

CYBATHLON Challenges 2024

General Guidelines for Participating Teams –

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Versioning

Version	History / Status
05 October 2023	Version 1.1

In case of questions or comments, please contact:	teams@cybathlon.com
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1. Purpose of this document

The instructions in this document are essential for the success of the CYBATHLON Challenges. It is the basis for a valid participation of your team in the races, the presentation of your team in the live program, the social media channels, and on the CYBATHLON platform. Please read the guidelines carefully and use the checklists for your preparations.

2. Further information and documents

Table 1 Documents & Guidelines

Documents	Description	Date of delivery
CYBATHLON Races & Rules Challenges February 2024	Click here for the detailed Races & Rules	already available online on website
Appendix I: Competition infrastructure	Instructions on how to build the obstacles and exact instruction and dimensions for the setup, please click here	already available online on website
Briefing for photo and video footage of teams	Instructions for taking photo and video footage of your team including your pilot and assistive technology for pre-event communication and livestream content	October 2023
Branding guidelines*	Detailed instruction on where to place the branding that is provided by CYBATHLON to the hubs or that needs to be produced by the teams onsite.	November 2023
Broadcasting guidelines*	Detailed instruction on how the teams need to film the races and how the process will be. Instructions on communication and on the communication tool for the live production.	November 2023
Scoring system guidelines*	Instruction regarding the infrastructure, the installation, and the operating of the scoring system.	December 2023
Competition schedule	Competition schedule with exact start times for all teams	January 2024
Event run sheet	Information about times and procedures at rehearsal and event day	January 2024

→ *Only relevant for teams that setup their own local hub

3. Dates and deadlines

Table 2 Timetable

Type	Description	Dates and Deadlines
Registration deadline	Last day to register your team for the Challenges February 2024	30 September 2023
Opening for TecCheck, MedCheck	Information and link to online forms will be available via Team Dashboard	October 2023
Shipping of material to Team Hubs*	Shipping of material to team's hubs <ul style="list-style-type: none"> Competition material depending on the discipline according to "Races and Rules Appendix 1: Competition infrastructure" Branding material 	November 2023
TecCheck and MedCheck 1 (written documentation)	<ul style="list-style-type: none"> Deadline for submission of written TecCheck documentation Deadline for submission of online pilot registration form including mandatory attachments 	17 December 2023
Communication material (text, photos, videos)	Deadline to complete or update the team portrait on our website and to upload photo and video footage for pre-event communication and livestream content	Asap, no later than 17 December 2023
TecCheck and MedCheck 2 (remote)	Deadline for completion of remote TecCheck and MedCheck <ul style="list-style-type: none"> For the MedCheck, we schedule a meeting with our medical doctor and your pilot. For the TecCheck, we schedule a meeting with our Head of Discipline and your team. <p>The pilot(s) must also be present at the TecCheck to demonstrate proper use of the device.</p>	19 January 2024
Test sessions for Team Hubs*	Test session at team hubs (technical infrastructure check, video signal connectivity, results system components test run)	8 January 2024 – 19 January 2024
Technical meeting (remote)	Final instructions for competition days, mandatory for all teams (team manager and pilot).	few days prior to the event (exact date and time will follow later)
Rehearsal including course check for Team Hubs*	Mandatory for all team hubs (includes a remote check of the setup, i.e., if the CYBATHLON guidelines and rules are followed). Pilots' participation at the rehearsal is optional. Teams starting at the Zurich hub do not need to be present at the rehearsal day.	01 February 2024
Competition & live streaming	All disciplines	02 February 2024

→ *Only relevant for teams that setup their own local hub

4. Competition

The following sections provide general information regarding competition mode, registration conditions, competition schedule and pre-competition procedures.

4.1 Competition mode

Depending on the discipline, four to eight (4-8) starting slots are available. The total number of pilots eligible to start in the CYBATHLON Challenges 2024 is limited to forty-four (44).

Depending on the number of registrations, we may adjust the number of starting slots per discipline after the registration deadline.

A competition will be run if a minimum of 2 teams is participating.

Each team has two attempts (races) at the competition to solve the four tasks (except for the FES discipline with only one run), with the better run counting.

A discipline session is finished after the last team has finished its second race. The final ranking has been determined. A winner's interview will be conducted.

4.3 Competition schedule

The competition schedule of each discipline will be defined depending on the number and geographic location of the registered teams – considering the time zones – to make it as convenient as possible for everyone involved.

4.4 Pre-competition procedures

The following checks will be performed ahead of the competition to make sure that the competitions are fair and safe:

- **TecCheck:** to make sure that the assistive devices are safe to be used and that they comply with the eligibility criteria outlined in the Races & Rules
- **MedCheck:** to make sure that the participating pilots in good general health and that they comply with the eligibility criteria outlined in the Races & Rules
- **CourseCheck:** to ensure that the competition infrastructure is built and set-up according to the Races & Rules at a team hub

5. Communication material

We need your support to introduce and present your pilot, your assistive technology and your team in the livestream for the Challenges 2024 and, prior to the event, to start promotional activities through our website and social media channels.

Therefore, we would need certain material from you, such as **text content, videos and photos** about your team, trainings and preparation sessions, your cutting-edge research, and your technology that you will be participating with in the CYBATHLON event.

After your registration for the Challenges 2024 is approved, **your team profile** will be posted on our website and we will ask you to add content and upload photos about your team, your pilot and your assistive technology so the audience can learn more about your team and your research. You can edit the team profile yourself in your dashboard.

More information on the video footage for the livestream content will be provided in the briefing (see Table 1 Documents & Guidelines).

6. Information on how to set up a Team Hub

5.1 General setup

The tasks are set up in a predefined order. The racetrack can be set up in two possible layouts, depending on the space available at the competition venue.

Each task will take place on a space of 3m x 5m.

Including the space around the tasks needed for the safety, branding, results monitors and filming, for the disciplines ARM, LEG, EXO, WHL, ROB, and VIS an area of min. 6m x 26m or 11m x 18m is required, depending on the task set up. For BCI and FES an area of min. 6m x 5m is required.

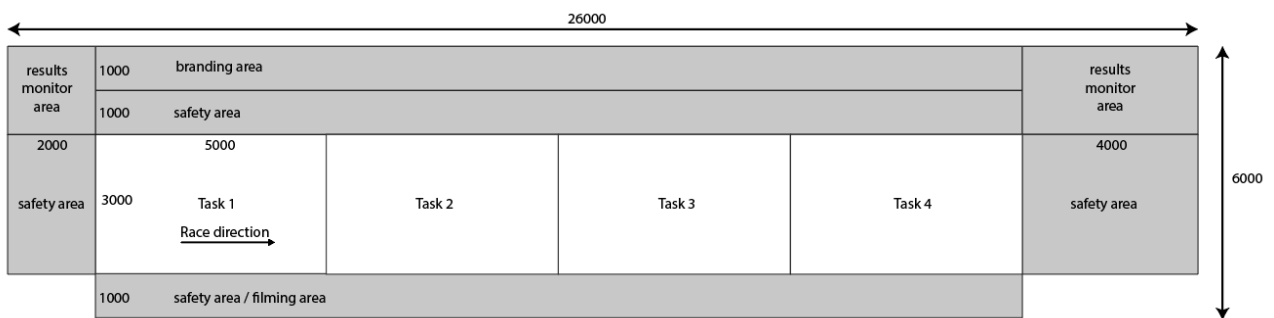


Figure 1: Task set up "in line" for the disciplines ARM, LEG, EXO, WHL, ROB and VIS.

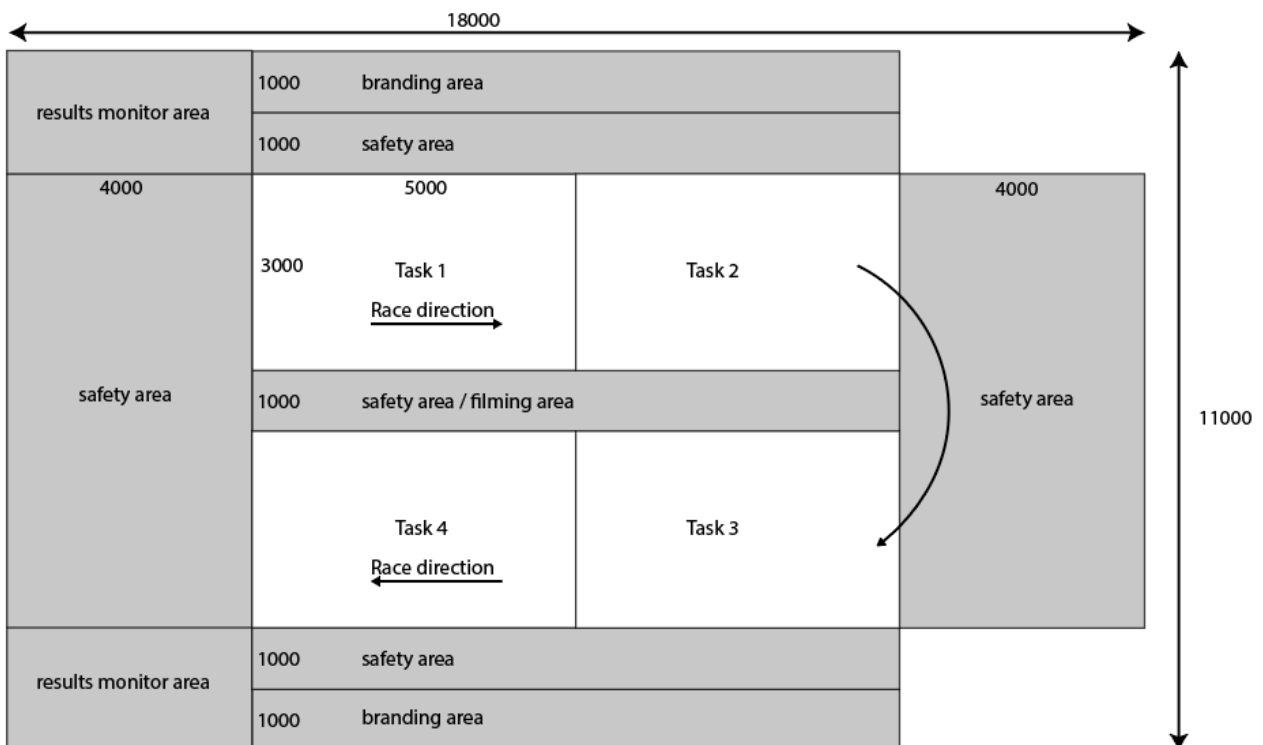


Figure 2: Task set up "in parallel" in the disciplines ARM, LEG, EXO, WHL, ROB and VIS.

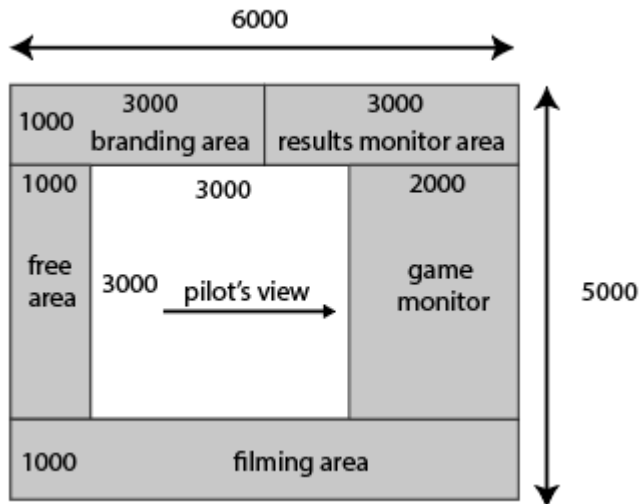


Figure 3: Competition set up in the disciplines BCI and FES

5.2 Competition Infrastructure

Please refer to the [Races & Rules](#) as well as to its "[Appendix 1: Competition Infrastructure](#)" on how to set-up the tasks.

5.3 IT infrastructure

In general, it is important to have stable wireless internet (WiFi) available at your Team Hub venue. The camera device requires a **20Mbit/s stable upload**. Some people involved in competition management also require bandwidth for video communication. Please use a wired internet connection if possible.

In addition, your Team Hub venue should have mobile internet access so that filming and scoring apps can use it as a backup for sending and receiving data. Mobile Internet is also recommended to set up a backup WiFi in case other wireless Internet sources fail.

Further information will be provided in the Scoring System Guidelines (see Table 1 Documents & guidelines).

5.4 Broadcasting

The general tasks of a hub regarding broadcasting are to film the performance of the pilots and to transfer the video and audio signal live to the production room in the CYBATHLON headquarter by using one of the following two setups:

Smart phone setup – iPhone or Android phone with “TVU Anywhere” App (free of charge)



Camera setup – professional camera with wireless connection to a “TVU One Transmitter”



Figure 4 Broadcasting set-ups – Left: smart phone set-up, right: camera set-up.

In both set-ups a stabilizing system (e.g., a gimbal) is required.

More details regarding the broadcasting infrastructure and procedures will be provided in separate broadcasting guidelines (follow later, see Table 1 Documents & Guidelines).

5.5 Branding

The local venue will include branding of CYBATHLON, of the CYBATHLON partners, and, if desired, of the partners of the participating teams (e.g., sponsors, team's university, team's company, etc.). 50% of the venue branding space is reserved for CYBATHLON branding. The other 50% are divided equally between partners of the CYBATHLON and partners/sponsors of your team (see Figure 5 Branding at team's hub). Branding on the racetrack and competition infrastructure is reserved for CYBATHLON branding. All branding will be done in blue & white or white & blue (white logo on blue background or vice versa). Colour codes are defined by CYBATHLON. Certain branding material will be sent to you by us, others we ask you to create or print on site.

For the Challenges in 2024, the CYBATHLON Team will provide branding material for the racetrack and competition infrastructure. **The CYBATHLON Team can produce the branding band including your teams sponsors and partners if you share the names, logos and address for shipping by 20th of October.** The CYBATHLON Team will also provide material for referees, backdrops, interview walls and starting numbers. CYBATHLON will provide Branding Guidelines that need to be followed (see Table 1 Documents & guidelines).

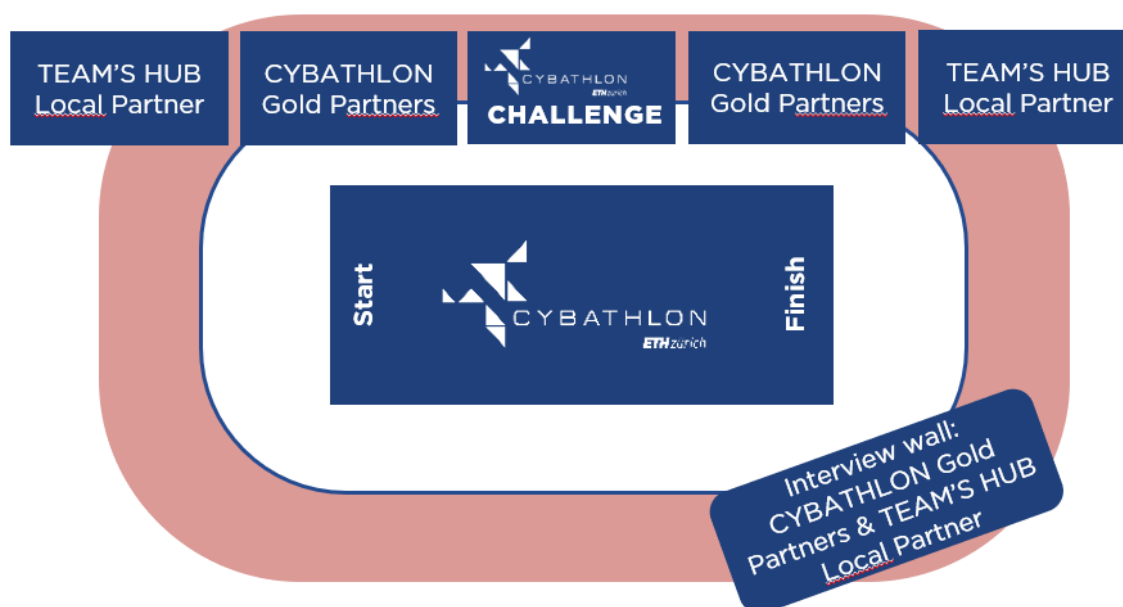


Figure 5 Example of branding a team hub with one task

5.6 Hub Staff

5.6.1 CYBATHLON Officials

CYBATHLON officials are the competition staff who carry out tasks of the competition management at the local hub such as:

- Course check (see point 4.4)
- Refereeing (to judge if the tasks are solved as outlined in the Races & Rules)
- Scoring (to measure the time needed by the pilot to attempt the tasks)

The recruiting of the CYBATHLON officials for a hub is organised by CYBATHLON together with

the organising hubs and the participating teams.

5.6.2 Additional Team Hub staff

In addition to the CYBATHLON officials, you will need staff (e.g., team members, volunteers etc.) to assist you in running the competition:

- 1 hub manager who organises the hub and stays in contact with us throughout the competition via the communication app “Discord”
- 1 - 2 persons filming
- 1 IT person to support you with technical problems
- In case you host more than 1 discipline at your venue: 3-4 movers who help you setup and dismantle the different tracks