

VirtualBrainCloud

Personalized Recommendations for Neurodegenerative Disease

The VirtualBrainCloud (TVB-Cloud) progress

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2022 public inchrisal reports	events, dissemination and communication
www.VirtualBrainCloud-202	0.ец

Public deliverable report

D9.3: Presentation at conferences and exhibitions, organization of yearly stakeholder event, participation in science outreach events

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Dissemination level Website

public www.VirtualBrainCloud-2020.eu



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1. Introduction

The burden of dementia represents a growing challenge for the elderly population, as well as for society and healthcare systems at large. While neurobiological research continues to unravel its underlying mechanisms, treatment options remain limited. Therefore, the ideal approach lies in the prevention of dementia.

In the present project, we have conducted research and developed digital infrastructure to tackle the challenge of dementia.

Part of our work was dissemination and outreach. In this deliverable report, we demonstrate how our outreach and dissemination activities were reported on our project website.

2. Partners involved

CHARITE, TP21, ALL



3. Description of work performed

In TVB-Cloud, a multitude of dissemination actions have been performed, targeting the various stakeholder groups.

To make all these activities visible, the consortium has created a sup-page on the public project website. The VirtualBrainCloud activities are being updated there permanently. In addition, summaries of achievements have been published annually (M12, M24, M36, M48). A final public report will be added.

4. Results

We have created two areas on the project website¹ that demonstrate the progress of the TVB-Cloud project.

The first area can be found under the menu item "Progress"² (Figure 1)

Construction Project Progress Publications Videos Consortium News		
The VirtualBrainCloud (TVB-Cloud) progress		
cloud-based environment that leverages the potential of big data and high-performance computing (HPC) for personalized prevention and treatment of neurodegenerative diseases (NDO). "VHO-Coucil as embedded in The European Coucil initiative. It combines leadery existing technologies and contributions to the development of neuronalized communication technology (ICT) services while ensuring the appropriate data safety and protection. The progress of the TVB-Cloud project described below on a yearly basis. TVB-Cloud results @ EC Cordis		
project results and achievements		
2023 public technical reports Optimization and evaluation of pipeline for practical use concluded Seamless integration of electrophysiological data workflows with TVB modelling Multi-resolution TVB models with evalues of contrain agrinularity	events, dissemination and communication Public summary on TV&-C progress - period 3 - 0112 2021 - 31.05 2023 soon here HEalth, Law, and Technology (HELT) Symposium 2023	
Audi-resolution i vermodes with evaluate to organize granuarity CTS2 standard compliant interface will be released to project partiers Publication of a causality study based on an instrumental variables approach TVB human models will be made available. We will dentify the biophysical terms in the "VB address" to compared to healthy individuals, and in relation to cognetive status Validited Use Case of a brain simulation platform for MOD, usable to pscientific and clinicity, and in relation to cognetive status Validited Use Case of a brain simulation platform for MOD, usable to pscientific and clinicity, and in relation to cognetive status		
physiological mechanisms 2022 public technical reports	events, dissemination and communication	
Webmar with demonstration of personalized simulation ("case studies") using the integrated modern TVB Workflows established that link progression models and TVB Final VBC platform is fully integrated and validated and full documentation of its functionalizes Validated and benchmarked data fitting workflow will be provided as a software for brain model personalization	Neuroscience 2022 TWS-EBRANS Integrated Workflows Workshops World Health Summit 2022. BIG Neuroassentby on Cognitive Virtual Brain Symposium: From Oracina Neuroconts to Consciouzness 2nd Expert Summit on the Future of Deep Brain Stimulation scientific publications	
Final analysis of relevant legal, ethical and regulatory framework, 2nd iteration, including a report on best practices and industry standards	TVB-Cloud reautis @ EC Cords Towards an efficient validation of dynamical whole-brain models Large-scale network metrics improve the classification performances of rapid eye-movement sleep behaviour disorder patients Frain Modelion of the onewards the Providers.	

Figure 1 TVB-Cloud Project Website has a dedicated "Progress" Area

¹ https://virtualbraincloud-2020.eu/

² https://virtualbraincloud-2020.eu/tvb-cloud-progress.html



Diverse dissemination activities, publications and deliverable reports are listed there per annum.

year	public reports	events	publications
2019	2	5	6
2020	10	11	10
2021	8	13	7
2022	5	6	5
2023	7	1	3

Public deliverables of the project are accessible via hyperlinks. We also added for each project period a public summary report (Figure 2).

2021	
public technical reports	
Most appropriate RS-processing pipelines for TVB modelling finished	Public summary on TVB-C progress - period 2 - 01.06.2020 - 30.11.2021
Group level SEEG brain dynamics measures and analysis pipeline for SEEG	Brain Connectivity Workshop
Full-cohort individual MEG brain dynamics measures at the disposal	"Personalized Multi-scale Brain Simulation" Virtual Course 15th International Conference on Alzheimer's & Parkinson's Disease AD/PD 2021
Framework for multi-modal integrated annotations established and in use	Alzheimer Europe co-hosts European Parliament Workshop on "Digital data for dementia research and

Figure 2 Example from the Progress area of our project website displaying the link to the downloadable summary report for 2021 (text in orange color).

Additionally, 39 public reports of the project can be found in the website area "Pubic Reports"³ (Figure 3).

ject Progress	Publications >> Conferences & Events Journals Public reports Press Videos Consortium News
	get the report
2021	TVB-C public summary period 2 - 01.06.2020 - 30.11.2021 get the report
	Alzheimer Europe sets out recommendations to improve data sharing in dementia research
	Public Deliverable 3.2
	Most appropriate RS-processing pipelines for TVB modelling finished
	» get the report
	Public Deliverable 3.6
	Group level SEEG brain dynamics measures and analysis pipeline for SEEG
	» get the report
	Public Deliverable 3.7
	Full-cohort individual MEG brain dynamics measures at the disposal
	» get the report
	Public Deliverable 2.10

Figure 3 Our project website provides a list of all public reports that have been released during the course of the project.

³ https://virtualbraincloud-2020.eu/tvb-cloud-publications.html#publications-reports



In the "News"⁴ Section of the website we provide announcements of dissemination activities (Figure 4).

Home Project Progress Publi	ications Videos Consortium News
	News
Oct	33rd Alzheimer Europe Conference
2023	
	Participate at the 33rd Alzheimer Europe Conference which will be organised in Helsinki from 16 to 18 October 2023 in collaboration between Alzheimer Europe and Muistiliitto, the Alzheimer's Society of Finland.
	This year's conference will be focusing on 'New opportunities in dementia care, policy and research'.
	» Visit the official website of the event.
Oct	World Health Summit 2023
2023	
	Join the World Health Summit 2023 taking place from October 15th to October 17th, 2023 in Berlin, Germany and digitally.
	This year's World Health Summit will focus on "Science, Innovation, and Policies" by reflecting on the most pressing topics, including a session on the "Global Testing and Experimentation Facilities for Health AI and Robotics" that we are organizing.
	> Registration and program on the official website of the event.
	Registration and program on the official website of the event.
Jul	Al4Health Summer School 2023
2023	
	Prof. Petra Ritter is invited to give a lecture at 2023 Al4Health Summer School, organized by the French Health Data Hub, as well as some France's leading AI research institutions, from July 3rd to 7th, 2023 in a hybrid format, both online and in person, in Paris, France.
	The Al4Health Summer School will cover the latest advances in the field of Al applied to health.

Figure 4 The "News" section of our project website announces dissemination and outreach activities of the consortium.

Number of news on the website: 14 in 2023, 41 in 2022, 59 in 2021, 39 in 2020, and 16 in 2019.

Our project has organized various stakeholder events per year. In the following we list a few prominent examples:

- Azheimer Europe Conference organized annully by partner Alzheimer Europe
- World Health Summit organized annully by partner Charité
- European Parliament Lunch Debates organized annually by Alzheimer Europe (once coorganized by Charité)

The VirtualBrain-Cloud Website

Beside project promotion

- on partners' websites (https://id.univie.ac.at/drittmittelfinanzierte-projekte/laufendeprojekte/virtualbraincloud),(https://meg.ucm.es/patients/personal-data-virtual-brain-cloud), https://www.fz-juelich.de/en/ias/jsc/projects/virtualbraincloud-vbc),
- in new media such as youtube <u>https://www.youtube.com/watch?v=kPMo4ZuPBMk</u>
- via partners' social media accounts

the project website is a major and sustainable tool for visibility.

The website had a significant number of visits:

⁴ https://virtualbraincloud-2020.eu/tvb-cloud-news.html



Year	Visits	Pages visited
2019	6.730	1.758.946
2020	12.805	1.711.756
2022	10.810	455.729
2023*	10.155	433.556
*01.01.2023 - 30.06.2023		

The duration of stay on the **TVB-C webpage** was 1h and more for up to 33% of visitors. While in 2019 and 2020 persons mainly from EU and UK visited the website, in 2021-2023, an increasing number of visitors were from the United States.



5. Conclusion, next steps

Our project was engaged in comprehensive outreach and dissemination activities as evidenced by the project website.

After the end of the project, we will maintain the website so that all content will continue to be available.