Describe the impact of the *FIRST* program on team participants within the last 3 years. This can include but is not limited to percentages of those graduating high school, attending college, in STEM careers, and in *FIRST* programs as mentors/sponsors.

Through FIRST programs, our team nurtures young adults who impact others through our team vision of Ignite, Improve and Innovate. Curtin FRC is also the only FRC program in Western Australia (WA) that awards graduation credits, as it is endorsed by the WA schools authority. 100% of student alumni in the past 3 years have graduated from high school or entered into tertiary education early, 58% continue FRC as mentors and 92% of members are already in or planning to go into a STEM career.

Describe your community along with how your team addresses its unique opportunities and circumstances.

Our community, WA, is 2.64 million km squared (1.02 million miles squared) in area, resulting in geographically isolated communities, presenting us with the opportunity to spread FIRST programs to rural areas. Isolation reduces availability of STEM resources and programs for communities. Over the past 3 years, we increased the number of rural FLL events, now holding 3 regionals in rural towns. We continue to travel to remote communities, and aim to help them become self-sustaining in the future.

Describe the team's methods, with emphasis on the past 3 years, for spreading the *FIRST* message in ways that are effective, scalable, sustainable, and creative. How does your team measure results?

Our measure of success depends on the activity, though is often expressed in participant numbers. Our primary school EV3 workshop, RoboAcademy (RA), has had continuous demand over the past 3 years. With 271 total participants and 46 returning to the program, RA is a sustainable and effective initiative for teaching the basics of robotics. Our inaugural offseason event, the WA Robotics Playoffs (WARP), involved 10 new schools and 13 teams, spreading the message of FIRST to new demographics.

Please provide specific examples of how your team members act as role models within the *FIRST* community with emphasis on the past 3 years.

4788 team members have proactively started 4 FLL teams at local schools, mentoring them throughout the season. 51% of our team members have volunteered at 26 FLL events over 3 years. Our team comprised a large proportion of the WARP planning committee. We directed important tasks; wrote our own FMS system; volunteered in key roles; mentored all pre-rookie participating teams; organised the purchasing of a basic kit for each team; and helped setup and pack-up the entire event.

Describe your team's initiatives to Assist, Mentor, and/or Start other *FIRST* teams with emphasis on activities within the past 3 years.

WARP has been our most effective initiative to start and develop FRC teams. Prior to the event, we started and assisted 10 pre-rookie teams. In the past, members of our team volunteered to start or assist FRC teams 6524, 7779, 8035 and 8613. Our students took the initiative to coach 6 FLL teams in 2021, all of which are continuing and spreading the FIRST message by expanding to more students and schools.

Beyond starting teams, what initiatives have you done to help inspire young people to be science and technology leaders and innovators? What results have you seen from your efforts in the past 3 years?

Taking our robot to events such as Curtin Open Day, Coogee Live, and Resources and Technology Showcase, and to programs such as Girls Engineering Tomorrow (GET), Robocup, and RA, created opportunities for a vast population of the students in WA to experience and become inspired by exciting STEM pathways. Our work with kids in RA and the student involvement in FLL coaching has resulted in the elevation of STEM education for more than 180 children during the last season.

Describe the partnerships you've created with other organizations (teams, sponsors, educational institutions, philanthropic entities, etc.) and what you have accomplished together with emphasis on the past 3 years

For WARP, we partnered with Murdoch and Curtin University (CU), as well as FRC teams 8613, 6524 and 7779 to organise, fund and run the event. This year for WARP, we have involved more organisations, including the Department of Primary Industries and Regional Development (DPIRD) as a long-term partner. We have also partnered with schools such as Atwell College, Armadale High School and Aveley Secondary College to run FLL events for years to come, ensuring the continuation of FLL events in WA.

Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, *FIRST*, and your communities.

Our team presents at programs such as GET and the Indigenous Australian Engineering School (IAES) to promote STEM and FIRST to our community's minority groups. Over the past 3 years, we have seen an increase in non-male team participants, increasing from 10% in 2019 to 20% in 2022. Furthermore, students come into our team from 19 different schools spanning ~100 km (~62.1 mi) across Perth. As our selection process is less stringent than others, our team promotes inclusivity within our community.

Explain how you ensure your team and the initiatives you have created will continue to run effectively for the foreseeable future.

By partnering with institutions and programs such as banks, schools, universities and government bodies, we ensure the long-term sustainability of our team and FIRST programs and events that we run. We work with CU to run RA, which helps fund our team and ensure our continuity. We have partnered with Bendigo Bank to sponsor an FLL regional for 3 years, the Wheatbelt Development Commission (WDC) to start and sponsor rural FRC teams over 3 years, and recently DPIRD to ensure the longevity of WARP.

Describe your team's innovative strategies to recruit, retain, and engage your sponsors within the past 3 years

We have engaged with CU to host the competition, as well as provide lots of the volunteers. We have also invited sponsors to events such as launch night, while also sending emails, social media and end of year

report recognition, and the opportunity to present at events. Through WARP, we have re-engaged past sponsors Altronics and Department of Defence to support our team in our future endeavours, helping us Ignite, Improve and Innovate within our community.

Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.

We strive to improve our relationships with rural communities to provide access to equal opportunities by starting sustainable FIRST events and teams. This includes running 4 rural FLL events in 2021 to reduce travel costs for FLL teams; starting and assisting pre-rookie FRC teams in Jurien Bay (~200km/125 mi), Kalgoorlie (~600km/372mi), and Bunbury (~168km/105mi); and partnering with WDC for the next 3 years to start and assist FRC teams in the Wheatbelt (~250km/150 mi).

Describe your team's goals to fulfill the mission of *FIRST* and the progress you have made towards those goals.

Through our team vision of Ignite, Improve and Innovate, we aim to inspire young people to be leaders in STEM within our community regardless of prejudice such as socioeconomic standing, geographic status and gender identity. We provide opportunities for team members to be STEM leaders in our community by coaching FIRST teams, volunteering at FLL events, assisting other FIRST teams, leading RA workshops, running Robot in 3 Days style programs for rural teams and presenting at events.

Briefly describe other matters of interest to the *FIRST* 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 or particularly noteworthy.

Quiz nights during Build Season are our way of engaging team members in 4788 and FIRST background and history, the understanding of which was diminished due to lack of competition. After the success of WARP, we wanted to make assistance more accessible to coaches of new FRC teams and therefore created the project Recipe Book. This book provides CAD models, the Cost Accounting Worksheet and instructions to aid in designing individual mechanisms, which together creates a modular robot.

Things to talk about:

- WARP
- Quiz/jeopardy nights
- Engaging parents
- Kick-off