

# NEUROPULS

Deliverable 7.1

## Visual Identity, Project Website and social network account

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Duration 48 months



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## Document Abstract

This report presents an overview of the NEUROPULS Horizon Europe project (Grant Agreement n° 101070238), including its visual identity, project website, and social media accounts.

The visual identity section provides an in-depth look at the project's logo, color palette, typography, and overall branding guidelines.

The website section explores the administration and management of the site, as well as its architecture, which includes the global structure, project overview, partner information, news and events, documents, and contact page.

Finally, the social media section examines the project's presence on Twitter and LinkedIn, including the roles and responsibilities of social media administrators, monitoring and reporting activities, and a summary of their social media strategy.

Overall, this report aims to provide a comprehensive understanding of the NEUROPULS project's visual identity and online presence.

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# 1. Website

## 1.1 Introduction

The NEUROPULS Project is a cutting-edge initiative aimed at advancing the state-of-the-art in neuromorphic computing technology to enable low-power and secure edge computing applications. As self-driving vehicles, Internet of Things (IoT), and Industry 4.0 continue to proliferate, the need for processing massive amounts of data locally and securely has never been greater. Traditional electronic computing systems have limitations such as high latency and low energy-efficiency, which are no longer suitable for these applications. Neuromorphic computing, a brain-inspired approach, is the solution to these problems.

The objective of the NEUROPULS Project is to develop a next-generation computing system that utilizes novel photonic computing architectures and security layers based on photonic physically unclonable functions (PUFs), augmented silicon photonics CMOS-compatible platforms, and emerging non-volatile phase change materials (PCMs). The project aims to demonstrate a two-order of magnitude improvement in energy efficiency, enabling neuromorphic accelerators to perform complex computational tasks with significantly reduced power consumption.

To achieve this objective, the NEUROPULS Project will focus on the following key objectives:

- Development of a CMOS-compatible platform addressing the integration of silicon photonics with PCMs and III-V materials
- Development of a low-power and secure RISC-V interfaced neuromorphic accelerator based on the integration of silicon photonics, novel PCMs, and Q-switched III-V lasers
- Development of a system-level simulation platform for PCM-based photonic low-power accelerators using photonic security layers

By developing secure hardware accelerators based on novel neuromorphic architectures and PUF-based security layers, the NEUROPULS Project will provide superior security, energy-efficiency, and speeds for spiking and formal recurrent neural networks (NNs) compared to currently available technology. The project's outcomes will revolutionize the future of computing and unlock the potential of neuromorphic technology for low-power and secure edge computing, enabling the next generation of intelligent, energy-efficient, and secure applications.

Therefore, a functional and attractive public website is essential for the project to build interconnectivity among the targeted NEUROPULS audiences.

The NEUROPULS website can be reached at <https://neuropuls.eu/> and is running since January 2023. It contains key information on the project: project's summary and objectives, partners' information, news, events and public documents related to the project, and a graph-chart showing the project in figures. Special care has been taken to provide good readability on mobile devices as well.

The website is compliant with article 17.2 of the Grant Agreement as it uses the European emblem (flag) that is associated to the sentence to acknowledge the financial support received under Horizon Europe.



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101070238 . This publication [communication] reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

Figure 1: NEUROPULS Website – Acknowledgement of EU funding

## 1.2 Administration and management of the website

As a Research and Innovation Action (RIA) granted by the European Union, the NEUROPULS project, requires a public website which fully reflects its propensity and responsibility for the dissemination activity. With this ambition in mind, the NEUROPULS website was launched at the end of January 2023 and is hosted by ABSISKEY (HPE subcontractor).

### 1.2.1 Website Administrators

The NEUROPULS Website Administrators and Web Content Editors are Thomas Van Vaerenbergh (HPE), Fabio Pavanello (CNRS), Diane Gabaret and Clara Pawlak (Absiskey, subcontractor). The Consortium members can contact them for any questions or comments at the following email addresses: [thomas.van-vaerenbergh@hpe.com](mailto:thomas.van-vaerenbergh@hpe.com), [fabio.pavanello@cnrs.fr](mailto:fabio.pavanello@cnrs.fr), [d.gabaret@absiskey.com](mailto:d.gabaret@absiskey.com), and [c.pawlak@absiskey.com](mailto:c.pawlak@absiskey.com).

### 1.2.2 Website management tool

The NEUROPULS website has been developed using the PHP language and the cross-platform JavaScript library, jQuery, which allows the creation of powerful dynamic web pages and Web applications.

The NEUROPULS website is coupled with Project netboard, a web management tool used for the management of the project, which enables through its user-friendly interface to continuously update the information to be published on the web site. Thus, news, events, project results may be added or removed at any time, so as to keep the flow of communication going on during the project lifetime.

## 1.3 Architecture of the website

### 1.3.1 Global structure

The website displays a top bar where there is a menu depicting 7 category sections. The category sections currently shown on the website are in the following order:

- Project
- Partners
- Graph-Chart
- News

- Events
- Documents
- Contacts us



*Figure 4: NEUROPULS Website top menu bar*

The category sections include both static and dynamic information on the project:

#### Static information

Category Section	Description
Project	Project Abstract and Objectives
Partners	Partner list, contact persons, partners map
Graph-Chart	The project in figures
Contact	A form to contact the project management team

#### Dynamic information

Category Section	Description
Project	News Slider
Project	A link towards the social network accounts of the project
News	Any public news about the project
Events	Any event related to the project
Documents	Any public documents related to the project

## 1.3.2 Project

In this section the abstract including the rationale behind the project is provided as well as the objectives are detailed. A news slider appears on top of this section to illustrate relevant news related to the project.

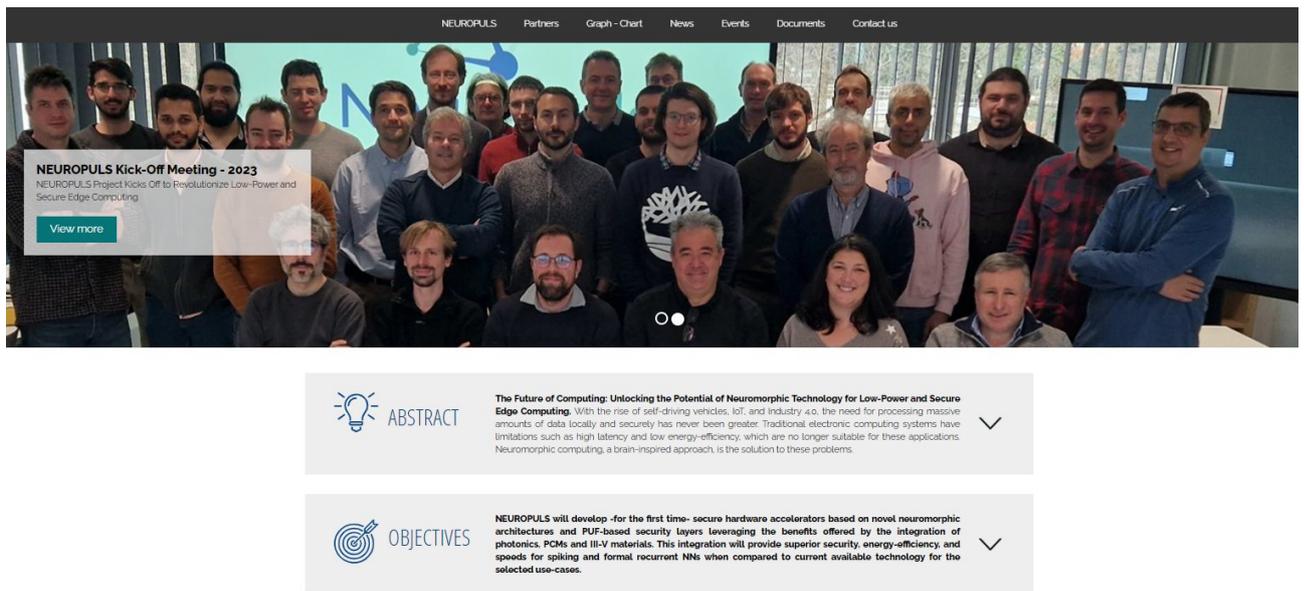


Figure 5: NEUROPULS Website – Project Section with the abstract, objectives and news slider

## 1.3.3 Partners

A list of partners and contact persons can be found in this section. For all partner organizations, hyperlinks to their websites have been added. For each contact person, a photo and hyperlinks to email addresses, and whenever relevant, social media accounts (LinkedIn and link to publications) have been added.

A partner map showing all partner organizations' location can be found at the end of the Partners' section.

## PARTNERS

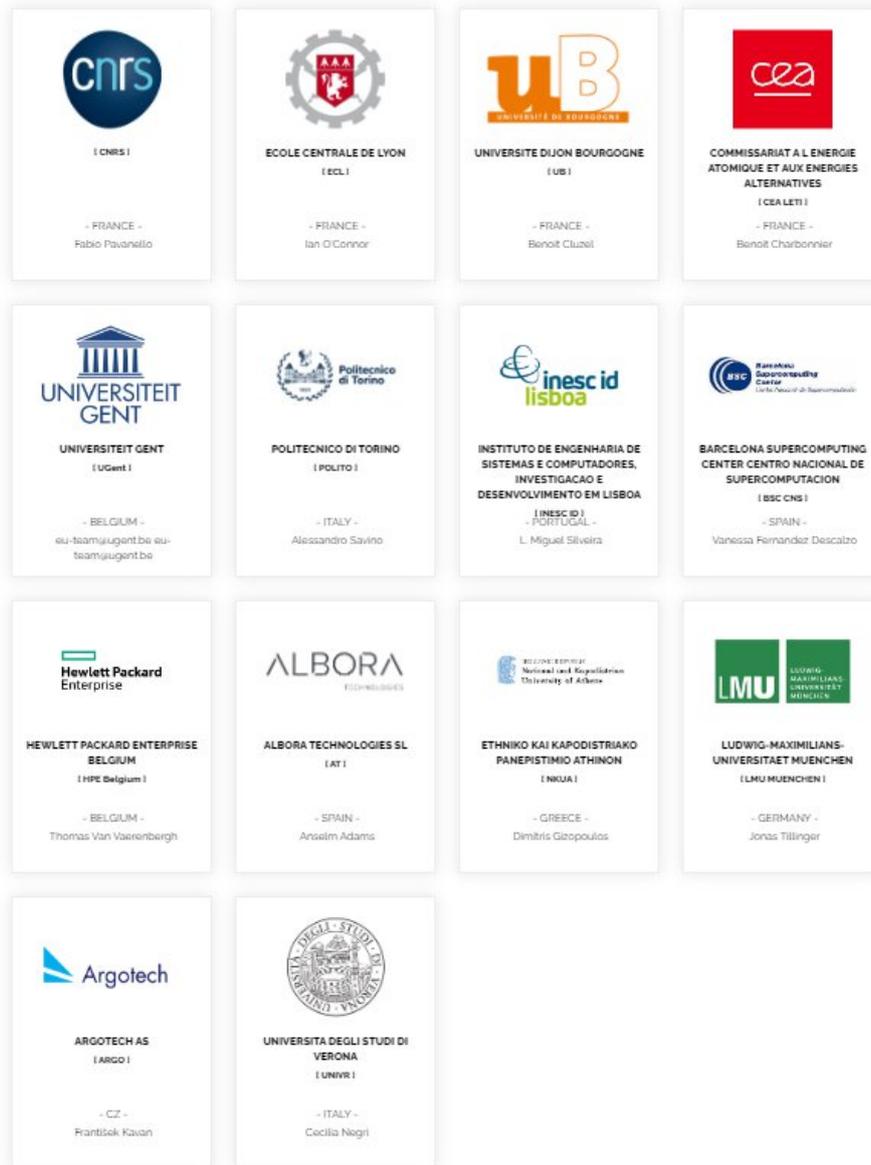


Figure 6: NEUROPULS Website – Partners’ details

## PARTNERS

 <p><b>Fabio Pavanello</b> Photonics for hardware security, neuromorphic computing, and communications - Project Coordinator, development of PUFs and PCM devices</p> 	 <p><b>Ian O'Connor</b></p> 	 <p><b>Benoit Cluzel</b></p> 	 <p><b>Benoit Charbonnier</b></p> 
 <p><b>eu-team@ugent.be</b> eu-team@ugent.be</p> 	 <p><b>Alessandro Savino</b> POLITO PI and WP6 leader</p> 	 <p><b>L. Miguel Silveira</b> INESC-ID Project Coordinator, work in Modeling and Simulation</p> 	 <p><b>Vanessa Fernandez Descalzo</b></p> 
 <p><b>Thomas Van Vaerenbergh</b></p> 	 <p><b>Anselm Adams</b></p> 	 <p><b>Dimitris Gizopoulos</b> National and Kapodistrian University of Athens PI</p> 	 <p><b>Jonas Tillinger</b></p> 
 <p><b>František Kavan</b></p> 	 <p><b>Cecilia Negri</b></p> 		

Figure 7: NEUROPULS Website – Partners' contact persons

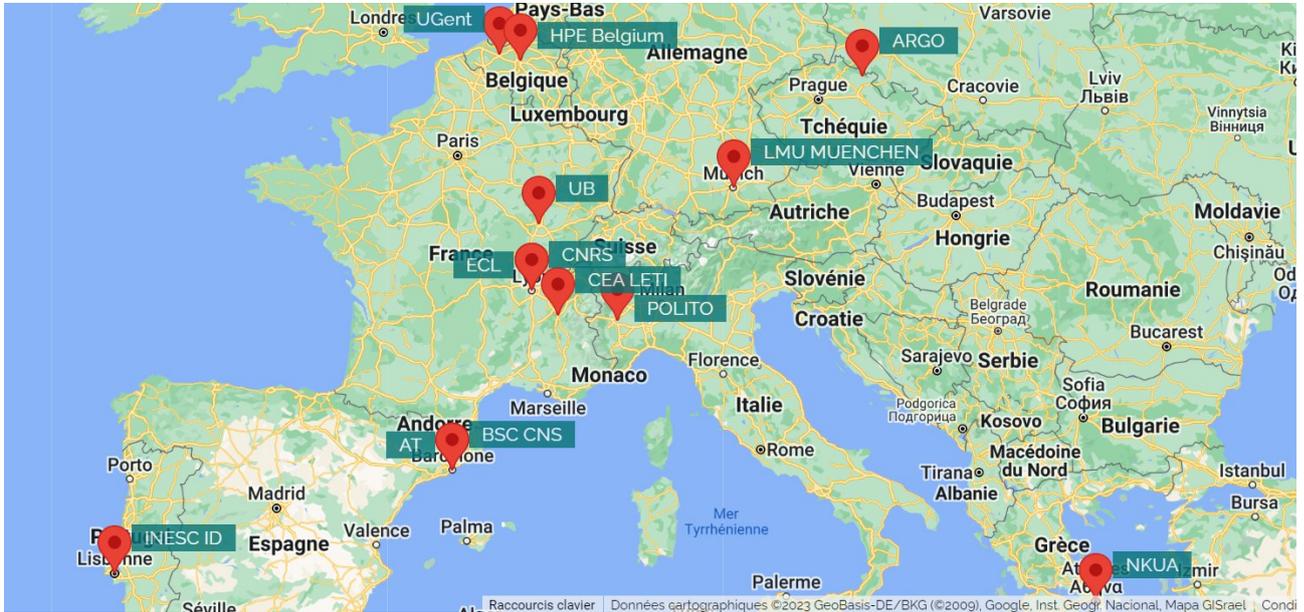


Figure 8: NEUROPULS Website - Partners map

### 1.3.4 Graph-Chart

From this section, information about the project such as Starting/Ending dates, EC requested contribution, Overall planned efforts, Full time equivalent in person\*month is presented.

#### GRAPH - CHART

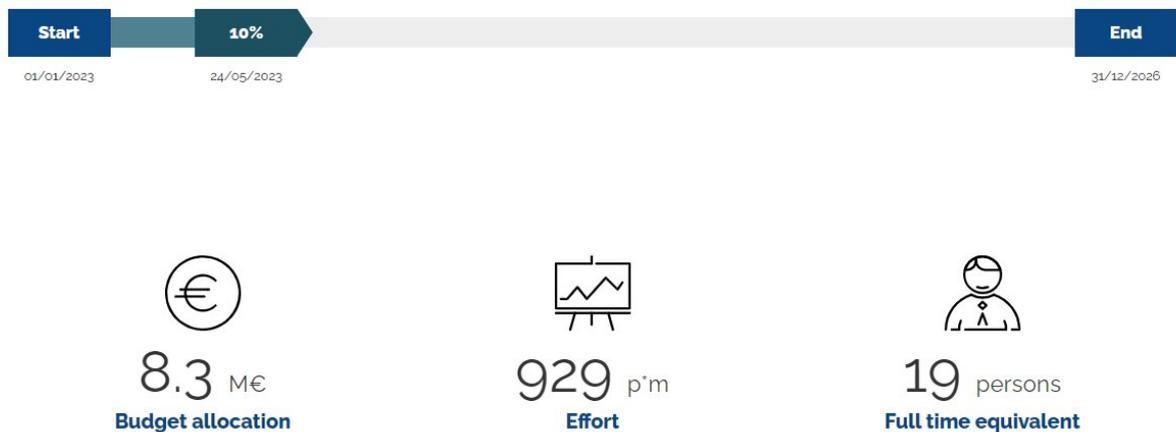


Figure 9: NEUROPULS. Website – The project in figures

## 1.3.5 News and Events

The News and events sections will display forthcoming news and events, past news and events. These sections will be regularly updated by the communication team.

For all published news, additional details can be viewed while clicking on the thumbnail of a news piece. This section can also embed hyperlinks to additional available information (document, images etc.). The most relevant news can be published in the news slider (see section 3.3.2 Project).

For all published events, the events section can also embed hyperlinks to additional available information (document, images etc.)

All project members are encouraged to post (via the administrator of the website) information that would be of interest for the general public and the consortium in particular. This could be article alerts, forthcoming meetings, and other relevant to NEUROPULS activities.

Information about forthcoming meetings, workshops, seminars, conferences outside of the project, etc. can be posted on the website. All project participants are encouraged to submit information on meetings, or other external events related to the project. It is also possible to attach documents (venue location, agenda, list of participants, etc.). This information will become visible on the project website.

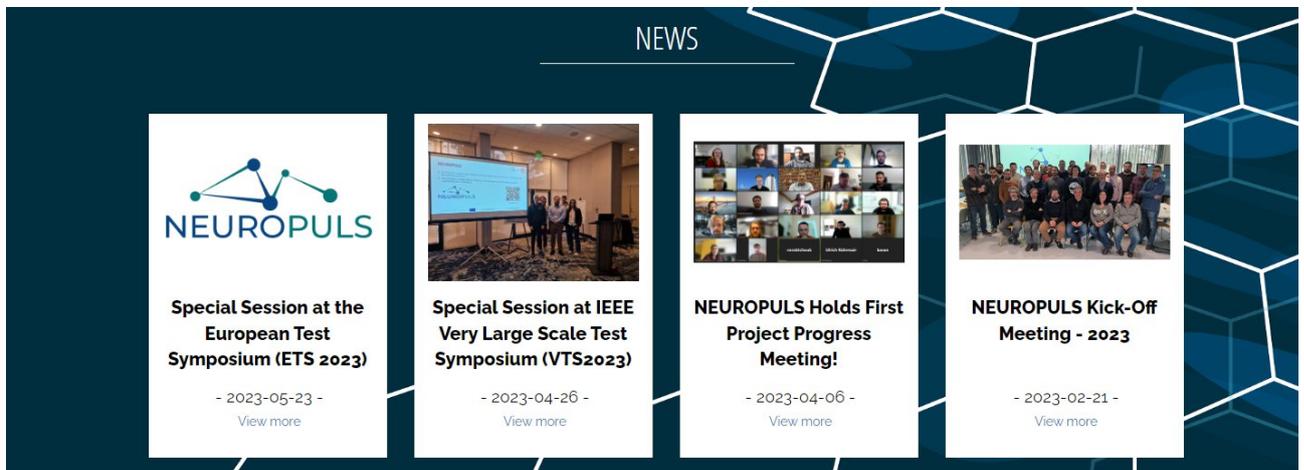


Figure 10: NEUROPULS Website – News

## EVENTS



Figure 11: NEUROPULS Website – Events



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### **1.3.6 Documents**

From this section all public documents related to the project will be made available for download. The document can be ordered by sub-section.

### 1.3.7 Contact us

A contact form is available from the contact section. It requires name, email address, subject and message. Once the message is sent, it arrives directly to the management and communication team.

CONTACT US

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By submitting this form, I agree that the information entered may be used for newsletter subscriptions, information requests and statistical analysis that may result. Under no circumstances will these data be transferred to third parties. To know and exercise your rights, in particular to withdraw your consent to the use of data collected by this form, please consult our general conditions of use.

I'm not a robot

Figure 12: NEUROPULS Website – Contact Form

## 1.4 Conclusion

The role of the website is to inform the general public about NEUROPULS and its achievements, as well as to attract potential collaborators to the project. The success of a project such as NEUROPULS depends on an efficient communication and coordination, and the public website is an essential tool to achieve this goal. The website provides public information and documents. It will be promoted via the social networks but also during conference attended by the project partners.

The website will be continuously updated, adjusted and improved. The level of visibility of the project will be measured at regular time periods, using indicators such as number of sessions, number of users, pages viewed, downloaded documents etc...

## 2. Social media

### 2.1 Introduction

A social network is essential for a research project for both communication and dissemination activities, so as to reach a wide — but also targeted — audience, and thus maximizing the impact and successful exploitation of the R&D outcomes.

LinkedIn and Twitter were chosen as social network platforms. The NEUROPULS LinkedIn and Twitter accounts have been operational since February 2023, and can be reached at <https://www.linkedin.com/company/neuropuls> and <https://twitter.com/neuropuls>. It is compliant with article 17.2 of the Grant Agreement as it uses the European emblem (flag) that is associated to the sentence to acknowledge the financial support received under Horizon Europe.

NEUROPULS will develop -for the first time- secure hardware accelerators based on novel neuromorphic architectures and PUF-based security layers leveraging the benefits offered by the integration of photonics, PCMs and III-V materials. This integration will provide superior security, energy-efficiency, and speeds for spiking and formal recurrent NNs when compared to current available technology for the selected use-cases.



This project has received funding from the European Union's Horizon Europe research and innovation programme under grant agreement No 101070238. 



Figure 13: NEUROPULS social networks – Acknowledgement of EU funding

As networking platforms which can be used for groups and establishes networks on specific topics, The NEUROPULS LinkedIn and Twitter accounts will help sharing short comments, posting announcements that can instantaneously reach a large audience and furthermore re-publishing relevant contents.

#### 2.1.1 Twitter

The NEUROPULS Twitter account will be used to serve communication and dissemination objectives: announcements, short comments, or news may be posted, if possible with media attachments (photos, images, videos ...).

If possible, the account will be fed each week, which requires all partners' engagement to regularly send contents and material to the WP7 leader.



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If existing, accounts of other linked R&I initiatives will be followed.



Figure 14: NEUROPULS Social network Account Twitter

## 2.1.2 LinkedIn

LinkedIn account will target the scientific community and professionals for it is largely used by those communities, while Twitter is more targeted by a larger public.

The contents are similar to Twitter's ones, except short comments. The editorial slant is also more formal. Frequency of publication is about one article each month, if possible (if there is enough contents/material provided by the partners).

If any, accounts of other linked R&I initiatives will be followed.



Figure 15: NEUROPULS Social network Account LinkedIn

## 2.2 Social media administrators

P7 HPE and P1 CNRS will administer the NEUROPULS LinkedIn and Twitter accounts, supported by the subcontractor Absiskey. After setting up the accounts, they will centralise the information to be shared and communicate to the audience, including replying to messages.

All Consortium members are welcome to contribute to the Twitter account activities via the Administrators.

However, to reach the widest possible audience, all NEUROPULS Consortium members who are already using social network are welcome to contribute to the LinkedIn and Twitter efficiency by following the project accounts, liking and sharing the project posts and relevant contents with the appropriate audiences, and their own networks.

## 2.3 Monitoring & reporting on NEUROPULS Social Media activities

Using social media will allow assessing in detail how well the posts will be received, from the moment of publication to the upcoming days and months.

Monitoring the NEUROPULS LinkedIn and Twitter accounts activities and assessing their effectiveness — ideally for each progress meeting — will provide a wealth of data to identify trends and refocus the project activities if necessary.

To measure the impact of the NEUROPULS social media account, relevant indicators including quantitative and qualitative aspects will be regularly checked:

### Twitter

- Quantitative: number of tweets, number of followers, number of profile visits, number of likes/shares, number of mentions (use of NEUROPULS hashtag), number of views

- Qualitative: types of comments received, their tone, types of followers, word clouds etc....

#### LinkedIn

- Number of articles/posts, number of followers, number of profile visits, number of views, and number of likes.
- Qualitative: types of comments received, their tone, types of followers, word clouds etc....

Based on the criteria selected, an analysis will be performed on the degree of the dissemination quality. This useful knowledge could be further used to adjust our dissemination/communication strategy and plan ahead.

Finally, when reporting on the project communication and dissemination activities to the EU (via the corresponding planned deliverables and the periodic reports), information about NEUROPULS LinkedIn and Twitter accounts activities, achievements and impacts will be included.

## 3. Visual Identity

### 3.1 Corporate identity and style guide

#### TYPOGRAPHY

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Montserrat Classic  
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz  
0123456789



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## LOGOTYPE

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## MONOCHROME

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## COLORS

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RGB : 8 71 129  
CMYK : 100 74 21 6

**#094682**



RGB : 6 117 120  
CMYK : 85 31 47 18

**#077477**



RGB : 128 165 182  
CMYK : 54 24 23 4

**#7FA4B6**



RGB : 216 238 243  
CMYK : 18 0 6 0

**#D8F3F7**



RGB : 200 45 102  
CMYK : 16 93 33 5

**#C62E65**



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## 4. Conclusion

The NEUROPULS project has effectively harnessed its visual identity, website, and social media networks to create a robust online presence. The cohesive visual branding, comprehensive website, and active social media engagement have not only amplified the project's visibility but also fostered effective communication and dissemination of its innovative work in neuromorphic computing. These digital platforms remain integral in connecting with a diverse audience, sharing project updates, and promoting collaborative opportunities.