

## FIRST Impact Award - Team 3354

### 2025 - Team 3354

#### Team Number

3354

#### Team Nickname

PrepaTec - TecDroid

#### Team Location

Queretaro, QUE - Mexico

**Describe the impact of the *FIRST* program on team participants within the last 3 years. Think about percentages of those graduating high school, attending college, in STEM careers, leadership skills, and serving as mentors/sponsors in *FIRST* programs.**

In 2024, TecDroid launched “The Yellow Path,” a plan for guiding our students through all categories, FLL, FTC, FRC, and Alumni, stages to build a culture of self growth, learn new skills, gain confidence, belonging in FIRST and STEAM. Over three years, 100% of our alumni graduated high school and continued to college, surpassing Querétaro’s 23% graduation rate. Additionally, 95% of our students now pursue STEAM careers. This legacy endures as 8 alumni have returned to mentor or coach.

**Describe your community along with its unique opportunities and circumstances. Think about your geographic region, diversity of town/school, language barriers, socioeconomic barriers, and cultural expectations.**

In Querétaro, only 23% of youth attend private education, while 91% of our private high school students rely on scholarships. In Querétaro, 49.9% of women face inequality, and 33.1% of people are dissatisfied with the state’s quality of life. Youths make up 31.8% of the population, yet the proportion engaged in robotics remains unknown. In consequence, we created the plan TecDroid 4change to address challenges and impact various areas through four categories: #4them, #4her, #4all and #4us.

**Describe the team’s methods, with emphasis on the past 3 years, for spreading the *FIRST* Mission in ways that are effective, scalable, sustainable, and creative.**

#4them aims to make learning fun and accessible for every child, showing them, how amazing STEAM is. We run initiatives like “Aprende con TecDroid” (40 kids/year), “Learn and Play” (+200 kids), “Code and Play” (30 kids), “Robotics League” (120 kids + middle school), “InspireBot” (139 kids), and “ASTRO CAMP” (217 kids) making STEAM learning enjoyable. We also started our first FLL Challenge team, impacting 10 kids, fully funding their learning, while promoting FIRST’s mission.

**Describe your team's goals and the progress you have made towards them to fulfill *FIRST*’s Vision.**

Our mission is to spark curiosity and passion for STEAM. Our initiatives work toward this goal, holding over 100 events in three years. Guided by our slogan, “One team, one dream, one legend,” we empower students to inspire others through their learning path, creating an endless cycle of learning and growth. One of our goals is to grow the FIRST family by starting three more FTC or FLL teams in the next two years, turning dreams into realities and stories into lasting legends.

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| <p><b>What impact has your team seen from your efforts described in the above question? How does your team measure impact?</b></p>                                                                                                                                                                                                                                                                                                                                                                                     |
| <p>Our efforts have impacted +6,000 people in three years through events, workshops, and team assistance. We measure impact by tracking student participation, event attendance, teams assisted, and feedback from attendees and schools. Key outcomes include starting our FTC and FLL team. Our initiatives not only inspire the community but inspire us to keep shining with our STEAM spark, for example keeping students engaged, turning them into alumni, and creating our largest generation yet.</p>         |
| <p><b>Please provide specific examples of how your team and team members act as role models within the <i>FIRST</i> community with emphasis on the past 3 years. How do you share these best practices with other teams?</b></p>                                                                                                                                                                                                                                                                                       |
| <p>We ran “The FIRST Journey,” a free webinar guiding rookie and veteran teams, with 55 teams from 10 countries participating. We collaborated with 5 teams to share knowledge. We also run “FIRST Go Green,” placing recycling centers for plastic bottles and caps at FTC regionals and soon FRC, promoting sustainability. Additionally, our 2023-2024 president was named “Student’s lider” and our current president was a Dean’s List Finalist and Queretaro’s State Youth Award Finalist in 2024.</p>           |
| <p><b>Describe your team's initiatives to Assist, Mentor, and/or Start other <i>FIRST</i> teams with emphasis on activities within the past 3 years.</b></p>                                                                                                                                                                                                                                                                                                                                                           |
| <p>#4us is committed to make FIRST and students grow. We’ve engaged with two schools: achieving one starting a FLL and the other a FTC team in 25-26. We carry this mission, competing in season 23-24 with our first FTC team and starting our first FLL team for season 24-25. We ran for the first time “ROBOTIN3DAYS” reaching +5,000 people, besides through our webinar, meetings and construction support, we’ve assisted +60 FRC teams, 3 FLL teams, 3 FTC teams, and are mentoring FTC #25915 BladeForce.</p> |
| <p><b>What other initiatives have you created, grown, sustained, or participated in (<i>FIRST</i> or otherwise) to help inspire young people to be science and technology leaders and innovators? What outcomes have you seen from your efforts in the past 3 years?</b></p>                                                                                                                                                                                                                                           |
| <p>#4them has the objective of inspiring STEAM and education. We have run three “ASTRO CAMP”, school visits training, and events such as “Learn and Play”, “Code and Play” and “Robotics League”. Through #4her, we inspire girls to engage with STEAM, hosting four editions of FemmeTech and one Barbie in Tech, impacting +800 women and empowering them to pursue these fields. These efforts and our FLL team, have inspired many kids to be part of the FIRST and join TecDroid when they enter high school.</p> |
| <p><b>Describe the partnerships and relationships that you've created with other organizations (teams, sponsors, educational institutions, government, philanthropic entities, etc.) and what you have accomplished together, with emphasis on the past 3 years.</b></p>                                                                                                                                                                                                                                               |
| <p>We’ve built long-term relationships with companies such as WAGO, Herco and Rastreo 365, becoming more than sponsors but part of the TecDroid family. We partnered with our engineering center of our campus (CIMA) for machine access and specialized training. Supported the M.E. initiative by Space Cookies three times, connected teams though FIRST Go Green and The FIRST Journey. Additionally, NASA for ASTRO CAMP, and Latin American universities for FemmeTech.</p>                                      |
| <p><b>Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, <i>FIRST</i>, and your communities.</b></p>                                                                                                                                                                                                                                                                                                                                                       |
| <p>TecDroid, trained in “Human Dignity” by PrepaTec, has two key initiatives focused on equity and diversity. #4all fosters inclusion running Sign Language training with “SignsBot” and “SignFest,” emotional regulation for kids with “Cuori,” and “Know Me FIRST” for students. #4her promotes equity with “Patrones Hermosos,” “FemmeTech”, “Barbie in Tech”, “Menstrual Product Collection” and “Menstrual Equity by Space Cookies.” Besides, 7 of our 11 students of the team’s directive board are women.</p>   |

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| <b>Explain how you ensure your team and the initiatives you have created will be sustainable.</b>                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                |
| <p>“Aprende con TecDroid” has been running for almost 14 years, “Learn and Play” for 8 editions, “FemmeTech” its 4th edition, and “ASTRO CAMP” soon its 4th in the summer. “SignsBot” and “InspireBot” remain active, and the “Robotics League”, paused in 2022, will continue in 2025. Through planning, we accomplish longevity of projects, remain impactful, improve events, and follow our mission. We aim to continue by documenting processes, adapting to challenges and necessities of our community.</p> |                                                                                                                                                                                                                                                                                                                                                                |
| <b>Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.</b>                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                |
| <p>Communication can fail with 37 members, leaders, and external interactions, so we held weekly directive board meetings, and we run the biweekly meetings with each area to maintain better communication and personalized learning. We ensure continuity with two weekly training sessions per area and a planner to enhance productivity, track progress, and manage pending tasks. Additionally, coaches meet weekly with each member to monitor our development and ensure effectiveness.</p>                |                                                                                                                                                                                                                                                                                                                                                                |
| <b>Briefly describe other matters of interest to the <i>FIRST</i> 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, particularly noteworthy, or had a large impact.</b>                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                |
| <p>TecDroid 4change began with the question of how we could improve our community. Through #4them, #4her, #4all, and #4us, following the SDGs, we aim to inspire and empower the next generation of changemakers. While we inspire others, we also grow as individuals, as a team, and as a FIRST family. We believe change is greater than ourselves, but we can be the spark that transforms the world around us, proving that ONE TEAM, with ONE DREAM can create ONE LEGEND. The legend: TecDroid 4change.</p> |                                                                                                                                                                                                                                                                                                                                                                |
| <b>Judge Feedback</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | <p><b>Is there something we can do to improve our social outreach plan? Is there anything missing from our submitted materials? Which outreach activity do you feel we could execute more effectively? An area of improvement?</b></p> <p><b>An area the team has an opportunity to improve.</b></p> <p><b>Something that really impressed the judges.</b></p> |
| <b>Essay</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                |

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| <p>What is change? Change, we hear this word very often, but for years we have been wondering about the real meaning of change. So what is it? For years we have been trying to solve this question, we studied our community, identified challenges and created an action plan: TecDroid 4change, divided into four categories: #4them, #4her, and #4all and #4us.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
| <p>Since our founding, learning has been central to our mission. We identified the lack of opportunities in our society and how this could influence the development of our youth. Our community experiences systemic challenges in providing all children with access to quality education, especially in STEAM. These gaps prolong the cycle of limited opportunities; to target this, we created #4them: This initiative aims to make learning fun and accessible for every child, showing them how amazing STEAM is. For nearly 14 years, our commitment to education has taken us to Escuela Primaria Ignacio Zaragoza in the rural community of La Monja. Through “Aprende con TecDroid”, we have created a space where learning goes beyond textbooks. Every two weeks, 40 children facing educational gaps explore English, science, Spanish, and mathematics, blending education with hands-on activities that spark curiosity. Over the past three years, we have run tutoring sessions for 120 students, ensuring that knowledge is not just taught but truly experienced.</p> |  |

With the objective of inspiring young minds, in 2014, we launched "Touch&Play," a day full of activities designed to teach children about STEAM. In 2017, it was renamed "Learn and Play." Since its creation, we have run and hosted 8 editions, impacting +200 kids in the last 3 years alone. Building on this foundation, we expanded our reach in 2022 running "Robotics League", a program that brought STEAM education to the small-town Doctor Mora in Guanajuato, driving 1 hour and a half two Saturdays of the month to teach electronics, programming, and mechanics to 120 kids. The final project, 21 teams competing in a challenge designed by us inspired by First Competition. In March 2025 Robotics League will continue at a middle school in Querétaro.

Furthering our commitment to STEAM education, in 2023, we created "Inspire Bot", a hands-on initiative that has visited three schools, running mechanics, programming, and science classes. Additionally, we assisted three FLL teams from one of these schools, spreading FIRST and reaching 139 children.

We believe that every child deserves access to transformative experiences, regardless of their geographic location. In a groundbreaking initiative, we brought the first "NASA ASTRO CAMP" to Querétaro, offering local children the opportunity to explore the wonders of space. In a year, we ran and hosted three ASTRO CAMP, inspiring 217 tripulants to reach for the stars. Expanding our commitment to hands-on STEAM education, we started our first FLL team in the 2024-2025 season in collaboration with WunderTec. Through the "Changers of the Future" scholarship, we have fully funded the learning journey of 10 children who will compete in their first regional event in February 2025.

The challenges in our community go beyond education; in Querétaro, 49.9% of women face inequality, and only 28% of STEAM professionals in Mexico are women. We aim not only to advocate for equality but also to create an environment where all female voices find the support they need to achieve their dreams. The second category #4her, is composed by initiatives like "FemmeTech", a congress created in 2024 to inspire women of all ages to explore STEAM through conferences and workshops. By February 2025, we will have run four editions of FemmeTech, two online and two in person.

Inspired by the Barbie line "You can be anything," in 2024 we also ran and hosted "Barbie in Tech by FemmeTech", a day of activities and lectures for 39 young girls to explore STEAM, engage with professionals and learn about these fields. In 2024, we partnered with Tecnológico de Monterrey and MIT to teach 28 girls FRC basics, helping to run "Patrones Hermosos".

We recognize the global issue of menstrual inequality, which violates human rights and impacts women's lives. Economic barriers and the societal stigma surrounding menstruation further prevents experiencing a healthy and dignified cycle. To help the women in our community, we ran "Menstrual Product Collection" collecting 471 packages of menstrual products, which benefited 44 women from the women's shelters Hogares Providencia and María Goretti. By running this initiative three times "Menstrual Equity by Space Cookies", we have provided free menstrual products for +360 women.

We seek to improve the quality of life in our community and break down the barriers in our surroundings. To promote this inside our community, we created #4all, in which we hosted a Sign Language training program "SignsBot" in collaboration with the student group Códigos to promote inclusion between 48 team members in 2023-2024. We believe that inclusion starts with us, however, we ran and hosted with Códigos "SignFest" on International Sign Language Day to raise social awareness about hearing disabilities in our community. We impacted 70 people through this event.

Beyond accessibility and inclusion, we are also committed to sustainability. In 2023, we started to run "MarketTech", selling vegetables that would otherwise be discarded from the CAETEC (Agro-Experimental Center at Tec de Monterrey), preventing 100 kg per week going to waste.

Our commitment extends to supporting those in need. We ran “Corazones de Papel” and collected 400 kg of paper, with proceeds benefiting women in Damas Azules en Cancerología de Querétaro, I.A.P., helping to cover chemotherapy treatments.

Harnessing the power of creativity and collaboration, we ran and hosted “Crafting Smiles”, collaborating with the campus Art, Technology, and Design department for a student-led bazaar. The \$2,130 dollars raised was used to purchase essential items for the María Goretti women’s shelter. Similarly, through “Manos Solidarias”, we coordinated a collection drive, gathering food, clothing, books, and toys, which were donated to shelter Hogares Providencia and the Cáritas de Querétaro I.A.P

We extend our actions to help our planet; "FIRST Go Green" is an initiative we run for the 2024-2025 season, promoting environmental sustainability by placing recycling centers for plastic bottles and caps at regionals. These efforts are facilitated by designated Go Green Ambassadors, helping reduce waste at 6 regionals of FTC and soon FRC. Expanding on this commitment, we will run “Change is Green”, a gathering at Regional León where teams will share collaborative ways to make FIRST more sustainable and combat global warming.

We aim to support team members in their personal development, helping them find their passion in STEAM, discover their career, improve communication, teamwork, and promote the growth of the FIRST family. To achieve this, we created #4us, in which we work with our team, the community, professors, and other teams. For example, with the help of companies Más Espacio and WAGO, we coordinated an “Open House”, allowing our students to visit their factories, introducing companies to FIRST and our members to professional spaces.

To ensure continuous learning, we run classes led by area leaders and mentors, which give team members the opportunity to learn about mechanics, design, programming, electronics and social media. To help our members develop their communication skills and passions, we participate in “Expo Ingenierías” to connect with the industry. We run “Team bonding sessions”, where team members participate in activities to strengthen unity, and through visits to the radio, members practice public speaking by sharing the team's progress and FIRST's vision with +4,000 listeners.

Our outreach efforts extend to inspiring the next generation in FIRST; we’ve engaged with local schools, creating interest to start a FLL team in an elementary school, and a FTC team in a high school for the 2025- 2026 season. In season 23-24 we started our first FTC team, and for this season our first FLL team. We ran “ROBOTIN3DAYS” for the first time, provided published resources: prototypes, design and programming. For us, FIRST is more than competition, it's also about helping one another grow and succeed.

Furthering this commitment to supporting teams, we ran “The FIRST Journey”, a webinar in collaboration with #3255 SuperNurds, #9312 Nerd SPARK, #325 Robolancers, #3478 LamBot, and #7565 Robonaticos to assist 55 rookie and veteran teams as they embark on their journey in FRC. We covered team management, mechanics, social media, programming, finance, and project development with a focus on the impact award. Through our webinar, meetings and construction support, we’ve assisted +60 FRC teams, 3 FLL teams, 3 FTC teams, and are mentoring FTC #25915 – BladeForce.

But none of this would have been possible without looking back and understanding where we started. Change isn’t immediate. It’s the accumulation of efforts, the hours spent organizing events, teaching students, and building a team culture based on FIRST’s values. In Querétaro, Mexico, in December 2009, a small group of students had ONE DREAM to create ONE TEAM.

In 2020, we created the 4-cause plan, divided into ecology, charity, education, and project development. As our community and challenges evolved, we adapted and transformed it into TecDroid 4Change.

With time we have grown, learned, loved, won and lost and realized that change is not just something that happens

to us, it's something we create. Fifteen years, more than 500 students and finally we have found the meaning of change, it is realizing that the question isn't "Can we make a difference?" but "How far can we go?" It's understanding that ONE TEAM, with ONE DREAM, can create ONE LEGEND, this is TecDroid 4change. ;

