Team Number
5665

1) **Team Mission Statement: Please briefly indicate what you believe to be the "driving engine" of your team. Your mission should be clear and concise. It should represent to any reader exactly what your business plan strives to accomplish.**

While everyone was busy dreaming about going to the Moon, Neil Armstrong chased after his dreams, making him the first man to ever set foot there. Just like Armstrong, we weren't satisfied with "dreaming"; instead, we went out into the world in the hopes of making a difference.

Our foremost principle is not to improve solely within ourselves, but to bring people up with us while improving. That is why it doesn't suffice to share our projects in Turkey; we choose to carry the light of science out into any dark alleyway, while also chanting from the top of our lungs that being an 'Armstrong' isn't in fact that hard.

Hence, we take any measure necessary like building science, engineering and technology to inspire innovation while nourishing crucial skills like curiosity, creativity, risk taking, openness, perseverance, leadership and self-confidence.

2) Team Origin: Please provide the date that your team formed, the location of your team, the current number of team members (highlighting any growth over past years) and describe the challenges the team had to overcome in order to participate in *FIRST* events.

Team 5665 (a.k.a SPARC) is the team of Sainte Pulchérie French High School and was established in 2015 with the contributions of Fikret Yuksel Foundation located in Istanbul, Turkey. We have been participating in FRC since 2015.Having started off solely with 18 students and 1 mentor in the same year, we have successfully expanded our team owing to the welcoming and accepting standpoint on science and technology here in Turkey. With this rather colossal progress, we have admitted students from all over our country and last year, we reached 55 students and 7 mentors. As a result, SPARC has claimed its well-deserved title of having the most number of students among all Turkish FRC teams. We also presented the FRC to them and helped them by all means to create and manage their own teams. As a consequence of the competitions being held in the U.S., just like any other foreign team, we too have had numerous amounts of problems concerning the transport, the accommodation, the fund and even all at the same time. However, we have learnt over time how to properly plan out our funds which, now and again, has been insufficient. There has also been several times where we have had to contribute to our goal by spending our ever so loved pocket money. Currently, our team consists of 26 students and 1 mentor. By learning how to think as one and finding solutions to problems which would otherwise derail people's daily lives, we believe that we are getting closer to our goal every passing day: Developing robots in the finest way possible.

3) Organizational Structure: Please detail how the team is structured to 1) Raise funds; 2) 3)Ensure funds are properly spent; 3) Find and engage sponsors; 4) Recruit team members/mentors for current & future seasons; 5) Ensure *FIRST* principles remain core to the team's efforts. Uploading an image of your team organizational chart below, will also satisfy this requirement.

At the beginning of each season, we carefully divide our team into 5 essential divisions:

Mechanics, social relations, safety, programming and design. We also select a 'captain' for each group who then makes sure everything goes swiftly.

Being students of a private school, we spend more time and manpower to find sponsors, in contrary to public school teams. After working hard and finally reaching our goal that we had determined in the beginning of the season, we plan out our spendings based on the immediate needs of the team; such as equipment, transport, tee-shirts, banners and accommodation. Afterwards, we put these funds to effective use.

Firstly we zeal to find sponsors by participating in numerous conferences and fairs. Then, we take the opportunity to exercise certain affinity relations if our school presents us some. We send 'thank you' emails to our sponsors after the competitions in order to properly show our respect and gratitude for their support.

Furthermore, we demonstrate the abilities of our robot to our school and our sponsors and share any prizes we get with them. By the help of this process, we succeed in the partage of the amazingly entertaining world of FIRST and therefore confirm the continuous participation.

Finally, at the beginning of each year we help new team members to adapt by providing them with presentations about mechanics, programming, etc.

4) Relationships: Please detail team efforts to specifically engage, inspire, educate and retain 1) Team members; 2) Mentors; 3) Sponsors/Community.

We believe that SPARC itself works much like a robot in many ways, by utilizing a beautiful harmony. Nevertheless, it also bears the capability to achieve plenty of things a robot may never manage to do. It is clear that we are aware of our deficiencies, which we are constantly trying to overcome.The only way we can succeed in this, is by the help of our hardworking team members, supportive mentors and sponsors. We are in a never-ending state of recruiting, teaching the 'freshmen' the importance of working while having fun and letting them experience the gratifying taste of success through hard work. We have learnt through previous competitions that this process is a very efficient way to get things done and thrive. To achieve this, we foremost give the newcomers presentations about the mechanics, programming and FRC. This assures the continuous participation of both the students and the mentors. In addition, we give the best opportunities to our team mates who aspire to become mentors themselves.

We communicate via email and face to face in between classes at school. We remember to inform each other about any incoming emails, meetings and deadlines. Certainly, it doesn't end there: Our valuable sponsors are also crucial to the continuation of our work. In a constant desire to include them in our family, we plan presentations about SPARC; talking about our team, our goal and all the valid reasons to support us, while also identifying a contact person who is always at their disposal. Additionally, we always include their logos on our uniforms and our stand.

5) Deployment of Resources: Please detail how the resources of your team (Financial or otherwise) have been deployed to 1) Engage the community to spread the message of *FIRST*; 2) Inspire others to get involved so that *FIRST* continues to grow; 3) Ensure all team members get the most out of their *FIRST* experience.

We as the team, are very well aware that communicating the principles of FIRST to the public is crucial. We have succeeded in having our voice heard through broadcasts by 2 different TV shows and 1 radio programme. We have demonstrated our robot, made presentations in events and by making special deals with our sponsors we have engaged many projects. These projects are devoted mainly to spreading knowledge about the

world of STEM while also encouraging kids to explore better and more effectively the science they use in their daily life.

We have established 5 FRC teams, along with 3 FLL ones. Likewise, with the help of Kocaeli Sanayi Odasi, we have built robotics labs for two teams in the rather underdeveloped parts of Anatolia. We have encouraged them to create their teams on their own by acquainting them with FRC and FIRST. We have shared our ideas with numerous prestigious companies such as Boeing, Zorlu, Kahve Dunyasi and even with the mayor of our district to involve the business world in FIRST and STEM. We are cooperating with our sponsors to admit more teenagers as FIRST members by hosting FLL workshops and 'MakerFaire' organizations once a year where we "celebrate arts, crafts, engineering, science projects and the DIY mindset".

To properly spread the joy of experiencing FIRST, we have negotiated with our sister schools in France and have commenced activity to establish robotics teams. All things considered, a great amount of our budget has been spent to raise awareness about the world of FIRST, while also continuing and improving our work.

6) Future Plans: Please indicate specific plans the team has for the next 3 years in regards to sponsorship, team and community outreach (including helping *FIRST* grow) and detail how you expect to be able to accomplish these goals.

Our future plans as SPARC are to reach even more students all over Turkey and inspire them to dive into the world of science and engineering. We wish to accomplish this by the help of the extremely positive and motivating comebacks from our recent projects. Therefore, we carried our knowledge to just about any city that would receive it: Kayseri, Mugla, Manisa, Gaziantep, Bursa, Antalya and Ankara.

In the near future, we are planning to acquaint Syrian refugee children with STEM with the generous help of our sponsors. Furthermore, we want to continue installing and building workshops, libraries, etc. for our sister schools who are in need of the mentioned things. In addition, we would really like to organize yet another MakerFaire and improve it by all means. We also think about a special education seminar on FRC, FLL and VEX that includes workshops. This could be of great use among several Turkish schools too.

In the long run, our plans are to help create even more robotics teams, especially in France and Spain where we would get the support of our sister schools and spread FIRST in Europe in an efficient way.

So, we make great efforts to join in a contract with expected sponsors and to ensure our current sponsors by showing them our strong desire to develop technology and science with the help of our projects.

7) Financial Statement: Please include information on team finances (include financial statement detailing income and expenditures). Uploading an image of your team financial plan below, will also satisfy this requirement.

Our sponsors are crucial to the financial state of SPARC. As previously mentioned, being students of a private school presents some difficulties concerning the search for sponsorships. Thus, at times; inscription fees, accommodation, the manufacturing process of the robot, transport, materials and printing are hard to work out.

Nevertheless, our current sponsors; such as Fikret Yuksel Vakfi, Kahve Dunyasi, Boeing, Detay Soft, Ortosella, Gelisim University, Kumport and Toksan play and important role in the continuation of our work. For example, Fikret Yuksel Vakfi helps us with any transport needs while Boeing, Kumport and Toksan pitch in with the inscription fees and

accommodation. Additionally, Detay Soft and Ortosella help out with the printing charges; Gelisim University with the manufacturing of our robot and Kahve Dunyasi with gifts.

At the beginning of each year, we plan out a carefully written mail and a detailed sponsorship folder to be sent to any potential sponsors. Afterwards, we get in touch with numerous companies first through our personal contacts and then via email or simply, the phone. Certainly, we make sure to commence this process after having determined our goals according to our budget.

8) Risk Analysis: Please describe the team's risk mitigation plan. Present a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis or narrative that describes the team plan to identify and respond to sustainability threats.

Being one of the oldest robotic teams in Turkey, our introductory years were fairly tough. But we changed this weakness into strength by working harder, devoting longer hours and gaining a lot of experience from our mistakes. Our teammates are well aware of the severity of this competition and have been working accordingly. Thanks to the mature history of our school which dates back more than 170 years, we got lots of attention both from within our community and outside. With this reputation, we believe that it's possible to deliver the FIRST's message to a large audience. However, we are also conscious students in our everyday lives who understand the responsibility of working together and in line with our school's rules. Additional to school hours, we had to devote two weeks of our holidays to create our robot, which we have gladly done. Likewise, we have found an efficient way to prolong our work time by meeting up outside of the school property or collaborating online. Despite all the inconvenience such as those who have been previously mentioned and several others, we have been able to get everything done assiduously before the assigned due dates. From the opportunities point of view, the robotics workshop which our school has had the convenience to host this year (and possibly again in the future) has helped us enormously throughout the building process of our robot. As a threat, we can say that being part of a private school and not a public school, we will always have the need to search for longer hours to find a sponsor.

9) Other Considerations: Briefly describe other matters of interest to the *FIRST* judges, if any

We plan for our business plan to include the team structure in a detailed way and therefore, we chose to use Business Model Canvas (BMS) which includes different sections, such as; Key Partners, Key Activities, Key Resources, Value Proposition, Customer Relationships, Channels, Customer Segments, Cost Structure and Revenue Streams.

Key Partners includes the people with whom we need to work in order to improve and deliver our projects. As for Key Activities, they define the subgoals that we need to achieve so that our projects can be properly fulfilled. Key Resources depicts the must-have items that we need to have in order to produce our projects. Value Proposition lists the problems that we solved, how we solved them and what obstacles we removed by solving them. Customer Relationships includes how we promote our projects to our sponsors and to the public. Channels mentions the media on which we communicate our projects to sponsors and other teams. Customer Segments are simply the consumer groups who need our projects for their daily use. Cost Structure shows our projects', competitions' and activities' cost structure. Revenue Streams, on the other hand, explains how we get paid for the projects, competitions and activities we provide.

We have also prepared a video to present the details on our BMS.