

## Chairman's Award - Team 4091

### Team Number

4091

### Team Name, Corporate/University Sponsors

The Carol Morgan School

### Briefly describe the impact of the *FIRST* program on team participants with special emphasis on the 2016/2017 year and the preceding two to five years

When you join DRIFT it always finds a way to your heart. DRIFT has the ability to change the way you think; it teaches you life relevant skills that you will use in the future. Our team captain, Nicolas Vasquez, has been able to find his real passion with the team. He has decided his future career because of his experience in the team and is now planning to study mechanical engineering, continuing his journey in STEM. He is one of the many examples of members whose heart has a fraction of DRIFT.

### Describe the impact of the *FIRST* program on your community with special emphasis on the 2016/2017 year and the preceding two to five years

DRIFT started a 'tech' revolution in 2012. Our school now has 3 Maker Space's, AP CompSci, robotics classes and an overall encouragement of the team's projects. We've been able to revolutionize how our community views STEMs, more people around the country are following engineering career paths, and because of our contagious passion more private schools around the D.R. are starting their own teams. FLL has flourished so rapidly we are expecting over 70 teams in our Caribbean Regional.

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

FIRST's message is to recognize Science and Technology. We have spread this message by helping in the creation of FRC teams in other schools in and out of the country we have enhanced the course selection in our own school and have brought FLL to the country, but most important of all we have brought technology to underprivileged kids around the country. The passion we hold and spread for robotics speaks for itself. We are at the epicenter of a technological revolution in the Dominican Republic.

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

Nicolas Vasquez. While he only recently became the team captain, he has always been a mentor our members have strived to be like. He is always teaching others how to do things ranging from drilling a hole to assembling the pneumatics system. Nicolas is only one of many members whom we strive to emulate in our community. While there are certain people we all emulate and look up to, within the DRIFT family, we all come together to form a community.

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

As a FRC team, we automatically assume the responsibility of inspiring creativity and a love for STEM in our community. As the first FRC team in the Dominican Republic we have taken this responsibility to the next level. Within our short time as a team of 6 seasons we have started another FRC team in the D.R. Team FORCE incorporated FLL and FTC into the school curriculum helped found the first FRC team in India RoboKnights and founded and hosted the FLL Caribbean Regional for the past 3 years.

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

As the first team in the Dominican Republic, we have a responsibility, to spread the message of FIRST. Within the Dominican Republic we have helped found the second FRC team in the D.R. we have incorporated FLL and FTC into our school curriculum, and for the past two years we have hosted the FLL Caribbean Regional. Last season a team member, Jahaan, visited RK Puram, one of India's most prestigious schools. With our support the students there, we helped found the first FRC team in India.

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

When we started in 2012 FIRST was unknown in our country; fast forward to 2017 and the country has 2 FRC teams and hosts the FLL caribbean regional with 30+ teams. We have sponsored (both financially and morally) 8 of them.

Several of our members have participated in the FLL caribbean regional as volunteers and referees. One of our members traveled to India and inspired them to start their own FLL program and we are in the process of helping a school start its' program in Nicaragua.

**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)**

Between our 1st season and 2nd season we helped found the 2nd FRC team in the DR, Team FORCE. Since the 14'-15' school year the FLL program has been an elective course at our middle school and an FTC program has been an elective for high school students. The FLL teams are all mentored by members from our team; our 6th grade team was invited to the *FIRST* Championships at Houston. We have also started the FLL Caribbean Championship in 2015, with an expected attendance of over 70 teams this season.

**Describe your Corporate/University Sponsors**

Unlike every other year, this year we have contacted one of the most prestigious institutes in the United States to help/guide us through this season. A professor from Worcester Polytechnic Institute is spending about five hours a week with us via Skype giving us tips and tricks on how to make a more efficient robot.

**Describe the strength of your partnership with your sponsors with special emphasis on the 2016/2017 year and the preceding two to five years**

Starting the season in November, we have been able to contact large companies such as Worcester Polytechnic Institute, Alvarez & Sanchez, and Marti PG. These are just a small portion of this year's sponsor list. As the tradition goes, the sponsors send us their logo for us to print it in the team's shirt and promote their company in USA, and in return, we give our sponsors several t-shirts.

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

In our view, *FIRST* is an inspiration and as an opportunity for those interested in mathematics, engineering and programming to be able to improve themselves and their situations. *FIRST* allows us students to cooperate as a team. *FIRST* tests our creativity to find solutions to problems we encounter and is a reminder of the importance of math and science. Most importantly of all, *FIRST* gives us the opportunity to find and develop our passions.

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

*FIRST* is not only about competing it is also about extending our reach demonstrating and teaching communities about robotics and the FRC competition. One of our initiatives is Project Girl this club has introduced STEM fields to girls across the country inspiring many along the way. Another initiative of ours is sponsoring scholarships for students from a local foundation to travel with us. These initiatives are great examples of how *FIRST* helps a team reach out spreading the message of STEM.

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

Nicolas Vasquez

**Essay**

DRIFT is the new *FIRST*  
WE ARE THE REVOLUTION

Almost 6 years ago, a small group of students with an inherent passion committed to achieving something before unheard of: they had a mindset that they would make the first FRC team in the Dominican Republic. Spearheaded by a group of motivated individuals, the founders of Team DRIFT took on a task of ground-shaking proportions, which has terraformed the technological basis of its country in an equal, logarithmically scaled, magnitude. We really did shake things up that first year, but little did we realize that we were doing much more than building a robot or following guidelines to a game in which we had to compete. We realized that Team DRIFT, and FRC, for that matter, were not just a task to take on. We realized that both, in perfect synchrony, existed for one purpose: revolutionize STEM education in our community, starting with our own school and extending to the rest of the country.

This idea of starting a revolution extends in many ways beyond the obvious, although, the obvious is a clear place to start. Therefore, individual members of the team have, since its inception, been acquiring lifelong skills in the areas of engineering, programming, marketing, and all sorts of STEMs. The software team, for example, has seen spectacular individual and team growth. From the very first year, in which members held no expertise and had to resort to the internet for their entire information deficit. They had no prior programming knowledge, so the members of software team

spent countless hours learning from books, internet, and expert mentors to improve this part of our team. In fact, during the first year of only using LabView to program the robot, trying to program an autonomous robot was just a dream. Fast forward five years, the software has acquired the knowledge to help themselves and to share these programming skills and knowledge with other teams (more on that later). It is important to consider the amount of technical elaboration that Team DRIFT has offered its members, increasing exponentially by the year. These very practical applications of ability are aside, of course, from the official first-aid certification that many team members have received, and more importantly, labor skills we've learned. Among the millions of things that each member has learned, lay the unquantifiable, but so clearly evident skills of teamwork, perseverance, problem-solving, self-management, and responsibility. It is not easy to start a team in a country with no access to any sort of resources, be they human, technological, or material. It is fair to say that stranded on our tropical island, we really are isolated from the rest of the technological world. There was virtually no experience from anyone on the team or community, and very few professionals that were willing to be mentors. There was a lack of materials and an inability to buy any necessary parts, from metal bars to sensors, were some of the challenges we faced our first few years. These trying situations really brought out the best in us; allowing us to push through and successfully complete our robots, even if it meant working over 35 hours a week. We learned to work with other people regardless of any differences in ideology or construction beliefs. We controlled high levels of stress when our robot (the second year) fell apart the day before bag-and-tag and days after both of our head mentors saw themselves unable to assist us for the rest of the season. We worked to solve problems and made several failed attempts, just like Edison and his light bulb. We never let our failures get in the way of finding a solution because that first year a top eight team selected us to their final alliance. It could be said of every member of Team DRIFT that truly, our perspective on pursuing technology has changed drastically.

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We grow ourselves by helping others and causing change. Historically, we are the first FRC team in the Dominican Republic. In our isolation, we understood that technology can not exist in single packets- it must be community- and so we set to work building said community. A single year after we began, due, mostly, to our inspiration in guidance, our small, impoverished nation procured its second team, Team Force. Knowing though, that this wasn't enough, we have gone to many schools advocating participation and involvement in robotics, in every form, as we have come to understand that our team is significant over just construction and entails a better nation. We have showcased our robot at every bonfire, Halloween frolic and technology showcase that our school has had in the last five years, and we have met great success in Autoferia Popular, which we have attended for four years. At this final event, we met our biggest exposure last year, conveying our robot in the annual car-show to over 10,000 viewers present, all the while explaining the purpose and meaning of our robot, and its importance to our nation. To such an extent does this value lie that our memorable robot, Sharkatron our first robot, was actually decreed a national hero. We have appeared on major media outlets including national television multiple times and a considerable number of nationwide newspapers, aside from showcasing at various malls and robotic expositions. We have, in the course of five years, gone from a team with barely the ability to maintain itself, to one of the largest proponents of technology in our country, and gradually making our country itself into a hub of STEMs, taking into account the fact that ourselves and our fellow team Force were fundamental in its development, we are now hosting FLL regionals for the entire Caribbean expecting more than 70 teams. And while all this outreach is great, we understand that a major part of the reason that our country needs us so badly is because the ideas which we promote are out of the reach of much of the populace, which needs to think about it's their next meal rather than building robots. It is for this reason that we place them in reach. We reach out to disadvantaged children by supplying them, in a combined effort with the Peace Corps, with lego kits, to, true to the FIRST mantra, inspire them. This inspiration, we believe, is the right step to allow our country to progress. We don't have our nation's next meal at hand to give out; we do, however, have the knowledge, experience and vision to teach them to build it. We reach out to the Chicas Brillantes organization to provide a group of young girls, living in such miserable conditions as to barely know the advent of computers, and teach them about the potential they have to be something other than maids or cooks or prostitutes. We reach out, and to the students we take in from Ces-Car and APAP, the chance to actively participate on the construction of a robot and then travel to the US becomes not only a dream come true, but one that without us would be impossible. We've also reached out to another school club called Project Girl, where we taught a group of girls in a 'batey' the possibilities of pursuing a STEM education. Most girls in these neighborhoods get pregnant before they are 18 but when we introduce them to the idea of pursuing technology, their minds expand to new realms. This hands-on experience does not merely entertain underprivileged teenagers; it pins them side by side to mentors and veteran Team DRIFT members, working on the robot, but more importantly, on themselves and the nation. Team DRIFT is the new 'tech' revolution.

We have not limited our necessity for reaffirming our experiences to our own nation. We have reached out internationally. In India, we began the first FRC team of a nation of 1.3 billion inhabitants, known for their technological prowess, through Skype calls and a 9 hour time difference, to help them in every way possible. From our humble beginnings, we have done more than build a robot. We have done more than inspire. We have begun an earthquake and we'll continue to shake until we're all touched by the power of our wrath.

Our country's culture doesn't encourage STEM higher education. We have taken on the task of making sure this notion is changed. We are a developing country, but we are confident that with the encouragement of STEM education, our country can rise through the ashes of controversiality. New conversations are happening in every corner of this country, and we dare say, it's because of us. We are the new revolution, and we intend to feed this furnace until our country rises.