

## Chairman's Award - Team 6429

[Print](#)[Close](#)**2018 - Team 6429****Team Number****6429****Team Name, Corporate/University Sponsors**

Zorlu Holding A.?./Vestel A.?./Fikret Yüksel Foundation/Ege University EBILTEM TTO/Renkler Makina/Kale Pasta & Ekmek/?.ZS?AD (Izmir Industrialists' and Businessmen's Association)/Elçi Film Yap?m/Omsan Lojistik A.?./SolidWorks/Egedeniz Textile & Guzelbahce Bahcesehir High School for Science and Technology

**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 inspires us as we inspire the community. 92% of 4D members are planning on having STEAM related careers. As FIRST widened our horizon, 6429 has become aware of global sensitivity. Sparkling with FIRST spirit, 4D achieved 494 hours of volunteering per member in STEAM-related activities for the community. Plus, 100% of 4D considers attending college. Thus, FRC became the platform where we gained social responsibility and mastered in converting what we learn to what we do.

**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**

Filled with gratitude to FIRST impact, we reached 2,000,000+ people in the community. Our curriculum Inspire the Future provides STEAM education for children from 5 to 13. 4D organizes seasonal STEAM Days to share the enthusiasm for 21st century principles. As an eco-friendly team, 6429 is designing an application to reduce the carbon&water footprint. Our social responsibility project 4 Colors of 4D draws attention to STEAM education, gender equality, obstacles and environment through donations.

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

4D cultivates next generations with centurial requirements thanks to FIRST message. To apply a creative method, 4D's Halloween party provided entertainment through STEAM. 6429 became a member of FIRST Help Now created by 3132 and held an unofficial Kick-Off. We ran 2 science camps for 90+ kids in a mega-factory, attended Maker Faire, STEM Kit & Teachers' Training Faire and Hack4Wellbeing(H4W). In H4W Hackathon our walking stick prototype, Tri Balance, was rewarded for its convenient usage.

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

Being an FRC team converted from FLL, 4D takes comprehensive steps to be the role models to youngsters. Since our mission has become our passion, we created a 115-member social media group to keep in touch with FLL teams in Turkey. We interacted with 150+ teams since we were 25% of the volunteers in FLL tournaments. We make video calls with disadvantaged teams. We are the formal mentors of several FLL Jr.&FLL teams. Thus, being the first FRC team in our region made us idols for the youth.

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

Thanks to events that we attended&volunteered; we obtained opportunities to express our approach, actions and plans. 6429 introduced FRC to FLL teams that will soon exceed the age limit of FLL. We became a worldwide inspiration and assisted numerous teams in mechanical&managerial aspects while starting FRC team 7153. With the impacts of 4D, 3 new FRC teams are formed in our region. Taking initiatives of 4D into account, it is blatantly clear that we became the FIRST role model in the community.

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

Full of commitment to help start or form other FIRST teams, we arranged STEAM activities for underprivileged students at various public schools and led them to be creative and productive for the future. We struck a chord among youngsters by evoking them to be the next FLL Jr. or FLL teams. Since 6429 believes a wish is inadequate until it comes true, we are beyond the horizon and already made a breakthrough. Hence, 10 FLL&FLL Jr. teams are growing with FIRST principles by courtesy of 4D.

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

Initially, 4D networked/directly contacted with 180+ FLL and FLL Jr. teams while mentoring/assisting 60+ of them. 6429 provided technical&mechanical supplies for rookie teams as well as our initiatives include giving a hand to various FRC teams. We networked with 90+ FRC teams and directly contacted with 40 of them. In 2 years, 4D assisted 12 teams for robot parts, 26 teams for designing&strategical help and 11 teams for programming. We translated game videos and took part in Game Manual translation.

### **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)**

To spread our knowledge, we formed an active community where we mentor FLL Jr.&FLL teams. In light of our enthusiasm, we always back up our mentees such as Team Jr. Dimension, Olympus and 4th Vision. Also, our last year's mentees from FLL team Thundercats are now our new members. 4D attends its mentees' after-school meetings since gears only work when together. Also, we arranged 8 workshops&presentations to rookie FRC teams at 4DKickoff. We are part of FIRST Help Me Now(24/7) to assist FRC teams.

### **Describe your Corporate/University Sponsors**

We work cooperatively with our sponsors for both manufacturing&community outreach. Zorlu Holding, Renkler Makina, VESTEL, Fikret Yüksel Foundation and SolidWorks support us technically while Omsan Lojistik transports our robot. Ege University EBILTEM TTO, Bahçe?ehir Schools and ?ZS?AD provide funds for our social responsibility projects while Kale Pasta&Ekmek provides catering services. Besides, Elçi Film Yap?m is our sponsor for Chairman's Video and Egedeniz Tekstil produces our team apparel.

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

Considering sponsors as milestones of FRC, we keep our bonds with partners constant. Our sponsors are informed about the current budget and expense, which we stabilize with our SWOT analysis. To strengthen our relations, 6429 has an organized structure dividing our sponsors as platinum, gold and silver. We spread the name of mentioned companies in all aspects. Balancing what we can contribute to them and what we need from them, we add reliability and permanence to the 4D ethics in sponsorships.

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

Open your eyes, look within. What can you do to help change the world? The answer lies in a worldwide phenomenon that cultivates creative and open-minded new generations: FIRST. Invoking gender equality, teamwork, organization, gracious professionalism; FIRST lays groundwork for a tight-knit community. Throughout the process, you will build up your imagination and vision thanks to STEAM. In conclusion, you will rediscover your potential to be an inspiration.

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

The question is: What makes 4th Dimension THE 4th Dimension? 4D tries to choose the least harmful ways in terms of transportation, robot building, etc. Not only do we hold educational phenomena, but also, we blend our community with engineering, entertainment and creativity. 6429 believes that memories are the backbones for unity and persistence; therefore, we have a tradition of annual team dinners. 4D has a message to the world: "Equalize the opportunities. Be the game changer."

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

Ece YÜCER

## Essay

### What is 4th Dimension?

We are the first FRC team in Aegean Region who introduced FRC and brought a new dimension for FIRST in its community. We are the team that incorporates teamwork into its culture, creating the power cubes of permanence. We started collecting the cubes as 10 members of FLL team Wall-E in 2015. Later on, we built a firm foundation -4th Dimension- on July 25, 2016 in Izmir/Turkiye with the power cubes we collected. Currently, we have 20 members who have grown up with the principles of FIRST and are full of curiosity.

In this adventurous road of both learning and teaching, our ultimate mission is to empower next generations by spreading FIRST's message without ANY gender discrimination and with the help of the opportunities that FIRST&STEAM provide us.

### What makes 4th Dimension THE 4th Dimension?

Our FLL history strengthens our team relations as we are aware of the importance of core values. We believe that learning is a long-lasting period and results or achievements are inadequate to define this rewarding journey. Henceforth, we firmly trust the PROCESS.

Since gender equality is a backbone for our future, we equalized the gender by balancing opportunities. As a team that consists of 10 boys and 10 girls, our team has set a true inspiration for the youth.

Furthermore, we built a comprehensive network open for interaction, association and cooperation. In this context; we have also brought a new dimension to gracious professionalism. Therefore, our perspective is running as one until we involve everyone.

Besides, we have a well-structured base that divides into sub-teams. In this way, we complete all the tasks with great teamwork and organization while managing our time well. According to our organizational structure, we do different kinds of projects and inspire next generations for a better future. The fundamentals of setting an inspiration are gained by courtesy of the STEAM activities that we brought to the underprivileged areas. Hence, we became the youngsters' role models and hope. In the end of the day, the sparkles in their eyes are worth to see.

### What are our successes and projects?

As a team that is in its 2nd year, we achieved more than we dreamed and started to feel proud of our hard work while gaining a lot during the working process. All the participations we had in these 2 years helped us improve ourselves. As a team, we attended numerous STEAM and enterprising related events that helped us create a tight-knit network and made it easier to contact the possible sponsors. In order to strengthen our relations, we have an organized structure that divides our sponsors as platinum, gold and silver. In all aspects, we spread the name of our sponsors. As we balance what we contribute to them and we need from them, we add reliability and permanence to the 4D ethics in sponsorships. In order to spread FIRST's message, we played for real by RUNNING various events.

For instance, we RAN an unofficial kickoff and organized workshops at the same time provided PUBLISHED resources of 8 different presentations for the rookie teams. Likewise, we HOSTED 8 FLL teams in our working area to ASSIST them.

Also, we carried out "Learn to Build" activity with the children aged between 6-9 and realized that only 20% of them are 6 years old. Thus, we decided to do more projects with preschool kids.

Furthermore, we RAN a Summer Science Camp in a megafactory for 30 workers' children from 7-14 and taught them about how to build and program a robot. After 5 days of education, we gave different tasks to the children according to their ages and examined whether the camp was efficient or not. The success ratio was 98%. So, it showed us that we'd taken a crucial step on our way to a brighter future. Later on, we HELD Winter Science Camp in the semester break. This time, 60+ students had an opportunity to attend robotics education and the ratio of success increased to 99% that makes us much prouder.

Besides, we realized that only 1% of locals in Izmir were aware of FIRST&STEAM based on the survey we did. So, we broadcasted globally to inform everyone about them.

Equally important, we organized STEAM Halloween party and gave a speech to the participants about us, FIRST and FRC. Also, we raised money for expenses.

Additionally, we were the models of the project "STEM Kit And Teachers' Training" held by TUSIAD (Turkish Industry and Business Association) and attended the faire as embodiments of STEM projects to inform the teachers about what we do.

Plus, we always search solutions to decrease our carbon and water footprint on Earth. However, we have to search and be the change itself with all the teams. So, we are working on an APPLICATION that calculates the team's footprints and suggests the ways to decrease them.

As well; according to the "More Than Robots" motto, we started a SOCIAL-RESPONSIBILITY project -4 Colors of 4th Dimension- to raise awareness in STEAM Education, Gender Equality, Obstacles & Environment. In this context, we designed 4 different t-shirts and sell them to donate the income to the related charities.

Another project that we are working on is PUBLISHING seasonal magazines that include assorted experiments for kids to encourage them in STEAM.

What's more, we became the initiative team which ORGANIZES seasonal conferences for all ages and all interests in Izmir. The Winter STEAM Days will be on February 10, 2018 and includes workshops and 7 speeches by experts. This way, we will be encouraging the locals.

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Along with this very path, we have reached the beyond. Taking a look back and considering the overall approach of Team 6429, we have become the change we wished to see in the world.

### How Did We Become Role Models In Engineering?

In this 2 years, we have ASSISTED 12 teams for robot parts, 26 teams for designing & strategical help and 11 teams for programming. Helping rookie teams is crucial to us because we have passed this way recently with the hardships of being the one&only team in our region. So, we PROVIDED electronic parts such as motor controllers,motors,etc. We also PUBLISHED designs of robot parts that are suitable for this year's game to ASSIST rookie teams in mechanical designing. Our robot was TOTALLY designed by our team members using Solidworks and AutoCAD. Apx. 39% of our robot parts are manufactured in our school. We use CNC, 3D Printer and Hot Wire Plastic Bender(HWPB) -constructed by our team- for their manufacture. With our HWPB, we bent polycarbonate to shape our elevator panels&intake. We also DEVELOPED a new mechanism that tensions our chains before we assembled them to our robot. We REDUCED our prototyping BUDGET 300% with in-house CNC. We produced 100% of our prototypes on our own.

%40 of our drive team is girl since we support gender equality.

We also produce bird nests&dollhouses with CNC machine for our region's BK schools (15 total) for innovation classes. We donated cathouses to DOWN CAFE where we built&painted them with staff.

Our walking stick prototype, TRI BALANCE, which was rewarded at H4W Hackathon is now being MATERIALIZED. We are Turkish REPRESENTATIVE of FIRST Help Now 24/7 started by 3132.

### What are our initiatives on Mentoring/Starting/Assisting FIRST Teams?

As a team which converted from FLL, we are working with effort to widen the FLL&FLL Jr. culture to our community. Since last year, we have networked/directly contacted with 180+ FLL&FLL Jr. teams while MENTORING/ASSISTING 60+ of them. We STARTED 2 FLL Jr. teams, 8 FLL teams and an FRC team. Plus, we networked with more than 90 FRC teams and directly contacted with 40 of them (incl. national&international). We TRANSLATED thecompassallience.org and Powerup field videos as well as taking part in translating 2018 Game Manual to Turkish. As the team which STARTED FRC in its region, we are proud to say that we are now 4 teams and becoming a bigger family as days gone by!

### How Do We Spread The FIRST's Message? Our Community Impact

We have exposed about 2 million people to FIRST through attending various events for 2 years. When we were first founded, almost NO company knew about FIRST, even STEAM. Now, FIRST message is being successfully spread in our region and nation for two years with the events we attend and arrange. Our commitment to FIRST's message and love to science lead us to volunteer in various STEM-related programs for 494 HOURS per member. For example, we are the FLL volunteer coordinator of high schoolers.

With our project "Inspire The Future" (IF), we had an opportunity to work with 3 different local public schools. The students in those schools, from age 5-13, were unable to reach STEAM sources freely since they didn't have enough support, so we decided to be the support itself. "IF" includes building and programming education with using EV3 and WeDo sets. Linked to "IF", 6429 proudly presents the STEAM curriculum to their cities' ministry of education:4DCoding. Concurrently, we will train the teachers to apply 4DCoding in classes.

Also from the students who attended the project, we STARTED and MENTORED one FLL Jr. team that will participate in the tournament in April. The team's registration fee and other costs are fully funded by us. Likewise, we are currently preparing to START one FLL team from the groups we educate. While gaining social responsibility,feeling and being ROLE MODELS to kids took us a step closer to our mission.

We started off a long game, and as being the drive engine, we will never stop making our mission and FIRST's purpose real. We will continue to INSPIRE our future, CULTIVATE different cultures and become social responsible to our world. We are 6429, the team combines engineering with new dimensions. Our perspective lead us to play for real and change the game. Hence, we became the GAME CHANGER itself.

Equalize The Opportunities.

#BeTheGameChanger

\*All terms used in this essay strictly match with 2018 Chairman's Award definitions.