

Chairman's Award - Team 3794

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2019 - Team 3794

Team Number

3794

Team Name, Corporate/University Sponsors

Tecmilenio Toluca/General Motors México/DOW/BOSCH/Boeing/SimpleWater/United Technology /LOCKHEED MARTIN/Rockwell Automation/SolidWorks/CNC-MEXICO/SOCOL/Comercial Montesur/HL/MULTIVAC/DEKA/LA MODERNA/IMPORT HAMS/ALUMNI WINT/FAMILY WINT&Universidad Tecmilenio

Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2018/2019 year and the preceding two to five years

78% of our students have improved their grades, 85% are related to STEM careers, 100% of our team members are attending or graduating from college. Since 2015, our university wanted to reward the effort of their FRC teams' participants by offering them a scholarship of the 60% in exchange of mentoring the team during their trajectory in the university. Additionally, more female members have joined our team, resulting in 50% of our members overall.

Describe the impact of the *FIRST* program on your community with special emphasis on the 2018/2019 year and the preceding two to five years

Throughout the years we've seen how the mentality and perspective of our community, related to science and technology, has changed. In 2014 only, a few knew about *FIRST* and nowadays everyone knows at least the competition. Even public schools that no one paid attention to them, have created their FLL teams. True be told, one of those little girls that funded the team, searched for a high school that had the *FIRST* program in it to keep her participation on the competition.

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

By giving a course dedicated to "line follower" and "Android applications", we reached over 400 students. Due to our experience, we found that the best way to learn is by experiencing in firsthand what it is like to be in *FIRST*, that why in the "Expo de Innovación WINT" we show the attendants what it is like to drive a robot with "the mini driver experience".

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

We prefer to help other teams, rather than using their problems to our advantage, our motto is to always help others no matter the circumstances. Not for nothing, we promote gracious professionalism to every place we go, the feeling that you have when someone helps you saying "we know how you support others, now it's our turn" it's unbelievable. By helping others, our experiences are shared so we can grow together.

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

We've achieved the inclusion of the FRC program into the Tecmilenio system since 2015. This action resulted in the creation of 26 FRC teams, which helped to spread the culture of FIRST across the country, due to this effect we now have 3 regionals in our country.

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

In the 2018 - 2019 FTC season, we managed to include the FTC program in the study plan of Tecmilenio, creating 10 teams that participated in the Rover Ruckus challenge, they secured their participation thanks to the grant we got for them, sponsored by BOEING. We inspired the opening of 2 FLL teams, the school asked us to mentor them during their participation, these resulted in the recent inscription of 2 of those members to our school to follow their path in FIRST.

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

In collaboration with our sponsor NTECH, we designed a digital platform which serves as a "how to" guide to help teams from all the categories of FIRST on the making of their team, inscription, planning of their business plan, making of the base chassis, etc. In the FRC kick off, we created a network of sponsors which helps other teams to reach several companies willing to sponsor them, due to these 9 teams have found sponsors in this event.

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)

Our team has worked with 2283 throughout the years in the translation of each year's game manual; during the kickoff, we work in collaboration with 2283, 3478, 4010, 6606, etc. (over 30 teams) to bring workshops that range from robot design to chairman's award. In collaboration with 6606, we mentor teams in the application of the "Rookie Grant", achieving the benefit for 12 teams.

Describe your Corporate/University Sponsors

GM: financial & mentorship - 3 yrs. Tecmilenio: facilities & mentorship - 9 yrs. DOW: financial & mentorship - 2 yrs. DEKA: financial - 1 yr. United Technologies: financial & mentorship - 1 yr. BOEING: financial & mentorship - 2 yrs. Lockheed Martin: financial & mentorship - 1 yr. Multivac: material & financial - 1 yr. BOSCH, SOCOI & CNC: use of machine shop - 3 yrs. Montesur, HL & Simplewater: financial and material - 3 yrs. Fundación Zurich: financial & mentorship - 1 yr.

Describe the strength of your partnership with your sponsors with special emphasis on the 2018/2019 year and the preceding two to five years

10 mentors that are employed by our sponsors have provided us with more than 4,000 hours of mentorship. Tecmilenio, DOW, BOSCH, GM, CNC Mexico, SOCOI, Fundación Zurich, have taught us new skills about industrial machinery, industrial logistics, teamwork, gaining resources, marketing strategies, as well as taking care of our surroundings. Without them, we wouldn't be where we stand today.

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

It's a life experience that doesn't differentiate from ethnicity, age, genre, race, in which people can develop professional skills and generates a social service that contributes to countries all around the globe. More than building robots is a place where you find your purpose in life, your wildest dreams suddenly become easier to achieve here, that's what FIRST is.

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

In 2015, we were recognized by our governor as one of the principal diffusers of science and technology in our state. We had to keep the example, that is how we noticed the importance of women in science and technology, we created the first all-female team in the country, 6606, due to this we impacted over 4,500 women. Recently, we visited 150 inmates in "Almoloyas youth jail", where we gave them courses related to STEM for 6 months.

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

NADIA MARMOLEJO

Essay

We set on a journey, granted our wishes. Since 2011 our founders had a dream to change the world. That dream we've seen realized thanks to the creation of WINT. Right when we started, we knew our mission should be to become an auto-sustainable team with a change initiative, as we made STEM fields part of the community growth. Since 3794 was born we realized there were many specific groups where science and technology could not reach, that's why we began our work focusing on sharing the FIRST philosophy through the right use of Gracious Professionalism. Now it is time to initiate the launch to a whole new universe.

By helping team 2283 since 2013 with the translation of the manuals for non-English speaking teams, every team can now understand it without problems. Our members have volunteered in over 13 FIRST events, because we ran the past 5 Kickoffs, in 2018 FIRST Mexico declared that we would run it permanently, in which workshops such as Safety Award, Rookie All Star Award, Robot Quick Build, Programming and Engineering Inspiration Award, will be present. In 2018 we started two FLL Teams (WinT Jr. and WinT Kids) one of them went to the FLL national by winning the Innovative Solution Award. The FTC teams 15754 and 15645 that were created by us, one of them made it to the National by winning the Design Award and reaching the semifinals, which made it one of the strongest teams of the competition.

Our University was inspired by us, thanks to showing them the benefits of FIRST, this evolved into the incorporation of FRC in every campus, they even changed their study plan which is now centered on STEM values. We started and mentored 26 teams in FRC as we assisted them on their rookie season and every two weeks in their second season. We helped them get the 3,000 Boeing grant and the Argosy Foundation grant. This whole process resulted in the participation of 12 Veteran teams and 12 Rookies in 2017.

The inclusion of women in STEM is essential for growth as a society, which is why in 2016 we created the first all-female team in Mexico, 6606, impacting 4,500 women. Two of our senior female members became their mentors and we sponsored them with mentorship, a work area, and spare parts. To ensure their continuity in FIRST, we talked with our sponsor "Dow Mexico" so they could support them as well, which resulted in 5,000 dollars grant for both teams.

In 2015 we created the "QDriver" station an opened source which allows FRC teams to control and manage their robots regardless of their operative system or devices, additionally anyone can contribute to improve it. Due to its success, it has been downloaded all over the world.

We have different that target different areas in our community. The first one being "FIRST Positive", which started in May 2017 where we incorporated Positive Psychology in our team, this resulted in an upgrade of our effectiveness and better relationships inside and outside the team. That is why it is important to share this way of thinking with our fellow teams, which is why in seven days the teams developed different activities related to the welfare circle, which are expressed in the FIRST Positive Manual. 25 teams around the globe formed part on this project.

Our second project is "STEM Without Walls" where we went to vulnerable communities to spread science and technology, where in collaboration with team 3339 from Israel, they worked with an orphanage as we did it with Almoloya's Youth Jail, where for 6 months we gave robotics courses and we impacted 150 inmates. "It was an experience like no other" that's what one of our participants told us, being locked away for so long and having touch with the outside world made them have, once again, the illusion of coming out to the outside world.

Thirdly, in collaboration with our sponsor DOW, we participated in the "WE" program where we designed two projects to inspire young people to unlock the power of science to address local or global problematics. We made, from scratch, an electric go-kart which can be used by young people with Down Syndrome, we targeted the "CAM" (Multiple Attention Centre, a school for kids with special capacities) as our main objective. In collaboration with a school from Villa Victoria, a project was born, which is a prosthesis that can be controlled with our muscles by using servos and is programmed with Arduino.

Our fourth project is one that was made in collaboration with NTECH, we created a digital platform where we help other people to create their own FIRST team by using documents and tutorials, you can also find courses about how to make your own line follower robot and Android applications. We've impacted 1,200 people, which each one of them has created their own application.

Our charity events range from giving toys to kids in need to recollecting and giving away box lunches for the relatives of the hospitalized patients. In 2017 there were two earthquakes in our country, we recollected a sum up of 2 tons for the affected.

Let's not forget about that each one of our members needs to do 240 hours of social service, we intend to give something back to our community in any way we can.

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Since 2016 we started doing the "Expo de Innovación Juvenil WinT" (Youth Innovation WinT Fair) the first event created to promote science and technology in our community. We seek to promote STEM and break current paradigms about the technological developments in our country. With this Expo, we are accomplishing the objective of making people, sponsors and government conscious of the importance of science and involving companies and associations into this field. With the help of 6606, 4010 (FRC teams), Liang and Iron Bots (FLL teams) we spread the FIRST philosophy inside the expo. Beyond just robots, the Expo has the purpose to be a motivator and incentive for future generations. We have impacted over 8,000 people.

We have reached children of different ages and teach them about FIRST, so in a future they can be part of it. We have gone to different schools to promote science and technology and show what it is like to live the FIRST values with "The mini Driver Experience". With these events we have reached a total of 12,000 children ranged from 6 to 15 years.

Starting 2 years ago, we transformed our "Hanging Out with WinT" campaign from just going to visit places in our city, to take it to ethnic communities in the diverse routes. These range from the Otomi, Mazahua, Mexica and Matlatzinca in which we carried our robots and allowed people to interact with them in order to transmit the interest and enthusiasm for STEM, due to this participation, we impacted over 3,000 people.

Our sponsors are more than just a company, we believe that they are our strategic allies to share FIRST and STEM values. We managed to form a solid relationship with them as we work together in events where we can impact our community and spread the message. With DOW we have gone to reforest "El Nevado de Toluca" where together we planted 7,500 trees, as well as rehabilitating an inclusion center for people with Down's Syndrome, "Daunis". Every FIRST team knows how hard it is to get sponsors, that is why alongside GM, we ran a networking event with several enterprises where all the teams that assisted the kickoff could talk to them, with this we wanted to make it easier for teams to get in touch with companies and make our sponsors even more interested in supporting FRC teams. As a result, BOSCH and other companies decided to mentor 9 teams for the 2018-2019 season.

On 2014 we counted with 5 sponsors, today we have 18 enterprises that are supporting us; we have been working with them hand by hand, gaining knowledge and experiencing what not everyone at our age could live.

FIRST gave us the chance to learn new things and values. Each one of us has learned something that will help us in our future, more than 85% of the team members have realized they want to study STEM-related careers in the near future and 100% of our alumni are either attending or graduating from college. WinT has been such a good experience that most of our alumni continue being in contact with us, about 70% of our mentors are students who used to be seniors and came back in order to support our new members. We have realized that 78% of our students have improved their grades and upgraded their performance in school.

We know WINT was created to change our community, to be something that inspires younger generations. Now we are creating and encouraging others to change the world, because we believe that if STEM is implemented by the youth, it is able to break paradigms.