in-progress checklist with all of the SPIs co-created so far was shared with them in a more visual format. This was the starting point of what would be discussed and improved in the Lab (this checklist is one of the tools that are being developed by WP 6 for Spain).

4.1.2 During the lab

The partners received instructions on the dynamics and the offline materials (Annex 10.4). The dynamics of the Labs followed the methodology of the "D3.2 Co-designing innovative multistakeholder engagement for OOSC".

The labs were divided into two parts: validation and improvement of the SPIs and co-creation of the tools.

Here below the structure of the first lab is described:

- Welcome (20 minutes)
 - Presentation of the project and of the participants
- Presentation of SPIs: (15 minutes)
 - The ENJOI partner introduces in the plenary the definition of S, P and I, and the infographics of the ones developed within the ENJOI project and organised in three sections: ethics, methodology and relationship with the public
- Dynamic 1: (55 min)
 - Read SPIS. How can we push these SPIs further?
 Participants circulate, read and add feedback on post-its.
 The focus needs to be on "from your perspective what is missing here?"
 - Ask participants to vote on the post-its adding sticky dots to high-priority feedback.
 - Identifying high-priority comments: Which of the highest-priority comments do we need to discuss? We look at all the infographics, sticky notes and dots and decide which are the topics that need to be addressed (min.3, max.5). We divide the participants into groups of 4-6 to discuss them. Each group can start with a different one.
 - Discussing how to implement the feedback in small groups.
 - Presentation of each group about the main results

- Break (20 minutes)
- Dynamic 2: (40min)
 - What tool would help me to address my needs in relation to science communication? (Push for the innovative tools, we already had workshops and videos suggested)
 - 1. What content(s) should it include?
 - 2. What format(s) should it have?
 - 3. What are its objectives?
 - Closing (15 minutes)
 - Open final conversation, next steps and wrap-up

This initial structure could later be modified in terms of time, order of the dynamics and structure, based on the Mutual Learning process (section 5.2 of this deliverable for further details).

4.1.3 After the lab

After each lab, a survey post-session (Annex 10.5) was sent to the participants. The results were reported in the mutual learning meeting to inform the following lab.

5. IMPLEMENTATION

ENJOI presented the SPIs to the quadruple helix stakeholders in the Labs in connection with the methodology of the NEWSERA project.

To take advantage of the knowledge of each type of stakeholder and go deeper in the discussions, ENJOI partners agreed to address a specific stakeholder per country:

• Italy Lab:

 Stakeholder: Citizens, including citizens associations, patients associations, consumers associations, foundations, startups, teachers, and activists. Participants were recruited considering the opportunity to discuss the ENJOI SPIs from the perspective of citizens active in relevant contexts (climate, environment, schools, LGBTQ+ rights, health, etc.)

o Date: 27th October 2022 (in person)

o Lead partner: formicablu

Portugal Lab:

 Stakeholder: Researchers. Participants were recruited considering the connections of FC.ID, a non-profit private association representing the Faculty of Sciences of the University of Lisbon.

Date: 9th November 2022 (in person)

Lead partner: FCID

Spain Lab:

 Stakeholder: Journalists and media industry. The Lab took advantage of a joint event between NEWSERA and ENJOI for journalists;

Date: 28th November 2022 (in person)

Lead partner: Science for Change

• Belgium Lab:

 Stakeholder: Policymakers and funders. Belgium is a well-known hotspot in Europe when it comes to decision-making. The aim was to bring this strength and expand it to a European level.

o Date: 7th December 2022 (virtual)

Lead partner: Stickydot



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5.1 Labs in practice

5.1.1 Italy

On October 27th, the Lab took place at the Formicablu headquarters in Bologna. They had a total of 10 participants. 13 participants confirmed, but three were unable to attend at the last minute. Citizens' associations, patient associations, consumer associations, foundations, startups, teachers and activists were among the categories of the invited participants, which were asked to give their contribution bearing in mind the citizens' perspective rather than their specific professions. Two of the participants were also present during the EWs in March 2022, and this was useful to keep a connection between the two events and the relative discussions.

The atmosphere was described as collaborative and the group was committedand focused. However, the timing was too tight and the participants felt a little under pressure, especially during the first phase of the Lab. This part was further improved through the mutual learning process (see section 5.2). The co-creation of the tools went smoothly and the groups managed to work on three contributions: open source platform to evaluate science journalism, a crowdfunding platform for science journalism and a tracker of science communication and journalism diffusion.

For what concerns the Lab's outcomes, five main points emerged:

- SPIs Engagement: according to many participants, it is described as
 too static in the proposed SPIs. Instead, engagement should be a
 continuous process. In (science) journalism, real engagement should
 anticipate the cognitive needs of the target audience
- 2. SPIs Diversity: according to many participants, in particular the representative of the LGBTQ+ community, diversity is still not enough as described in the current list of Standard, Principles and Indicators. Diversity shouldn't be embedded at formal level only (e.g., "diversity of language"), but should become one of the main guiding principles of the whole media ecosystem. At the same time, giving voice to all the

- "dissonant voices" can be controversial (risk of false balance?)
- 3. **SPIs at formal level**: some participants pointed out that there is some degree of dissimilarity, in particular for standards and indicators. Some are too detailed while others are too general. They suggested trying to elaborate descriptions that are more uniform and homogeneous.
- 4. **Application of SPIs**: according to the group, it is not perfectly clear who should apply the different Standard, Principles and Indicators and when. For example, it was suggested to imagine different possible applications according to the type of media?
- 5. Sustainability of SPIs: some participants felt an excess cognitive load for those who want to follow all the SPIs all the time. This might lead to a risk of non-sustainability for many content producers. For example, we might risk missing what a participant called the "grove of YouTubers", or the "pond of Instagrammers": some categories of content producers are just not expected to follow all these SPIs, and to demand that they do so it would make it unsustainable for them.

All these inputs were considered during by the consortium, and some of them were embedded into the Enjoi Manifesto (See D2.3 ENJOI's Manifesto on Outstanding Open Science Communication).

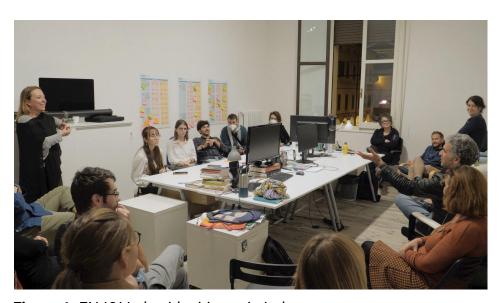


Figure 1: ENJOI Lab with citizens in Italy.

5.1.2 Portugal

On November 9th, the lab in Portugal was held at the National Museum of Natural History and Science in Lisbon. They had 13 researchers and professors from different fields: journalism and communication, climate change, cancer and stem cell biology, environmental humanities, robotics, paleontology, biodiversity, modeling, wildfires and forest ecology, machine learning/artificial intelligence, and clinical research in oncology. In total, 27 people were invited, and 15 were confirmed (two were not able to attend on the day).

The participants were divided into groups from the beginning which made it possible to discuss a bit deeper the SPIs, but still, time was a challenging element.

Four topics emerged during the discussion:

- The need to reach specific target audiences by adapting to new formats and channels (visual aspects were found important to make the information more attractive, in particular for the youth, although other target audiences were also mentioned);
- 2. Transparency of the agendas of media, journalists (and also of researchers, politicians, and other stakeholders);
- 3. The benefits of creating more opportunities for collaboration between researchers and journalists;
- 4. The need to present not only the scientific results but also the process.



Figure 2: ENJOI Lab with researchers in Portugal.

5.1.3 Spain

The Spanish Lab ran concurrently with the NEWSERA Data Journalism #CitSciComm Lab, as part of the larger NEWSERA-ENJOI Conference "DATA4CitSciNews" on November 28th in Barcelona. Section 7.1 of this deliverable goes over the joint event in greater detail.

The Lab took place in the Parc Cientific, a location that houses research institutes, companies, and other entities that contribute to the ecosystem of innovation, life sciences, and technology. There were 11 participants present, 28 invited, and 15 confirmed (four could not attend on the day).

The participants were: journalists, science communicators, social media experts, and the CEO of a science communication startup. Four participants were present in the Spanish Engagement Workshop which contributed to having a deeper discussion. They were distributed in three different groups so each group had at least one person that was more familiarised with the SPIs. Each dynamic had relevant contributions. The

participants highlighted the importance of the SPIs while suggesting improvements to make them more useful.



Figure 3: ENJOI Lab with communicators in Spain.

5.1.4 Belgium

The fourth and final lab aimed at research funders, funders of science communication, policymakers and decision-makers in the field.

As it reached the final stages of the co-creation process of the ENJOI Labs, we brought the participants to focus on how the SPIs can be integrated into research funding and policy across Europe. The Lab was held online in order to make it possible to have participants from different parts of Europe. A form was sent among the main contacts from the ENJOI partners.

The lab had eight participants out of 19 who had confirmed their participation. They came from Belgium, Italy, Netherlands and Spain. The Lab started with the Milestone 7 "Presentation of intermediate results"

(Annex 10.6) developed by WP4 and presented by the ENJOI coordinator, Elisabetta Tola.

The participants were mostly research funders and policymakers, a few had a science communication or research background. About half of the participants had previously taken part in Engagement Workshops which made them more familiar with the SPIs.

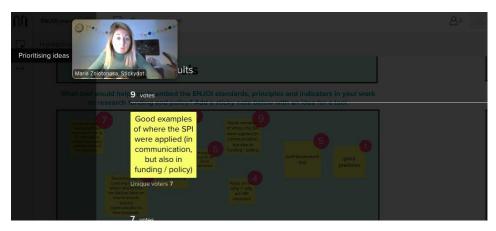


Figure 4: ENJOI Lab with research funders and policymakers online.

5.2 Mutual learning process

The ENJOI project follows the cascade effect which means that the Consortium met for Mutual Learning sessions following each lab. These exchanges of lessons learned enabled the consortium to strengthen the dynamics for the following lab, focusing on increasing participants' abilities to voice their needs and requests for high-quality content. A similar strategy was successfully implemented in the NEWSERA labs (Magalhães, Guasch, et al., 2022).

Italy was the first country to develop the Lab and the key findings were that the time frame provided for the Lab proved to be too short, particularly during the first phase: the time needed to read the SPIs and reflect even briefly on what was read might be longer. Nevertheless, this first reading is of paramount importance to ensure effective work in the following phases.

The main advice from the Italian team was:

- Revise the general timeline;
- Less time for silent brainstorming;
- Ask participants to review the SPIs in advance;
- More time for plenary discussion;
- Stay focused on the stakeholder group for the co-created tools;
- Try to connect the exercise with some relevant aspects emerged during the SPIs module and avoid already proposed tools.

The feedback from Italy was used for the Lab in Portugal, and the dynamics of the first module were slightly modified. It increased the time devoted to SPIs to nearly two hours, leaving less time for the tools. Participants in each table worked only on one specific aspect of the SPIs (ethics & deontology; methodology & practice, and relationship with the public), not on all of them, so they had more time to reflect and provide more specific feedback. The final discussion with the entire group allowed them to share their results with all the participants.

The change worked very well. As more time than expected it was dedicated to the SPIs (because it was considered beneficial for the discussion), the tools were only drafted. Even though short time was dedicated, three different and innovative tools were co-designed and presented to the entire group.

Spain followed the adaptations of the dynamics done in Portugal in order to go deeper into the analysis of the SPIs. The participants were divided into three groups that were prepared in advance to ensure diversity of profiles (at least one person was present in the EW and more familiarised with the SPIs per table).

An A4 with the SPIs was available in the table which helped the participants to keep focused on the section they needed to discuss and the guidance of the facilitators in this part of the dynamic was crucial.

The Spanish mutual learning meeting happened in person on the day right after the event because we had at least one representative from each partner and each WP present in Barcelona for an ENJOI general meeting. It was shared how well the adaptations succeed and the observation to keep the participants in groups to be more specific with each division of the SPIs.

This feedback was particularly relevant in the Belgian Lab. Since the lab was held online and lasted two hours, it was essential to have each group

going straight to the point.



Figure 5: ENJOI Mutual learning in Spain.

6. RESULTS

The labs with the stakeholders were a great opportunity to bring new actors to be part of the co-creation process of ENJOI framework and the resulting SPIs and Manifesto. In this way, the content produced in the project is not perceived as a top-down framework proposed only by specific experts for wider use. On the contrary, they are the result of a bottom-up approach that should lead to a much higher rate of adoption, in line with the challenge of building a more inclusive, innovative and reflective society as envisaged and recommended by the Horizon 2020 Work Programme.

In total, we had 42 participants in the four labs that had a unique opportunity to contribute with recommendations for high-quality science communication at the European level.

The participants replied to a post-session survey where some of them indicated that they comprehended the SPIs and went beyond providing inputs for improvement. They also had time to reflect on barriers and expectations related to science communication, in particular, social media, and the need to reach specific target users through channels and tools that connect with them.

Overall, during the Labs, 8 principles, 29 standards and 34 indicators were validated and improved. The result of this work has been used to feed into the Manifesto that can be assessed in the D2.3 ENJOI Manifesto for OOSC.

6.1 Reporting

After the achievement of each lab, the partners responsible for the organisation translated the feedback from the participants into a document. Then this content was collated into a Miro board as post-its that were tagged according to the source Lab. This distribution allowed to have the difference between each country in each SPI and the overall outputs.

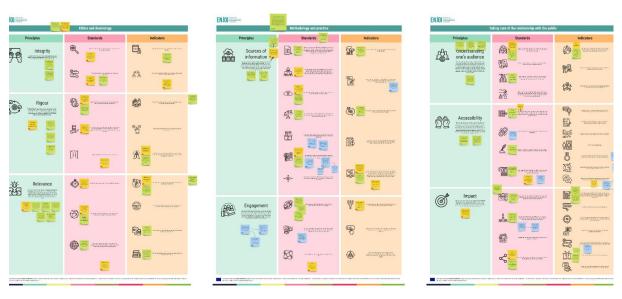
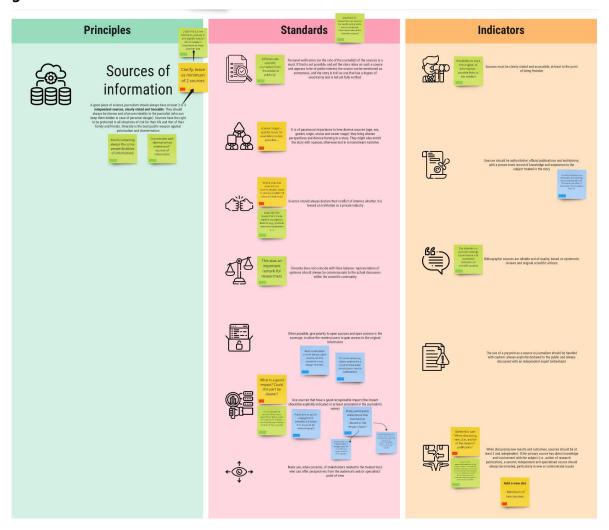


Figure 6: Miro board with the results from the Labs.





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Figure 7: Miro board with the feedback about principle, standards and indicators related to "Sources of information".

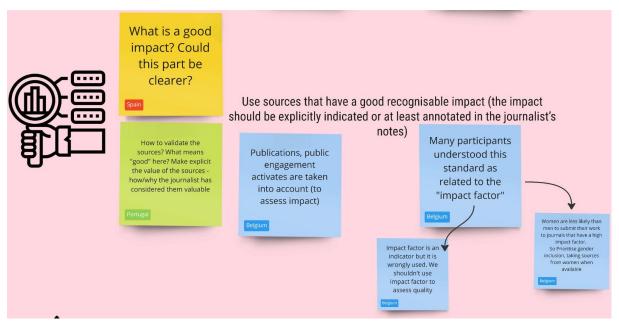


Figure 8: Miro board with the feedback of Spain, Portugal and Belgium of one standard related to "Sources of information".

7. GOING BEYOND THE LABS

7.1 The "DATA4CitSciNews" event

On the 28 of November in Barcelona, NEWSERA and ENJOI in partnership organised the "DATA4CitSciNews", an event on the state of the art of data journalism, the challenge of misinformation, and citizen science. During the event, an impressive line-up of media and journalism experts discussed meaningful case studies on the topics of data science journalism, journalism for the public interest and in a civic context, and the concept of citizen journalism applied to science coverage.

In a time when scientific misinformation and fake news are increasingly becoming a challenge both for the public and for media professionals, it was key to have an event on how citizen science can contribute to data journalism and to fight misinformation. Elisabetta Tola the coordinator of ENJOI shared the theoretical and practical framework that guide the project and its ongoing results, and finally discussed the importance of looking and learning from the best practices in science communication.



Figure 9: The "DATA4CitSciNews" event in Spain.

From November 28th to 30th, the "DATA4CitSciNews" exhibition took also place. This is an original piece of work that showcased five works to set off the concept of citizen science journalism, through alternative visuals, installations and critical narratives. The exhibition aimed to spark a discussion about how citizens and journalists and well-designed data collection can be the drivers behind investigation to ultimately respond to societal needs and benefit communities. The priority of science communication and journalism is to respond to societal needs and enable the public to fully incorporate their scientific citizenship rights. Principles, standards and indicators (SPIs) should be at the core of a strong ethical and deontological approach to science communication and journalism. So the exhibition had the SPIs and a part where people could interact and contribute to them. This allowed the project to bring the SPIs to a different audience with a bottom-up feedback that is also present in the Miro board explained in section 6.1.



Figure 10: The "DATA4CitSciNews" exhibition with the ENJOI SPIs.

7.2 Science communication conferences

In order to increase the impact of the labs and the project, participation in conferences is also being planned. The aim is to promote and share the participatory methodology in the form of a workshop inspired by the Labs to discuss good practices in science communication within the main conference events that will take place in the near future. Participants will be invited to contribute actively to problem-solving and strategies for Outstanding Open Science Communication (OOSC), a framework that promotes high quality and transparency in science communicators and science journalists' everyday work. It will be an opportunity to improve scientific communication and journalism through a participative activity of mutual learning that will help us to advance in a greater knowledge of the profession and in the results of ENJOI.

Such first participatory workshop has been accepted for the Public Communication of Science and Technology Conference (PCST) that will be held in the Netherlands from the 12th to the 14th of April. The conference takes place every two years, bringing together practitioners, educators and researchers in the diverse and growing field of science communication.

Different proposals are also currently being submitted, like a scenario workshop to the European Science Engagement Association (EUSEA) Conference that will take place in Bolzano, Italy, on May 3-4 2023.

8. CONCLUSION

Labs with quadruple helix stakeholders were an opportunity to search for common ground between people with different expertise and roles in society, and to give attention not only to problems but also to solutions.

After the first rounds of Engagement Workshops (EW) in Italy, Portugal, Spain and Belgium, the Labs tested the ENJOI SPIs in the same countries but with new, more tailored audiences.

All the main results (See Sections 5 and 6 of this document) emerged from a co-creation process, taking into account different perspectives on how to improve the Standard, Principles and Indicators for an outstanding open science communication and journalism.

So far, the ENJOI project developed 8 principles, 29 standards and 34 indicators that were validated and improved during the 4 rounds of EWs and the subsequent 4 rounds of Labs.

Overall, the EWs and Labs' participants confirmed the main principles that were already identified after the literature analysis and expert interviews. But a great added value was given for what concerns the SPIs refining and improvement, and their practical application and sustainability.

Moreover, specific perspectives emerged according to the different stakeholders groups. In particular:

- Citizens: suggestions to make the SPIs more **engaging** and **inclusive**
- Scientists: suggestions to make the SPIs more transparent and open and to foster more opportunities for collaboration between researchers and journalists;
- Science journalists and communicators: suggestions to make the SPIs more useful for their everyday work
- Policymakers and funders: suggestions to make the SPIs more practice to be integrated into research funding and policy across Europe

The result of this work fed the ENJOI Manifesto, which can be assessed in the D2.3 ENJOI Manifesto for OOSC.

The content produced and the interaction between the participants and the project showed that we are on the way to improving science communication and journalism to be more consistent, reliable and useful.

9. REFERENCES

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10. ANNEX

The Annex, attached from next page, contains all the materials produced and shared before, during and after the Labs in the four countries.



Labs

Guidelines and templates

The ENJOI Labs are an opportunity to bring the ENJOI Standards, Principles and Indicators (SPIs) of outstanding open science communication to a new audience, to test out and refine them, with a focus on ensuring their practical applicability. It also contains an ideation session to define tools that could support a range of stakeholders in applying these SPIs.

The partners that will run the Labs have available the following information and documents:

- 1. Invitation to the participants: E-mail and PDF;
- Agenda of the lab for the participants, <u>SPIs</u> to be translated and <u>Canva</u> <u>Template</u>;
- 3. Offline materials (page 2 in this guidelines);
- 4. Report of the Labs (page 4);
- 5. Form post session.

3. Offline materials

The materials to print are available in <u>this folder</u>. It is described below the agenda and needs for each part of the lab.

Materials	 Short presentation: agenda and practical guidelines Post-session questionnaire Non-digital (buy) Name tags Sticky notes (ideally post-it) Felt pens (ideally edding 1200 black) 5 sticky dots per person Sticky tape Non-digital (print - calculated for 3 working groups) 3x SPIs definitions DIN-A4 1x SPIs infographics DIN-A2 (3 sheets) 1x 'Topics' canvas DIN-A2 3x 'Discussion' canvas DIN-A2 3x 'Tools1' canvas DIN-A2 3x 'Tools2' canvas DIN-A2 3x 'Tools2' canvas DIN-A2
Other needs	 Projector 3 big tables (for 3 working groups) 18 chairs (for 15 participants + 3 facilitators) Available walls (to hang maps) Catering

Time	Duration	Title	Script	Format	Materials needed
10.00 - 10.05	5 min	Arrival	We wait for participants to enter the room. As they enter, we give them name tags.	Plenary	Name tags
10.05 - 10.10	5 min	Welcome	Welcome to the workshop, presentation of the agenda and practical guidelines	Plenary	Short presentation: agenda and practical guidelines
10.10 - 10.25	15 min	Presentation of the participants	Each person will introduce themselves to the main group: Name, institution and relation with communication	Plenary	• None
10.25 - 10.40	15 min	Presentation of SPIs	We introduce the definition of S, P and I, and the infographics of	Plenary	• 3x SPIs definitions DIN-A4



			the ones developed within the ENJOI project.		• 1x SPIs infographics DIN-A2
10.40 - 10.50	10 min	Reading and silent brainstorm	Read SPIS How can we push these SPIs further? Participants circulate, read and add feedback on post-its. The focus needs to be on "from your perspective what is missing here?"	Tables	 SPIs A4 Sticky notes (ideally post-it) Felt pens (ideally edding 1200 black) Slide with the questions
10.50 - 10.55	5 min	Silent prioritisation	Adding sticky dots to high-priority feedback. We ask participants to vote on the post-its.	Tables	• 5 sticky dots per person
10.55 - 11.05	10 min	Identifying high-priority comments	Which of the highest-priority comments do we need to discuss? We look at all the infographics, sticky notes and dots and decide which are the topics that need to be addressed (min.3, max.5). We divide the participants into groups of 4-6 to discuss them. Each group can start from a different one.	Plenary	1x 'Topics' canvas DIN-A2 (to write down the high-priority topics) Sticky tape (to hang the canvas –and infographics, if possible– on the wall so that everyone can see the discussion topics)
11.05 - 11.25	20 min	Discussion	Discussing how to implement the feedback in small groups.	Groups of 4-6	• 3x 'Discussion' canvas DIN-A2 • Sticky notes • Felt pens
11.25 - 11.35	10 min	Presentation	Presentation of each group about the main results	Plenary	
11.35 - 12.05	30 min	Break		Plenary	Catering
12.05 - 12.15	10 min	Tools brainstorm	What tool would help me to address my needs in relation to science communication?	Groups of 4-6	• 3x 'Tools1' canvas DIN-A2 • Sticky notes • Felt pens
12.15 - 12.45	30 min	Ideation on one concept	 min per question: What content(s) should it include? What format(s) should it have? What are its objectives? "Who" is determined by the targeted stakeholder in each Lab/country. That will be the final target user of the tool Push for the innovative tools, we already had workshops and videos suggested, for example. 	Groups of 4-6	• 3x 'Tools2' canvas DIN-A2 • Sticky notes • Felt pens
12.45 - 13.00	15 min	Final discussion and wrap-up	Open final conversation, next steps and closing	Plenary	

4.1 Reporting informative template

Question	Answers
Country:	
Date:	
Format: online or in person?	
Duration of the Lab	
How many organizers?	
How many participants?	
Stakeholders:	

4.2 Reporting content template

Lab Module 1: Validating and pushing SPIs further		
Question	Answers	
Topics:		
Discussion:		

Lab Module 2: Cocreating tools		
Question	Answers	
What tools would help me address my needs in relation to science communication?		
Chosen tools		
What are its objectives?		

What content and format should it include?	
Who can support its development?	

Template email:

Dear.

I am writing to invite you to a **three hours workshop on science communication**. As part of the EU-funded project <u>ENJOI</u>, this workshop gathers 15 professionals willing to define what makes outstanding science communication, creating practical recommendations and tools. By replying to be interested, you will be one of the 15!

Science communication and science journalism face increasing threats across Europe, from polarisation to fake news. ENJOI seeks to tackle these challenges, working together to make science communication more consistent, reliable, truthful, open, engaging and useful, developing critical thinking and raising digital awareness.

This is a unique opportunity to contribute with recommendations for high-quality science communication at the European level. We will bring together professionals from academia, journalism, and science communication for an incredible co-creation experience.

Please, find attached an invitation with more information about the workshop.





The ENJOI Lab is a great opportunity to improve science communication and journalism by making them more consistently, reliable, truthful, open, engaging and useful.

You will:

- Connect with professionals that are interested in science communication in Spain by joining this community of practice;
- Influence the recommendations for high-quality science communication on a European level and make sure that the outputs are practical for your area;
- Contribute to the creation of a science communication tool applicable to your work;
- Be in touch with latest research results on science communication;
- Have a good time and get a chance to take a break from your daily routine to reflect on the bigger picture with your peers.

Join our ENJOI Lab!





Ethics and deontology

Principles

Integrity

Journalism and communication must be transparent, honest, and upright. Full and truthful independence needs to be granted both to the journalist and communicator and to his/her sources

Standards



Need to nurture and adopt a critical and sceptical attitude towards all sources and information



Clear description of the sources, in order for the reader to be able to find them

Indicators



The methodology used in the work process should always be explained



Clear and explicit statement both on the relationship with the sources or in case of any conflicts of interest

Rigour

Rigour and accuracy are two key assets of science and should also characterise any science communication, from the quick post on social media to the more articulate long-form article or interactive cross-media. To be rigorous, SC should focus on the process of science making and not only on the results and should never be presented as an immutable piece of truth



Have the information reviewed by at least two independent fact-checkers, peers and/or experts and specialists



The information is based on facts and data with references, links, sources for each piece of data/fact



Try to adopt an impartial and objective language, although it should still be representative of the current debate, also in terms of proportions and weights of the diverse positions within the scientific community



Adjectives and other forms of evaluative language are used only when necessary



Objectivity is relevant, but transparency it is even more so



The editor or reviewer (explicitly mentioned in the content) has a declared relationship of proximity (cultural, geographical, etc.) with the subject to be dealt with



Relevance

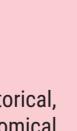
The priority of science communication is to respond to the needs of the audience and enable the target users to fully incorporate their scientific citizenship rights. In other words, SC should aim to give people the correct information to make a decision, discern among alternatives, choose the appropriate sources of knowledge and embrace those scientific outputs that can contribute to their well-being



Context and needs are presented in a correct diachronic perspective



The subject is of ascertained international/ national/ local interest (depending on the platform)



The content explicitly explains why the topic is of public interest and what is the novelty compared to previous knowledge



There is an explicit link between the story and the piece of research (basic/local/national) behind it



80% of the bibliographic sources should not be more than five years old (risk of obsolescence)



Connections with the historical, political, social and economical framework are clear, explicit and clearly described



Complexity is embraced, and uncertainty is dealt with and incorporated into the information. The focus of the story should be on the science process and not solely on the results





Methodology and practice

Principles

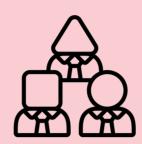
Sources of information

A good piece of science journalism should always have at least 2 or 3 independent sources, clearly stated and traceable. They should always be diverse and of proven identity to the journalist (who can keep them hidden in case of personal danger). Sources have the right to be protected in all situations of risk for their life and that of their family and friends. Diversity is the best pacific weapon against polarization and discrimination

Standards



Personal verification (on the side of the journalist) of the sources is a must. If that is not possible, and yet the story relies on such a source and appears to be of public interest, the source can be mentioned as anonymous, and the story is told as one that has a degree of uncertainty and is not yet fully verified.



It is of paramount importance to hear diverse sources (age, sex, gender, origin, status and career stage): they bring diverse perspectives and diverse framing to a story. They might also enrich the story with nuances otherwise lost in a mainstream narrative



Sources should always declare their conflict of interest, whether it is toward an institution or a private industry



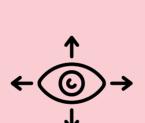
Diversity does not coincide with false balance: representation of opinions should always be commensurate to the actual discussion within the scientific community



When possible, give priority to open sources and open science in the coverage, to allow the readers/users to gain access to the original information



Use sources that have a good recognisable impact (the impact should be explicitly indicated or at least annotated in the journalist's notes)



Make use, when possible, of stakeholders related to the treated topic who can offer perspectives from the audience's and/or specialists' point of view

Indicators



Sources must be clearly stated and accessible, at least to the point of being findable



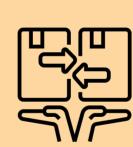
Sources should be authoritative:
 official publications and
 institutions; with a proven track
 record of knowledge and
 experience in the subject treated in
 the story



Bibliographic sources are reliable and of quality, based on systematic reviews and original scientific articles



The use of a pre-print as a source in journalism should be handled with caution: always explicitly declared to the public and always discussed with an independent expert beforehand



When discussing new results and outcomes, sources should be at least 2 and independent. If the primary source has direct knowledge and involvement with the subject (i.e., author of research publication), a second, independent and specialised source should always be included, particularly in new or

controversial issues



Engagement

Engagement refers to the employment of diverse practices (building on the cultural and/or psychological dimension and the technological one) to enter into a true collaborative framework with one's audience and public. It should not be merely seen as a tool to collect feedback, comments and suggestions. It is of paramount importance to take into account, understand and appreciate the needs, to respond to expectations and demands for better information



Establishment of a loyal and engaged community around the communication work with a two-way dialogue



Make use of appropriate engagement tools and maintain a regular, periodical, correct conversation and collaboration, without ever abandoning the community with no explanation



Foster collaboration and not competitiveness with the potential sources



Conversion funnel: how many community members switch from the free version to the paid version to access the products



Response to the Call to Action (to receive feedback; to fill in surveys and questionnaires; to participate in a training course or a live activity; etc.)



Approval from the audiences to enter a participatory and collaborative community (subscription to a newsletter; response to invitations; the number leads or collaborative actions shared by the audience)



Taking care of the relationship with the public

Principles



Understanding one's audience

There is no such thing as 'general public' anymore. Audiences are very diverse, fragmented, and connected by interests, needs, ages, languages and purposes that do not necessarily reflect those of a local/national community nor are easy to identify. Audiences can be niches that coalesce in a bigger community through the digital environment or might be physical communities united by one specific common local problem. Studying, listening to and cultivating the audiences is a key asset for journalists, media, communicators and institutions alike

Standards



Canvas and other tools help to define and segment the audience, to describe the personas, and to detail their needs and expectations in order to adapt the message



Different formats, platforms and multimedia resources should be adjusted to the selected type of audience



A multidisciplinary diverse team (in terms of skills, backgrounds, gender and demographics) has a much better chance to craft appropriate content and formats for diverse audiences



Effective communication is tailored, taking into account the public's needs and their world of reference. Representative stories, examples of cognitive proximity and the conveyance of cognitive emotions enhance the audience's engagement

Indicators



Data analytics and other quantitative measurements (surveys, questionnaires) that define the demographics, psychographics, geographical and cultural segmentation of the users



Measurement of matchmaking between the declared profile of the audience and the content provided



Differentiation of content and distribution strategies depending on the algorithm of the different social networks



Accesibility

Science communication should not be aimed only at people with a previous passion and interest or knowledge of science. Science information is needed also and even more by those who might not be interested and attracted to it but nonetheless will have to take decisions

based on science-related matters (health measures; energy policies; climate adaptation; etc). Special care should be put into making the scientific information accessible to people who might come from less science-educated or disadvantaged groups to people with very diverse backgrounds and needs



Clear, simple and accessible language, particularly when discussing technical issues and data. Technical concepts are explained in clear language. Avoidance of oversimplification as well as jargon and over-technical definitions



Links and any other direct indications to access information directly are provided



Narrative is employed to convey the message to the target audience. There is a correct and appropriate use of metaphors and analogies



Data visualizations and infographics, as well as visual and cultural references are designed and crafted to foster engagement and resonance with the content



Formal correctness. The text and graphs do not contain errors, including ortho typographical or syntax-grammatical errors



Surveys and other data collection to measure the audience's understanding and its ability to explain it to others



monitored with analytics

Digital distribution is made available and



Language takes into account diverse and

There is no use of stereotypes



Number and diversification of sources in cultural.

non-binary gender perspectives and shows

awareness and respect for differences



socio-economic, ethnic, geographic, gender, etc. terms



Inclusion of diverse perspectives and expertise in terms of voices and types of experts and non-experts included in the story



Impact

Science communication and journalism are relevant and useful if and when they generate an impact on the public, from a basic level of awareness to a more complex and proactive level of action. The impact can be enhanced with an appropriate strategy of distribution in terms of timing, channels and smart sharing.



Reduce digital oblivion: relevant contents should remain available and findable also in the long term. Updates and integrations can increase the impact if properly highlighted



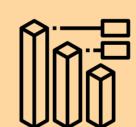
Communication should be a loudspeaker for a diverse range of stakeholders. Feeling represented is a key and a precondition to contribute to the use and sharing of the contents



Journalism and communication should consider an action-oriented problem-solving response



Open redistribution and ease of sharing are of paramount importance in the publication and communication strategy



Use of selected target metrics or KPIs (depending on the media: number of followers, reach, interactions, likes, shares, number and quality of comments, number of visits, unique views, viewing or reading time)



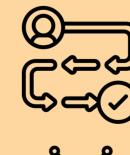
Number of conversions from awareness to subscription



Number and quality of re-circulation of news/contents or, better, of new original products generated from a press release, a newsletter, a direct communication



Comprehension and persistence of the message in the public (surveys; questionnaires; etc)



Measurable change in behaviour and attitude as a result of the communication action (community behaviours; individual behaviours)



Social and political debate on the issue has been promoted



Change at policy, funding or legislative level, locally, nationally or even internationally, concretely connected with the publication





Topics



Discussion

Topic:



Tools What How Why What tool would help you address your needs in relation What content(s) and format(s) should it include? Why do you think this is the most adequate tool? to science communication?



What are the ENJOI SPIs?

Principles, standards and indicators (SPIs) should be at the core of a strong ethical and deontological approach to science communication and journalism.

Principles are main concepts that can be translated into standards to be used as practical recommendations. For each principle, it is possible to identify one or more standards useful to satisfy it. Indicators are a practical way to measure the accomplishment or at least the development in the right direction of standards and principles.

In ENJOI, principles, and consequently standards and indicators, are organised in three thematic clusters to cover different dimensions of the communication process: ethics and deontology, methodology and practice, and those directed to the relationship with the public.

PRINCIPLE

A specific, observable and measurable characteristic that can be used to achieve a particular outcome in science communication

STANDARD

A reference model, to be used as a general rule to measure quantity, extent, value, or quality in science communication

INDICATOR

A specific, observable and measurable characteristic that can be used to achieve a particular outcome in science communication 20/12/22, 15:37 ENJOI

ENJOI

Thank you for your contributions to the ENJOI Lab in Spain! We hope it was a productive time for you and that you had a good time.

We want to know how your experience was and if you are interested in continuing to be part of the ENJOI community. That's why we encourage you to take part in a short survey, it will only take you a few minutes.

*Obligatorio

	1- What did you like most about the ENJOI workshop?
	2- What could we improve in the workshop?
	3-The duration of the workshop was:
	Selecciona todos los que correspondan.
	Long
	Sufficient
	Short

4- How would you rate the level of work involved in the lab?
Marca solo un óvalo.
It was difficult to get everything done
More than expected, but manageable
What I expected
Less than expected
5- Did you learn any useful information about science communication in the workshop?
6- Would you like to comment on the principles standards indicators and/or
6- Would you like to comment on the principles, standards, indicators and/or tools?
tools?
tools?

8.	8- How would you like to continue to be part of the ENJOI community?
9.	9- What do you think could contribute to a better interaction between the
	participants of the ENJOI community? Is there a tool/format/channel you prefer?
10.	10-Would you like to share your email among the people who were in the workshop?
	Selecciona todos los que correspondan.
	Sí No
11.	11-Would you like to share your social media among the people who were in the workshop? if so, please share with us the social media and your profile.

20/12/22, 15:37 ENJOI

Este contenido no ha sido creado ni aprobado por Google.

Google Formularios

20/12/22, 15:37 ENJOI















Presentation of intermediate results Elisabetta Tola 7th December 2022





complexity

process not only results

science

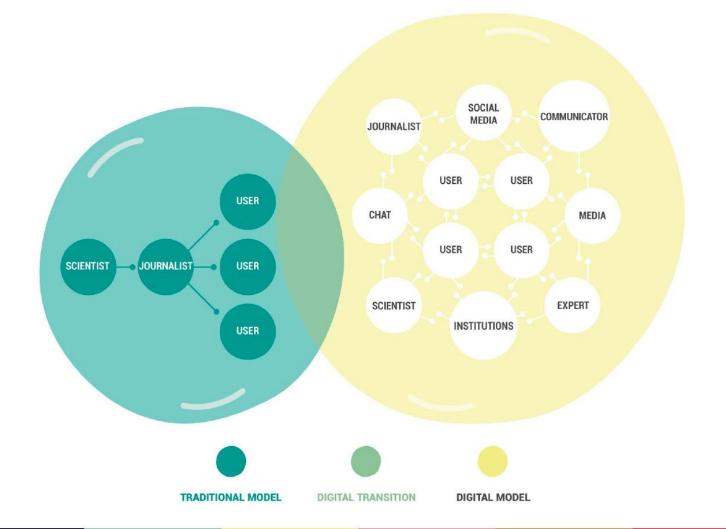
subject of controversy and misinformation

key factor in democratic deliberation

crisis of trust and accountability

proper framing and transparency key for trust





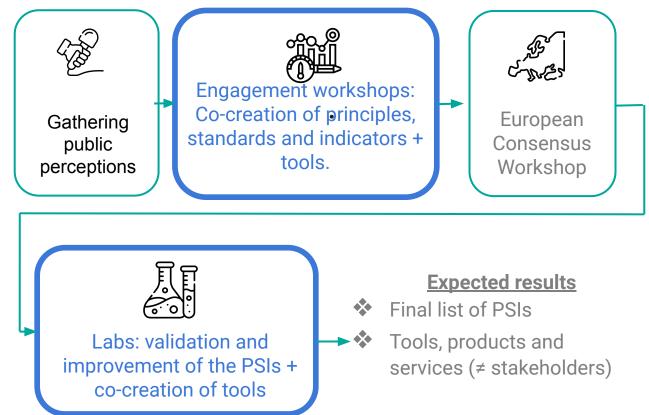


ENJOI Project

- ENJOI (ENgagement and JOurnalism Innovation for Outstanding Open Science Communication).
- Engagement as a key asset of innovation in science communication.
- Co-creating standards, principles and indicators (SPIs).
- ENJOI's ultimate goal is to improve science communication by making it more consistently reliable, truthful, open and engaging.



Overview of the co-design methodology of ENJOI

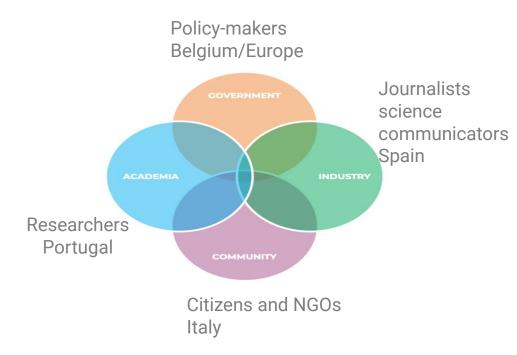


Stakeholders in the EWs and Labs

Engagement workshops (EWs)

Labs



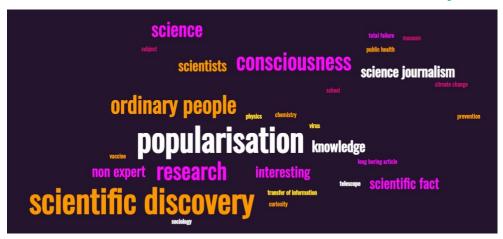


MAIN RESULTS SO FAR

Gathering public perceptions

 More than 200 people that do not work with science communication replied to the survey across the Belgium, Italy, Portugal and Spain.

What science communication means to you:



4 EWs: Italy, Belgium, Spain and Portugal 58 participants













4 Labs: Italy, Portugal, Spain and Belgium More than 50 participants

Lab in Italy for citizens



Lab in Portugal for researchers



Lab in Spain for science communicators

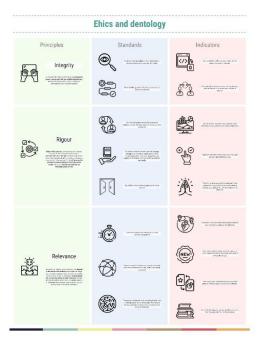


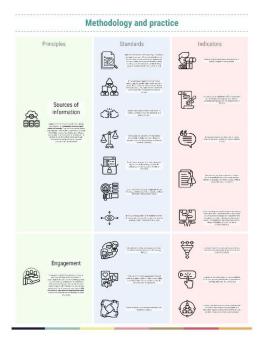
Lab across Europe for policy makers

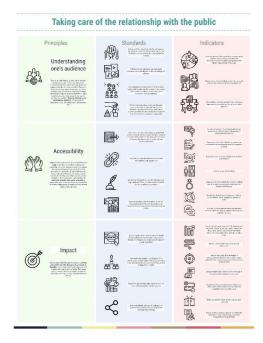


Co-created principles, standards and indicators so far

- 8 principles
- 29 Standards
- 34 Indicators







Principles

Integrity

Journalism and communication must be transparent, honest, and upright. Full and truthful independence needs to be granted.



Relevance

The priority of science communication is to respond to the needs of the audience and enable the target users to fully incorporate their scientific citizenship rights.



Rigour

Rigour and accuracy are two key assets of science and should characterise any science communication.



Sources of information

A good piece of science journalism should always have at least 2 or 3 independent sources, clearly stated and traceable.



Principles

Engagement

Employment of diverse practices to enter into a true collaborative framework with one's audience, understanding the needs, responding to expectations and demands for better information.



Accessibility

Special care should be put into making the scientific information accessible to people who might come from less science-educated groups, with very diverse backgrounds and needs.



Understanding one's audience

There is no such thing as 'general public' anymore.
Audiences are very diverse and fragmented. They can be niches that coalesce in a bigger community united by one specific common problem.



Impact

Science communication and journalism are relevant and useful if and when they generate an impact on the public.



Results

Final list of principles, standards and indicators

 Manifesto: an inspirational guide for science communicators, journalists, researchers, citizens.

8 Co-created tools

 Observatory to connect and disseminate the results of the project



Thank you!

Mutual Learning Meeting 4.11.22 LAB ITALY

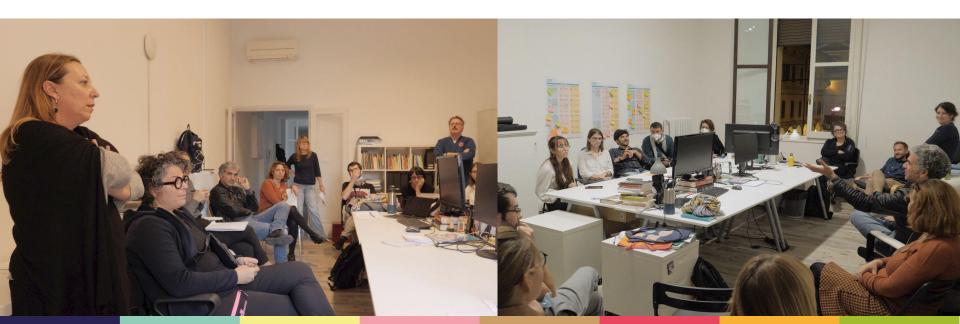




"Citizen" group

10 participants (3 couldn't attend)

Categories: Citizens Associations, Patients associations, Consumers associations, Foundations, Startups, Teachers, Activists



Introduction

Quick round: Welcome, Presentation of the participants, the ENJOI project & SPIs

Atmosphere: Informal, relaxed, committed and interested group

Chatham House Rule: NOT Applied





Silent brainstorming... Too silent :-)



The groups never get to speak: it's hard to create connection (+ evaluate participants' interactions)

Brainstorming + Prioritisation:

Too long, but still 25 minutes are not enough to digest all the contents and provide valuable feedback

Validation of SPIs: goal not achieved in a systematic way

Plenary: Identifying high-priority comments

Main problem: TIME!

10 minutes not enough (at least 30 minutes needed)

No time for the second group exercise on feedback implementation (we eliminated it)

Risk of very broad discussions



Module 1 SPIs: TIPS



- Revise the general timeline
- Less time for silent brainstorming (ask participants to review the SPIs in advance?)
- More time for plenary discussion
- Rethink the second working group:
 - Move to plenary OR
 - Add more time (1 hour), including a final plenary



Clear goal, effective results



Participants demonstrated **interest** and creativity

Citizen's perspective: very valuable for the project

Proposed tools:

- Open source platform to evaluate science journalism
- <u>Crowdfunding platform</u> for science journalism
- <u>Tracker</u> of science communication and journalism diffusion

Module 2 Tools: TIPS

- Try to connect the exercise with some relevant aspects emerged during the SPIs module
- Avoid already proposed tools
- Probably less time is enough
- Stay focused on your stakeholder group!





Process

- Easy-to-use material, simple and effective
- Overall **timing** to be revised

Contents

- **SPIs**: "low innovation" (hard to go deep enough into the topics)
- **Tools**: good results

Networking

- Willingness to cooperate, share, and listen
- Willingness to be in touch and participate in the ENJOI Observatory
- Networking (drinking) session :-)



THANKS!



Mutual learning Lab Portugal 9/11/2022 10-13h

National Museum of Science & Natural History (Lisboa)



Lab "Academia"

- **Printed materials:** agenda, informed consent, list of SPIs (DIN-A4), leaflet, DIN-A1 posters, printable icons (to work on the tools for WP6)
- **Participants:** 13 researchers from several fields (15 confirmed, 27 invited)
 - Communication = 2
 - Journalism = 1
 - o Climate change = 1
 - Cancer and stem cell biology = 1
 - o Environmental humanities = 1
 - o Robotics = 1
 - o Palaeontology = 1
 - o Biodiversity = 1
 - o Modelling = 1
 - Wildfires and forest ecology = 1
 - Machine learning/Al = 1
 - o Clinical research in oncology = 1
- **Work dynamic:** 3 groups (4-5 people) prepared in advance to ensure diversity of profiles, each group worked on <u>ONE aspect of the SPIs</u>: ethics & deontology; methodology & practice, and relationship with the public

SCIENCE TECHNOLOGY ENVIRONMENT HEALTH HUMANITIES

Workshop structure

Expected duration	Real duration	Content
30 min	35-40 min (we started with 5 min delay)	Welcome Practical information Agenda Short introduction: • Challenges of science communication and journalism • ENJOI project (main objective) • Methodology used for the co-creation of the SPIs (EWs and Labs) • EW vs Labs – stakeholders involved Ice breaking: introduction of participants (small groups) – drawing Objectives of the session What the SPIs are practical example and three main aspects to work on during the session
1h 20 min	1h 50 min - 2h	Module 1: Validation and improvement of SPIs
10 min	10 - 15 min	Break
50 min	20 min	Module 2: Co-creation of tools
10 min	-	Closing
(180 min)	(195-200 min)	+ 20 min ideally 30 extra minutes (at least)

Module 1: Validation and improvement of SPIs

DYNAMIC 1: BRAINSTORMING (30/40 min)

- (Silent) Individual work: reading and first reflections on the SPIs (*) (around 10 min) (SPIs DINA-4 + post-its)
- Small groups: sharing of their (individual) ideas and collective work on the identification of the "challenges" (what is missing? what is not clear enough? what can be improved?) (around 25-30 min) (SPIs DINA-1 + post-its)

DYNAMIC 2: PRIORITIZATION + IMPROVEMENT (40 min)

• Small groups: identification of the highest-priority comments related to the SPIs that need further attention ("problematic" topics) to be improved + improvement (once identified the "problems" try to find solutions) (around 40 min) (SPIs DINA-1)

DYNAMIC 3: COLLECTIVE DISCUSSION (40/45 min)

 Plenary discussion: overview of problems identified and solutions (each table presents their findings) + group discussion (around 40-45 min)



(*) Each table worked ONLY ONE aspect of the SPIs: ethics / methodology / publics



Module 1: Validation and improvement of SPIs

Positive aspects: deeper understanding of (some) SPIs, fruitful discussions (both specific and general aspects emerged), and collective work (people like to talk and share their ideas!)

"Negative" aspects: they have a partial view of the SPIs, although, the entire list was sent in advance and was available at each table







Module 2: Co-creation of the tools

- Brainstorming, selection of one idea per group and design of prototype (EXPRESS, 15 min)
- Presentation of prototype (5 min)

Positive aspects: participants managed to identify, at least, one tool per table that could help other researchers to communicate their work, some aspects discussed were implemented in the suggested tools (e.g., need of more visual aspects when communicating science)

Negative aspects: <u>lack of time</u> to develop some of the prototypes

Module 2: Co-creation of the tools

Development of a community of researchers, graphic designers, and professional communicators to help researchers to communicate their research

App to support researchers to select the most suitable format and channel to communicate their research based on audiences' preferences/stakeholders' needs Online platform that integrates a database of researcher and journalists and a ranking of high-quality media outlets (to support communication dept. and researchers)







Feedback received

- Enjoyable and useful dynamics
- Liked the co-creation approach used
- Diversity (and quality) of the group of researchers was acknowledged
- Willingness to be in touch and receive the results of the project
- → Survey post-workshop already sent to collect more specific feedback (n=5)
 - Duration: enough (2), short (3)
 - Difficult to do all work planned (4)
 - Useful, expectations reached and exceeded (5)







THANK YOU!