

FIRST Impact Award - Team 7563

2023 - Team 7563
Team Number
7563
Team Nickname
SESI SENAI MEGAZORD
Team Location
Jundiaí, SP - Brazil
Describe the impact of the <i>FIRST</i> program on team participants within the last 3 years. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in <i>FIRST</i> programs as mentors/sponsors.
Once in contact with FIRST, it never leaves you. FIRST program has made 7563 members develop real-world skills that enabled them to succeed in academic, professional and personal life. 7563 is proud to have 100% of their alumni graduated in HS, and 90% of them are in STEM careers. Besides, TOGETHER WE ARE STRONGER is an initiative that gathers 7563 alumni to keep them active on FIRST as volunteers and on the team's programs, helping us to expand our impact coverage.
Describe your community along with how your team addresses its unique opportunities and circumstances.
Technological accessibility is still an issue in Brazil. Brazilian public schools and rural communities' students who suffer from a lack of infrastructure learning conditions. In order to change this reality, MEGAZORD has been providing free robotics classes to underserved children through the program #CODE+. We developed inclusive lessons, opening windows to change lives by spending efforts and resources on inspiring the unfortunate ones to have new opportunities through STEM and FIRST.
Describe the team's methods, with emphasis on the past 3 years, for spreading the FIRST message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?
To spread the FIRST message, we developed the MEGAZORD'S OUTREACH PLAN alongside with our sponsors, ensuring sustainable projects and events by empowering the trainers and creating a teacher's network to keep and expand our impact's field. For instance, a creative way to globalize FIRST is the WOODIE FLOWERS BOX, a mechanism of STEM education. We measure our results by analyzing the student's interest in STEM and the sustainability of our programs over the years.
Please provide specific examples of how your team members act as role models within the FIRST community with emphasis on the past 3 years.
7563 members act as role models by keeping the FIRST values for the rest of our lives. In 2022, Joyce volunteered at an organization in Egypt that seeks to achieve peace and human potential through youth leadership development, where she's responsible for promoting workshops and educational spaces,

thus, assisting the community to create tourism solutions for social-economic issues. Also, Bruno implanted robotic classes in public schools throughout the community group of young councilman.

Describe your team's initiatives to Assist, Mentor, and/or Start other *FIRST* teams with emphasis on activities within the past 3 years.

Through monthly webinars, individual videoconferences, and in-person visits, we mentor 68 FIRST teams from Brazil and assisted other 49 from all around the globe since 2020. Also, we created BRAZILIAN FIRST COMMUNITY, a discord chat where we provide digital information over FLL, FTC, and FRC, to do so Brazilian teams can interact and contact us for assistance. Currently, 7563 is mentoring #9085 a team started by us with the goal of spreading the FIRST values.

Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?

CYBERLEADERS aims to expand the use of technology in classes, enabling students to be tech leaders. Developed with our sponsor, SESI, to provide to the students the expansion of their scientific repertoire and increase the use of technologies in the learning process. We created the course contents and training of teachers that reached 632 students since 2019, thus investing in new ways of active education. In 2022, 81% of students expressed interest in pursuing a STEM career at college.

Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years

Our team has developed partnerships with sponsors, teams and philanthropic entities. Our sponsors, Rockwell Automation, 3M, National 3D, SESI, SENAI, helped us going further to reach our goals, providing resources and mentorships. Assisting us to improve our impact through social projects, for instance our monthly workshops at ATEAL, where we supply adapted STEAM lessons to deaf children. Also, we created a deep bond with FLL and FRC teams from our region, unifying the different programs.

Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, *FIRST*, and your communities.

7563 is committed to fostering and cultivating a culture of equity and diversity. Through the inclusive programs #ANEWHOPE, #MEGAGIRLS, and #FIRSTINCLUDES we inspire underrepresented and unfortunate groups to feel their dreams matter, moreover, children with no access to the internet can have their first STEM experience. Besides, we could assist PEAMA, an adapted sport and motor activities program, with LEGO workshops.

Explain how you ensure your team and the initiatives you have created will continue to run effectively for the foreseeable future

As a philosophy, 7563 believes that the most effective way to continue our legacy is through empowering trainers, enabling them to keep spreading STEAM knowledge to other people and graduate more educators, like gears, where one movement leads the others, ensuring the MEGAZORD ideas and values keep alive from generation to generation. One example is our initiative MEGAZORD-AI, where we have taught educational professionals to a future with different kinds of teaching.

Describe your team's innovative strategies to recruit, retain, and engage your sponsors within the

past 3 years

Our team is sustained by our long-lasting relationship and commitment to our sponsors and partners, making a strong alliance, where we retain them by keeping a mutual growth. 7563 engages our partners, supporting them in their projects as they support us. We approach the companies through our events and visits, like at "SENAI World", where we recruit more collaborators by introducing FIRST and our team's initiatives, having more support and resources to change and inspire lives.

Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.

As a Brazilian team, a big challenge is to buy international products and materials for the robot building process, because of the high shipping cost and long deadline. Based on that, to overcome this issue, we established partnership with international sponsors, such as Rockwell Automation and 3M, thus optimizing the logistics process. By exceeding this challenge, 7563 can improve the quality and the functionality of the mechanical performance.

Describe your team's goals to fulfill the mission of *FIRST* and the progress you have made towards those goals.

Our biggest mission is to be the difference, by changing the way that our community sees technology and STEAM, thus, being a game changer in the access of science and education. By promoting sustainable social events and robotics workshops, starting inclusive actions, and encouraging a cultural change of education in Brazil we are working towards our goals. Through this, we ensure the application of FIRST values around us, like in the process of starting new teams and assisting rookies.

Briefly describe other matters of interest to the *FIRST* Judges, including items that may not fit into the above topics. The judges are interested in learning about aspects of your team that may be unique or particularly noteworthy.

Working with the goal of spreading the FIRST message, 7563 goes beyond! We include the FIRST Core Values in our habits, transforming the world around us. 7563 is the essential pillar for the cultural and technological revolution in our community. This way, we guarantee that each underrepresented group in our society is able to interact with science and technology, promoting inclusion in groups, such as the immigrants community, with CESPROM, that allows us to develop and apply our projects.

Essay

Using robotics as a tool to assist our community members to overcome social-economic issues, 7563 has been working to inspire the underserved ones and grows up the FIRST community. We develop technical and non-technical skills through FRC competitions while inspiring unfortunate communities to

become the next innovators generation through outreach activities with FIRST and STEM programs. Our main mission is to be the difference by creating a legacy and globalizing FIRST through the MEGAZORD'S OUTREACH PLAN, developed in partnership with our main sponsors, Rockwell Automation, 3M, SSA Automation Power, National 3D and SENAI-SP.

ENGAGING AND INSPIRING

Our first step is inspiring our community members by attending events and running robotics workshops with STEM activities. Throughout our history, we discovered that a simple interaction may be the necessary motivation to start an entire life transformation.

In 2022, 7563 in partnership with our main sponsor SENAI-SP organized the event "SENAI World", where we shared and taught technological and technical skills, engaging people in STEM areas. Besides, our team has been organizing the STEM DAY since 2019, an event that gathered 2,810 students and their families, and 190 educational professionals to celebrate innovation with interesting lectures on STEM careers, tech workshops, and robot performance.

To expand our team values, we developed an initiative called #STEMITYOURSELF with adapted STEM-based lessons as engaging tools to teach K-8 students basic mechanical, electrical, programming and building skills with LEGO materials, with 19 workshops run we inspired 566 public school students.

INCLUDING AND ENCOURAGING

Our second step is lowering barriers to access education through inclusive programs, giving voice to underrepresented groups to discover new passions. We promote workshops to philanthropic institutions and provide resources and training to volunteers to develop a sustainable impact in those organizations.

#ANEWHOPE: To inspire and teach vulnerable children from shantytowns, public schools, and rural communities, our team works like a bridge that leads them on a journey to discover their potential. Through robotics workshops, now children and teenagers who suffered from sexual assault, domestic violence and drugs abuse are welcomed and encouraged to follow new paths in their lives through STEM. Besides, we also work to reintegrate vulnerable immigrants and refugees and include them into the FIRST community, being a turning point for 150 immigrants from Haiti, that through this sustainable project, every month have contact with Science and Technology.

#MEGAGIRLS: It aims to encourage girls to pursue STEM careers and become strong leaders. Through workshops, events, support, and mentorships, 7563 focuses on including more and more female students in our team and in other FIRST teams that we started. Bringing more women into STEM fields opens greater career opportunities to them, this way, companies that participated and supported our workshop to girls in industry, like, Coca Cola, P&G, and Siemens, now include FIRST alumni girls.

#FIRSTINCLUDES: It sights to inspire and encourage disabled people to interact with STEAM fields and discover new potentials. We show that robotics is for everyone and there are no barriers to dreaming.

We promoted inclusive and accessible robotics workshops and STEM-based activities for children and adults regardless of their condition, also inspiring them to become FIRST members. Usually, our team promoted adapted and inclusive LEGO workshops with deaf children from ATEAL, an assistance association for them.

CREATING STEM LEADERS

Our third step is to increase the use of STEM lessons in classes to develop technological skills among the students to change the Brazilian education system.

#MEGAZORD-AI: With the imminent change in the labor market, industry 4.0 became much more present in the world and is considered an essential element in future jobs. Therefore, our team, in partnership with our sponsor SENAI –SP, aims to prepare and graduate workers of the future with different kinds of teaching with cloud deployment models, artificial intelligence, machine learning and others. In its first application in 2022, the project reached 677 students. According to our plan, we expect to reach, in our community, 1560 people this year.

EDUCATIONAL ROBOTICS CLASSES: It aims to integrate robotics as an official part of the student's curriculum at school to engage them with robotics in addition to promoting the incorporation of content from different areas of knowledge. 7563 developed all the technical material for the lessons, adapted the content for all ages, and provided training to teachers. 7563 has been working hard to empower trainers, guaranteeing a sustainable work. By graduating teachers, now, after 2 years around 95,000 students from public and private schools have been learning basic building and coding concepts with LEGO-based activities.

#CODE+: It points to expand the awareness of technical expertise and encourage children from slums to learn robotics through interactive and free micro:bit lessons. It represents an opportunity for students to access new knowledge and technological skills preparing them for leadership in a digital society. In partnership with the FRC teams 7565, 7567, 9085, 9199 and 9200, we enabled educational professionals from 76 schools in our state, that are forming classes and currently reaches around 100,000 students enrolled for free costs. 7563 developed all the technical material for the lessons, adapted the content for all ages. Now, children that barely had access to a computer can learn basic mechanical concepts with FIRST-based materials.

GLOBALIZING FIRST AND STEM

To immortalize Woodie Flowers by reaching vulnerable children through STEM education and engaging FIRST teams with outreaching we created the WOODIE FLOWERS BOX, a mechanism of teaching STEM with hands-on activities used in all the workshops we ran, and it is also destined to FIRST teams learn how to include STEM in outreach. The box is filled with 10 activities representing all areas of STEAM. We distribute this box to FIRST teams during FRC and FLL competitions to inspire them to promote STEAM-related outreach while developing long-term skills. Through this, 136 boxes were delivered to all the states from Brazil and 39 different countries, reaching 64 FLL teams, 15 FTC teams,

and 28 FRC teams from all the continents. In 2022, our team members distributed boxes to public schools in Singapore and to philanthropic organizations in Egypt and trained and inspired the institutions to build up an FLL program. In addition, the boxes are distributed to public schools in our region, promoting children's interaction with robotics activities and inspiring them to be the next generation of innovators.

EXPANDING THE FIRST COMMUNITY

Our final step is to grow the FIRST community in Brazil by starting, mentoring teams, supporting competitions, and working on the progression of the programs. Promoting monthly webinars, individual videoconferences, and presential visits, 7563 mentors 74 FLL, 25 FTC, and 49 FRC teams around the world, on 5 continents, teaching them technical and non-technical skills. Recently we have created our new team, 9085 Mega Harpy, an FRC team from our region, that receives all the necessary support and help from us to grow inside the FIRST community, by maintaining our weekly mentoring with them, while sharing all our knowledge and experiences we also learned new skills and values offering development for both teams, bringing them with us to the same competition.

Besides providing technical assistance, we encourage teams to forge partnerships with local businesses and schools and teach students how to engage these sponsors by promoting outreach events. As an example of our impact, the FLL team SESI Heroes since 2019 constantly has been mentored by us, helping them to become world champions in 2021. Furthermore, 7563 members became strong FIRST volunteers and advocates. Megazord is currently working on a funding plan, starting, and sustaining FLL, FTC, and FRC teams in public and private schools in the next two years, with that, we will manage to fund younger robotics teams in the form of payment for materials or registration costs. Also, looking for the Rookie's team, 7563 decided to support and help them, and created the Rookie's Guide, a document that contains all necessary information for new teams, being distributed in national and international competitions, as well as, via videoconference in process of online meetings. This document is very important to introduce the new teams to the FIRST universe, as a result the team 9047 Techmakers, who received our Rookie's Guide, won the Rookie All Star in the 2022 Off Season.

COMMUNITY SUPPORTERS

Poverty was worsened in 2020 and 7563 saw it as a priority to assist the least favored families during the pandemic. Members of our team helped to pack and distributed 500 packed meals, 1,000 surgical masks, and 300 hand sanitizer bottles to vulnerable groups in our region and philanthropic organizations, assisting 150 families. Besides, in partnership with the religious community JUSMAG from our city, 7563 helped collect food to help needy children in our city, in a Christmas campaign that happens every year. MEGAZORD believes that any help is welcome, and our main function is to reach out to everyone, after all, we are much more than robots.

7563 has become a driving force for STEM education once we used the FIRST tools to promote a real cultural change in our reality. The hearts we touch are proof we are the difference. FIRST is a tool to inspire, build communities, and change lives. The FIRST flame lives inside our hearts and it will be

everlasting!

BE THE DIFFERENCE, BE 7563!;

