

Chairman's Award - Team 1156

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2018 - Team 1156

Team Number

1156

Team Name, Corporate/University Sponsors

John Deere/National Instruments/Severo Industria/Metalthaga/Konrad Caminhoes/Novo Hamburgo City Hall/Courovale/LRB Quimica&Marista Pio XII

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2017/2018 year and the preceding two to five years

FIRST program has a huge impact on team participants both personally and professionally. 99% of our students go to college, while the national average is 19%. For the 3rd year in a row, all of our senior students have chosen STEM careers for their professional lives. In the last year, 2 team members got an internship at a sponsor company, creating a robot to automate their daily workflow. Our members take STEM for life and choose to work in worldwide companies like Riot Games, SAP, Weatherford.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2017/2018 year and the preceding two to five years

We work to develop a community where businessmen, underprivileged institutions and schools value an education based on STEM development. For 3 years in a row, we ran the robotics area of the largest science fair of Latin America. Thanks to our strong partnership, John Deere Inspire Program is now mentoring new FLL teams in Brazil. In the last 5 years, we've reached 10,800 people through robotics, from small to huge community events, such as the reception ceremony of Rio's Olympic Flame.

Team's innovative or creative method to spread the *FIRST* message

As a FIRST message catalyzer, we developed a game based on Clue, which uses FRC arenas, game pieces and participants. We will donate 10 copies to schools frequented by people in social vulnerability, so kids can have contact with FIRST ideals and inspire their attitudes. In 2017 we were invited by the CEO of the largest bank of Latin America to develop a telepresence robot. It was used by him during an event with employees, businessmen, digital influencers and transmitted live on youtube.

Describe examples of how your team members act as role models and inspire other *FIRST* team members to emulate

Our team members do not measure efforts to make FIRST grow in our country. Together, they have traveled over 160.000 man*mile all over Brazil, in order to act as volunteers & judges and to train FLL teams & mentors. In a trip to another state, we formed 12 FLL teams, directly reaching 120 children. Our members were also responsible for food, toys and clothing donation for kids and elderly, as a way to demonstrate their gratitude for the opportunities FIRST provided them.

Describe the team's initiatives to help start or form other FRC teams

We're working with Plan Ceibal, FLL's Official Operator in Uruguay, to start an FRC team for the 2019 season. We've been in their country 3 times in the last 2 years. The representative from FLL partner in Uruguay went to a US regional with us to experience FRC. Currently there's no FRC regionals in Brazil, therefore we influence our community to strengthen the program in our country, through speeches about starting an FRC team and in social events mainly related to FLL.

Describe the team's initiatives to help start or form other *FIRST* teams (including Jr.FLL, FLL, & FTC)

We're involved with FLL introduction and organization of the National Championship in Uruguay. With our school's network help we organized a Robotics Festival, exciting 130 teams to work on STEM and reaching 4000 people. We helped John Deere to apply their mentoring system at Brazilian *FIRST* teams and starting 3 new FLL teams in underprivileged schools. Last year, we formed 12 new FLL teams, changing 120 kids' lives. We moved about 200 teams and reached more than 5900 people.

Describe the team's initiatives on assisting other *FIRST* teams (including Jr.FLL, FLL, FTC, & FRC) with progressing through the *FIRST* program

We organized a lecture to 60 FLL mentors where we taught the requirements to an FLL team progress to an FRC team. We also organized an event that counted with 5 Brazilian teams qualified to the FLL nationals, where we demonstrated our FRC robot and a taught them about the FRC progression. There is an FLL team aside our workplace, in which many of our team members work as mentors. This proximity acts as a connection bond for both teams members, so when they finish FLL they may join FRC.

Describe how your team works with other *FIRST* teams to serve as mentors to younger or less experienced *FIRST* teams (includes Jr.FLL, FLL, FTC, & FRC teams)

We worked together with FRC team 1391 to create an opportunity to other teams to learn about programming with "The Secret Book of FRC LabVIEW", a book designed by 1391 to facilitate LabVIEW programming comprehension for FRC. We played the role of translators, serving as mentors to all Brazilian FRC teams. During the offseason, our team helped to train FRC team members to become FLL judges. We also worked with other mentors and influenced FLL teams to train new and less experienced FLL teams.

Describe your Corporate/University Sponsors

NH City Hall supports our volunteer work at public schools since 2007. Metalthaga and Severo Industry provide metal and machinery services. Marist Foundation and Marist PIO XII School facilities supply and fund us since 2003. NI provides resources, funds and professional support since 2016. John Deere sponsors us with funds and FLL mentoring support since 2016. Plastfera provides plastics sheets since 2015. Clássica provides shirt services since 2015. LRB supports us with funds and outreach.

Describe the strength of your partnership with your sponsors with special emphasis on the 2017/2018 year and the preceding two to five years

We developed a robot in partnership with Severo to optimize their manufacturing process. Out of 3 people certified by National Instrument's CLAD exam in our state, 2 are team members, thanks to NI support. The partnership with John Deere and contact with the global director of JD Inspire program created big opportunities to mentor FLL team to less privileged schools in our state. The Marist Foundation Network helped us to develop a new sponsorship folder, cleaner and easier to understand.

Describe how your team would explain what *FIRST* is to someone who has never heard of it

FIRST is more than a robotics competition, it's a life experience based on real world challenges. *FIRST* introduces science and technology in students lives, based on facing challenges with cooperation between teams, generating a healthy & kind environment through engineering. It doesn't only teach STEM, educate us to be better people and inspire other to be better as well. *FIRST*'s students receive lessons that are taken for life inspiring people to spread their knowledge and passion.

Briefly describe other matters of interest to the *FIRST* judges, if any

Today, we're seeing a cultural change on STEM area in Latin America due to our work during the last 16 years. We've directly helped the *FIRST* program thrive in Brazil, pioneering the FLL category through the creation of new teams, organization of events, training judges & mentors and connecting all FLL operators. Now, Brazilian FLL has more than 1000 active teams. We've also strengthened *FIRST* in a new country participating as judges & volunteers in the Uruguay FLL Championship 2 years in a row.

Team Captain/Student Representative that has double-checked this submission.

Matheus Reckziegel

Essay

Glossary:

Under Control, a.k.a. UC: The Hero

Sponsors: Allies

Robot: Companion

Funds: Coins

Level 1: Introduction!

Welcome to the Chairman's Team Adventure 2018! We'll be following the journey of our protagonist, The Hero Under Control (UC) and its faithful Robot Companion. Get ready for a game filled with thrill and adventure. We hope you join forces with our Hero to face the boss that halts the advance of science and technology!

UC was born after a robotics enthusiast gathered individuals with desire to break barriers. In 2003, 30 students began what would be an epic journey of inspiration. Through robotics, UC gained power to impact the lives of every person who got in touch with him, making them qualified, proactive, and capable of embracing differences.

Every team member works hard for the whole community to be empowered by science and technology, regardless of context or social condition. In the last level, UC will have to face a Big Boss, as a way to succeed in his mission. The Big Boss is the set of all things that prevent the development of science and technology in our world.

To proceed in this adventure, receive a Motivational Power Up!

Level 2: Creating leaders and inspiring people!

To advance through the FIRST program, UC provides a thrilling STEM experience to guide people's choices in work and life. He incites his members to develop new skills that will be essential in the transformation of their world.

By renewing 60% of his members in 2018, UC changed the lives of everyone that joined this journey. All the girls on the team are encouraged to tread their own paths on STEM fields. They are mentored by women that work with engineering on the industry.

UC's work model has inspired many local schools. In the last two years, 11 representatives of different institutions came over to learn about his STEM education model, which pioneered STEM education in the region.

Good Job! You've received a Leadership Power Up. Next level unlocked!

Level 3: Time to go beyond the school!

After inspiring his team and school, UC began his journey in the local community. Our Hero organized 22 robotics demonstration events to inspire less privileged students from public schools, granting hundreds of children their first contact with STEM.

In the last 3 years our Hero took his companion to Kids Run, a child marathon where kids could interact with UC's companion and with smaller Lego robots. The robot even got to run around the circuit, showing all the kids how science and technology can be as fun as other sports!

In the last 3 years, he collected 4,600 pieces of clothing for families in need, 200 lbs of food for a retirement home, besides the 1500 man-hours of volunteering in hospitals and schools.

UC wants to go further, and to advance to the next level it is necessary to transform the whole community. Due to the notable work in the city, UC was invited 3 years in a row to organize the robotics area in the largest science and technology fair in Latin America, MOSTRATEC, gathering hundreds of kids in robotics challenges. With UC collaboration, our city is now recognized as a technological pole.

Good job! You've received a Community Involvement Power Up. Next level unlocked!

Level 4: Resources and Sustainability

To continue his journey, UC needs to find allies. This allies contributes with coins and resources assisting in the evolution of the Hero.

At the beginning of the game, the Hero counts with Marist Pio XII HS as an ally that provides a place to work and initial resources for UC to begin the journey.

UC found strategic allies, Metalthaga and Severo, who assists him with materials and machining for his companion. The Hero also assisted Severo by developing a robot to automate their daily workflow.

Beyond these, the City Hall ally assisted in missions, by showing the route to public schools most in need in his hometown.

National Instruments assists the Hero with coins and technical support. John Deere became the Hero's biggest ally. They provide coins, and together they implemented the JD Inspire program in Brazil, which is responsible for mentoring new FLL teams.

The support of all allies is essential for the Hero's journey. Due to their support, today UC begins every season with enough resources to participate in two regionals and in the Championship.

Good job! You've received a Entrepreneurship Power Up. Next level unlocked!

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Level 5: Creating and Mentoring new teams to enable FIRST grow.

Our Hero decided to spread his knowledge, mentoring 46 FIRST teams, 12 in the last two years. With the mission of spreading robotics through Brazil, UC got involved in the training of 16 FLL teams in the neighbor state in 2018. In a partnership with our city hall, our Hero started 3 FLL teams in public schools, to help young kids interested in STEM whose schools could not provide the incentive they deserve.

UC plays a crucial role on FLL's development in Brazil. When SESI took the role as FLL operator in Brazil, they invited UC so we could act as their counselors on leading this FIRST category, opening doors for thousand of kids to engage in STEM fields.

Good job! You've received a Recruit Allies Power Up. Next level unlocked!

Level 6: Growing and transforming our community

UC needed backup to defeat the Big Boss and inspire more people to pursue STEM. To do that our Hero organized bigger events. So UC members managed to organize the biggest robotics event from their state: The FMRE (Marist Educational Robotics Festival). There, the members acted as committee leaders, judges and volunteers. This led to the participation of 1300 children from 130 teams and 4,000 visitors.

UC traveled to Brasilia to present a telepresence robot that he built to the CEO of the largest bank in Latin America, Banco do Brasil. There, 2500 people have met and supported our Hero in his journey, among them the bank employees, entrepreneurs, and influential speakers.

UC was also on the world's greatest International Tournament of Professional Education, the WorldSkills, which counted with more than 250.000 people from 62 different countries! There, UC acted as volunteer on the SESI Robotics Festival, which was an open FLL event, where UC members acted as organizers and speakers, mentoring FLL teams.

In 2016 during the reception of the Olympic Torch, Under Control was present with Dragoon, the robot from 2016, that interacted with the folks present there, raising the curiosity of children and adults. UC and his 2016 Robot were featured on the Official Twitter Legacy Account for the Rio 2016 Olympics, that has over 600 thousand followers.

Good job! Your Community Involvement Power Up has been upgraded! Next level unlocked!

Level 7 Big Boss: Opening new horizons: Introducing FIRST in new countries

UC will have to show that he is ready to beat the Big Boss that refrains the development of STEM. After a long journey, our Hero realized that to inspire young people in the way he wants, he has to do more than act locally. So he decided to open new horizons and began to act globally.

In 2015 UC started getting in touch with all rookie teams of the season through Hangouts, this way making friends in Australia, Mexico, USA and Chile.

In 2016 he received one new mission, when he had the unique opportunity of spread FIRST abroad. Our Hero helped to implement FIRST in Uruguay, a country that until then, did not know about the FIRST message and which has a huge potential to inspire thousands of young people.

The contact began when UC was introduced to Plan Ceibal, the Uruguayan government program responsible for technological education in the country. For months, our Hero helped them plan the first FLL event through training and long conversations via Skype that helped create a great partnership with Fabiana, director of Plan Ceibal.

The day of the first FIRST event in Uruguay finally came and 8 UC members acted as judges, volunteers, and presented his Robot Companion, being the first FRC robot to be in Uruguay.

To beat the Big Boss, our Hero kept his efforts in Uruguay. Due to FLL great results, Plan Ceibal intends to progress to FRC, creating the first FRC team of Uruguay in the 2019 season with the support of our Hero. To do so, Fabiana, the director of Plan Ceibal, traveled with the Hero to the Hudson Valley regional to experience how inspiring FRC is.

In 2017, another FLL event took place in Uruguay and the Hero inspired more than 1500 students. The event counted with 10 members and the FLL team of UC school, competing along with the teams of Uruguay, Argentina and Paraguay. With the Hero Inspiring 4 countries of Latin America in one event, he gained the New Horizons Power Up, allowing him to face the Boss!

Even after inspiring countries such as Uruguay, Argentina and Paraguay we defeated our first Big Boss in this journey. However over time UC realized that it required much more Gracious Professionalism and Coopertition to overcome all the Big Bosses that still prevent our students from STEM. Our Hero aims to solidify FIRST in Latin American, spread STEM for minorities and increase the number of student in the FIRST program.

Final Scores

Congratulations!

Through your effort, you achieved:

1450 people directly involved - spreading FIRST's message and developing STEM in Brazil.

3 new countries supported - you were able to transform people in new areas, making your community even bigger.

1500 hours of volunteer work - inspiring science and technology for people that wouldn't have this opportunity.

160.000 miles*men traveled to support FIRST growth - this way, more people can be reached to develop STEM through other schools, institutions and enthusiasts around the country.

12 new FIRST teams created and mentored in the last year, 750 teams assisted in FLL events around the country.

20 million people reached through TV, newspapers or social medias - making FIRST visible for people from all around the country.