CYBATHLON Challenges 2024
General Guidelines for Participating Teams –

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Versioning

<table>
<thead>
<tr>
<th>Version</th>
<th>History / Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 June 2023</td>
<td>Version 1.0</td>
</tr>
</tbody>
</table>

In case of questions or comments, please contact: teams@cybathlon.com
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

<table>
<thead>
<tr>
<th>Documents</th>
<th>Description</th>
<th>Date of delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYBATHLON Races &amp; Rules Challenges February 2024</td>
<td>Click here for the detailed Races &amp; Rules</td>
<td>already available online on website</td>
</tr>
<tr>
<td>Appendix I: Competition infrastructure</td>
<td>Instructions on how to build the obstacles and exact instruction and dimensions for the setup, please click here</td>
<td>already available online on website</td>
</tr>
<tr>
<td>Briefing for photo and video footage of teams</td>
<td>Instructions for taking photo and video footage of your team including your pilot and assistive technology for pre-event communication and livestream content</td>
<td>October 2023</td>
</tr>
<tr>
<td>Branding guidelines*</td>
<td>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.</td>
<td>November 2023</td>
</tr>
<tr>
<td>Broadcasting guidelines*</td>
<td>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.</td>
<td>November 2023</td>
</tr>
<tr>
<td>Scoring system guidelines*</td>
<td>Instruction regarding the infrastructure, the installation, and the operating of the scoring system.</td>
<td>December 2023</td>
</tr>
<tr>
<td>Competition schedule</td>
<td>Competition schedule with exact start times for all teams</td>
<td>January 2024</td>
</tr>
<tr>
<td>Event run sheet</td>
<td>Information about times and procedures at rehearsal and event day</td>
<td>January 2024</td>
</tr>
</tbody>
</table>

*Only relevant for teams that setup their own local hub
### 3. Dates and Deadlines

#### Table 2 Timetable

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>Dates and Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration deadline</td>
<td>Last day to register your team for the Challenges February 2024</td>
<td>30 September 2023</td>
</tr>
<tr>
<td>Opening for TecCheck, MedCheck</td>
<td>Information and link to online forms will be available via Team Dashboard</td>
<td>October 2023</td>
</tr>
<tr>
<td>Shipping of material to Team Hubs*</td>
<td>Shipping of material to team’s hubs</td>
<td>November 2023</td>
</tr>
<tr>
<td></td>
<td>• Competition material depending on the discipline according to “Races and Rules Appendix 1: Competition infrastructure”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Branding material</td>
<td></td>
</tr>
<tr>
<td>TecCheck and MedCheck 1 (written documentation)</td>
<td>• Deadline for submission of written TecCheck documentation</td>
<td>17 December 2023</td>
</tr>
<tr>
<td></td>
<td>• Deadline for submission of online pilot registration form including mandatory attachments</td>
<td></td>
</tr>
<tr>
<td>Communication material (text, photos, videos)</td>
<td>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</td>
<td>Asap, no later than 17 December 2023</td>
</tr>
<tr>
<td>TecCheck and MedCheck 2 (remote)</td>
<td>Deadline for completion of remote TecCheck and MedCheck</td>
<td>19 January 2024</td>
</tr>
<tr>
<td></td>
<td>• For the MedCheck, we schedule a meeting with our medical doctor and your pilot.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• For the TecCheck, we schedule a meeting with our Head of Discipline and your team. The pilot(s) must also be present at the TecCheck to demonstrate proper use of the device.</td>
<td></td>
</tr>
<tr>
<td>Test sessions for Team Hubs*</td>
<td>Test session at team hubs (technical infrastructure check, video signal connectivity, results system components test run)</td>
<td>8 January 2024 – 19 January 2024</td>
</tr>
<tr>
<td>Technical meeting (remote)</td>
<td>Final instructions for competition days, mandatory for all teams (team manager and pilot).</td>
<td>few days prior to the event (exact date and time will follow later)</td>
</tr>
<tr>
<td>Rehearsal including course check for Team Hubs*</td>
<td>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.</td>
<td>01 February 2024</td>
</tr>
<tr>
<td>Competition &amp; live streaming</td>
<td>All disciplines</td>
<td>02 February 2024</td>
</tr>
</tbody>
</table>

*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.](image1)

![Figure 2: Task set up "in parallel" in the disciplines ARM, LEG, EXO, WHL, ROB and VIS.](image2)
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”

![Smart phone setup](image1)

![Camera setup](image2)

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.

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