FIRST® TECH CHALLENGE

Accessibility Guide

Removing Barriers Through Accomodations

FIRST® is a global robotics community that prepares young people for the future.

www.firstinspires.org

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FIRST® Tech Challenge Accessibility Guide

Introduction

"*FIRST* is committed to fostering, cultivating and preserving a culture of equity, diversity, and inclusion. We embrace and encourage differences in race, ethnicity, national origin, sex, gender, gender identity, gender expression, sexual orientation, disability, age, religion, income, language, learning difference, or any other characteristics that make our adult-force and students unique.

Exploring, developing, and implementing strategies to become more inclusive and ensure access to our programs to all students (as well as access to key supports) is critical for *FIRST* to reach its goal and mission. ALL young people should have the opportunity to become science and technology leaders. *FIRST* will remove barriers to program participation for underserved, underrepresented students. Pursuant to that end, *FIRST* Equity, Diversity, & Inclusion is a concerted, organized effort to develop strategies to make its programs more accessible and inclusive."

This guide provides guidelines that should be followed to make *FIRST* Tech Challenge resources and events more accessible for all participating individuals. While this guide contains specific guidelines for achieving accessibility, readers should keep in mind that this guide is unable to predict all accommodations that may be necessary. It is important to remember that inclusivity and accessibility is not a recommendation but a requirement.

- Accommodations not discussed explicitly in this guide may be necessary.
- Use judgement on ways to accommodate without endangering the individual in need of accommodation or others' safety.
- Events should be inclusive, accessible, and enjoyable for everyone.
- Contact *FIRST* with specific questions about more complex accommodations (ex: extra components for students to participate in gameplay, etc.).
- Ensure that program partners understand that inclusion/accessibility is not a recommendation.

Ethos of Accessibility

FIRST® is committed to Equity, Diversity, and Inclusion and as such, *FIRST* makes reasonable accommodations for persons with disabilities that request accommodation. If a participant needs an accommodation for an event, we ask that they talk to a volunteer at the event or contact their local leadership before the event so they can ensure the accommodation is provided. Accommodations are determined reasonable given it does not create undue hardship or cause safety concerns.

Reasonable Accommodations Definition:

Reasonable accommodations are provided adjustments or modifications to remove physical barriers, (unless it would impose an "undue hardship"). Reasonable accommodations should not be viewed as "special treatment, but rather as lending a helping hand, or a change in the way things are normally done to enable people with disabilities to have an equal opportunity to participate fully in all aspects of society without discrimination. Further, reasonable accommodations often benefit everyone, helping ensure equality of opportunity, full participation, independent living, and economic self-sufficiency for all.

To understand the accommodation beneficial to an individual requester, we encourage *FIRST* and/or its official representatives (i.e., PDO's, hosts of official *FIRST* events, Volunteer Coordinators etc.) to provide accessible option(s) for individuals with a disability to request an accommodation. Upon receipt of an accommodation request, *FIRST* and/or its official representatives should contact the individual requesting an accommodation to understand the specific need, reasonable accommodations that would address the need, and next steps both for *FIRST* and/or its official representatives, and the individual to ensure the agreed upon accommodation need is met, and how to access it at the time of need. *FIRST* and/or its official representatives should have written documentation of the request, process for deciding on the accommodation(s), discussion with individuals, and outcomes.

Note:

1. One link brings the reader to a website, the other provides a definition of the term.
2. Businesses with fewer than 15 employees, most PDOs, are not covered by the employment provisions of the ADA.

We recommend event planners read The Americans with Disabilities Act (ADA) Planning Guide for Making Temporary Events Accessible to People with Disabilities document. True accessibility begins before the event. When you keep all attendees in mind during planning, you will be better prepared to support requests as they come in rather than scrambling at the last minute. This guide will help Program Delivery Partners (PDP) and Event Committees consider ways to make events more accessible. Additionally, PDPs (Program Delivery Partners) may use the Equity, Diversity, and Inclusion Event Checklist to help event organizers think through accessibility of different aspects of an event.

A few reminders as you begin thinking about accessibility:

- **Proof of disability is not required** - No person is required to show proof of their disability—nor should they **ever** be asked for proof. This includes people who request accommodations, ask for accessible seating, attend with a service animal, or have an invisible disability.
- **Invisible Disabilities** - Invisible disabilities are physical, mental, or neurological conditions that can limit or challenge a person's movements, senses, or activities, and can impact that person's ability to learn or work.
- **Be mindful of words you use** - It is important to use respectful and inclusive language when communicating with or talking about people with disabilities. Reference the Stanford Disability Language Guide for additional tips with language.

Language, Text, and Image Accessibility

This section focuses on the guidance regarding accessibility tools (software and apps) to use with *FIRST* Tech Challenge resources and systems. There are a variety of ways to provide accommodations for language, text, and image accessibility.
Most web browsers have a screen reader/read aloud option:"

- Google Chrome requires an Add In for read aloud.
- Microsoft Edge includes read aloud in their three dots "…" setting in the upper-right corner of the browser.

Smartphone apps, like Seeing AI (Artificial Intelligence), provide awareness of an individual's environment through the phone's camera including facial recognition/description, read aloud for signs and other text, and much more.
FIRST Tech Challenge systems can be translated into most languages if requested. Currently, FTC (FIRST Tech Challenge) Scoring and FTC Live can be used in Spanish, French Canadian, and Portuguese. Please contact ftctech@firstinspires.org if you would like to translate the systems into another language.
Microsoft has great resources for providing access to your community based on their individual needs while using the Microsoft suite of products:

- Accessibility Technology & Tools | Microsoft Accessibility
  - Vision
  - Hearing
  - Neurodiversity
  - Learning
  - Mobility
  - Mental health

ADA website also provides the guidance and compliance of this government agency:

- The Americans with Disabilities Act | ADA.gov

Here is a useful checklist of considerations for documents and marketing materials created in your region:

- ❑ Use Alt text in presentations and website for screen reader/read aloud accuracy.
- ❑ Try Google Translate or Smartcat for translation of PDF documents and other files.
- ❑ Colors have enough contrast to be distinguishable.
- ❑ Font size is appropriate for the visually impaired.

Registration Accommodation Identification
Volunteers and teams will soon see a checkbox for an event accommodation request on their registration dashboard when registering as a team or volunteer.

Event General Recommendations

Event Coordinators and/or PDPs should contact teams before the event (recommended 1 month prior) to ask if any of the teams attending need specific accommodations.

- PDPs can use this language as a starting point: “We strive to host inclusive, accessible events that enable all individuals to engage fully. To request an accommodation or for inquiries about accessibility, please contact (name, email, phone).”
- Teams are also encouraged to reach out to PDPs with any accommodation requests.

All staff and volunteers should have a basic awareness and sensitivity to accessibility issues and accommodation requests. Ensure volunteers know who they can ask for help if they are unable to answer the question. Pit Admin must have access to this information and who the point of contact is for any questions they cannot answer, as they often are the ones teams come to during the event. Contact accommodations@firstinspires.org with questions.

Venue Accessibility

Event Navigation

- **Accessible schedule** – easy to understand, posted online before the event and updated consistently throughout the event. Team check-in, opening ceremonies and activities based on role should be provided to teams and volunteers. The FTC Live software provides judging and inspection schedules in a table or list format.
- **Easy to read maps** -- events should provide maps that help participants to navigate the layout of the event and easily identify bathrooms, quiet rooms, and other accommodations.
    - FTC-Scoring provides a “Pit Map” builder option to build out the event layout in advance of the event.

Seating

Accessible seating at events should be prioritized ahead of time. Seating near the field should be reserved for individuals, both participants and spectators, who require accessible seating for visual or mobility support. Chairs should be provided for individuals who cannot access bleachers.

- Closer seating to the event field for visually impaired participants and spectators.
- Consistent rules and training about saving seats/allowing teams to sit together near accessible seating, seating behind accessible seating for teams with members that require accessible seating
- Chairs for those who cannot reach bleachers.
- Wheelchair seating for students to sit with their teams.

Walkways

Accessibility should be prioritized when determining the width of aisles, pit areas, and queuing areas. All areas should be clear to easily navigate the event. All walkways should be free of cables or any other potential barriers (ex: boxes, chairs, etc.) that could cause a hazardous environment.

- Less packed queuing areas to allow for ease of navigation.

- Aisle width standards: Provide instructions for any ramps and/or elevator access in the building; accessible bathrooms; barrier-free pathways; wide doorways and aisles.
    - For US based events, the ADA an accessible route means the route is at least 36 inches (~92 cm) wide and has a minimum height of 80 inches (~204 cm). An exception to the width is at doors where the route may be reduced to 32 inches (~82 cm) for a maximum distance of 24 inches (~61 cm).

Visual Displays

All visual displays should be clear and easily readable. Visual displays include signage, videos/screen displays, and lighting. If possible, video displays should contain closed captioning.

- CC on videos during ceremonies.
- Attention to colors used to mark tables and rooms.
- Color standards - for lights, writing on boards, etc.
- 22" monitor or larger is recommended for score displays.

Apps such as Microsoft's "Seeing AI" are available to guide those with a visual impairment through their environment. Apps like this provide object detection including people, read-aloud capabilities, and more.

Audio

- Suggest those with audio-sensitivities to bring ear plugs.
- Does the event require an American Sign Language/Sign Language Interpreter?
- Consider the times during the event when sound can be turned down.

Quiet Space

A quiet space is a room for students to retreat to if they are overwhelmed or overstimulated. Quiet spaces should contain tables, chairs, and optional quiet activities for students. Examples of quiet activities that can be provided are coloring books, coloring pencils, and puzzles.

- Space for tables and chairs.
- Resources for quiet activities for students (Coloring books and Crayons, Crossword Puzzles, Sudoku, Jigsaw Puzzles).

Family Room

Consider allocating a space for nursing parents, and others who need to care for young children.

Service animals

Some participants at an event may require a service animal. A service animal is individually trained to do work or perform tasks for a person with a disability.

a) The ADA requires the animal to be under the control of the handler. This can occur using a harness, leash, or other tether. However, in cases where either the handler is unable to hold a tether because of a disability or its use would interfere with the service animal's safe, effective performance of work or tasks, the service animal must be under the handler's control by some other means, such as voice control.

b) In situations where it is not obvious that the dog is a service animal, staff may ask only two specific questions. Staff are not allowed to request any documentation for the dog, require that the dog demonstrate its task, or inquire about the nature of the person's disability.
   1. Is the dog a service animal required because of a disability?
   2. What work or task has the dog been trained to perform?

c) According to the ADA, allergies or fear of dogs are not legal reasons to deny a disabled person and their medical equipment access. Anaphylaxis or any other major dog allergy affects less than 1 in 100,000 according to the CDC (Centers for Disease Control), and the causes are usually repetitive licking on the face from a dog, not from contact transfer.

   https://www.ada.gov/resources/service-animals-2010-requirements/#top

Volunteer Training

It is important for all volunteers to be properly informed about the accommodations available at events. Each volunteer has a unique job and role in interacting with students. Volunteers should be aware of the event's general accommodations as well as job specific accommodations. All volunteers should be aware of the info available at pit admin at events and be able to assist participants in accessing needed accommodations.

- Judges and referees awareness exists in their respective volunteer guides on how to best support people with special accommodation, i.e., calling out the points, supporting autistic students in a judging room, etc. All training should be easy.

Judging Accommodations

Understanding Differences

Each student is special and unique, with different strengths, challenges, social skills, and learning abilities. Some differences may be misinterpreted. Please be mindful that your first perception may be off. For example, a student who is quiet or has limited social skills may have extensive knowledge to share. You may also notice cultural differences. Remember that some cultures expect eye contact, while others may find eye contact to be disrespectful. Always be positive, flexible, and patient. A few differences that you may encounter include students with limited social skills, who have difficulty expressing thoughts verbally, who shout out blunt or inappropriate comments, or may distance themselves physically from the team. Some of these challenges may be neurological in nature. Differences between a student who is not able to do something as compared to a refusal to do something can show up in a way that is not familiar to you. A student may have an intense interest in a specific topic or area. For example, they may not be able to see the big robot picture, but may have extensive knowledge about programming, or the mechanical build. As a judge, you will need to adjust your expectations. Many students with high abilities may take longer to process and answer questions; many may get left behind compared with a student who reacts more quickly.

When evaluating teams who seem “too rehearsed,” think about how an adult might prepare for a big presentation at work. Some team members may memorize facts and examples. Since teams work for weeks or months to get ready for tournaments, the teams often practice until it is perfect. Seeming rehearsed is not necessarily a sign of an over-involved adult. If you are not sure of the team’s true understanding, ask follow-up questions for an explanation of their thought processes or go into more detail.

Neurodivergence Awareness

As a *FIRST* Tech Challenge volunteer, you should be aware that neurodivergent youth often take part in *FIRST* programs. Autism spectrum disorders are considered neurodivergent and relate to communication, social interaction, and restrictive or repetitive behaviors and interests.

Some examples of neurodivergence include:

- difficulty understanding language gestures or social cues;
- difficulty engaging in back-and-forth conversations or interactions;
- intense interest in unusual topics or objects, an intense concentration on favorite activities;
- good rote learning and long-term memory skills, a desire to adhere to the rules;
- ability to understand and retain concrete concepts and patterns, often with strong interest or ability in math and technology;
- difficulty managing transitions, changes in routine, stress, and frustration.

More intense neurodivergence may include no speech or limited to no eye contact. As a volunteer, be prepared to include students that require an accommodation, including those who are on the autism spectrum. You may find you need to use direct concrete phrases and break down questions or instructions into fewer steps. Give the student extra time to respond and be aware that students that have some neurodivergence sometimes have outbursts or unexplained behavior, which could be directed at judges or even teammates.

Other Considerations

- Accommodation Ambassador role for volunteers at events.

Accessible Menstrual Products

Providing free gender-neutral menstrual products supports the participation of all students and volunteers. Free gender-neutral menstrual products should be available in female and gender-neutral bathrooms and should be easily identifiable and accessible.

Questions?

If you have additional questions or need help with accommodation requests, please contact our Accommodations Inbox.

View the ED&I (Equity, Diversity, and Inclusion) checklist on SharePoint: EDI (Equity, Diversity, and Inclusion) Event Checklist.pdf (sharepoint.com)