

Science Communication Plan of the COST Action - CA22131

Each Action MC shall adopt a Science Communication Plan including a communication, dissemination, and valorisation strategy, as well as a plan to implement this strategy. The Science Communication Plan shall reflect the MoU in particular connecting to the aims and objectives of the Action. It is recommended that the Science Communication Plan is approved by the Management Committee not later than 6 months after the start date of the Action. It is recommended that the Science Communication Plan, including progress on implementation, is discussed on a yearly basis by the Action MC and reviewed or amended where necessary. (*Annotated Rules for COST Actions*, article 5)

This template is provided to COST Actions as a support for developing the Action Science Communication plan. Actions can adapt the plan structure and content according to their needs.

VERSIONS AND HISTORY OF CHANGES

Version	Date of adoption by MC	Notes (e.g. changes from previous versions)	Lead author(s)*
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** The Science Communication plan is developed, updated and its implementation monitored under the overall supervision of the Science Communication Coordinator, and in close collaboration with other relevant contributors.*

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COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation.

1. SUMMARY

The main goal of the Science Communication Plan of LUCES COST Action (CA22131) is to define and organise the communication and dissemination activities to be employed for achieving wider exploitation of the Action's results. The communication activities will aim to raise awareness on the action activities in order to maximize their impacts and reach broader and diverse target groups. The plan lists the different communication channels, tools and platforms that will be suitably selected for better knowledge and technology transfer across research fields, and between academia and industry. Dissemination and exploitation strategy is defined and will be used throughout the project duration. It also contains detailed strategy for continuous improvement of the defined goals in line with the main objectives stated in the Action's MoU. Dissemination of results will raise awareness about what science, in particular supramolecular luminescent chemosensors (LCs), can do for society, promoting the active collaboration between academic and non-academic researchers.

The role and responsibilities of the Action's members and WGs in the implementation of the defined communication objectives is also described in the Plan along with the timeline of the expected deliverables, which will facilitate the continuous monitoring of the Action's progress. A dedicated Working Group (WG4: Dissemination and Exploitation) is set to coordinate and implement the diverse measures for communication, dissemination and valorisation of Action results. WG4 will work in close relation and under the supervision of the Science Communication Manager and the IP & Technology Transfer Manager, along with the Action's Chair and Core Group (CG). Active involvement of Young Researchers in all communication and dissemination activities is highly valued in accordance with one of the main goals of LUCES. Furthermore, this document can be used as a guideline for establishing individual dissemination and exploitation strategies within the local context of various stakeholders that will be regularly addressed and updated. All these will be needed to reinforce the strong commitment of the Action's leading research groups in the field of supramolecular chemistry, chemical sensors, (nano)materials, electronics, theoretical calculations as well as experts in analytical techniques, researchers from industry and interested stakeholders in their joint endeavour to bridge the gap between fundamental research and the market towards the development of luminescent sensors to be used to help resolve environmental security problems.

2. GENERAL AIM AND TARGET AUDIENCES

The main challenge of LUCES is to tackle key problems regarding environmental safety/security through luminescent sensing that employ supramolecular systems. Convinced in the many advantages of the proposed innovative approach of sensing the diverse environmental pollutants, and for the purpose of nature and societal benefit, the LUCES team is dedicated to establishing a scientific and technological platform to gather a critical mass of European research groups able to develop high affinity and sensitivity luminescent chemosensors. This defines the many and diverse target audiences that should be reached in order to attain the specific objectives of the Action.

Main target groups for communication and dissemination of the Action's results, both at the European and non-European level, are I) the scientific community, II) general public, III) policy makers and regulatory bodies, IV) industrial partners, V) educational and ecological communities. Different strategies to reach the specific audiences will be tailored reflecting their needs and interests and involving both physical and electronic tools.

The scientific community will be reached with scientific publication and conference participation. Clear messages on the social media (X and Instagram), news posted on the Action's web page and relevant electronic media will be used to reach also the general public. Organization of specific meetings and round tables will be used to promote the contact between the Action's participants, different stakeholders and general public. Participation of industrial partners will be enforced through relevant involvement of LUCES and its members in more professional social platforms (such as LinkedIn), Industrial fairs, co-organization of training schools, hosting young researchers for short-term scientific missions (STSM).

More specifically, **the scientific community** will be engaged in the fulfilment of the Actions' specific objectives related to research coordination and capacity building. The final goal of the research coordination will be to complement the existing expertise and facilities in order to identify protocols for the development of luminescent sensors with very low limit of detection (LoD) under real-life conditions. These key requirements will be communicated throughout all communication and dissemination activities to attract and focus the attention of researchers with complementing expertise. For this purpose, the Action's web page has been developed from a very early stage of starting the Action and an account in the social media X, LinkedIn and Instagram has been created. A comprehensive database/platform containing the different outputs and the resulting standardized protocols for the evaluation of the sensors will be created and shared between all members of the Action. Continuous monitoring and evaluation of sensor development progress will ensure that key messages and target audiences are regularly updated in alignment with the organization of Action events, such as annual conferences, monthly webinars, and training schools. This approach will also streamline the preparation of next year's communication materials—such as videos, newsletters, podcasts, and newspaper interviews—targeted at both the general public and industry partners. The active involvement of YRIs in annual training schools and STSMs, supported by the Action, will be crucial for achieving the specific capacity-building objectives. Additionally, engaging YRIs in science communication activities, monthly webinars, and co-leadership of the working groups will help develop their organizational and soft skills.

Targeting the **general public**, as well as **policy makers and regulatory bodies**, is part of achieving another specific objective of LUCES that is to act as a stakeholder platform or trans-national practice community that reinforce the socio-economic impact of the application of supramolecular luminescent chemosensors (LCs) in the area of environmental monitoring and human safety. Critical pollutants of local or global importance will be identified through available database surveys, and the key challenges in their detection will be communicated to the public in social media, organization and/or participation in public events, such round tables, public discussions, TV debates or magazines. Close interaction with members of regulatory bodies and/or standardization offices will provide detailed information on the state-of-the-art at the standardization procedures and requirements, which will facilitate the Action's main goal on building a prototype with improved sensing parameters and applicability. The research endeavours of LUCES team will be communicated to the public and policy makers with the emphasis on the results obtained, their progress, and the overall benefit to society in developing highly sensitive, portable and accessible sensing devices. These are expected to be of particular interest to **educational and ecological communities**, which will be targeted through participation of Action members in local events, such as Science festivals, Open door days, School fairs and competitions, as well as in European events such as Researchers' night, Earth Day, World Water Day, etc.

The **industrial partners** will be of continuous focus throughout all Action events to ensure reaching the specific objective related to translation of the building principles of supramolecular LCs into flexible and scalable prototypes and devices for monitoring of chemical threats to human health and environmental safety. Action's objectives and results will be communicated in more professional social platforms (such as LinkedIn) or industry publications and reports, and through participation in trade-fairs, industry exhibitions and

forums, SMEs networking events. These will start at the very early stage to ensure Actions visibility among industrial stakeholders and to the benefit of common interest in finding smart solutions to existing technological or methodological challenges in the sensors industry. Companies outside LUCES, professional associations and European clusters will be invited to participate in the events organized by the Action, to give valuable feedback for successful final products. News on final products for real-life applications and marketplaces will be disseminated through communications in newspapers, scientific magazines, websites of the different Institutions and via Institutional and public TV channels.

The achievement of transfer of knowledge between fundamental research and real-life applications, along with the training of early-stage researchers working in this cutting-edge research field, will be the expected final communication topic to be released in all Horizon Europe, and EC platforms.

3. PLAN FOR THE COMMUNICATION OF ACTION RESULTS

This Action will strive to communicate its results to promote the leadership of the European supramolecular community, interested in luminescent sensing. The ultimate goal is to raise awareness about what science can do for society and the environment. For this reason, it is fully integrated into each of the general objectives addressed by this project and a special WG will be dedicated to it. Involving European citizens more closely with science requires having extensive lines of communication. For this, different strategies to disseminate LUCES' activities and scientific results will be developed.

3.1 LUCES website

The dedicated website of the of the LUCES Action has been created (<https://lucescostaction.com/>) and will be used throughout the project' implementation as a main tool for storing, organizing and sharing information since it is accessible from almost all devices. It is used from the very beginning as the knowledge platform for this Action. Visitors to the website (currently 400 unique visitors per week) will find relevant information about the activities and results of the Action, including meetings, conferences, publications, STSMs, and Inclusiveness Target Country Conferences Grants (ITC-CG), as well as information on other pertinent topics. Additionally, a database will be created and continuously updated to help monitor and report on the Actions' activities, such as the involvement of Young Researchers (Yrs).

The Science Communication Team (or the designed responsible person) will update the website with news about the Action' activities, including Short-Term Scientific Missions (STSMs), training schools (TS), zoom meetings for dissemination of scientific results, outputs (joint publications and projects) and event announcements. A user-friendly website will be developed to make the Actions' results public, providing easy access from anywhere and serving as a strong dissemination tool for all stakeholder groups. For internal communication among the participants, the website may also be used as the primary means of distributing administrative, policy, and procedural documents, such as the applicants' procedures for STSMs, ITC Conference Grants among others.

3.2 Mailing list and internal social network

An electronic mailing list including all Management Committee (MC) and all working group members has been established for internal purposes of LUCES Action to provide a

mechanism for internal communications and distributing news and information about any event of activity. The mailing address is: info@lucescostaction.com
In addition, Team groups have been created to provide a mechanism for internal communication between the different working groups.

3.3 Social media

Public outreach can be enhanced by using social media, which all the channels have a direct link on the website of the Action. Through our social media channels, we strive to deliver timely and relevant information about our activities. This allows us to engage with the target groups who are involved in our activities. Additionally, all content posted on the Action website will be shared across our social media accounts to ensure maximum reach and interaction. At the present, our LUCES LinkedIn group has 84 members (LUCES_COST_Action CA22131). Our Twitter/X account @LUCESCOSTAction has 135 followers. Our Instagram account @lucescostaction has 38 followers. In all three social platforms has been already posted all the activities of our Action. We will incorporate relevant hashtags in our social media posts to connect with these initiatives, in line with the communication strategy of the COST office. This approach will enable the COST office to cross-promote our updates and news whenever they find it pertinent.

3.4 Publications, conferences, meetings, training schools and webinars

The Action will promote collaborative publications involving at least two members in peer-reviewed international scientific journals. Additionally, we support the presentation of results from these collaborations at conferences that are not organized by the COST Action, considering mainly the involvement of ITC countries and also grants for the dissemination of the Action (Dissemination Conferences). The mission of dissemination will be accomplished through open access publication and so that data are freely available to the largest possible audience. Major scientific journals will be contacted to plan themed issues dedicated to LUCES research. Public outreach joint articles (at least 5 per year) will be a powerful tool to encounter citizens, policy makers at the national and European level, public authorities, media, industries, civil society organizations. We plan also to publish some open access articles related to LUCES in an established agreement with Chemistry Europe along the duration of the project.

The Action also wants to fight against the platitude that “many good ideas never make it to market” through the strong collaboration between academic and non-academic participants. All results with potential to give rise to IPRs will be protected by patenting and licensing in accordance with the IPR policy.

The Action will host general joint meetings, working group (WG) meetings, and Training Schools for young researchers (YRs). The results of the work carried out in LUCES will also reach the research community by established communication channels, i.e. oral and poster presentation at conferences, seminars, video tutorials, etc. Moreover, the WGs will be encouraged to organize specialized sessions at international conferences and to seek additional funding to promote this initiative. International experts on Supramolecular Chemistry, Chemosensing and Technological development of prototypes and devices, whether they are part of the Action or not, will be invited to the Actions’ training schools and master/PhD-level courses and young postdoctoral researchers (up to 4- years after the PhD defense) at academic institutions in order to increase visibility and attract another recognised research on the topic. Other companies, professional associations and European clusters will be contacted in order to invite them to participate in the Action, to give valuable feedback for successful final products.

The network will also share their research with the general public by active participation in science open-days such as the European Researchs’ Night. Also, Action members will contact their Institutions (Universities) to try to include at least one laboratory experiment for

the Degree students about simple designed reactions based on Supramolecular Sensing approaches.

News regarding final products for real-life applications and marketplaces will be disseminated through communications in newspapers, scientific magazines, websites of the different Institutions and via Institutional and public TV channels.

4. PLAN FOR THE DISSEMINATION OF ACTION RESULTS

The following dissemination materials have been already established or planned during the lifetime of the LUCES COST Action.

4.1 Visual identity of the action

The Action logo is as follows:



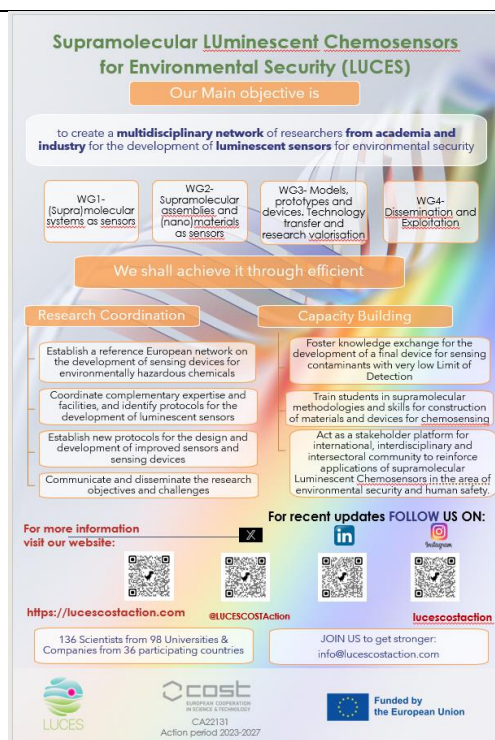
This will be used as part of our visual identity alongside the COST (and EU) logos, as well as the name and number of the Action. All dissemination materials will be created in accordance with the visual identity of the Action to ensure effective project branding. The design of the Action website will also reflect this visual identity. The logos will be featured on all public documents related to the Action, including conference presentations, posters, and more, to enhance the visibility of the Action. For members and partners, the logos are already available for download on the website.

4.2 Website and social media for dissemination

To improve the visibility and accessibility of the Action's news, we will also use the website and social media channels as part of our dissemination strategy. The website includes information about the members of the LUCES network, with their name, institution of affiliation and country, skills, materials, sensing techniques, instrumentation, targets and the availability for STSM. Data is available in an excel spreadsheet on the website and is intended to facilitate the search for potential Action members who could be potential cooperation partners with whom to exchange students. All the members of the Action are encouraged to actively contribute to all the platforms available by sharing updates, insights, and relevant resources.

4.3 Promotional poster

A poster promoting the Action have been designed including infographics of the Action and posted for downloading on the Action website. This non-technical publication has been created to communicate the Action objectives and work in an accessible to the general public. The poster will be used in different conferences in order to make more visible the Action (it has already been presented at the international conferences NanoInnovation2024 and Supramol2024).



4.4 Promoting dissemination in conferences, workshops and round tables

To maximize the impact of the Actions' results and foster stakeholder engagement, Action members, in collaboration with the Action Core Group, will actively disseminate information about the LUCES network at key conferences and workshops relevant to our field. Round tables involving participants, stakeholders and general public will be also performed for the dissemination of the Action. Some gadgets (pens, notebooks...), containing the logo of the Action and the official COST logo (according to the COST rules) will be also prepared to be distributed in the Dissemination Grants attendances.

4.5 Promoting dissemination at Universities

To amplify the impact of the Actions' outcomes and strengthen stakeholder engagement, Action members, together with the Action Core Group, will proactively disseminate information about the LUCES network at universities. Leveraging the frequent travel of Action Core Group members to universities for thesis panels, meetings, and collaborations, they will strategically schedule seminars alongside these visits to further promote the LUCES COST Action. This approach ensures that dissemination efforts are integrated with ongoing academic engagements, maximizing outreach and visibility for the network's objectives and achievements.

4.6 Promoting dissemination through creation of database

The Action will encourage WG meetings and specific discussions/sharing of common and complementary interests will be programmed. Cooperation between different groups will be promoted in these sessions and, in particular of YRIs. A database/platform containing the different outputs and the resulting standardized protocols for the evaluation of the sensors from individual groups and from cooperative efforts will be created and shared between all members of the Action to ease exchange of information and cooperation between different WGs. A "wish-list" of the different partners will be also incorporated in the platform to ease the collaboration and possible resolution of lack of infrastructures/possibilities in individual groups. The organization of an International Symposium on Optical Sensing and Devices

will be programmed in the Concluding Action Meeting. STSM participants will be encouraged to be involved in this organization with the support of the CG members.

5. PLAN FOR THE VALORISATION OF ACTION RESULTS

The goal of this plan is to maximize the impact and utilization of the tangible research produced by this Action, ensuring they yield both scientific and socio-economic benefits. In this section, we highlight several outcomes that can be regarded as successes for this initiative.

Engaging in knowledge exchange activities is a top priority for the Action. We are committed to collaborating with all relevant stakeholders to identify their needs and ensure that the research conducted by the network addresses real-world challenges. However, identifying potential end users and stakeholders for this Action will necessitate ongoing effort throughout its duration. This will involve maintaining regular communication with these groups and organizing meetings facilitated by the network. Building partnerships with these stakeholders will also enable us to gather valuable feedback on the effectiveness of our valorisation strategies and the adoption of the research outcomes produced by the Action. Fostering synergies with organizations, policymakers, and other key stakeholders, along with developing collaborative projects and grant proposals, can significantly enhance the utilization of the Actions' results.

Knowledge transfer is crucial for the scientific community. To support this, we implement workshops and Training Schools designed to enhance the skills of researchers within the network, foster collaboration opportunities, and advance their careers.

By executing this plan for the valorisation of Action outcomes, we strive to maximize the benefits of our efforts, stimulate innovation, encourage knowledge exchange, and drive positive change within organizations and communities.