



Brainteaser

D10.7 DC&SE Report (M36)



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EXECUTIVE SUMMARY

The present report aims to track progress made with dissemination, communication and stakeholder engagement (DC&SE) actions during the third year of the project (1st January 2023 – 31st December 2023) to maximise BRAINTEASER's impact so far.

This document details actions suggested or directed by the new edition of the project's [DC&SE Strategy and Plan \(D10.2\)](#) updated at the end of 2022. It encompasses all the endeavors carried out in this context, covering challenges, risks, methods of mitigation, and insights gained from these actions.

In particular, this report will examine how BRAINTEASER has:

- Executed communication and dissemination initiatives to guarantee that all project outcomes reach the relevant audience and attain the foreseen impacts.
- Monitored the impact of dissemination and adapted strategies and methodologies as deemed necessary.
- Involved all partners to execute the updated DC&SE strategy plan correctly and completely.
- Coordinated with external stakeholders (patients, health care professionals, regulators, policy makers, and the industry (e.g., pharma companies), as well as other related projects and institutions to ensure broad outreach for communication and engagement activities.

As in the previous project's years, the fundamental methodology employed in drafting this report will be crucial for subsequent evaluations of the project's capacity to enhance, adjust, and capitalize on the outputs and accomplishments.

LIST OF ABBREVIATIONS AND GLOSSARY

Table 1: List of Abbreviations and Glossary

Acronym	Full name / definition
DC&SE	Dissemination Communication & Stakeholder Engagement
WP	Work Package
ALS	Amyotrophic Lateral Sclerosis
MS	Multiple Sclerosis
DoA	Description of Action
AI	Artificial Intelligence
EU	European Union
EC	European Commission
DHSS	Digital Health Society Summit
BIDays	Brain Innovation Days
KPI	Key Performance Indicator
Grey literature	Common grey literature publication types include reports (annual, research, technical, project, etc.), working papers, government documents, white papers and evaluations. Organizations that produce grey literature include government departments and agencies, civil society or non-governmental organizations, academic centres and departments, and private companies and consultants.
Open Evaluation Challenges	Large-scale public evaluation initiatives to validate the solutions developed by the project with respect to third-party approaches.
CoP	Community of Practice: An innovation community to create new breakthrough ideas, approaches, and knowledge.

1. INTRODUCTION

The BRAINTEASER's DC&SE Strategy follows an exploitation-driven dissemination approach. The design, maintenance, implementation and monitoring of the strategy is shaped in WP10. However, several other WPs (e.g., WP3, WP9) implement different stakeholder engagement actions throughout the life course of the project to secure proactive involvement in co-creation processes, as well as endorsement of and institutional commitment to large-scale uptake overall. Additionally, all consortium partners have committed to dissemination activities per their foreseen role, effort and potential outreach to groups of interest. The various, pre-defined dissemination, communication and stakeholder engagement activities in alignment with our targeted audiences can be subject to changes or cessation depending on reporting results and recommendations.

The overarching goal of BRAINTEASER is to exploit the value of Big Data from a range of different sources (i.e., health, lifestyle habits, and environment) and of Artificial Intelligence (AI) methodologies to better support patients and clinicians in Amyotrophic Lateral Sclerosis (ALS) and Multiple Sclerosis (MS) management. The DC&SE strategy aims to help fulfil such an objective via four primary aims:

1. Highlight the significant assets of BRAINTEASER, including the expertise derived from pilot experiences,
2. Expand the BRAINTEASER stakeholder community on both regional, national, European and international level,
3. Foster innovation and elevate the project's visibility, credibility, and influence through the growth of the CoP,
4. Establish the foundation for a robust market positioning and exploitation strategy for BRAINTEASER outcomes/achievements.

Each of these aims is being tackled through the implementation of activities across the project's work packages on the basis of 4 strategic DC&SE pillars:

- **Increase awareness:** Employing effective communication methods to guarantee that relevant stakeholders are well-informed about BRAINTEASER's objectives, actions, and accomplishments, including their accessible assets and resources on a broader scale,
- **Foster involvement:** Utilising diverse initiatives, online tools, events, consultations, publications, open challenges, and a CoP, BRAINTEASER endeavors to draw in and engage innovators, potential customers, and users from across Europe and beyond,
- **Ensure engagement:** Simplifying access to pertinent, easily comprehensible information to enhance understanding of BRAINTEASER technologies and initiatives. This includes details about existing testbeds, deployment sites, resources, trials, and services — all pivotal in encouraging active participation and fostering market uptake,
- **Facilitate Adoption:** Leveraging clinical evidence derived from BRAINTEASER implementation. This empirical validation of the project's interventions, services, or products not only enhances the scientific rigor of the findings but also serves as a crucial factor in easing the adoption and integration of the results into additional real-world healthcare environments.

2. METHODOLOGICAL APPROACH

The DC&SE plan developed during BRAINTEASER's first 6 months and updated in December 2022, is guiding the overall dissemination and communication.

During year 3, focus has shifted towards phase 3 and 4 of the DC&SE strategy, namely decision and loyalty (see Figure 1). By effectively managing the decision and loyalty phases, the dissemination strategy can create a conducive environment for stakeholders to not only decide in favor of adopting the results but also to remain committed and engaged over the long term. This, in turn, enhances the overall uptake of the project's outcomes.

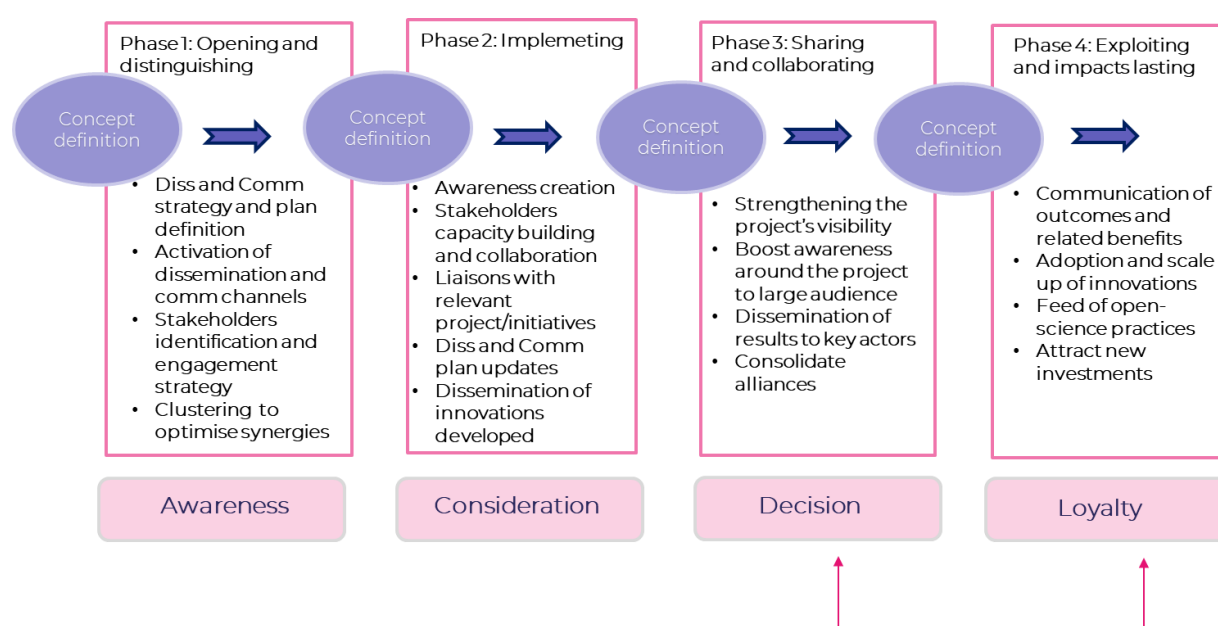


Figure 1. BRAINTEASER Communication, Engagement and Dissemination timeline.

The BRAINTEASER project places a strong emphasis on achieving maximum impact and sustainability, with the overarching aim of fostering lasting positive changes for citizens, communities, and health systems. The *strategic dissemination of information and insights, coupled with active engagement of stakeholders, becomes a linchpin for sustaining impact long after the project concludes.*

As in the previous years, in 2023, WP10 has closely collaborated with all WPs within the project to achieve the stated objectives. It has remained adaptable to dynamic situations, responding to the changing needs of stakeholders by integrating new, pertinent technologies and considering diverse perspectives from multiple stakeholders, all with the aim of ensuring long-term sustainability.

This report will thoroughly examine DC&SE activities while acknowledging the interconnected framework of communication, dissemination, and sustainability to achieve maximum project impact. To steer this analysis, a comparison will be drawn

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between the Key Performance Indicators (KPI's) outlined in the project's Description of Action (DoA) and the actual outcomes accomplished by the consortium.

In conclusion, the report will address recognized challenges, impart lessons learned, and offer recommendations to build upon achievements and fortify the project's results uptake and sustainability.

3. BRAINTEASER Key stakeholders, interests and expectations and DC&SE Actions

The table below provides the list of stakeholders' categories, their relevance for the project and the DC&SE activities undertaken during year 3. Additionally, with the aim to provide more clarity by means of impact, the following section (section 4) will examine DC&SE actions by formats and pre-defined KPIs.

Table 2. Key stakeholders, interests and main actions undertaken during year 3.

Category	Relevance	DC&SE main actions and channels in year 3 of the action
Patients and their support networks as well as the general public	They are the ultimate beneficiaries of all BRAINTEASER tools and services created, deployed and evaluated. Particularly relevant to support one key feature of the project methodology that is co-creation with end users.	<p>General actions included:</p> <ul style="list-style-type: none"> Continuous update of the BRAINTEASER website and social media accounts (LinkedIn/X - past Twitter) with relevant content and project's events announcements Release of the fifth newsletter Involvement of patients' organisations in the project's second and third exploitation workshops as well as in the project's liaisons activities Presentation of the project's in a number of large events (i.e., Digital Health Society Summit – DHSS - and Brain Innovation Days - BIDays)

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		<ul style="list-style-type: none"> Information about the project published on partners' newsletters and websites Launch of the first, "Woman in Multiple Sclerosis", of a series of webinars promoted by the project's CoP (WP3).
Healthcare service providers (clinicians, hospital facilities, executives and decision makers)	Together with the previous category, they are the core end users of the BRAINTEASER tools and services. Fully involved in the project's co-creation initiatives.	<p>The ongoing research findings of the BRAINTEASER project are openly made available on the project website in the Scientific Resources section.</p> <p>Clinicians and decision makers have been involved in the panel discussion of the exploitation workshops aimed at guiding the BRAINTEASER consortium in designing the most suitable exploitation path.</p> <p>Health care service providers have been part of the audience attending a number of events in which BRAINTEASER project has been showcased (i.e., DHSS, BIDs, International Data Week IDW 2023,).</p>
Academia and research organisations	Bring essential know-how, disruptive ideas and solid multi-disciplinary backgrounds to the BRAINTEASER.	<p>The scientific publications already made research and innovators communities.</p> <p>The project's public deliverables are accessible on the project website.</p> <p>The BRAINTEASER Open Evaluation Challenges, 2022 and 2023 editions, proceedings and</p>

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		<p>publications are openly consultable; information about the 2024 open challenge is already published.</p> <p>All the international conferences in which BRAINTEASER has been presented during 2023 have registered a large participation of the scientific community.</p>
Developers, manufacturers, suppliers, integrators	They lead innovation designing smart services and apps which are more usable, useful and affordable for users, using AI, Intelligent systems, big data and other emerging technologies	<p>The BRAINTEASER Open Evaluation Challenges are conceived to meet the interest of this stakeholder group and to actively involve them in the design and development of the evaluation infrastructure.</p> <p>ICT companies have been involved in the second and third exploitation focus group panel discussions.</p> <p>Massive participation in events such as DHSS 2023, International Data Week 2023, BIDsays 2023.</p> <p>Stable one2one conversations have been established with two ICT providers actively involved in the project's activities: Atmotube and Garmin.</p>
Pharma Companies	AI can improve the drug discovery process, enabling the identification of disease patterns in large datasets. The pharma industry will actively execute AI strategies to remain competitive and, as	All the external events in which BRAINTEASER has been presented during 2023 accounted for a sound participation of the pharmaceutical industry.

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	such, it represents one of the main project's key target groups for BRAINTEASER results sustainability.	<p>Pharma companies have been strongly represented at the project's Mid Term Workshop. Ad-hoc communication is used to involve them in the project's annual Open Evaluation Challenges. They are always well represented at the BRAINTEASER exploitation Focus Group workshops as panelists.</p> <p>The BRAINTEASER project was introduced by EBC to the Pharma company "Merck".</p>
Healthcare authorities, public and environmental health departments, and policy makers	National and regional authorities are the key decision makers, procurers and payers in the healthcare systems.	<p>Health authorities and policy makers have participated in many events presenting BRAINTEASER such as the DHSS 2023, the policy event organised by the EU Parliament "Time to improve the life of people living with ALS", the "Focus on Innovation" ceremony, Brain Innovation Days</p>
Policy and regulatory experts (specialists with in-depth knowledge in specific policy areas, standardisation bodies, certification bodies)	Scientific knowledge is keystone for regulatory decision making. Many Horizon Europe projects generate data of direct relevance to regulatory authorities, health technology assessment and payers.	<p>Regulatory agencies and standardisation bodies are actors fully addressed by BRAINTEASER CoP (with dedicated services).</p> <p>Policy and regulatory experts have been actively participated so far to the BRAINTEASER exploitation workshops as well as to the liaison activities (e.g., European Medicine Agency).</p>

4. IN-DEPTH LOOK AT THE DC&SE ACTION PERFORMANCE (YEAR 3)

As every year, the Dissemination and Communication Manager, Natalia, is responsible for analysing and reporting on the project's communication and dissemination activities. This assessment gauges the project's performance against set KPIs, offering explanations for results and proposing recommendations. These suggestions aim to enhance successful aspects or modify strategies in the updated plans for Dissemination, Communication, and Stakeholder Engagement to achieve improved outcomes in the near future.

Table 3: KPI and outcomes for DC&SE actions during year 3.

Communication means	KPI	Estimated KPI	Outcomes in Year 3
Project website	No. of web visits	1.000 visits/year	6085 visits
Partners' website	No. of published info/news	≥ 5/year BRAINTEASER info/news	Not all partners have reached the target while others have exceeded it. Details are given in section 4.1.2
Newsletter	No. of issues	2/year	1 issue published (July 2023); the next issue is planned to be published in February 2024
Press release	No. of issues	1/year	3 press releases
Scientific publications (by scientific/technical partners)	No. of publications	≥ 5/year	15
Social media (X-Past Twitter and LinkedIn)	No. of followers	1.000 followers in total	1038 followers (X – past Twitter 285 – LinkedIn 753)
Participation in external events	No. of events attended	4/year	9
Consortium organised events (for Y3)			
Mid-term workshop (M24)	No. of participants	Participants: ≥40	79

4.1 Digital Communications, Positioning and Outreach Analysis

4.1.1 Project's Website

The website for BRAINTEASER (<https://brainteaser.health/>) was launched during mid-year 1 of the project. Since then, it has seen positive growth in terms of website visits (synonymous with “sessions” in Google Analytics) and page views.

As it follows the natural evolution of the project's activities and its achieved results, new sections and updates of existing ones have been implemented during 2023.

New section:

- **Clinical settings:** The BRAINTEASER Clinical settings have a dedicated space for communication and dissemination of individual results.
- **IDPP@CLEF2024:** It presents all the information needed to participate to the new edition of the project's Open Evaluation Challenges.

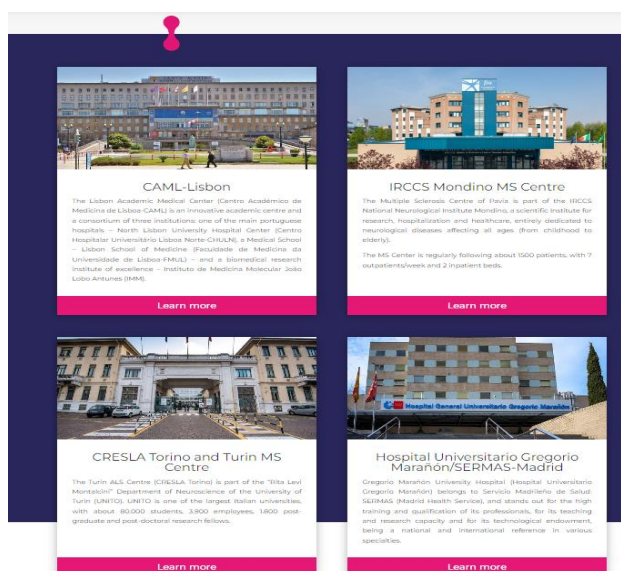


Figure 2. Clinical settings page preview.

Updated sections:

- **Resources:** The resources section has been updated following the recommendations provided in the project's second review report. 3 different pages have been created: **Public deliverables**, **Scientific publications** and **Scientific literature**. These pages are continuously updated with content.
- **IDPP@CLEF 2023:** the page has been updated after the challenge completion including the agenda of the lab, the presentations made and the scientific papers submitted and discussed.
- **Community of Practice (CoP):** The page is continuously updated with content for clinicians, experts by experience, caregivers, and general public with interest in the

use of AI and other digital tools for the management of Amyotrophic lateral sclerosis (ALS) and Multiple Sclerosis (MS) diseases.

The KPI for the website was set at 1000 visits per year. During year 3, the website reached 6,085 visits and 15,275 page views. This means that not only the set KPI was exceeded but users were perusing the website much more frequently. In regards to the number of visits, there is a 40% increase while in regards to page views there is a 79.5% increase when compared with the respective values for 2022 (year 2).

The project website users' distribution, in geographical terms, is impressive, suggesting that the project is effectively reaching a global audience, from various backgrounds and sectors.

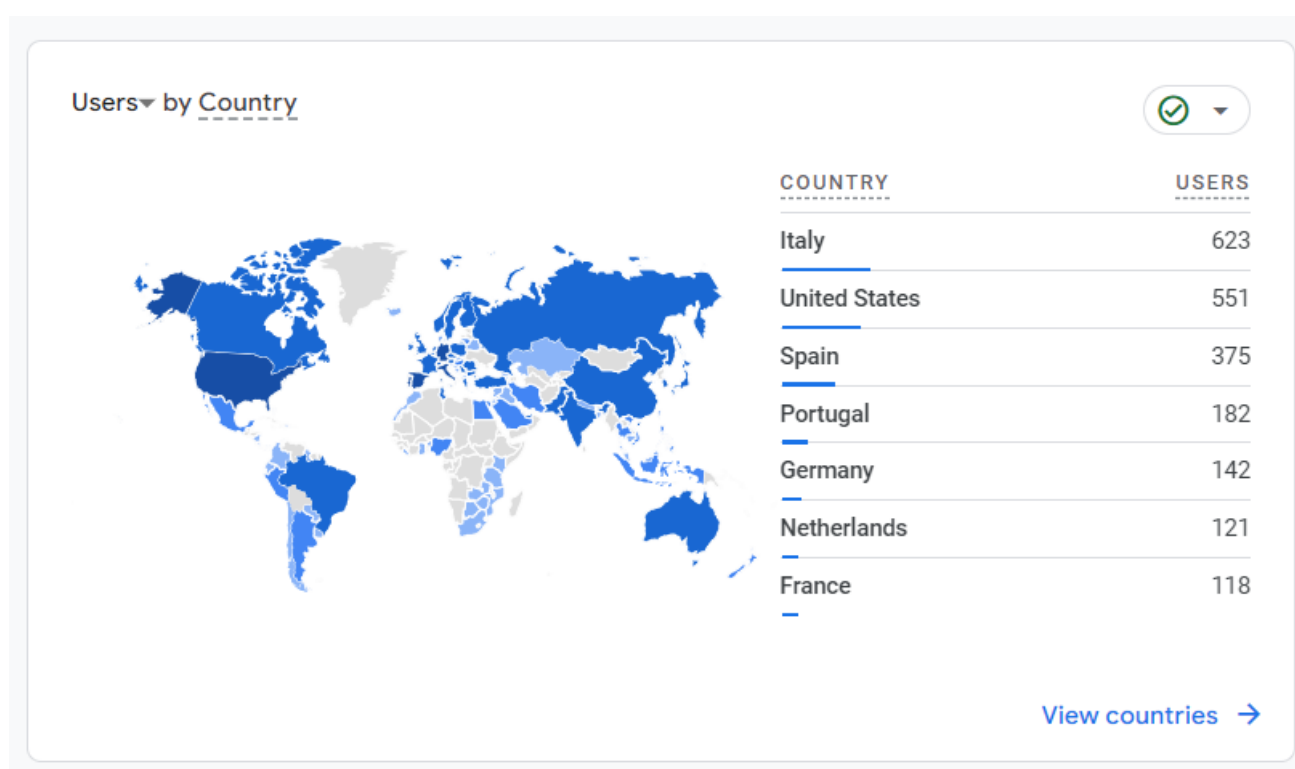


Figure 3. Geographical distribution of website visitors.

These high figures represent a great degree of visibility for the project and reflect the effects of stronger, more focused actions by both the communications team and BRAINTEASER consortium.

For example, consortium members were extremely active online and offline, sharing news and information about the project. Multiple members participated in [DHSS](#), a well-known virtual event that plays host to large audiences on both European and international levels. At the DHSS, BRAINTEASER was able to leverage its virtual booth and presentation to reach a greater audience and share information related to the website. On the day of the DHSS event, we can see a significant peak in website traffic.

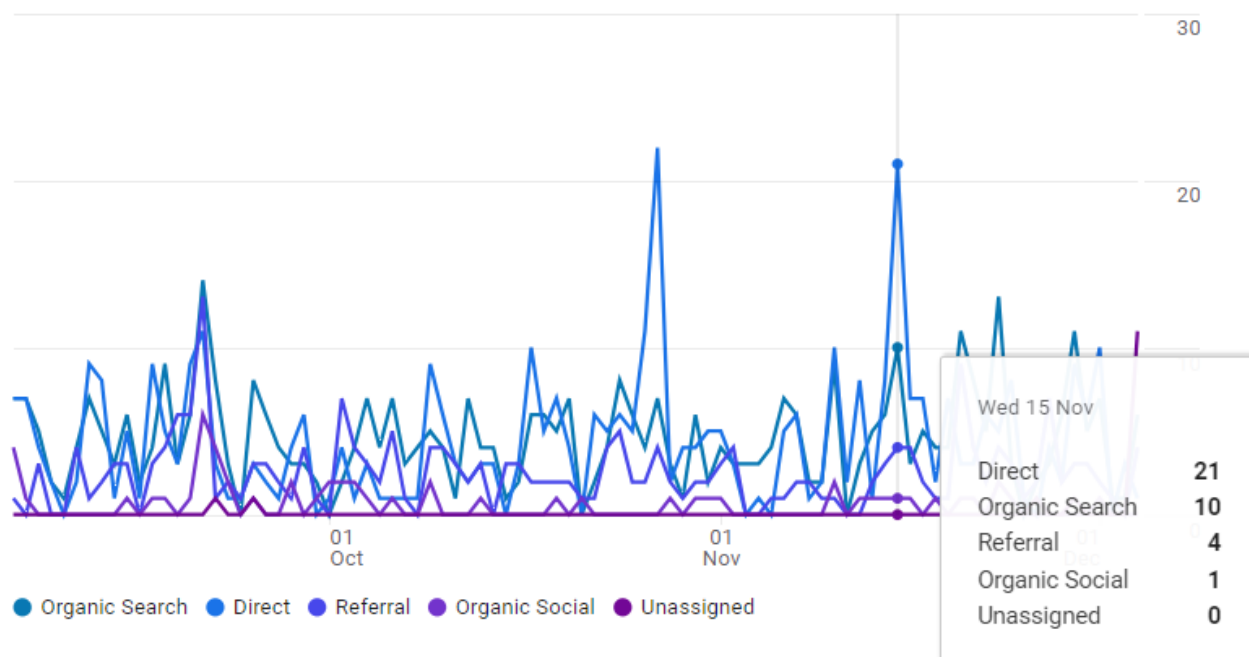


Figure 4. Website traffic acquisition during the last 90 days.

At the same time, it has been evident how interest in an event like the Open Evaluation Challenges could be leveraged to re-direct individuals to the BRAINTEASER website. The page dedicated to the [IDPP@CLEF2023](#) is the page with the most visits (2,020) during year 3, after the website's landing page, with an impressive Average engagement time (1m 08s).

Page path and screen class ▾ +		↓ Views	Users	Views per user	Average engagement time
		15,275	3,323	4.60	1m 07s
		100% of total	100% of total	Avg 0%	Avg 0%
1	/	4,633	2,105	2.20	19s
2	/open-evaluation-challenges/idpp-2023/	2,020	622	3.25	1m 08s
3	/partners/	685	305	2.25	57s
4	/open-evaluation-challenges/idpp-2022/	623	185	3.37	1m 07s

Figure 5. Top website pages (no. of visits and average engagement time).

These are the recommendations to continue building viewership and user sessions include:

1. Promoting project and website awareness through participation in virtual and on-site events,
2. Promoting project and website awareness through social media campaign pushes,

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3. Continue creating content in layman language whilst upholding the integrity of the content thereof,
4. Taking advantage of the fourth project year to dive into a deeper understanding of how website visitors are interacting with the different elements of the BRAINTEASER website and make recommendations for improvements,
5. Strengthening the content of the most recent sections added to the website, while adding more scientific publications, stakeholder and expert interviews, and more. Additional resources and links can help redirect target audiences to the page and afford them the opportunity to peruse the website.

4.1.2 Partners' websites and social media communication

The table below gives a specific overview of partners' contribution and support to the BRAINTEASER online communication activities during year 3.

Table 4. Outcomes of partners' online communication activities during year 3.

Partner	Website/Blog posts	X-Past Twitter No. tweets/ retweets	LinkedIn No. posts	Newsletter No. articles
UPM	-	-	-	-
UNIPD	1. Join the BRAINTEASER Mid Term Workshop	18 tweets	15	-
FC.ID	1. LASIGE PUBLISHED IN THE JOURNAL OF BIOMEDICAL INFORMATICS 2. LASIGE'S RESEARCH ON AI FOR HEALTHCARE AND SCIENCE HIGHLIGHTED BY NEWS MAGAZINE EXAME INFORMÁTICA	-	-	1
UNITO	-	6 tweets	-	-
iMM	-	2 tweets	2	-
SERMAS	-	-	-	-
MNDN-PV	-	49 retweets		-
BELIT		17 tweets	16	2
IST	1. BRAINTEASER Mid Term Workshop 2. BRAINTEASER Mid Term Workshop 3. CD Pharma and InSilicoTrials join forces to	20 tweets	22	1

Partner	Website/Blog posts	X-Past Twitter No. tweets/ retweets	LinkedIn No. posts	Newsletter No. articles
	enhance patient care through in silico technology 4. AI state-of-play around clinical research – BRAINTEASER Community of Practice 5. Cutting-edge Big Data initiative 6. InSilicoTrials Awarded 2023 Innovation Radar Prize			
ECHA	1. BRAINTEASER Mid Term workshop 2. Unleashing the IDPP@CLEF Potential: Assessing Predictive Algorithms and Enabling Data Sharing for Enhanced Research 3. The 5th BRAINTEASER project newsletter is out! 4. The Gender dimension in Multiple Sclerosis – The BRAINTEASER CoP launches its first webinar 5. AI state-of-play around clinical research - BRAINTEASER Community of Practice 6. Brainteaser project: Catalysing Innovation	10 tweets – 35 retweets	12	6
EBC	1. BRAINTEASER Mid Term Workshop 2. Look back at the BRAINTEASER Mid Term workshop 3. Women in Multiple Sclerosis webinar 4. BRAINTEASER project 5. BIDays programme 6. BIDays Speakers	12 tweets - 13 retweets	10	8 (EBC Monthly Newsletter); 3 (EBC Brainy Insights); 1 (dedicated newsletter)

4.1.3 Newsletter

In July 2023, BRAINTEASER issued its fifth newsletter, targeting subscribers and project followers. The newsletter aimed to emphasize the project's progress, focusing on:

- **Advancements in Clinical Site Experiments:** Highlighting the momentum of BRAINTEASER, particularly in the context of ongoing clinical site experiments.
- **CoP Awareness:** Promoting awareness about the CoP and issuing a call for new members to enrich its value.
- **Emphasis on Open Science and FAIR – Findability, Accessibility, Interoperability, and Reusability - Principles:** Underscoring the importance of open science and adherence to FAIR principles, aligning with the Open Evaluation Challenges organized by BRAINTEASER.
- **Results Sustainability Promotion:** Showcasing the promotion of sustainability for project outcomes, including the presentation of the initial project exploitation plan.



Figure 6. Preview of BRAINTEASER Newsletter (July 2023 issue).

Distinguishing itself from previous editions, the newsletter adopted an innovative approach, incorporating audio-visual elements to facilitate the assimilation of information. The intent behind these changes was to boost engagement and accessibility, accommodating various learning preferences and presenting the project's advancements and key messages in a more dynamic and interactive fashion.

It is worth noting that whilst no specific KPI for newsletter performance was set, it has appeared to continue doing well. More than 50% of 123 recipients opened the newsletter. Furthermore, it is extremely important to highlight that the number of subscribers (from the second newsletter issue) rose from 65 to 131 in total. This is about an 100% increase in the BRAINTEASER subscriber base!

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131 Recipients

Audience: BRAINTEASER Project

Delivered: Wed, Jul 19, 2023 6:53 AM

Subject: The 5th BRAINTEASER project newsletter is out!

[View email](#) · [Download](#) · [Print](#) · [Share](#)

75 Opened	12 Clicked	8 Bounced	0 Unsubscribed
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Successful deliveries	123	93.9%	Clicks per unique opens	16.0%
Total opens	180		Total clicks	23
Last opened	11/10/23 4:59AM		Last clicked	7/24/23 10:28AM
Forwarded	0		Abuse reports	0

Figure 7. 5th newsletter issue, campaign performance insights.

Furthermore, we would like to add that this positive trend in subscribers is attributable to synergistic outreach efforts by the consortium, i.e., contacting a well-curated list of MS/ALS researchers and related contacts.

The release of the sixth issue of the project newsletter is anticipated to be slightly delayed from the initially planned date in December 2023. This adjustment is made to coincide with the full gathering of the project's partners scheduled for early February 2024, allowing for a more comprehensive and impactful newsletter release.

In particular, the newsletter will be dedicated to an in-depth view of the clinical sites' work, with the aim of highlighting success factors and experienced barriers in implementing the BRAINTEASER solutions. This clinical evidence related to the effectiveness and challenges faced during implementation can support the scale-up of BRAINTEASER solutions, providing valuable insights for future endeavours and contributing to the project's overall impact and success.

All the project's newsletters can be found [here](#).

4.2 Social Media Outreach Analysis

BRAINTEASER social media channels (LinkedIn and X - past Twitter) promote the content available in the project's website, and also attract attention to it through targeted campaigns. As proposed in the original DC&SE plan, various hashtags were used to support BRAINTEASER online actions including, but not limited to:

- #BRAINTEASER_EU
- #ALS
- #MS
- #AI
- #ArtificialIntelligence

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- #BigData
- #Neuroscience

The KPI set for social media was 1000 followers in total on X – past Twitter and LinkedIn. This has already been reached at the end of year 3 (1,039 followers in December 2023). However, our efforts for widening our reach among target groups will continue during year 4.

LinkedIn

The BRAINTEASER LinkedIn page has currently 753 followers (178% increase in comparison to the same figure for year 2).

Follower highlights ?

753

Total followers

478

New followers in the last 365 days

Figure 8. LinkedIn page highlights.

The breakdown of these followers is quite widespread, suggesting that the project is reaching out effectively to a variety of audiences, either it comes to job function or to industry.

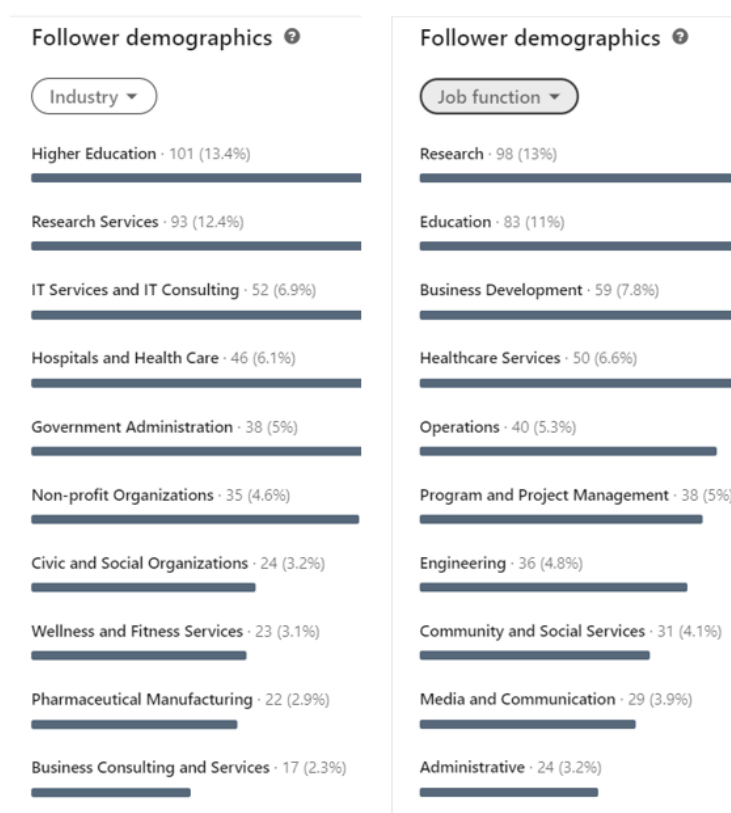


Figure 9. Followers' demographics (Industry & Job function).

In terms of content creation and engagement with target audiences, the LinkedIn page

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is performing satisfactorily on a permanent basis throughout the year.

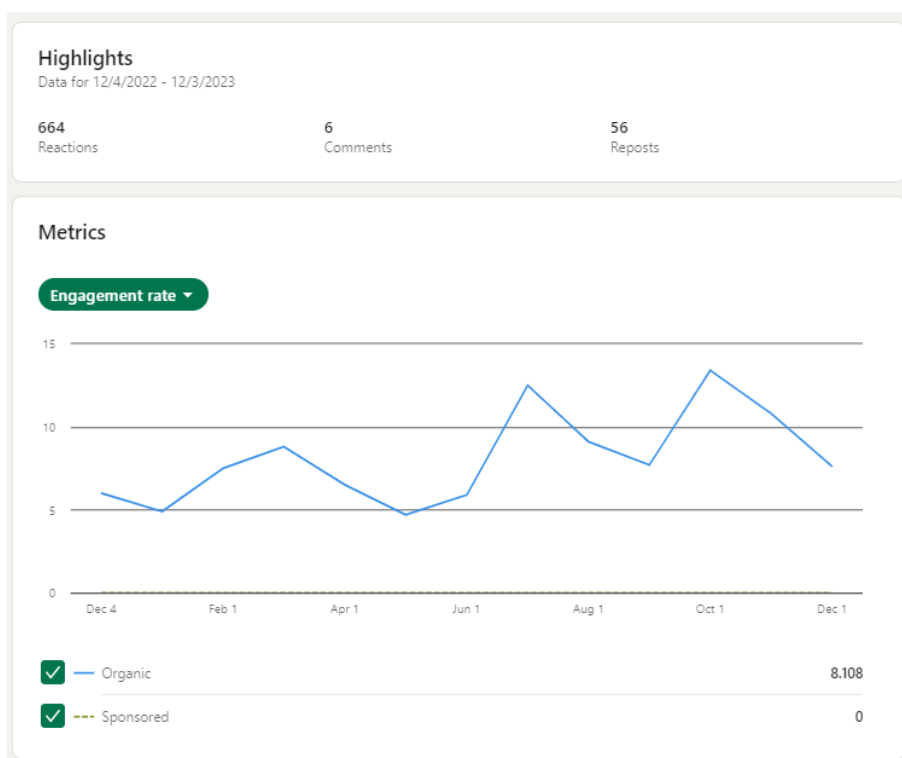


Figure 10. LinkedIn page content engagement rate.

X – past Twitter

The BRAINTEASER X- past Twitter account has reached 286 followers (a 68.2% increase compared to the same figure in year 2).

Weekly tweets have led to more than 4,500 impressions in the last three months (51 impressions on average per day).

Your Tweets earned **4.5K impressions** over this 91 day period

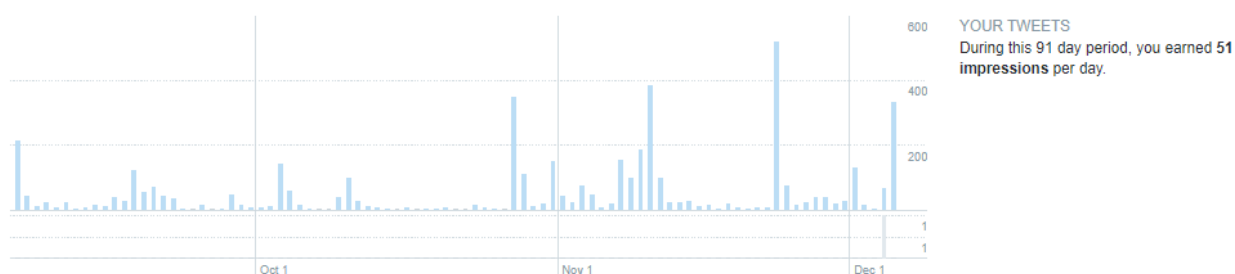


Figure 11. X- past Twitter account performance highlights.

The top tweets are associated with events BRAINTEASER project is participating or organising, confirming that participation in events plays a crucial role for engagement with our target audiences.

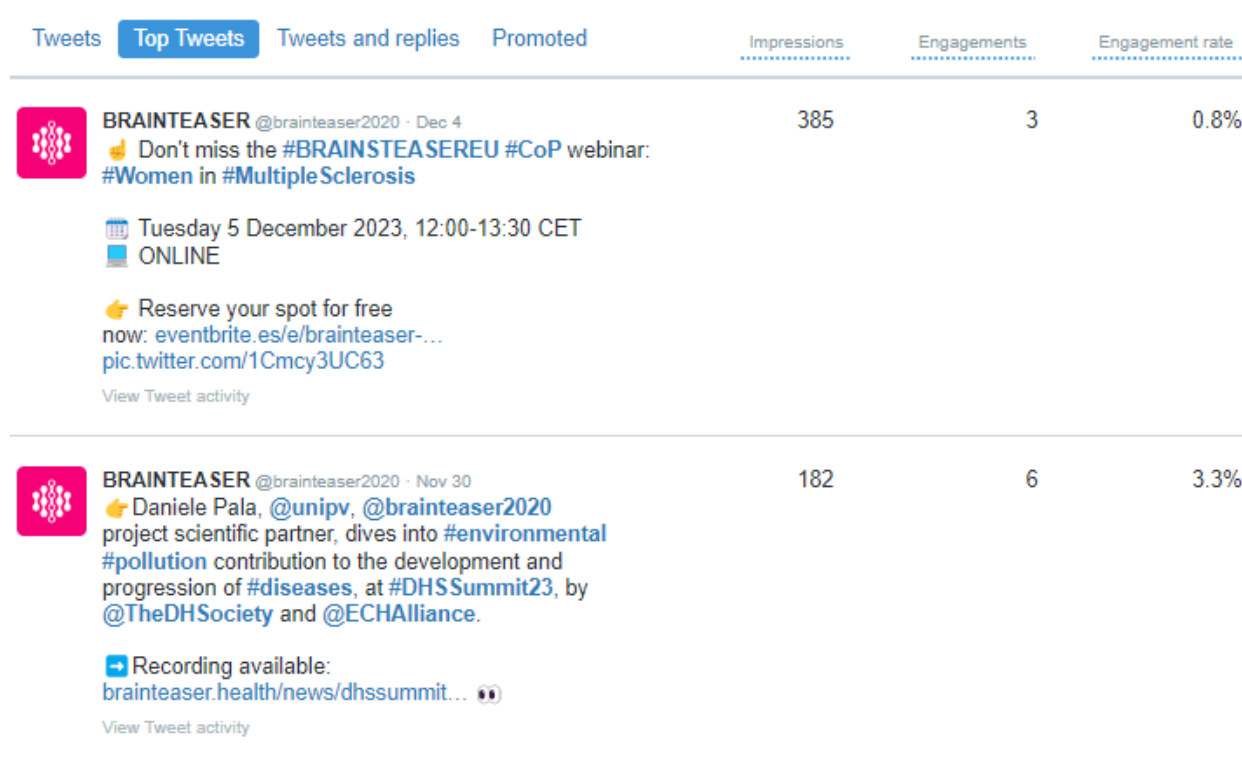


Figure 12. Top Tweets.

These figures are significant given that they underpin how auspicious engagement and an increase in followers could occur simultaneously if the content resonates well. This year, the content included ranged from interviews, structured news pieces and content articles that address stakeholders concerns on a broader level while never forgetting to reference and showcase the BRAINTEASER project.

Nonetheless, with the aim to promote visibility and awareness of BRAINTEASER and increase engagement with our target audiences, **year 4 will see certain actions to be undertaken, including:**

1. Continue adhering to the monthly planned calendar that outlined different article ideas for better stakeholder engagement
2. Continue performing quarterly internal report of social media performance, to adapt messaging and approaches
3. Pull article content ideas from the exploitation plan that would address the appropriate audiences and relate how the BRAINTEASER project will support better care for patients and help caregivers and healthcare professionals
4. Define and promote social media campaigns, e.g., the CoP activities or the Open Evaluation Challenges (during the first quarter of 2024).

It is worth mentioning that **the BRAINTEASER project did well with engagement and increased number of followers due to the support of consortium partners.** This action will be continued, although with a stronger focus on the content writing pieces. To support this, the communications lead will organise periodic one-to-one sessions with consortium writers to improve their writing and provide tips for more effective communications. As seen earlier in section 4.1.2, consortium partners contributed to communications and

dissemination actions through their own social media channels. This, too, will be fostered further to maintain active engagement.

Lastly, more audio-visual content will be produced to support engagement and foster the sustainability potential of the project.

4.3 Audio-visual products

During the third year of the project, a variety of audiovisual products have been created, under the strong belief that this mode of communication can facilitate a more engaging and accessible means of conveying complex information, fostering better understanding, and enhancing the overall influence of project-related messages.

Here the full list of produced video-content:

1. [Empowering Minds: The BRAINTEASER Community of Practice harnessing AI and digital tools for MS and ALS Management](#) - 3,896 views
2. [Unleashing the IDPP@CLEF Potential: Assessing Predictive Algorithms and Enabling Data Sharing for Enhanced Research](#) - 284 views
3. [Revolutionizing care through technology: unveiling unique benefits and promising investment prospects of BRAINTEASER](#) – 178 views
4. [Hannes Hilberger, LETHE project: Catalysing Innovation - Constructing Dynamic Healthcare Ecosystems](#) – 37 views
5. [Vera Nies, RADAR-AD: Catalysing Innovation - Constructing Dynamic Healthcare Ecosystems](#) – 9 views
6. [Barbara Di Camillo, BRAINTEASER: Catalysing Innovation - Constructing Dynamic Healthcare Ecosystems](#) – 23 views

An investigation into the factors influencing the discrepancy in the number of clicks received by different videos has been carried out. Several elements may contribute to the variation in viewer visits, specifically the "first click" on the content. Notably, in this specific instance, the title and the inclusion of popular keywords appeared to be particularly influential. The objective of delving into these aspects was to reveal insights that could assist in optimizing future video content, improving audience engagement, and ultimately boosting click-through rates.

5. EVENTS

5.1 Events arranged by BRAINTEASER partners

In the framework of the Consortium's organised events, worth to mention is:

- **The BRAINTEASER Mid Term Workshop**

BRAINTEASER mid-term workshop took place on 28 February 2023 in the prestigious location of the University of Padua Botanical Garden, Italy and was attended by 80 participants.

The organization of the event came at the end of the first phase of the project and served as the basis for the launch of the second phase or 'pilot phase', which focuses on transforming the current approach to health from a reactive to a predictive system focused on risk forecast, patient stratification and prognosis.

- **The second and the third exploitation Focus Group workshops**

A series of four Focus Group online workshops is organised with the aim of enlarging the project's vision on users and market needs, obtaining additional requirements and accompanying the BRAINTEASER Consortium towards the most suitable results' sustainability and commercialisation strategy.

The [second workshop](#), held on 21st February 2023, aimed to gather insights on how to maximize the use and value of healthcare data, highlighting the critical role that high-quality data plays in the successful application of AI-based solutions, with a focus on health data collection, data utilization, and data sharing.

The [third workshop](#), held on 11th December 2023, provided an update on the ongoing BRAINTEASER activity, focusing on the interactive tools being designed to collect information from the patient and to provide personalized feedback, and the underlying data infrastructure.

- [The Second Open Evaluation Challenge with its final workshop held in Thessaloniki – Greece on the 21th September 2023 during the CLEF Conference.](#)

Each year, the BRAINTEASER project organizes an open evaluation challenge, called iDPP@CLEF (Intelligent Disease Progression Prediction), to involve research groups from academia and industry in the assessment of the performance of their AI algorithms to predict the progression of ALS and MS. These challenges are open to anyone wishing to participate and they are built around real clinical and sensor data (properly anonymised), provided by the clinical partners in our consortium.

This year, in the [iDPP@CLEF 2023](#) challenge, three tasks have been organised by BRAINTEASER: two of them were focused on the progression of MS and one of them on the progression of ALS.

All information, presentations and proceeding about the 2023 challenge can be openly consulted [here](#).

In addition, a number of informal meetings were organised with groups interested in collaborating/exchange knowledge with the BRAINTEASER initiative, as well as dedicated events to boost the networking with projects and initiatives relevant to BRAINTEASER. Details about liaisons activities are provided in section 5.

5.2 Conferences and congresses featuring BRAINTEASER

Integral to the strategy for communication, dissemination, and stakeholder engagement is the involvement of BRAINTEASER consortium members in national and international conferences. This active participation serves to promote BRAINTEASER's value and enables direct interaction with diverse audiences. The subsequent list outlines partners' involvement in crucial conferences and events throughout year 3, along with the stakeholders they engaged with.

Table 5. Conferences & events attended by BRAINTEASER' partners in year 3.

Conference name and link	Location	Date	Type of event	Attending partner/s	Audience
O desafio dos dados: Uma nova fronteira nas doenças neurodegenerativas	Lisbon, Portugal	31/01/'23	Workshop	iMM	Academy, Industry, General public
Focus on Innovation" ceremony, the main event of the EU Opportunity Week in Serbia (June 21-26th) dedicated to innovation and support for innovative entrepreneurship	Belgrade, Serbia	21/06/'23	Ceremony and promotion showcase (of successful projects and funding programmes)	BELIT	Key stakeholders in EU innovation funding and support in the country (including the president of Serbia, the relevant ministers and other governmental body representatives, EU Delegation and IPA programme officials...)
Time to improve the life of people living with ALS Policy	European Parliament,	07/09/2023	Policy event	EBC	Policymakers, scientists, clinicians, patients

Conference name and link	Location	Date	Type of event	Attending partner/s	Audience
recommendations for improved diagnosis, care, and treatment	Brussels, Belgium				advocate, industry representatives
THE GREEN BRAIN	Turin, Italy	30-sep-2023	Scientific café with poster presentation to external audience	UNITO	General Audience
International Data Week IDW 2023	Salzburg, Austria	23-26th October 2023	Festival of data	BELIT	Data scientists, curators, academia, industry, policymakers
Brain Innovation Days	Brussels, Belgium	26 & 27 October 2023	Multistakeholder event	EBC, UNIPD, UPM	Researchers, clinicians, patient and start-up, SME and industry representatives, regulators, policymakers, public and private funders/investors
DHSSummit'23: Refining the connections: Advancing evidence on the linkages between environment, health and data	Virtual	15/11/'23	Panel discussion	ECHA, UniPavia	Government, health & social care providers, companies and start-ups, researchers, insurances, patients' groups and citizens, investment community, pharma

Conference name and link	Location	Date	Type of event	Attending partner/s	Audience
DHSSummit'23: Unlocking the Value Of Health Data In The International R&D Projects: Enabling Fairness And Expanding Opportunities For Secondary Use	Virtual	15/11/'23	Panel discussion	ECHA, UniPadova	Government , health & social care providers, companies and start-ups, researchers, insurances, patients' groups and citizens, investment community, pharma
I-Brain festival: The event aimed to link the research to social reality, stimulate a social debate on the theme and challenge the stigma surrounding brain disorders based on evidence-based information.	Ghent, Belgium	26/11/'23	Brain festival	EBC	Citizens
Our Brains, Our Future: The Value of Brain Research – from Basic to Clinical – to Improve Patient Outcomes in Europe	Senate of Spain, Madrid, Spain	28/11/'23	Policy conference	EBC, UPM	Scientists, clinicians, patients advocate, industry representatives and policymakers

6. SCIENTIFIC DISSEMINATION

Scientific publications are crafted to disseminate research experiences and evidence regarding the potential of BRAINTEASER technology and the methodological approach within the research and innovation communities. The BRAINTEASER consortium intends to release position papers, review articles, and research papers on the scientific topic and findings in peer-reviewed journals as well as in "grey" (non-indexed) literature. The list of scientific publications for 2023 is provided below.

Table 6. Scientific publications in year 3.

Title and identifier	Partner	Authors	Title of periodical or series	Publisher	Year of publication	Open access
Triclustering-based classification of longitudinal data for prognostic prediction: targeting relevant clinical endpoints in amyotrophic lateral sclerosis	FC.ID, IMM	Diogo F. Soares, Rui Henriques, Marta Gromicho, Mamede de Carvalho, Sara C. Madeira	Scientific Reports, Volume 13, 2023/4/15	Nature Publishing Group UK	2023	yes
Artificial intelligence and statistical methods for stratification and prediction of progression in amyotrophic lateral sclerosis: A systematic review	UNIPD, FC.ID, IMM, UNITO, MNDN-PV	Erica Tavazzi, Enrico Longato, Martina Vettoretti, Helena Aidos, Isotta Trescato, Chiara Roversi, Andreia S Martins, Eduardo N Castanho, Ruben Branco, Diogo F Soares, Alessandro Guazzo, Giovanni	Artificial Intelligence in Medicine, Volume 142, August 2023, 102588	Elsevier	2023	yes

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		Birolo, Daniele Pala, Pietro Bosoni, Adriano Chiò, Umberto Manera, Mamede de Carvalho, Bruno Miranda, Marta Gromicho, Inês Alves, Riccardo Bellazzi, Arianna Dagliati, Piero Fariselli, Sara C Madeira, Barbara Di Camillo				
The flail-arm syndrome: the influence of phenotypic features	iMM	Marta Gromicho, Miguel Oliveira Oliveira Santos, Susana Pinto, Michael Swash & Mamede De Carvalho	Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration, Published online: 04 Jan 2023	Taylor & Francis	2023	no
Trends in the diagnostic delay and pathway for amyotrophic lateral sclerosis patients across different countries.	iMM	Catarina Falcão de Campos, Marta Gromicho, Hilmi Uysal, Julian Grosskreutz, Magdalena Kuzma- Kozakiewicz,	Frontiers in Neurology, Published: 17 Jan 2024	Frontiers	2023	yes

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		Miguel Oliveira Santos, Susana Pinto, Susanne Petri, Michael Swash and Mamede de Carvalho				
Sporadic Spinal-Onset Amyotrophic Lateral Sclerosis Associated with Myopathy in Three Unrelated Portuguese Patients.	iMM	Miguel Oliveira Santos, Marta Gromicho, Ana Pronto-Laborinho and Mamede de Carvalho	Brain sciences, Published: 28 Jan 2023	MDPI	2023	yes
Respiratory phenotypes in amyotrophic lateral sclerosis as determined by respiratory questions on the Amyotrophic Lateral Sclerosis Functional Rating Scale-Revised and their relation to respiratory tests	iMM	Susana Pinto, Miguel Oliveira Santos, Marta Gromicho, Michael Swash, Mamede de Carvalho	European journal of neurology, Published online: 05 Mar 2023	Wiley	2023	yes
Clinical characteristics in amyotrophic lateral sclerosis with Sub-Saharan Africa ancestry - A Portuguese hospital-based cohort study.	iMM	Miguel Oliveira Santos, Marta Gromicho, Susana Pinto, Ana Pronto-Laborinho and Mamede de Carvalho	Clinical Neurology and Neurosurgery, Published online: 13 Mar 2023	Elsevier	2023	No

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Demographic changes in a large motor neuron disease cohort in Portugal: a 27 year experience	iMM	Inês Alves, Marta Gromicho, Miguel Oliveira Oliveira Santos, Susana Pinto, Ana Pronto-Laborinho, Michael Swash & Mamede De Carvalho	Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration, Published online: 06 Jun 2023	Taylor Francis &	2023	yes
Association of Copresence of Pathogenic Variants Related to Amyotrophic Lateral Sclerosis and Prognosis. 10.1212/WNL.00000000000207367	UNITO	Chio A, Moglia C, Canosa A, Manera U, Grassano M, Vasta R, Palumbo F, Gallone S, Brunetti M, Barberis M, De Marchi F, Dalgard C, Chia R, Mora G, Iazzolino B, Peotta L, Traynor BJ, Corrado L, Dalfonso S, Mazzini L, Calvo A.	Neurology	American Academy of Neurology	2023	yes
Serum chloride as a respiratory failure marker in amyotrophic lateral sclerosis. 10.3389/fnagi.2023.1188827.	UNITO	Manera U, Grassano M, Matteoni E, Bombaci A, Vasta R, Palumbo F, Torrieri MC, Cugnasco P,	Front Aging Neurosci.	Frontiers	2023	yes

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		Moglia C, Canosa A, Chiò A, Calvo A.				
Amyotrophic lateral sclerosis regional progression intervals change according to time of involvement of different body regions. 10.1111/ene.15674	UNITO	Manera U, D'Ovidio F, Cabras S, Torrieri MC, Canosa A, Vasta R, Palumbo F, Grassano M, De Marchi F, Mazzini L, Mora G, Moglia C, Calvo A, Chiò A.	Eur J Neurol, Apr;30(4):872-880.	Wiley	2023	yes
Impact of diabetes mellitus on the respiratory function of amyotrophic lateral sclerosis patients.	iMM	Pinto S, Oliveira Santos M, Gromicho M, Swash M, de Carvalho M	Epub ahead of print	Wiley Online library	2023	yes
Presymptomatic geographical distribution of ALS patients suggests the involvement of environmental factors in the disease pathogenesis	UNITO	Vasta R, Callegaro S, Sgambetterra S, Cabras S, Di Pede F, De Mattei F, Matteoni E, Grassano M, Bombaci A, De Marco G, Fuda G, Marchese G, Palumbo F, Canosa A, Mazzini L, De Marchi F, Moglia C,	J Neurol	Springer Online	2023	yes

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		Manera U, Chiò A, Calvo A.				
Factors predicting disease progression in C9ORF72 ALS patients	UNITO	Mandrioli J, Zucchi E, Martinelli I, Van der Most L, Gianferrari G, Moglia C, Manera U, Solero L, Vasta R, Canosa A, Grassano M, Brunetti M, Mazzini L, De Marchi F, Simonini C, Fini N, Tupler R, Vinceti M, Chiò A, Calvo A.	J Neurol	Springer Online	2023	yes
Multiple Sclerosis Survival Prediction Results from DSM-COMP BIO UNITO	UNITO	Ivan Rossi, Giovanni Birolo, Piero Fariselli	CLEF (Working Notes)	CEUR Workshop Proceedings	2023	yes

In addition to the scientific publications, as outlined in the table below, a number of academic papers have published in the context of academic conferences and workshops.

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Table 7. Conferences publications in year 3.

Author(s)	Title	Conference	Date	Location	Published in	Link to Paper
Helena Aidos, Roberto Bergamaschi, Paola Cavalla, Adriano Chiò, Arianna Dagliati, Barbara Di Camillo, Mamede Alves de Carvalho, Nicola Ferro, Piero Fariselli, Jose Manuel García Dominguez, Sara C Madeira, Eleonora Tavazzi	iDPP@ CLEF 2023: The Intelligent Disease Progression Prediction Challenge	European Conference on Information Retrieval	16/03/2023	Thessaloniki	Springer Nature Switzerland	here
UNIPD - Isotta Trescato, Martina Vettoretti, Barbara Di Camillo	Predictive and risk stratification models in patients affected by chronic neurodegenerative diseases	Artificial Intelligence in Medicine (AIME 2023)	12-15/06/2023	Portoroz, Slovenia	Presented as a poster during the poster session of the Doctoral Consortium	-
Vladimir Urošević, Nikola Vojičić, Aleksandar	BRAINTEASER Architecture for Integration of AI	ICOST 2023	7-8 th /07/2023	Wonju,	Proceedings of the ICOST 2023 Conference. Lecture Notes in Computer	here

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Author(s)	Title	Conference	Date	Location	Published in	Link to Paper
Jovanović, Borko Kostić, Sergio Gonzalez-Martinez, María Fernanda Cabrera-Umpiérrez, Manuel Ottaviano, Luca Cossu, Andrea Facchinetti & Giacomo Cappon	Models and Interactive Tools for Amyotrophic Lateral Sclerosis (ALS) and Multiple Sclerosis (MS) Progression Prediction and Management			Republic of Korea	Science, vol 14237. Springer, Cham.	
M. Riquelme-Orozco, S. Gonzalez-Martinez, M.F. Cabrera-Umpierrez, Member, IEEE, M.T. Arredondo	Designing a Clinical Tool for Follow-up and Management of Amyotrophic Lateral Sclerosis: A Methodological Approach	45th Annual International Conference of the IEEE Engineering in Medicine & Biology Conference (EMBC).	26/07/2023	Sydney, Australia	Conference Proceedings	-
Guazzo A, Atzeni M, Idi E, Trescato I, Tavazzi E, Longato E, Manera U, Chiò	Predicting Clinical Outcomes of amyotrophic lateral sclerosis Progression	CIBB 2023	6-8/09/2023	Padova, Italy	Proc. 18th International Conference on Computational Intelligence methods for	-

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Author(s)	Title	Conference	Date	Location	Published in	Link to Paper
A, Gromicho M, Alves I, de Carvalho M, Vettoretti M, Di Camillo B	using Logistic Regression and Deep-Learning Multilayer Perceptron Approaches				Bioinformatics and Biostatistics (CIBB 2023)	
Daniele Pala, Giacomo Zagami, Cosimo Strusi, Pietro Bosoni, Cristiana Larizza, Riccardo Bellazzi and Arianna Dagliati	"Land Use Regression on Interpolated Urban Graphs to Assess Air Pollution Personal Exposure"	CIBB 2023	6-8/09/2023	Padova, Italy	Proc. 18th International Conference on Computational Intelligence methods for Bioinformatics and Biostatistics (CIBB 2023)	-
Mahin Vazifehdan, Pietro Bosoni, Daniele Pala, Eleonora Tavazzi, Roberto Bergamaschi, Riccardo Bellazzi and Arianna Dagliati	"Longitudinal Missing Data Imputation for Predicting Disability Stage of Patients with Multiple Sclerosis"	CIBB 2023	6-8/09/2023	Padova, Italy	Proc. 18th International Conference on Computational Intelligence methods for Bioinformatics and Biostatistics (CIBB 2023)	-

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Author(s)	Title	Conference	Date	Location	Published in	Link to Paper
Ruben Branco, Diogo F. Soares, Andreia S. Martins, Joana Valente, Eduardo N. Castanho, Sara C. Madeira, Helena Aidos	Investigating the impact of environmental data on ALS prognosis with survival analysis	CLEF 2023	18-21/09/2023	Thessaloniki, Greece	CEUR Workshop Proceedings	here
Ruben Branco, Joana Valente, Andreia S. Martins, Diogo F. Soares, Eduardo N. Castanho, Sara C. Madeira, Helena Aidos	Survival analysis for multiple sclerosis: predicting risk of disease worsening	CLEF 2023	18-21/09/2023	Thessaloniki, Greece	CEUR Workshop Proceedings	here
Guazzo A, Trescato I, Longato E, Tavazzi E, Vettoretti M, Di Camillo B	Baseline Machine Learning Approaches To Predict Multiple Sclerosis Disease Progression	CLEF 2023	18-21/09/2023	Thessaloniki, Greece	M. Aliannejadi, G. Faggioli, N. Ferro, M. Vlachos, Working Notes of the Conference and Labs of the Evaluation Forum (CLEF 2023), 1219-1232, CEUR Workshop Proceedings (CEUR-	here

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Author(s)	Title	Conference	Date	Location	Published in	Link to Paper
					WS.org), ISSN 1613-0073, (2023)	
Faggioli G, Guazzo A, Marchesin S, Menotti L, Trescato I, Aidos H, Bergamaschi R, Birolo G, Cavalla P, Chiò A, Dagliati A, de Carvalho M, Di Nunzio GM, Fariselli P, García Dominguez JM, Gromicho M, Longato E, Madeira SC, Manera U, Silvello G, Tavazzi El, Tavazzi E, Vettoretti M, Di Camillo B, Ferro N	Intelligent Disease Progression Prediction: Overview of iDPP@CLEF 2023	CLEF 2023	18-21/09/2023	Thessaloniki, Greece	A. Arampatzis, E.s Kanoulas, T. Tsikrika, S. Vrochidis, A. Giachanou, D. Li, M. Aliannejadi, M. Vlachos, G. Faggioli, N. Ferro (Eds.), Experimental IR Meets Multilinguality, Multimodality, and Interaction. Proceedings of the Fourteenth International Conference of the CLEF Association (CLEF 2023), Lecture Notes in Computer Science (LNCS) 14163, Springer, Heidelberg, Germany, (2023)	here
Inês Alves, Marta Gromicho, Diana Monteiro, Sara	BRAINTEASER: Enhancing Amyotrophic Lateral Sclerosis Care	Congresso de Neurologia 2023	09-11/11/2023	Porto, Portugal	Presented as a poster during the poster session	here

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Author(s)	Title	Conference	Date	Location	Published in	Link to Paper
Simão, Mamede de Carvalho	through Remote Monitoring and Artificial Intelligence Integration					
U. Manera ^{1,2} , A. Bombaci ¹ , M. Torrieri ³ , A. Canosa ^{1,2} , R. Vasta ¹ , F. Palumbo ¹ , M. Grassano ¹ , M. Daviddi ¹ , E. Matteoni ¹ , S. Cabras ¹ , L. Mazzini ^{4,5} , F. De Marchi ^{4,5} , C. Moglia ^{1,2} , A. Chio ^{1,2} and A. Calvo	Calculated maximal volume ventilation (cMVV) as a marker of early respiratory failure in amyotrophic lateral sclerosis (ALS)	ALS-MND Symposium	6-8 Dec 2023	Basel, Switzerland	Amyotrophic Lateral Sclerosis and Frontotemporal Degeneration journal supplement (volume 24, supplement 1, November 2023)	here

7. PRESS RELEASES

Three press releases have been drafted and distributed to the project's members for further dissemination in 2023.

These releases are designed to inform the public about noteworthy and significant achievements by BRAINTEASER, with the aim of garnering positive media coverage.

The following outlines the information prepared in this context:

1. [Newly developed AI Models by EU Digital Health Project To Show Promise in MS/ALS Care](#), Jan 18, 2023, unveiling the inaugural set of AI models created by BRAINTEASER
2. [BRAINTEASER Mid Term workshop](#), Mar 13, 2023, dedicated to the main outcomes of the project's midterm workshop
3. [Unleashing the IDPP@CLEF Potential: Assessing Predictive Algorithms and Enabling Data Sharing for Enhanced Research](#), Jul 17, 2023, aimed at promoting the BRAINTEASER Open Evaluation Challenge 2023 edition.

8. TRADITIONAL MEDIA COVERAGE

Throughout the present year, BRAINTEASER has garnered the attention of journalists, resulting in the publication of pertinent news in conventional media channels.

This marks a significant accomplishment for the project, especially when juxtaposed with 2022, a year during which no articles were featured in traditional media.

This achievement underscores the project's ability to capture the interest of journalists and secure positive media coverage, a testament to the noteworthy results it has attained.

Within the area of press, BRAINTEASER appeared via:

Table 8. The project in traditional media during year 3.

Publication Name	Date of press clipping	Language	Title of the article and link
Cision PR Newswire	16/11/2023	English	InSilicoTrials Awarded 2023 Innovation Radar Prize Established by European Commission in AI and Smart Devices Category
Informazione.it	17/11/2023	English	InSilicoTrials Awarded 2023 Innovation Radar Prize Established by European Commission in AI and Smart Devices Category
Multiple Sclerosis News Today	21/11/2023	English	InSilicoTrials wins award for its AI efforts in treatment development
VPH Institute	28/11/2023	English	InSilicoTrials Awarded 2023 Innovation Radar Prize
Biotechgate	16/11/2023	English	InSilicoTrials Awarded 2023 Innovation Radar Prize Established by European Commission in AI and Smart Devices Category
EUROPEAN OFFICE OF CYPRUS	22/11/2023	English	The best of EU-funded innovations: three HaDEA beneficiaries among finalists of the Innovation Radar Prize
European Health and Digital Executive Agency (HaDEA)	10/11/2023	English	The best of EU-funded innovations: three HaDEA

Publication Name	Date of press clipping	Language	Title of the article and link
			beneficiaries among finalists of the Innovation Radar Prize
Technology Magazine	16/11/2023	English	InSilicoTrials Awarded 2023 Innovation Radar Prize Established by European Commission in AI and Smart Devices Category
Yahoo finance	16/11/2023	English	InSilicoTrials Awarded 2023 Innovation Radar Prize Established by European Commission in AI and Smart Devices Category
Market Watch	16/11/2023	English	InSilicoTrials Awarded 2023 Innovation Radar Prize Established by European Commission in AI and Smart Devices Category
Exame Informática	25/10/2023	Portuguese	O que falta à IA para ser útil à Ciência
Saudeonline	22/09/2023	Portuguese	Projeto de big data visa ajudar doentes com esclerose lateral amiotrófica e esclerose múltipla

9. COMMUNICATION AND DISSEMINATION SYNERGIES WITH OTHER PROJECTS AND INITIATIVES

During the previous years of the BRAINTEASER project, coordinators from similar EU-projects came together to discuss and agree on common issues in their research field. In 2022, they agreed that regulatory issues (e.g., different regulation in the EU-member states; Linking regulatory challenges to the commercialisation plan; the use of AI to support healthcare) are one of the main challenges in the exploitation phase of their research.

As the regulatory issues were quite broad and very specific to each project and difficult to address and implement in the BRAINTEASER project, we decided to broaden the topic and type of liaison activities during the winter plenary meeting in 2023. The BRAINTEASER liaison activities plan was updated, and new actions were implemented.

To reassess the mutual interest points of collaboration, focus areas and additional liaison activities, EBC planned individual calls with the coordinators of already identified as well as new EU-projects between March and August 2023. In total, 9 BRAINTEASER related projects (i.e., all the EU-projects funded under the same topic as BRAINTEASER and relevant brain research funded under the same main programme) were contacted and provided input.

In addition to the calls and with the aim to identify more relevant projects and players for the BRAINTEASER community, EBC also attended 2 in-person events where several EU-funded project coordinators, relevant initiatives and players in the BRAINTEASER space came together.

- EBC attended the [RADAR-AD final conference](#) in Amsterdam (Netherlands) to learn more about the project results and the consortium exploitation plans – including seeking a qualification advice from the European Medicine Agency. EBC had a chance to further discuss BRAINTEASER with RADAR-AD partners including the coordinator, which led to the invitation of a regulatory expert to share RADAR-AD best practices in the BRAINTEASER roundtable discussion at Brain Innovation Days (October 2023).
- EBC attended the “[Conference on Personalised medicine: the evolution of healthcare to improve people's lives](#)” organised in the framework of the Spanish EU-presidency in Valencia (Spain) to learn more about the [European Partnership on Precision Medicine](#) and to find relevant projects for BRAINTEASER to liaise with. Following this meeting, EBC invited TEHDAS coordinator, Elina Drakvik, Sitra, Finland, to join the BRAINTEASER roundtable discussion at Brain Innovation Days (October 2023).

In October 2023, EBC organised an event during the [Brain Innovation Days](#) around the topic of the call to which BRAINTEASER and other EU-projects applied (e.g., LETHE): [Personalised early risk prediction, prevention, and intervention in brain diseases – Challenges and opportunities of AI and Big Data technologies](#) (see agenda below). This event aimed to promote the exchange of experience, knowledge and data between related projects and initiatives. Featuring 3 EU-funded projects (BRAINTEASER, [LETHE](#) and [eMOTIONAL Cities](#)), 2 projects co-funded by the European Commission ([TEHDAS](#) and [RADAR-AD](#)) and a global initiative ([PROMS](#)), the event addressed personalised early risk

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prediction, prevention and intervention in the brain space (neurology and mental health), and benefited from patient perspective and regulatory (i.e., European Medicine Agency) experts' insights.

The event was moderated by Usman Khan, Chair of the Motor Neurone Disease (MND) Association and living with multiple sclerosis.

Carl Mörch stressed the importance of providing education in the language of people and adapting the tools to the audience so that AI doesn't make inequalities even greater.

The EU-project coordinators pointed out the challenges researchers in the field are meeting (notably different regulations across the countries and the need for enough data to register developed tools as medical devices) and called the entire scientific community and patient organisations to unite forces in a co-design approach.

The patient representatives stressed the importance of a renewed humanism in medicine and integrating Patient Reported Outcome Measures (PROMS) in healthcare policy, research and practice: in the context of AI and new technologies, there's a need to find new ways to engage patients and digital approaches could contribute to make patient engagement an even more successful partnership.



Figure 13. BRAINTEASER event hosted by the Brain Innovation Days.

The regulatory experts addressed the identified challenges researchers met along the way for translating brain research into innovation. They all highlighted the importance of fostering collaboration between key players in the field including companies and players and engaging the society as a whole (notably through the implementation of patient advisory boards).

Each expert in this event also shared their perspective on the value of multi-stakeholder collaboration in the brain space to achieve common goals. Those interviews also serve as content for the CoP and as BRAINTEASER communication material (see above).

Programme

2 pm	Welcome Barbara Di Camillo – BRAINTEASER Scientific Coordinator, University of Padova
2.05 pm	Bridging the gap between medical technologies and society Carl Mörch – Co-Director, Artificial Intelligence Institute for the Common Good
	Session 1: latest Brain Discoveries
2.20 pm	MS and ALS: advancing clinical decision making through wearables Barbara Di Camillo – BRAINTEASER Scientific Coordinator, University of Padova
2.30 pm	Preventing dementia with Big Data and Machine Learning Hannes Hilberger – LETHE Representative, FH Joanneum
2.50 pm	Neurourbanism: Data Science & Technology for mentally healthy cities Bruno Miranda – eMOTIONAL Cities Co-Coordinator, Universidade de Lisboa
	Session 2: patient perspective
3 pm	PROMs integration in healthcare policy, research and practice Orla Galvin – Executive Director, European Federation of Neurological Associations (EFNA)
3.10 pm	Toward a renewed humanism in medicine: the case of the global PROMS Initiative Paola Zaratin – PROMS Initiative SSC Co-Chair, Italian MS Society – Italian MS Foundation
3.20 pm	Session 3: panel discussion with regulatory experts
	Vera Nies – RADAR-AD Program Manager, Lygature
	Elina Drakvik – TEHDAS2 Representative, University of Helsinki
	Florence Butlen-Ducuing – Scientific Senior Specialist, European Medicine Agency
3.50 pm – 4.10 pm	Session 4: open discussion Moderated by Usman Khan – Motor Neurone Disease Association

Figure 14. BRAINTEASER event programme.

In November 2023, EBC organised the event “[Our Brains, Our Future](#): The Value of Brain Research – From Basic to Clinical – to Improve Patient Outcomes in Europe” in the Senate in Madrid (Spain) and introduced Madrid-based BRAINTEASER partners to representatives from relevant players in the EU Multiple Sclerosis space ([Italian MS Society](#) – Italian MS Foundation, [European Charcot Foundation](#), [Merck Healthcare](#)). These newly created connections will facilitate the sustainability of the projects’ results.

As for the joint webinar on AI trustworthiness in brain digital health, set to take place in July 2023 and feature BRAINTEASER, [ALAMEDA](#) and LETHE, it has been postponed until a later date.

2024 liaison activities will include:

1. Two [Brain Talks podcasts](#) featuring BRAINTEASER and a sister project of which one will take place in January 2024 (i.e., BRAINTEASER and eMOTIONAL Cities).
2. A joint article featuring all the projects listed above, their research findings and a set of recommendations.
3. A public event at the Brain Innovation Days.

10. CHALLENGES, RISKS, MITIGATION PLAN AND LESSONS LEARNED

10.1 Challenges experienced

This report serves as a tool to identify the achievements but also barriers that influence maximal impact and should be addressed in the upcoming months. Thus, the following challenges are listed as learning points that will be taken forward by the communications and dissemination team to improve BRAINTEASER visibility, outreach, stakeholder engagement and ultimately, sustainability.

The first challenge is related to the project newsletter, and the number of subscribers/ receivers. Although the newsletter has achieved increased reach and engagement during year 3, the BRAINTEASER consortium would like to engage with a wider audience through the newsletter, in order to be able to effectively disseminate project results and engage with stakeholders in the coming months. Before the planned release of the 6th issue (February 2024), ECHAlliance, supported by all partners, will run a social media campaign aiming to attract more subscribers. The project consortium was related to the creation and implementation of the content ideation strategy.

The other, more internal challenge is related to the CoP, and its enrichment with material relevant to a wider spectrum of stakeholders and audiences. Apart from the efforts made by the BRAINTEASER consortium with regards to content creation, it is important to engage stakeholders in sharing content and using the CoP platform as “a collaborative space for people with multiple sclerosis and amyotrophic lateral sclerosis, their clinicians, caregivers, and the general public who are interested in using AI and other digital tools to help manage these conditions”. Aiming to foster the exploitation and sustainability potential of the CoP as a collaborative platform, the BRAINTEASER partners will actively focus on inviting all relevant stakeholders to share through the CoP latest advances, trusted knowledge and resources, while in parallel increasing their own efforts for creation of more such content.

10.2 Next steps

Next steps for the BRAINTEASER project will first and foremost aim to uphold and reinforce the Communications-Dissemination-Sustainability triangle mentioned earlier in this report. This means that BRAINTEASER will integrate the recommendations and even the risk and mitigation plan into the work and processes of the project. These changes will occur gradually, beginning with a comprehensive overview of the main findings of this report.

Year 4 of the project is expected to be the most interesting one, in terms of finalized results. Attracting more audiences to the project newsletter is crucial for effective dissemination of these results, while enriching the BRAINTEASER CoP with content and enabling stakeholders to actively contribute in it, is crucial for the exploitation and sustainability potential of this collaborative platform and the legacy of the BRAINTEASER project in general. ECHAlliance, as the CD&SE Manager will focus on coordinating all partners' efforts towards these steps.

BRAINTEASER – D10.7

If we all do our part, we will ensure the positive trends in growth across the different communications channels continue rising.

11. CONCLUSIONS

BRAINTEASER project started during the times of an unprecedented crisis that might have influenced its internal communications and external outreach. Despite this, it has managed to ensure smooth communications amongst partners and promote grand visibility on the busy international stage of research and innovation initiatives. Understandably, for a European digital health project of this complexity, there were also some challenges that this report described for purposes related to transparency and points of focus of improvement for the consortium. The project will build upon these learned experiences to guide the activities during the year 4 of the project.

BRAINTEASER has continued embarking on the promising path it first began three years ago. We have seen that there is visible growth across many dimensions of the project. We also anticipate that such growth will not stop, especially as final outputs come to light. That said, it will be vital that communications and dissemination embrace all opportunities for impact so the project enjoys the highest probability of successful uptake after its completion.