

CYBATHLON – MOVING PEOPLE AND TECHNOLOGY

The CYBATHLON is a unique championship in which people with physical disabilities compete against each other to complete everyday tasks using state-of-the-art technical assistance systems.

Hanging out washing, getting up from the sofa or climbing stairs – the race courses at the CYBATHLON are designed to represent everyday activities in order to demonstrate just how well a particular device assists the user. Technology providers (from universities or industry) work hand-in-hand with pilots (people with disabilities) right from the development phase.

The teams can compete in six different disciplines to present and test their latest robotic technology:

BRAIN-COMPUTER INTERFACE RACE



In the BCI race, pilots with quadriplegia use brain-computer interfaces to control avatars in a computer game. The aim of this technology is to control devices such as computers or wheelchairs for people with limited ability to move.

FUNCTIONAL ELECTRICAL STIMULATION BIKE RACE



The FES race is for pilots with paraplegia. Functional electrical stimulation is enabling them to perform a pedalling movement on a recumbent bicycle.

POWERED ARM PROSTHESIS RACE



In this race, pilots using an arm prosthesis on one or both sides can compete. The prosthesis has to include the wrist and can be navigated with any kind of control.

POWERED LEG PROSTHESIS RACE



In this race, pilots using a leg prosthesis on one or both sides, including a knee joint, have to perform various movements. They can use any kind of active or passive prosthetic device.

POWERED EXOSKELETON RACE



In this race, pilots with complete thoracic or lumbar spinal cord injury can compete using an exoskeleton. This wearable, powered support enables them to walk and master other everyday tasks.

POWERED WHEELCHAIR RACE



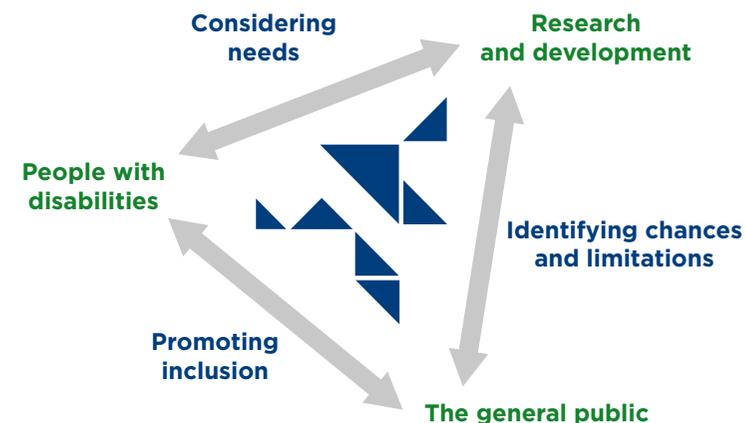
In this race, pilots with severe walking disability using a powered wheelchair can compete. The wheelchairs feature novel technologies to overcome obstacles such as stairs or doors.

CYBATHLON – MORE THAN A COMPETITION

Besides the actual competition, the CYBATHLON offers a platform to drive forward research on assistance systems for everyday use, and to promote dialogue with the public. Technology developers should have the opportunity to exchange ideas and collaborate closely with people with physical disabilities as they develop their devices.

GOALS OF THE CYBATHLON

- Promoting research, development and implementation of assistive technology for people with disabilities
- Building a common platform for technology developers, people with disabilities, and the general public
- Informing the public and stimulating discussion on inclusion and equality of people with disabilities in everyday life
- Removing barriers between the general public, the users and the developers



FACTS AND FIGURES

- In 2013 Robert Riener, Professor of Robotics at ETH Zurich, launched the CYBATHLON as a platform for the development of assistive technologies suitable for everyday use
- In 2016 the first CYBATHLON competition took place in the SWISS Arena in Zurich Kloten
- 66 pilots from 25 nations competed in a sold-out stadium (4600 spectators)
- The event was broadcasted live on Swiss Television (SRF) for 8 hours and attracted wide national and international media attention

GET READY FOR CYBATHLON 2020
2 - 3 MAY 2020, SWISS ARENA KLOTEN, ZURICH