



DAIsy – Developing AI ecosystems improving diagnosis and care of mental diseases

ITEA 4 – 21016

Work package 7 (WP7)

Dissemination & Exploitation

Deliverable 7.1. Dissemination Strategy

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1	Dec 2023	Initial version
2		Final version

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1 Dissemination strategy

This task focuses on the dissemination of scientific- and technological results through national and international publishing channels, targeting the mental healthcare community. In a scientific context, we will send results to scientific publishers in Turkey/Portugal/Germany, and the Netherlands.

Commercial dissemination will be targeting potential users and patient associations by actively being involved in relevant health information online trading shows, social media events, and network events. For these purposes, a variety of dissemination actions will be performed participation in mental healthcare conferences in 2023 onwards, healthcare & AI- events, workshops, and targeted presentations to exhibitions and/or prospective customers.

At the start of the project, public available- and potential customer portal will be published as an interactive website, providing the latest project developments and trial applications for customers.

The overall dissemination strategy is to provide the Daisy results across the targeted regions, academic networks of health care providers. The goal is to increase the reach of evidence with the message of the Daisy result of improving diagnosis and care of mental diseases with the Daisy AI ecosystems.

The latest findings, results and demo's are material to publish through the website, during the project and after the project end. The website will be live after the project end to assist in future exploitation.

During the project we will evaluate on the effectiveness of the dissemination strategy and improve the strategy accordingly.

The strategy is to publish and spread the information on:

- Achievements
- Exploitable results

Achievements includes publications and posters, attending and organizing conference, workshops and tradeshow.

Exploitable result includes open-source solution and new product applications.

2 Publications

Relevant publications will be mentioned on the website, feedback on the publications will be measured and evaluated during the project in order to improve the effectiveness (eg feedback from the market/academia).

Publication strategy:

In order to publish effectively all partners will send their coming publication topic and which publisher they will send out the publication.

Publications by multiple partners will be coordinated to achieve maximum effect. This will be the case of uses cases where more partners are involved. Depending on the case, it can be decided to focus on specific countries or international publishing.

The joint publication plan is to publish important findings during and at the end of the project. Attached there are examples of relevant publications.

3 Conferences

The strategy is to coordinating attend relevant national and international conferences and provide feedback after the conference with an action plan.

Partners will provide every half year their conferences and discuss which partners attend in order to avoid doubles.

Attached there are conferences which are relevant for the upcoming period.

4 Public Website

The project website is <https://daisy-project.org/>

The website will be useful to the healthcare community with an interest of the last innovations on diagnosis accuracy and treatment selection in Major Depressive Disorder (MDD) and Eating Disorder (ED).

The website contains the introduction to the project, use cases, consortium information, blog posts and news and articles of our latest developments.

The publication strategy is to publish latest news, developments and findings on the website.

Attached screenshots of the website.

5 Attachments

Conference Paper:

A conference paper titled "Developing Advanced AI Ecosystems to Enhance Diagnosis and Care for Patients with Depression" was presented at Conference EFMI STC 2023 in Torino, Italy on the 24th of October 2023 and has been published in the proceedings, available at

<https://ebooks.iospress.nl/volumearticle/64995>.

Developing Advanced AI Ecosystems to Enhance Diagnosis and Care for Patients with Depression

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Abstract. Major Depressive Disorder (MDD) has a significant impact on the daily lives of those affected. This concept paper presents a project that aims at addressing MDD challenges through innovative therapy systems. The project consists of two use cases: a multimodal neurofeedback (NFB) therapy and an AI-based virtual therapy assistant (VTA). The multimodal NFB integrates EEG and fNIRS to comprehensively assess brain function. The goal is to develop an open-source NFB toolbox for EEG-fNIRS integration, augmented by the VTA for optimized efficacy. The VTA will be able to collect behavioral data, provide personalized feedback and support MDD patients in their daily lives. This project aims to improve depression treatment by bringing together digital therapy, AI and mobile apps to potentially improve outcomes and accessibility for people living with depression.

Keywords. Depression, virtual therapy assistant, neurofeedback therapy, smartphone, wearables, fNIRS, EEG, AI

Journal paper:

A review paper 'Optimizing real-time fNIRS in BCI and neurofeedback: A comprehensive overview of strategies to improve reliability, spatial specificity, and signal quality' was submitted to the special issue 'Advances in Mobile Optical Brain Activity Monitoring' in the Journal 'Frontiers in Neuroergonomics - Neurotechnology and Systems Neuroergonomics' and is currently under review.

Preprint available at: <https://osf.io/9bgku/>.

Optimizing real-time fNIRS in BCI and neurofeedback: A comprehensive overview of strategies to improve reliability, spatial specificity, and signal quality

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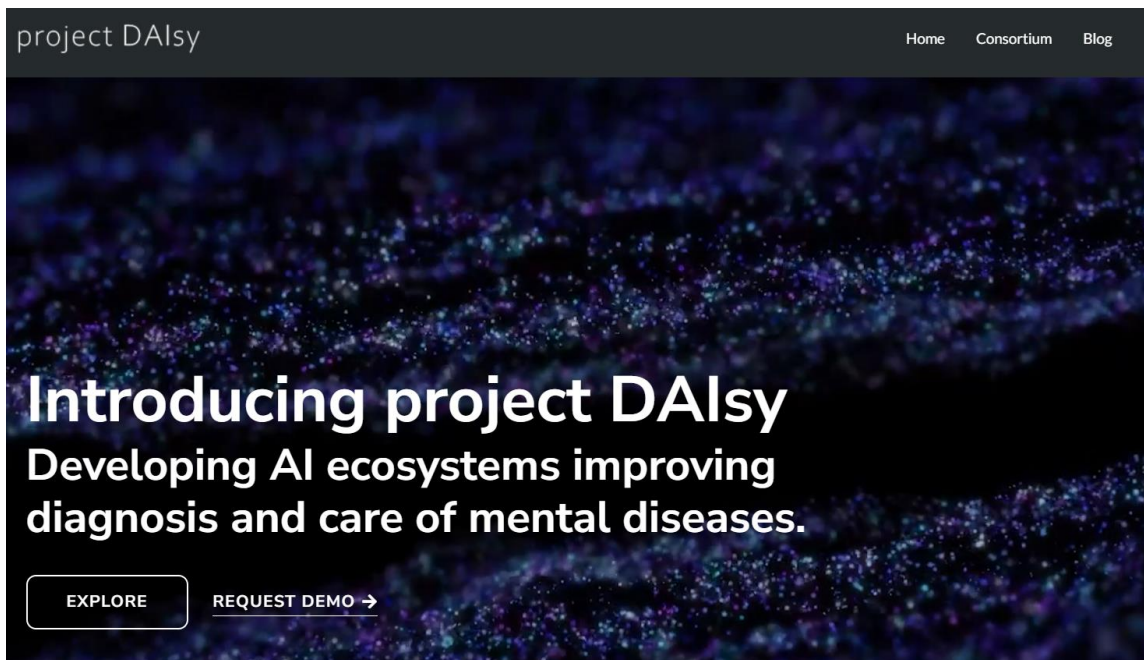
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2 ABSTRACT

3 The optical brain imaging method functional near infrared spectroscopy (fNIRS) is a promising tool
4 for real-time applications such as neurofeedback and brain-computer interfaces. Its combination
5 of spatial specificity and mobility makes it particularly attractive for clinical use, both at the
6 bedside and in patients' homes. However, achieving reliable and high-quality signals in real-time
7 fNIRS applications requires careful consideration of two crucial aspects during the preparation
8 and execution phases. First, while fNIRS shows good spatial specificity in capturing superficial
9 cortical brain regions, reliably and consistently targeting specific areas within this region can be
10 challenging, especially when repeated measurements are required. In addition, the variability of
11 cap placement can cause problems due to a lack of anatomical information. Second, minimizing
12 noise in signals used for real-time applications is crucial to ensure that they largely reflect the
13 true underlying brain activity. However, fNIRS signals are prone to contamination from cerebral
14 and extracerebral systemic confounds as well as from motion artifacts. Inadequate real-time
15 preprocessing can result in the system running on noise rather than reliable brain activity.
16 This review article aims to help advance fNIRS-based real-time applications by covering various
17 strategies to improve spatial specificity and signal quality. For this purpose, possible optimization
18 options are discussed, which should help to improve the planning process and the implementation
19 of real-time studies and thus facilitate the development of future real-time applications. Based
20 on the existing expertise of fNIRS researchers, recommendations are made that could help to
21 improve the reliability and repeatability of these applications.

22 **Keywords:** fNIRS, real-time, preprocessing, neurofeedback, BCI, noise reduction, systemic activity, motion artifacts, spatial specificity

Home Page:



The hero section of the Project DAIsy website features a dark background with a dense field of colorful, glowing particles in shades of blue, purple, and green, creating a sense of depth and movement. The text is white and positioned on the left side of the image.

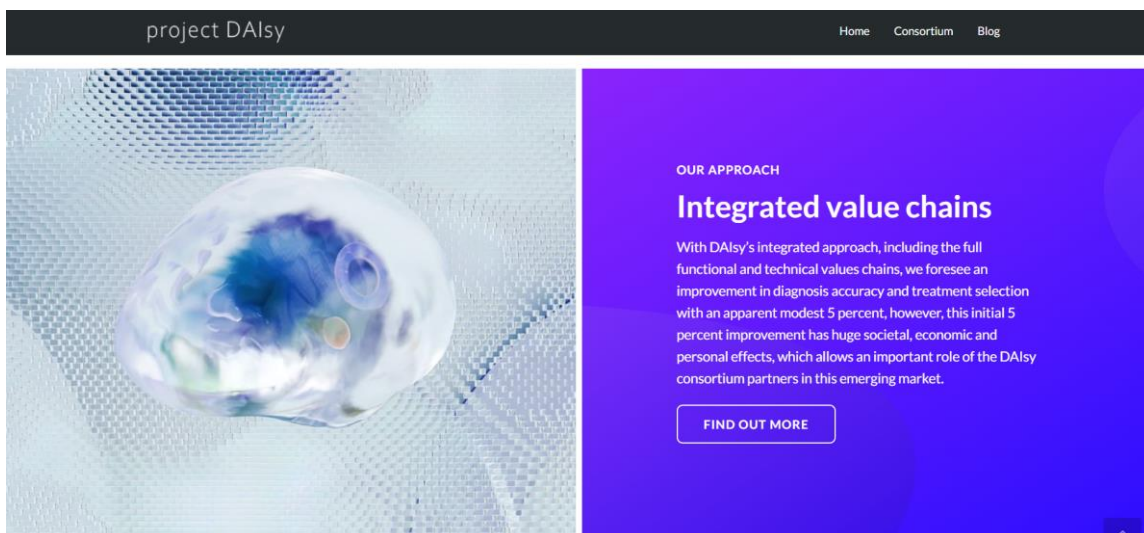
project DAIsy Home Consortium Blog

Introducing project DAIsy

Developing AI ecosystems improving diagnosis and care of mental diseases.

[EXPLORE](#) [REQUEST DEMO →](#)

Project Information



The Project Information section is divided into two main areas. On the left is a 3D visualization of a human brain, rendered in a light blue and white color scheme, set against a background of a grid of small, glowing blue squares. On the right is a solid purple background with white text and a button.

project DAIsy Home Consortium Blog

OUR APPROACH

Integrated value chains

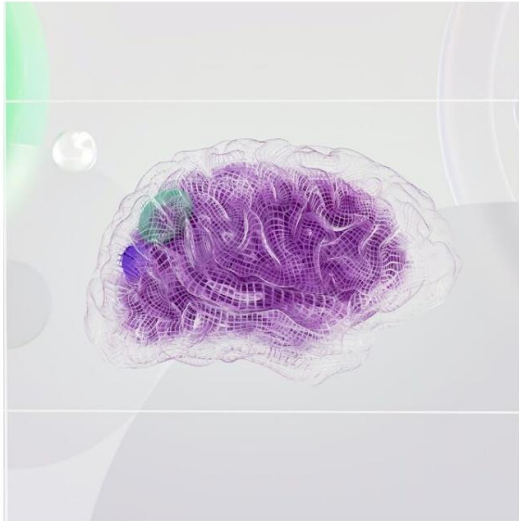
With DAIsy's integrated approach, including the full functional and technical values chains, we foresee an improvement in diagnosis accuracy and treatment selection with an apparent modest 5 percent, however, this initial 5 percent improvement has huge societal, economic and personal effects, which allows an important role of the DAIsy consortium partners in this emerging market.

[FIND OUT MORE](#)

Use cases:

PROJECT RATIONALE

Our use cases



– Dutch use case: MDD and ED

The Dutch use case focuses on two main mental diseases and their interplay: Major Depressive Disorder (MDD) and Eating Disorder (ED). For both diseases, DAISY will develop, research, and validate AI-based tooling for the diagnosis, treatment decision support, and prognosis by the analyses of multiple sources of data assessing the status of patients.

+ Swedish Use Case: Clinical information synthesis

+ Turkish Use Case 1: NPISTANBUL Brain Hospital

+ Turkish Use Case 2: Cerrahpaşa Hospital

+ German Use Case 1: Multimodal Neurofeedback

+ German Use Case 2: Virtual therapy assistance

+ Portuguese Use Case: Self-management of MDD

Project Consortium:



German Coordinator: A. Sander -
Ascora



Dutch coordinator:
B. Stalknecht
SemLab



Overall Coordinator: Arda Ödemiş
ARD GROUP, Türkiye



Portugese Coordinator: ISEP

OUR TEAM

The foundation of our project

Our exceptional consortium is the heartbeat of our project, and the driving force behind our success. As a diverse group of best of breed organizations, we understand that true innovation stems from collaboration, creativity, and expertise.

[OUR CONSORTIUM](#)

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udiobestand		Opnamestudio	
IPITIE	STATUS	DATUM	
Iké, de staat a...	Verwerkt	11/10/2023	
zo, de is gesta...	Verwerkt	11/10/2023	

Semlab delivers 1st prototype GGZ Intake AI

Venue: AMC, Meibergdreef 9, 1105 AZ
Amsterd The first prototype of Semlab's
GGZ intake interview AI application was
delivered to GGZOB. The functionality of
this prototype includes: Create an audio
recording of the intake interview
Transcribe the audio recording Classify ...
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30 juni 2023

project DAly potential

DAly addresses the current limitations of
accurate diagnosis, monitoring and
prognosis of mental diseases, which can be
addressed by the multifactorial aspect of
the progress of the disease, by combining
novel data acquisition techniques and novel
AI methodologies for heterogeneous ...
[Read More](#)

1 januari 2023

Dutch consortium Kickoff meeting

Venue: AMC, Meibergdreef 9, 1105 AZ
Amsterdam Room: Voorbijzaal L-131 Date:
Thursday Dec. 22, 2022 Attendees:
Dedicated DAly Engineers/Managers
working on the project

29 november 2022