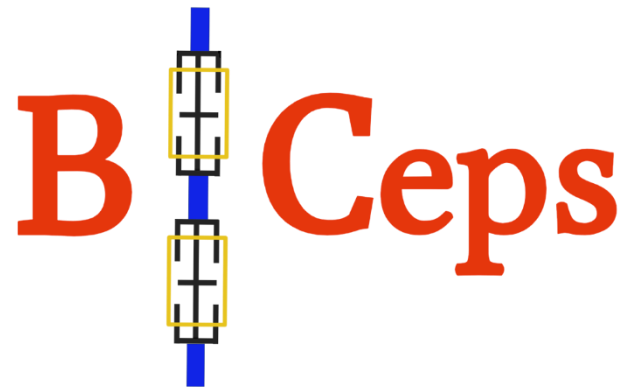




D5.2 Dissemination Plan 1

August 2025

Project Information

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Summary of Deliverable

In BiCeps, communication, dissemination and engagement are regarded as essential components of excellence, operating in close alignment with the project's technical and scientific ambitions. These activities will play a crucial role in supporting BiCeps' wider impact goals and ensuring that the project's innovations reach beyond the lab. The primary objective of this Communication, Dissemination, and Engagement Plan is to establish the strategy, resources, and actions necessary to ensure that BiCeps outcomes are effectively adopted by the scientific community, industrial stakeholders, and regulatory bodies. This deliverable describes the initial strategy for the dissemination and communication activities. A diverse array of accessible and engaging content will be created, leveraging visual storytelling, editorial outreach, social media, and scientific publications, with the objective of stimulating interest from both expert and non-expert audiences across Europe and beyond. Furthermore, it defines the guidelines, channels, and tools for deploying the communication and dissemination activities that are foreseen in the Grant Agreement. It also provides a framework for adapting these activities as required throughout the project lifecycle.

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1 Creating a Lasting Impact

BiCeps will engender impact through communication and dissemination activities that will cultivate trust in and awareness of new bioinspired actuator technologies, thereby accelerating their adoption across scientific and industrial domains. BiCeps will proactively disseminate the properties and performance of new bioinspired actuators developed during its course to facilitate the wider utilisation of these next-generation mechanical innovations. The mission to be achieved is one of strategic significance, entailing a combination of online and in-person outreach initiatives, underpinned by the utilisation of content that is both clear and engaging, and consistent across a range of platforms.

1.1 Project overview

An actuator is a device that converts energy into motion or mechanical work. It is used to control various systems and processes in industrial applications, automation, robotics, and many other fields. Actuators play a crucial role in many systems, from simple devices like electric doors to more complex applications such as robotic arms or automated production lines. Although significant progress has been made in the field of actuator technologies, traditional actuators such as motors and engines are complex multicomponent devices difficult to fabricate and recycle. Moreover, they are heavy and big with reduced energy-efficiency. This limits the performance of mechanical systems powered by them. Addressing these limitations, the research-led BiCeps is taking a bold step toward the next generation of mechanical systems by developing bioinspired actuators that mimic the strength, precision, and compliance of biological systems.

This ambitious initiative aims to revolutionise the field by leveraging advanced additive manufacturing techniques to create structurally resilient actuators that can adapt to a wide range of use cases, from minimally invasive medical devices to adaptive robotics, and beyond. The BiCeps vision redefines how mechanical motion can be generated, opening up new design possibilities previously unachievable with conventionally manufactured devices.

Looking ahead, the project envisions a future in which motion generation will not depend on motors and engines, bringing a new movement generation paradigm into the hands of researchers, engineers, and industry. This shift from standardised mechanical systems to highly tailored, bioinspired solutions place the end-user at the centre of innovation.

BiCeps technology will offer several key advantages: lightweight construction, high mechanical resistance, exceptional design freedom, and the potential for fully integrated functionality within a simple printed structure. These innovations are set to overcome many of the constraints found in current actuator systems and will contribute to reducing energy consumption, improving performance, and increasing long-term sustainability.

To bring this breakthrough concept to life, BiCeps brings together leading experts in materials science, additive manufacturing and material testing. Led by Brno University of Technology (BUT), the consortium includes COMTES FHT, FunGlass Centre at Alexander Dubček University of Trenčín, Lithoz GmbH, and the Czech Technical University in Prague.

By developing novel design strategies and new devices, BiCeps will lay the foundation for a new class of actuators, bridging biology and engineering for a smarter, more responsive future.

1.2 Communication approach

BiCeps aims to create impact through communication and dissemination activities that build trust, improve awareness, and foster engagement by achieving the following key objectives.

- **Tell the 'BiCeps story' and maintain a steady flow of content** by making the project's goals, technologies, and breakthroughs tangible—using evidence-based content, visual storytelling (images of behind-the-scenes work, the consortium members and meetings), and an editorial calendar (delivering updates, highlights, and key outcomes) communicated through engaging and accessible formats (social media, partner newsletter, partner press release).
- **Amplify diverse voices and blend technical accuracy with emotional resonance** across the project consortium, from engineers and researchers to innovation leaders, while exploring different motivations, use cases, and perspectives across academia, industry, and healthcare, both online and offline, including through interviews with consortium members, social media and events (conferences, fairs).
- **Leverage the strong networks and influence** of BiCeps consortium partners to expand our reach and foster cross-sector dialogue in relevant communities.
- **Demonstrate credibility** by highlighting the expertise, motivation, and collaboration behind BiCeps and building trust through transparent communication of progress and results through scientific articles, peer reviewed papers and conference contributions.

To build European-wide understanding and enthusiasm for bioinspired actuators as a cutting-edge solution in motion generation, BiCeps will develop original, high-quality content.

1.3 Dissemination approach

The primary objective of BiCeps is to facilitate optimal knowledge transfer, thereby ensuring that the project's research outcomes are disseminated to the relevant professional audiences who can most effectively apply them. The project's outputs are designed not only to raise awareness and understanding but also to inspire concrete action that accelerates the adoption of its technologies, both during and beyond the funding period.

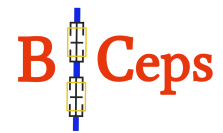
The dissemination of BiCeps outcomes is pivotal in ensuring their accessibility and usability by relevant stakeholders, including the scientific community, industrial partners, professionals in many sectors, technology developers, and policymakers. The primary objective is to emphasise the technological relevance and industrial applicability of bioinspired actuators across various domains, including automation, medical technology, robotics, transport, refrigeration, and smart systems. It is expected that, by the end of BiCeps, stakeholders in the movement generation industries will be sufficiently engaged by the project's outcomes to support future developments and innovations, helping to bring the new technology closer to market.

The following resources and tools have been identified as being of key importance:

- The **establishment of extensive professional networks** with various institutional, academic, and industrial partners serves to enhance the project's reach and uptake.

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- It is imperative that **scientific publications** are made freely available to ensure that key findings are widely accessible.

In order to optimise the impact of its research and facilitate long-term exploitation, BiCeps will make a large number of its deliverables, in accordance with the designation of the Grant Agreement, public wherever possible, thereby aligning with Open Access and Responsible Research and Innovation (RRI) practices.

The following dissemination activities have been meticulously planned.

- External events like conferences, summits and industry fairs have been identified as dissemination opportunities. Here is a tentative list of events that consortium partners plan to attend for presenting the BiCeps developments.
 - Conference of the European Ceramic Society
 - Formnext trade fair (Frankfurt, Germany)
 - AM Ceramics conference
 - Annual meeting of the German Ceramic Society
 - European Congress of Biomechanics
 - MEDICA medical trade fair (Düsseldorf, Germany)
 - ASB Congress (US)
- The publication of scientific articles in relevant journals is an essential component of academic research.
- Results of research projects are disseminated through a variety of channels, including open access journals and online platforms and social media platforms (LinkedIn, BlueSky) in addition to the official website. This requirement is subject to the condition that the dissemination of research data and reports is in accordance with the relevant intellectual property rights (IPR).

Through these activities, BiCeps will ensure that its innovations actively shape the future of actuator design.

2 Project Branding

A robust and consistent visual identity is imperative to accomplishing BiCeps' communication and dissemination objectives whilst encapsulating the project's fundamental values of innovation and progress. The purpose of this is to ensure consistency and a professional appearance across all project materials.

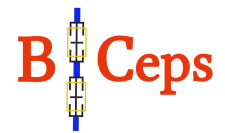
Additionally, explicit guidelines will assist the consortium in accurately acknowledging EU funding and displaying the EU flag in accordance with Horizon Europe stipulations.

2.1 Logo and colour pallet

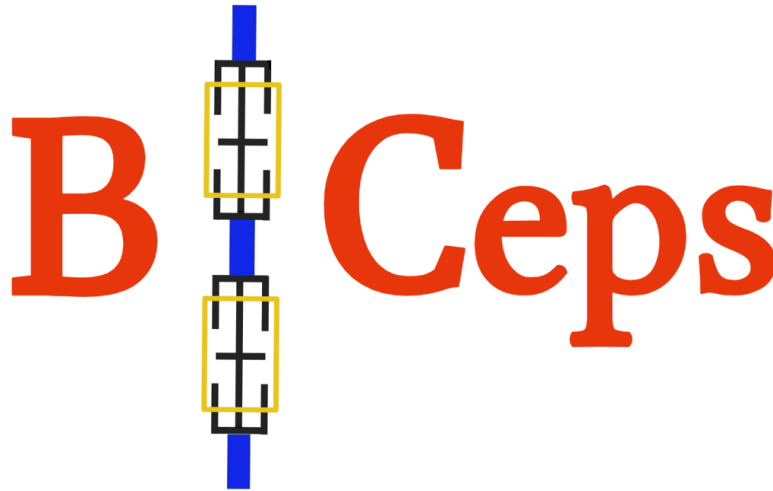
A logo and colour scheme have been devised to provide a visually striking and memorable visual identity for BiCeps.

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It is imperative that the logo is not subject to alteration or adaptation by project partners; rather, it is to be used in its current form. It is imperative to exercise caution and ensure that the dimensions of the logo are not distorted.



A range of complementary colours has been selected with great care to ensure visual consistency across all BiCeps communications, while allowing for flexibility and variety. These colours serve to reinforce the project's identity and can be adapted in order to highlight different themes, concepts, or levels of information, moving beyond the core palette, when necessary, in order to ensure clarity and engagement.

2.2 EU acknowledgement

It is imperative that all BiCeps publications and project outputs explicitly acknowledge the support of the European Commission. This formal acknowledgement is pivotal in fostering transparency and ensuring adherence to the stipulated guidelines of Horizon Europe. For instance, one of the following statements, or similar, should be included:

"This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101186758."

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Alternatively, when positioned within the body of a text: *"The research leading to these results received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101186758."*

Furthermore, it is imperative that all communications include the following standard disclaimer, translated into local languages where appropriate:

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This project has received funding from the European Union's EIC Pathfinder European Innovation Council Work Programme (HORIZON-EIC-2024-PATHFINDEROPEN-01-01) under grant agreement No 101186758.

“Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Innovation Council. Neither the European Union nor the granting authority can be held responsible for them.”

In accordance with the European Commission's visibility requirements, the official EU logo accompanied by the European Innovation Council logo must be displayed wherever possible.

3 Planned activities

During the four-year BiCeps project, a series of strategic communication and dissemination activities will be carried out to increase visibility and stakeholder engagement. A range of editorial content will be developed in accordance to the projects outcomes to showcase the project's progress and innovations, and to raise awareness of the critical role of bioinspired actuators to shape the future industrial landscape of Europe and beyond.

Produced in collaboration with the Lithoz communications team, these materials will support outreach to key audiences across sectors, including industry, academia, policy and the public.

3.1 Compelling activities

Whether shared online, presented at events or communicated face-to-face, the production of compelling and meaningful content lies at the core of BiCeps' communication strategy. A diverse mix of editorial and visual materials (images) will be produced and disseminated through digital platforms and in case of a press release with media partners.

In today's fast-moving communications landscape, it is the quality of the message, not the platform, that captures attention and creates lasting value. By focusing on impactful storytelling, BiCeps aims to foster genuine and sustained interest in its research, innovations, and solutions for bioinspired actuators.

The strategy prioritises agile content creation and distribution with measurable reach and engagement, ensuring efficiency and relevance over slower, more resource-intensive dissemination formats.

Interviews are a powerful way to communicate BiCeps' research by telling authentic, human-centred stories. Audiences are interested not only in the cutting-edge science and solutions behind the project, but also in the people driving it forward. To bring this perspective to life, in-depth interviews will be conducted and shared throughout the duration of the project.

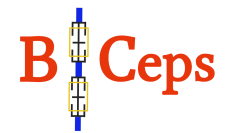
These interviews will feature experts from the BiCeps consortium. They will provide first-hand insight into their experiences and the impact of the solutions. The content will be published on the project website and social media platforms.

3.2 Website

The BiCeps website (<https://www.eic-biceps.eu/>) has been designed to function as a contemporary, dynamic communication hub, offering a wealth of resources. The digital hub functions as the primary conduit for the project's outreach endeavours, serving as a repository for an expanding compendium of editorial materials. This content is proactively disseminated across pertinent digital ecosystems, encompassing media platforms, partner channels and social networks.

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The website functions as a central node in the BiCeps's digital dissemination strategy, thereby enabling BiCeps partners to focus on creating impactful content while maximising outreach and resource efficiency. Constructed on the WordPress content management system, the platform delivers an uncluttered and readily accessible user experience across diverse devices and can be readily updated as the project evolves.

3.3 Social networks and digital media

Social media will be a vital tool for connecting BiCeps with the research, innovation and industrial ecosystems, as well as extending outreach to a wider public audience. It will facilitate real-time communication, amplify project outcomes and encourage stakeholder engagement at all levels.

Rather than targeting a large number of platforms, the strategy emphasizes maintaining a strong presence on the most effective channels for research communication. Accordingly, official accounts have been created on LinkedIn and BlueSky:

LinkedIn: <https://www.linkedin.com/company/biceps-project/>

BlueSky: <https://bsky.app/profile/bicepsproject.bsky.social>

LinkedIn is the primary social media platform for BiCeps. The dedicated company page shares project updates, milestones and original content, and fosters a professional space where researchers, entrepreneurs, policymakers and industry figures can follow and engage with the initiative.

The platform's publishing features will spotlight insights from consortium partners. BUT and Lithoz actively encourages project members to contribute personal updates, behind-the-scenes content and reflections on their work with BiCeps. These peer-to-peer insights help to humanise the research and create a deeper, more authentic impact.

LinkedIn has proven to be an effective platform for Horizon Europe communication campaigns and will remain central to BiCeps.

A vibrant LinkedIn presence will:

- Establish BiCeps as a credible source of cutting-edge information and innovation.
- Ensure consistent engagement with key stakeholders, especially in academia and industry.
- Share original, high-value editorial and visual content.
- Enable direct interaction with professionals.

BlueSky will be used as a secondary channel to increase visibility, enable real-time communication and facilitate community interaction. It is particularly useful to reach a wider audience and highlight the whole spectrum of the BiCeps project.

Through BlueSky, BiCeps aims to:

- Share timely project content and news.
- Interact directly with researchers and other relevant stakeholders through posts and participation at conferences and fairs.
- Build visibility before, during and after major project milestones or events.



BiCeps uses its website and social media platforms as communication channels to maximise its visibility, credibility and impact. These channels serve not only as tools for dissemination, but also as engines for engagement, inspiring professional stakeholders and the general public alike to connect with the project's vision and outcomes.

3.4 External events and academic outreach

As BiCeps is part of the EIC Pathfinder Open Call, the projects external outreach will include the participation in events related to entrepreneurship, breakthrough innovation and the development of new sustainable bioinspired actuator technologies.

BiCeps partners will prioritise publishing scientific papers in high-impact, internationally recognised journals and at international conferences, thereby ensuring the visibility and credibility of BiCeps' results within the global research community. However, key results will be withheld from publication until the consortium identifies and properly protects the most commercially valuable outcomes. Temporary embargoes will be applied to support intellectual property protection and commercialization strategies. These will be minimized and lifted as appropriate. This strategy safeguards intellectual property, ensures a competitive advantage, and supports the successful commercialization of the bioinspired actuator technology.

Over the course of the project, it is expected that:

- Industry partners and research institutions will participate in at least 30 conferences.
- The consortium will publish a minimum of 19 peer-reviewed journal articles.

In addition to these formal outputs, all partners are encouraged to play an active role in dissemination by contributing to conferences, webinars, seminars, workshops and public forums. These efforts will be crucial for promoting BiCeps' results throughout the project lifecycle and during the final stages, when commercial uptake, replication and broader impact can be maximised.

4 Monitoring and evaluation

To ensure communications are effective and aligned with project goals, continuous monitoring and evaluation are essential. Where available, tracking data is a cornerstone of assessing reach, engagement, and overall impact.

Monitoring and evaluation serve several core functions:

- Performance measurement: tracking key performance indicators across platforms.
- Impact analysis: assessing the qualitative and quantitative effects of communication activities.
- Reporting: documenting findings for internal review.
- Strategic adjustment: using insights to adapt messaging, content types or channel priorities.

While data from owned and shared media, such as the BiCeps website and social media accounts, are relatively easy to analyse, identifying earned media, for example, when BiCeps is cited by journalists, featured in third-party newsletters or mentioned in scientific publications remains more challenging. Nevertheless, efforts will be made to document these appearances through media monitoring and partner feedback.

Ultimately, continuous evaluation ensures that the BiCeps communication and dissemination strategy remains adaptive, efficient and aligned with the project's evolving needs and stakeholder expectations.

4.1 Web monitoring

Web monitoring plays an essential role in understanding how users interact with the BiCeps' online presence, as part of BiCeps' broader communication and engagement strategy. This includes the official website and associated platforms, such as social media channels.

The process of monitoring enables the assessment of performance, the identification of areas for improvement, and the tracking of the extent to which BiCeps' messages are reaching the target audience. Key indicators to be observed include:

- Total number of website visits.
- Average session length and engagement.
- Geographic location of visitors.

These metrics will be analysed by Google Analytics and reviewed regularly to help shape and refine content strategies, identify growing areas of interest and assess BiCeps' international visibility. These analytics will be monitored quarterly, with key insights being reported to the Project Management Board during project meetings.

4.2 Social media monitoring

As with the website, BiCeps' social media channels will be closely monitored to evaluate the volume and sentiment of online interactions. This process captures a broad spectrum of engagement data, from straightforward metrics such as likes, shares, comments and follower count to more nuanced indicators such as content downloads, audience conversations and thematic trends.

Monitoring will cover all active BiCeps platforms, with LinkedIn serving as the primary channel and BlueSky acting as supplementary outlet. The aim is to understand how different audience segments, such as researchers, industry professionals, policymakers and the general public, are engaging with the project's content.

Social media activity will be tracked and documented, helping the team to:

- Measure reaches and engagement across communication channels.
- Identify emerging topics of interest within the technology and economy of actuators.
- Evaluate the resonance of BiCeps' key messages with different stakeholder groups.

4.3 Performance measurement

The effectiveness of the BiCeps communication and dissemination strategy will be evaluated using a set of clear, measurable indicators. These indicators will help to determine how effectively the project is raising awareness, engaging target audiences and amplifying its messages across Europe and beyond.

Key performance indicators include:

- Awareness levels across target audiences - tracking recognition of the BiCeps project among primary stakeholders (industry, research and policymakers), as well as the general public.

- Website and social media performance - monitoring activity on the BiCeps website and analysing the impact of major communication actions, such as the publication of new articles or project milestones.
- Visitor analytics - using web-based tools to analyse audience behaviour, including total visitors, the most-visited pages, geographical reach and the interests and needs of site users.
- Event participation - tracking attendance at BiCeps-hosted seminars and demonstrations, and public appearances of BiCeps at trade fairs or scientific conferences as a measure of direct engagement.

These indicators will be reviewed quarterly to guide strategic adjustments and ensure that BiCeps remains visible, credible and impactful throughout the project's lifetime.

5 Open Access Policy

BiCeps fully supports the Open Access policy established by the European Commission. This ensures that the project's scientific and technical outputs are widely accessible, thereby maximising their value and societal impact. The consortium anticipates a variety of professional publications resulting from the project and intends to publish them in accordance with the EC-defined gold open access model. This will be done while safeguarding authors' rights and complying with agreements with scientific or technical publishers. The Open Access strategy is described in detail in the Data Management Plan (D1.4) delivered in M6.

Key areas of focus include:

- **Technical reports and project deliverables**
Partners will collaborate on project deliverables and technical reports that document and analyse BiCeps' results. A Quality Assurance Plan will define the procedures for producing, updating, distributing and storing project documents. Deliverables will be made public wherever possible, except in cases where this could compromise intellectual property rights and commercialization.
- **Research data from validation activities**
Data generated during implementation of BiCeps will capture the quantified impacts of BiCeps solutions. Key results will be shared with stakeholders, and decisions regarding dissemination, exploitation or protection will be taken by the Project Management Board.
- **Open access scientific publications**
BiCeps will prioritise the gold open access route to ensure immediate availability, in line with publisher policies.

This approach ensures that BiCeps' research outcomes actively strengthen Europe's knowledge base, drive innovation, and pave the way for the uptake, use, and valorisation of the robust, enduring, and reliable bioinspired actuators in various technical applications.