

Information letter for participants

Title of research project: ‘Enhancing Esports Team Performance Using Game Analytics, Communication and Physiology.’

Dear Sir/Madam,

You have shown interest in a scientific study of Breda Guardians, the Department of Data Science & Artificial Intelligence of Breda University of Applied Sciences, the Department of Organization Studies of Tilburg University’s School of Social and Behavioural Sciences and the Department of Cognitive Science and Artificial Intelligence of Tilburg University’s School of Humanities and Digital Sciences. Before you participate in this study it is required that we obtain your written declaration stating that you have been fully briefed about the study and are willing to participate. This is called “Informed Consent.” You will get an explanation from the researchers about the design of the study, the exact nature of your participation and the possible risks. Additionally, it will be explained how the results from the study will be managed to guarantee your privacy. Please read in the text below what participation in this study entails.

Study subject and goal

This project seeks to optimize esports team performance by integrating game data analytics, team communication data, and physiological signals into an automated data collection pipeline, focusing on games like Valorant, Counter Strike: 2, and League of Legends, in order to enhance decision-making and strategic planning for the Breda Guardians esports teams (BUas), while also laying the foundation for future collaborations in the Dutch esports research field to develop a longitudinal data collection and performance assessment pipeline.

Study content and design

Data will be collected in multiple sessions (i.e. match or practise) throughout 2024 and 2025 will take about 60 minutes per session.

Test session

During this study you will play a match/practice of the game of choice in The Hive. You will play your match/practice like any other match/practice with your fellow teammates where you will be able to show your skills and level of cooperation within the team. Before the start of the actual experiment, you will have the opportunity to ask questions about any aspect of the study related to the experiment.

Cognitive measures will be collected during the study using biometric measuring devices. By agreeing to participate in this study, the data collected from the biometric measuring devices will only be used for research purposes or ameliorating the performance of Breda Guardians' esports teams, including the participants own performance.

Confidentiality personal details and access by third parties

The information collected in this study will be treated confidentially. Personal details collected during this study will be substituted by a code number. Only this number is used for study documentation and in reports or publications on this study. The person corresponding to the code number can only be retrieved by he/she who has the key to the code (i.e., the researchers Bram Heijligers, Dr. Paris Mavromoustakos Blom, Kyana van Eijndhoven, Samuel Vieira). The anonymous data will be retained for a minimum of five years.

No individual results will be computed. Details will be processed anonymously and on a group level for possible scientific publications or presentations.

When are you not allowed to participate in this study?

You cannot participate in this study if you have (a history of) migraine or epilepsy. Additionally, you cannot participate if you are pregnant or expect to be pregnant or if you are younger than 16.

Voluntary participation

Participation in this study is completely voluntary. You do not have to give any reason if you do not want to participate. Even if you give your permission now, you can withdraw this permission at any time without having to give a reason.

Advantages and disadvantages

Participating in this study will provide you with direct advantages. Results of the study can potentially contribute to improving player performance, decision-making and behavioural sequences of events.

What to do when you have a complaint?

If you have a complaint about the study, you can report this to one of the researchers involved in this study. Alternatively, you can report your complaint to an independent person of the Ethics Committee of Breda University.

The experimenter is Bram Heijligers. He can be contacted via e-mail heijligers.b@buas.nl. The main researcher is Bram Heijligers, and he can be contacted via e-mail: heijligers.b@buas.nl. The independent person of the Ethics Committee of Breda University is Dr. Mata Haggis, and he can be contacted via e-mail: haggis.m@buas.nl.

Administrative procedure

If you are willing to cooperate in this study, we request you to sign the document “Informed Consent” before participating in this study.

If you have any further questions, please ask the experimenter.

Kind regards,

Bram Heijligers

Paris Mavromoustakos Blom

Kyana van Eijndhoven

Samuel Vieira