

## FIRST Impact Award - Team 3478

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| <b>2023 - Team 3478</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Team Number</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>3478</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Team Nickname</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| PrepaTec - LamBot                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Team Location</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| San Luis Potosí, SLP - Mexico                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>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.</b>                                                                                                                                                                                                                          |
| LamBot isn't just a robotics team, when you sign up to this you sign up to change your life and live the best experiences. That's why in the last 3 years, more than 63 members graduated from high school, 75% of them have earned a scholarship for their college, 81% decided to take STEM careers and 8 are current mentors. On top of that, 2 of our ex-members of the team founded their own robotics school called "RobotistasMX", where they teach kids from basics to advanced robotics.       |
| <b>Describe your community along with how your team addresses its unique opportunities and circumstances.</b>                                                                                                                                                                                                                                                                                                                                                                                           |
| As a team, we try to use our platform to give visibility to our community's problems. An unseen problem in San Luis Potosí is the violence that migrants face; for this, we helped "Casa del Migrante" with 100 kits of hygiene products and 90 kg of food, to help them get by with their trip. To break the idea that women are unsuitable for science we started GIRLable, a series of talks and activities, impacting over 200 women, showing them they also have a spot in the STEM world.         |
| <b>Describe the team's methods, with emphasis on the past 3 years, for spreading the <i>FIRST</i> message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?</b>                                                                                                                                                                                                                                                                                      |
| Thanks to the impact that FIRST has had on us, we want to show our society how STEM has no barriers to reach and change lives, that's why we created "Robotics Day" introducing the people around us to the actual world of FIRST, now it is an official state celebration approved by our government. Also, our school hosted a TEDx event, where one of our teammates talked about how to achieve goals through what FIRST taught him, in front of 250 people, proving that we create our own limits. |
| <b>Please provide specific examples of how your team members act as role models within the <i>FIRST</i> community with emphasis on the past 3 years.</b>                                                                                                                                                                                                                                                                                                                                                |
| We believe in the power of experience, that's why with 13 years of hard work we have the opportunity to guide other teams. For this, we created First Robotics Fest in 2014, a series of talks made for and by Mexican teams to exchange their experiences and raise the level of the competition. The last FRF we                                                                                                                                                                                      |

hosted was virtual in 2020, reaching more than 400 people. Also we've been invited to exclusive global OffSeasons, being the only Mexican team, gaining experiences to share to our community.

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

We know that being part of the FIRST community isn't always easy, especially when you're new to this experience. That's why we created "Rookies", a project where we offer new teams a hand to boost their potential with different tools, so far we've contacted over 400 teams and had around 50 video calls solving their concerns. Also we collaborated with "Peñoles" where we exchanged engineering experiences with their 23 teams in this organization, in return they offered us social projects advice.

**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?**

Mexico being a conservative nation, isn't known for innovation and technology, that's why opportunities are limited for most teenagers. With our resources, we created "Beca LamBot", a scholarship to help 3 students with visual discapacity to finish their High School at a program of our institution. Also, we brought camps created by MIT for 30 girls who don't have easy access to engineering. As well, introducing programming courses and talks about STEM for around 100 girls at Casa de Jesús.

**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**

We've learned that when you need help, there is someone willing to give you a hand. That's why we collaborated with organizations to carry out social projects. With "Colonia Juvenil" we brought children who live in a rural zone in our state, an activity of building Lego robots to change their perspective about technology. Also, with "Casa del Migrante" we helped people get by with their trip by giving them 100 kits of hygiene products, and 90 kg of food to address a common problem in our city.

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

Spreading equality and inclusion is crucial for our team to show everyone can take part in STEM, therefore we created "Adultos Mayores" to help elderly people understand how their devices work, by making tutorials about everyday activities of the technology around them. Moreover, we worked with students of an organization focused on integrating people with down syndrome called "Integrarme Down" bringing them the experience of building a Lego robot, and learning about robotic structures.

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

With 13 years of experience, more than a team, LamBot is a long lasting project, everyone that joins comes with new ideas that get combined with all the knowledge and experiences of the whole team. LamBot has a solid structure formed by sponsors, coaches, mentors and students, where with all the abilities we've learned through mentoring and seasons, no one is vital and if someone leaves, there is always a person with passion willing to take that place and keep this dream going.

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

### past 3 years

Within the past 3 years we've faced challenges related to the pandemic, and our sponsors were always there to lift us up, that's why we organize an annual event where we let them take part in what we do, it's called "Robot Reveal" a way for them to see our work and let them know they are not just part of the team's funding, they are part of our big family. We also participate in the different events they organize, for us to also get involved in their projects and community.

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

One of our biggest areas of opportunity is the fact that our city doesn't get involved much in robotics and engineering. To improve this situation, we've been looking out for the chance to open a new First Tech Challenge team. The action we are taking is that we have reached out to 3 Mexican FTC teams asking for advice and experiences. We're doing this with the hope of changing our close-minded society and giving STEM a place in our community to involve young people in what we love to do.

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

LamBot has had diverse activities to embrace leadership and innovation for younger generations. Last year we hosted the "Robot Fair" where we invited a local robotics team to experience our internal competition, and for them to show the projects they worked through the semester. Also, we visited 5 local institutions and 4 state schools to talk about our team, FIRST and STEM, to inspire teenagers getting involved in science and technology, impacting more than 5000 students.

### 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.

We stand with the statement that "FIRST is more than robots" so bringing together the team is crucial for us. That's why we created "LamVlogs", a series of videos that show our daily life experiences within the team in our YouTube channel. On the other side, we collaborated with Psicomerida, a mental health institution to get a 20% off discount code on therapy sessions. This to push people to seek professional help, so we can involve them in STEM in the best state possible.

Essay

The world is changing, and we, the new generation, are the future leaders of it. LamBot 3478, is a team that for 13 years has been breaking stereotypes in Mexico, and tearing conservative barriers in a close-minded society.

As a big team, our mission is to spread our passion for STEM using our resources to create projects that empower new generations and motivate youth to develop within it, using science and technology as a vehicle to transform and transcend.

We want to leave a mark on our country's technological history, by inspiring others to be engineers, scientists, and technicians in the future to increase the appreciation of the STEM fields in our country.

To strengthen our initiatives, we divided our projects into 6 blocks: Education, Culture, Inclusion and Equity, Health and Environment, FIRST, and LamBot Community, to comprehend and handle them more effectively.

We want a society where everyone has access to education and technology. That's why we've created initiatives to give teenagers opportunities to be leaders in STEM, seeking to expand their horizons and find new ways of viewing their future.

Firstly, we helped 3 students with visual disability to study high school online in an institution called Prep@net, with a scholarship called "Beca LamBot". In it, we provide 50% of the total payment, in addition to the 40% that our school provides, leaving the students with only 10% left. This is for them to end their studies and be prepared for their future and enlarge their possibilities.

To embrace leadership and innovation for the new generation, last year we hosted the "Robot Fair" where we invited a local robotics school to experience our internal competition and to show the projects they worked on throughout the semester.

To expand LamBot and FIRST values, we attended schools to talk about what we do and introduce them to science and mathematics. We impacted around 50 teenagers, changing their perspective about the stigma of these subjects being boring and complicated.

We know the importance of showing robotics to the world, that's why we don't limit ourselves to schools. We also host camps, including "Patrones Hermosos", brought by our head coaches and imparted by our mentors. This is a collaboration with MIT that consists of teaching young women basic programming, opening their horizons, keeping up with our objective of expanding the previously mentioned topics and changing the lives of 80 girls.

To point up how our team develops a way to push our colleagues into being leaders, we have the FIRST block, where we seek to be role models and embody the mission of FIRST. We started by creating "Robotic Winter Fest", an internal competition where the team was divided into 6 groups to use the knowledge they learned through mentoring to complete the challenge of recreating an OffSeason hosted by the mentors and creating a learning experience.

We know how difficult the first season can be, that's why each season we contact all the rookies. In the last 3 years, we have contacted over 400 rookie teams and we had 50 calls with some of them, answering their concerns and using our experiences to fulfill their questions.

To follow these ideals, we created First Robotics Fest in 2014, a series of conferences for and by teams, to help each other with specific advice. In 2020, we turned it into a digital format for the pandemic, having an impact on over 400 people. Last year, campus Guadalajara hosted an OffSeason and we gave a talk about the experience of going to international regionals.

To help us and others, we collaborated with Peñoles, a national company that has 23 national FRC teams. We help their teams with mechanical tips in exchange for social project advice for our team.

Since 2017 we've been invited to the tryouts of the national selection in the "First Global Challenge", this is for our performance during the season. We've been guests at several invitational OffSeasons, being one of the few Mexican teams involved in these competitions.

While accomplishing this, we like our people to be in a well-being state for us to introduce them to science and technology. To achieve this, we created the health and environment block, impulsing initiatives in our community giving importance to physical and mental health, along with a clean environment.

We look forward to changing the stigma of mental therapy being taboo. That's why we collaborated with Psicomerida, by getting a discount code of 20%, to push young people in the search of psychological help with professionals, helping them access this without having trouble with time, prices, or locations.

As a team that focuses on science and technology, we tend to contaminate a lot with transport and materials we use, that's why we've created projects with the objective to reduce the 20% of our carbon footprint. We recycled the equipment we use through the season and we cleaned an avenue in our city, by collecting more than 10 trash bags full of rubbish.

Technology is for everyone without judging the context of their lives. Due to this, we have the block of Inclusion and Equity, which aims to show that there are no barriers to be part of STEM.

We noticed our city's biggest problem is the exclusion of women in STEM. To fight it, we started GIRLable, where we brought different activities to girls in our community. We began with programming courses in an institution for female teenagers who suffered violence called "Casa de Jesús", impacting around 150 girls.

Using the same kind of activities, we brought LEGO Mindstorm to "Intégrame Down", an organization for people with Down Syndrome, to introduce 10 of them to the world of STEM, letting them notice they are capable despite their way of learning.

Additionally, we participated in the camp "Juntos", founded by an institution that looks forward to integrating people with any type of disability. We impacted approximately 100 people in this event with dynamic activities of science and technology.

We realized elderly people have problems understanding new technologies. For this, we added a series of tutorials on our YouTube channel to help them understand the technology surrounding them.

Insecurity is one of the biggest problems in Mexico and people relate it to migrants, so we are trying to

change this point of view. We collaborated with “Casa del Migrante”, an aid house that offers shelter and food to migrants passing through the city. We collected 90 kg of food and made 100 hygiene kits to help them during their journey.

We’ve noticed that a lot of people reject technology in favor of tradition, we want to make clear that STEM is not here to replace that but to embrace it. We created our Culture block, in the search to transform our culture into one that embraces STEM.

We created “Robotics day” in 2015, an official state celebration approved by our government. Celebrated on October 22nd each year, it’s aimed to introduce people to the world of FIRST and show them our passion for STEM. Previous to this day, we make a whole week full of activities to promote STEM and robotics.

We embrace our culture by putting altars in “Día de Muertos”, a traditional celebration in Mexico. Last year, we commemorated the femicide victims with an altar, to give them the voice they couldn’t raise before.

We did “Megaposada”, a traditional celebration done right before Christmas. We went to CAM, a center for handicapped people to study. Bringing joy to their Christmas with activities and gifts to 50 people between 1 to 18 years old making memorable moments.

Lastly, we visit our local science museum called “El Laberinto”, to show what we do and our passion for STEM. Also to introduce them to the world of science and technology, impacting around 1000 people each month.

However, we aren’t just a robotics team, we want people to know who we are and our purpose. For this, we have “LamBot Community”, in this block we demonstrate that we are more than robots.

We use our social media to spread out team updates, such as activities and events. We have 2144 followers on Instagram, 5544 on Facebook, and 142 on Tik Tok.

As well as a YouTube channel called “LamBot 3478” with 429 subscribers and 50 videos about the team. We publish LamVlogs, a series of videos about our daily experience in the workshop during each season.

Our school hosted a TEDx event, where one of our team members gave a talk on how to achieve goals through what FIRST and LamBot have taught him, in front of 250 people, and 492 views on the official TED talks website, proving that we create our limits.

Our team is not only formed by students and mentors, also by parents and sponsors. They help us in different ways, like financing the team. We also participate in the activities they invite us to, and we have events like the Robot Reveal to show the work we’ve done thanks to their resources. This year, our sponsors are General Motors, Bosch, Cummins, SEL, EKK, and Sort Port.

Talking of financial support, we have our way to fund our team, through raffles or selling any product at institutional events. This to get enough budget for the season, events, materials, and transportation. More than a team and more than robots, we see ourselves as what we call the 3478 project, which is a

way of making the team sustainable and everlasting. We've been part of FIRST for 13 years, and it's been a rollercoaster. We've learned to be independent and strong, to survive any inconvenience. If anyone leaves, someone with the same abilities will take their place with enthusiasm. We love STEM and LamBot, and that's our biggest strength.

We think of ourselves as a team that constantly improves, being like a river, only moving forward and never being stopped. We consider our existence a triumph against our country's stereotypes and living proof that youth can change everything. That's why we believe in "Victory goes beyond winning". ;

