

FIRST Impact Award - Team 8020

2025 - Team 8020
Team Number
8020
Team Nickname
Cyberpunk
Team Location
Taipei, TPE - Chinese Taipei
Describe the impact of the <i>FIRST</i> program on team participants within the last 3 years. Think about percentages of those graduating high school, attending college, in STEM careers, leadership skills, and serving as mentors/sponsors in <i>FIRST</i> programs.
100% of members go to Universities in Taiwan & abroad, 95% major in STEM. FIRST experience helped 15% of members enter universities thru Special Talent College Admission program, compared to ONLY 1% in general. We partner with universities (eg NTU) to provide members with lab internship opportunities. 100% of our students engage in community volunteering honing leadership skills. Many of alumni are FIRST mentors (eg Mentor 8805 on LabVIEW), or volunteers at STEM events like TISF(science fair).
Describe your community along with its unique opportunities and circumstances. Think about your geographic region, diversity of town/school, language barriers, socioeconomic barriers, and cultural expectations.
As public school allocating more resources for gifted class, 8020 plays as leverage role providing the ONLY chance for non-gifted classes students to participate in engineering, attracting 20% of freshmen applying yearly. 8020 not only emphasize on hands-on practice but also academic research. All these training can turn into one's engineering advantage. Our reputation helps attract corporates (TSMC/MediaTek) to fund in Minimizing the Digital/AI Gap through forming strong partnerships with us.
Describe the team's methods, with emphasis on the past 3 years, for spreading the <i>FIRST</i> Mission in ways that are effective, scalable, sustainable, and creative.
Social Innovation Platform© is our sustainable approach to increase STEM programs for K-12. -FLL&EV3: Implement 12 robotics camps/courses with 10 partners reaching 1006 kids. -Engineering: Partner with 7 bodies (schools & Children Homes) to improve hands-on engineering curriculum. -FRC: Held Kickoffs, Practice games & Conferences. 80% of teams across Taiwan participated since 2022. -Open Course: Offer lectures for 500 high school students(beyond FRC) with college-level engineering contents.
Describe your team's goals and the progress you have made towards them to fulfill <i>FIRST's</i> Vision.
We believe future leaders are built by STEM practitioners and focus on "Minimize the Digital/AI Gap".-15 innovative courses: K-9 kids "Discover engineering" through hands-on & Problem-Based learning delicately created & crafted by 8020.-Inclusive: Reached 200 underprivileged students/year across 3 cities, including kids from philanthropic foundations or rural schools.-Change the culture: Created opportunities for students to shine & spread STEM(eg Taiwan FRC conference, special reports).

What impact has your team seen from your efforts described in the above question? How does your team measure impact?
One student who participated in our camps in 2019 joining the team this year, despite Taiwan's competitive entrance exams, defying the odds. 2 of our partner schools currently implement our courses in their class. We assisted 6191 with tech & field and mentored 8585 on team management, both returned to competition smoothly despite a year's halt. 25 teams joined the conference we initiated & shared experiences. Our media exposure for FIRST & STEM gained attention with over 30,000+ views on YT.
Please provide specific examples of how your team and team members act as role models within the <i>FIRST</i> community with emphasis on the past 3 years. How do you share these best practices with other teams?
All 8020's events are student-led. At regionals, our students actively help teams with tech/LabVIEW problems(eg assist 8270 in making impromptu climbs, helping 5025,8805 on LabVIEW). Students held 15+ open lectures helping 10+ teams, including 4 FRC rookie teams. Since 2022, students hosted 6 press conferences locally & internationally, gaining wide awareness. In 2024, we host international visits from Macau & Czech and initiated Click service & helping teams from Poland, Philippines.
Describe your team's initiatives to Assist, Mentor, and/or Start other <i>FIRST</i> teams with emphasis on activities within the past 3 years.
8020 is open to assist all 48 teams in Taiwan through FIRST. -Mentored #8585, 8805 & assisted 20+ local & international teams (eg Assist #9126 winning rookie-all-star, providing swerve advice for #2984, sharing with #702 during build season). -Self-fund & build practice field for 8 local teams & visiting teams (eg #6083). -Published 12 open resources from design to outreach. -Assist international teams by providing Click travel guides. -Started FLL program at a local elementary school in 2024.
What other initiatives have you created, grown, sustained, or participated in (<i>FIRST</i> or otherwise) to help inspire young people to be science and technology leaders and innovators? What outcomes have you seen from your efforts in the past 3 years?
8020 creates future innovators: -Minimizing the Digital/AI Gap, our 6-year partnership with TFCF helps provide 120 underprivileged students unique STEM opportunities in 3 years and ensure sustainability. -Inspiring school curriculum to add our engineering teaching aids during class to explain physics concepts. - Transform robotics education by designing FRC-inspired competition for ASUS new robot product since 2023. -Initiate the first-ever FRC conference showing how academics shine in FRC.
Describe the partnerships and relationships that you've created with other organizations (teams, sponsors, educational institutions, government, philanthropic entities, etc.) and what you have accomplished together, with emphasis on the past 3 years.
8020 partners expand our reach through Social Innovation Platform©. We form long-term partnerships with 6 corporates (e.g. retained DIODES since 2022). They provide resources for us to grow & deliver community services to philanthropic foundations or schools. In return, they can record these in their CSR report, creating a mutually beneficial strategy for all three parties. Our strategic partnership with #6998 through MOU treaty overcomes distance barriers to collaborate in spreading FIRST.
Describe your team's efforts in the past 3 years to promote equity, diversity, and inclusion within your team, <i>FIRST</i>, and your communities.
Despite being an all-boys high school, 8020 consistently promotes DEI in STEM. We assist 6191(all-girls team) by giving tech lectures & providing space for robot testing. We are made up of students with diverse backgrounds, including some special needed students or from near-poor households. Our outreach efforts aim to Minimize the Digital/AI Gap, including underprivileged students from children's homes or philanthropic entities in STEM learning (eg patiently guiding autistic kids during camps).

Explain how you ensure your team and the initiatives you have created will be sustainable.	
Due to Taiwan's education system, our students can only obtain 1 year of competition experience before taking leadership roles. Nonetheless, we achieve team sustainability through solid team structure, business plan & alumni engagement. Through Social Innovation Platform©, we successfully recruit and retain our partners yearly despite changes in 8020. Our approach of "Train the Trainer" by involving school teachers during STEM programs secures lasting impact even after an engineering camp ends.	
Highlight one area in which your team needs to improve and describe the steps actively being taken to make those improvements.	
During our probation period, some members struggle to balance schoolwork and team activities. We initiate Time Management course and counseling hours to help them. In 2023, we implemented the C.K. Training Passport, which significantly improves our quality of training and helps with status tracking. This change improved our engineering rigor and led to many Excellence in Engineering Awards. We negotiated with the school to use school time to train, accounting for 28% of the total training time.	
Briefly describe other matters of interest to the <i>FIRST</i> 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, particularly noteworthy, or had a large impact.	
CyberpunkK forms a strong unity thru our No Ownership philosophy, ensuring mutual respect & teamwork. Our MINIMIZE THE DIGITAL/AI GAP initiative brought STEM to 1000+ underprivileged students through Social Innovation Platform. We initiate events like Taiwan FRC Conference or practice games, supporting 40+ teams. We acquired funding from the government for 6 Taipei teams. We transform the culture by holding robotics competitions at junior highs or participating in public events to promote FIRST.	
Judge Feedback	
	8020 has achieved 3 Excellence in Engineering, 2 Finalists, 1 Engineering Inspiration since 2022. We'd been the alliance captain role for past seasons. For Impact award, we would like to get feedback from judges – what impress them, what to improve. An area the team has an opportunity to improve. Something that really impressed the judges.
Essay	
CyberpunkK believes that the future technology is created by STEM practitioners, focusing on "Minimizing the Digital/AI Gap" with humanity at its core. Through Social Innovation Platform©, we form strong partnerships with corporates to implement sustainable programs providing STEM education with and beyond FIRST. We aim to transform of Taiwan's traditional education culture by instilling applicable skills, good values, and a new trend in science education.	
Team 8020 is located at Taipei Municipal Chien Kuo High School, in the heart of northern Taiwan, with 42 students & 4 mentors. As the nation's top-ranked senior high school for boys, CK students have extreme competitiveness in academic abilities. This allows us to attract more corporates & NGOs to form strong partnerships with us in spreading STEM.	
8020 spearheads engineering learning at our school, providing the ONLY opportunity for students to engage in robotics, with 20% of freshmen applying yearly. Contrary to Taiwan's test-heavy education culture, we emphasize hands-on practice through team collaboration. Our training in Design of Experiments & Engineering Process showcases how academic research translates into engineering advantages.	

Student leadership is vital to 8020's sustainability. Despite having only 1 year of experience before taking leadership roles, our team structure ensures versatility and knowledge inheritance. Since 2022, over 60 members have undergone leadership training, with 20 positions available for veterans yearly. Through small group mentoring, C.K. training passports, and shadowing current leads, we ensure everyone is prepared for the build season. If a member opts out, an 'Exit Interview' maintains positive relationships with ex-members.

8020 hosts numerous bonding events to foster a sense of belonging among team members. These include RPG games during new member orientation, campfire talks during leadership training, and BBQ parties on the last night of regionals. "Despite the pressure, the surprise birthday cake was heartwarming," recalled one of our drivers. Our iconic blue & silver hair makeup gives a sense of inclusion for team members at regionals. In 2022, we did special face makeup in support of Ukraine.

Partnerships Cyberpunk has successfully engaged 6 corporates, 7 schools, and 2 NGOs to deliver STEM programs for K-12 through our Social Innovation Platform©. 8020 retained corporates such as DIODES & ASUS for over 3 years to sponsor our initiatives. We turn the energy instilled in us into fuel and initiated: (1) FLL programs & robotics camps for K-6 young kids; (2) Engineering courses & PINBO robotics competitions for junior high students; (3) Open courses & FRC events for high school students. Our results can be written into our sponsor's annual CSR reports to help them meet their ESG targets, benefiting corporates in return.

8020 believes that STEM practitioners create the future. Engineering learning should extend beyond textbooks, embracing discovery & innovation. In 2023, we interviewed junior high school teachers and found a need for teaching aids in abstract physics concepts like potential energy. We designed "climbing mechanisms" using rubber bands & laser-cut gears to simulate telescopes. Teachers use problem-based learning to spark curiosity and thinking. This aid is now in 2 junior high school curriculums. Many of our STEM initiatives follow this principle, led by our members or partnered teachers, encouraging students to experience STEM firsthand.

"Minimizing the digital/AI gap" is a goal we strive for to promote DEI in STEM. Our partners range from children's homes to rural schools. Since 2019, we've partnered with Taiwan Fund for Children and Families to provide long-term robotics programs for underprivileged kids. Our partnership ensures steady growth through monthly sessions, boosting confidence, igniting passion for STEM, and enriching lives. In 2024, a student from the 2019 camp at TFCF joined our team after passing the competitive national entrance exam despite the camp's distant location from our school.

STEM Initiatives Cyberpunk has made significant strides by designing our own STEM curriculum and doubling the number of innovative courses over the past three years.

8020's FLL program has sparked robotics learning within the local community. In 2024, we introduced FLL to Taipei Mandarin Experimental Elementary School, where students acted as youth mentors, guiding kids in robot design & control for FLL competitions. We also arranged six classes (180+ students) to visit us during the annual exhibition, inspiring them to delve more into engineering.

Since 2022, 8020 held 12 robotics camps of varying difficulty levels. We were the first to use the board game Coding Ocean, making programming fun for kids. Our EV3 missions ranged from simple Ferris wheels to creative sumo robot matches. Additionally, we organized sessions for students to showcase their work, encouraging shy members to share in front of everyone and build confidence.

In 2024, 8020 demonstrated the flexibility of our STEM courses at an engineering camp for St. Francis Xavier Home for Children and Juvenile. Students built Power Cars using common materials, showing that STEM is accessible in everyday life. In fidget spinner class, students explored the concept of inertia by placing different coins on the edges and observing spin time to discover the relationship. Despite having no prior STEM-related classes, young kids

eagerly embraced the world of science and shared their insights.

Beyond K-9 initiatives, 8020 offers open courses for high school students. We hold lectures on topics like design thinking, strategy, and college-level engineering. Professionals from corporations are invited to give speeches on subjects such as UI & UX. Over 500 high school students have benefited from 10+ open courses in the past 3 years. Additionally, 8020 negotiated with the school to use self-directed learning time for specific engineering training, guiding students uncertain about their interests.

Leading the Taiwan FIRST Community 8020 believes in Gracious Professionalism® & Coopertition®. Taiwan's education culture causes students to see winning as the utmost importance, but CyberpunkK exemplifies the FIRST values by leading & inspiring the Taiwan FIRST Community in many ways.

We are committed to assisting all 48 FRC teams in Taiwan. We mentor 8585 on technical and management aspects and 8805 on LabVIEW programming. We support teams through in-person courses, such as assisting the all-girls 6191 with technical knowledge, and online training, like helping 9126 with their Business Plan, which won them Rookie All Star in 2023. Our published resources on our website cover all aspects of our team, from robot designs to outreach efforts. Our impact extends internationally, hosting visits from Czech and Macau high schools and holding online sessions with teams like 702 and 5883 (Poland).

We noticed Taipei teams needed a practice field, so starting in 2023, we self-funded and built a competition field, providing a space for Taipei teams to test robots during the build season. We held practice games and also welcomed teams outside Taipei(eg 7709, 7130). At regionals, our LabVIEW service team supported 5+ teams, ensuring assistance even with less commonly chosen programming languages.

We're often asked about the reason behind our success. We've hosted numerous visits from teams like 7589 & 6083 and welcomed everyone to our annual exhibitions. To create more ripples, we shared our research at NNKIEH academic competitions, detailing design concepts and scouting app. In 2024, we initiated Taiwan FRC Conference to create a platform for teams to learn from each other and let students shine through sharing their innovations. The conference not only included breakout sessions with a variety of topics but also team-building with an FRC version "What's in the box" game. Embracing collaboration, we invited 4253 to implement the conference together, welcoming 25 teams (300+ participants) across Taiwan.

Changing the culture Beyond FIRST, we are strong advocates for STEM learning. Annually, we invite the mayor of Taipei and Bureau of Education officials to our events, gaining attention and securing government sponsorships, aiding in fundraising for 6 Taipei teams. In 2024, we participated in the Taipei Artificial Intelligence festival, assisting the government in promoting AI applications in robotics and supporting more resources for AI exploration.

8020 is eager to let everyone hear our voice. We recorded a broadcast on National Education Radio, inspiring more students to participate. Our students even initiated press conferences on the international stage, gaining wide attention. We spread FIRST through exclusive news channel interviews, covering audiences in Taiwan, San Francisco ('22), Los Angeles ('23), and New York ('24). The extensive media coverage brought high awareness of FIRST, leading to invitations from high school principals to help establish FRC teams (4 TV special reports and 40 local news features).

We are changers of robotics education. When we heard ASUS was starting a new robot product called PINBO for young kids, we believed a single-person mission-based course couldn't offer the same experience as FRC. In May 2023, CyberpunkK reached out to bring PINBO into schools through a competition. We designed the game based on Coopertition, with various robot actions and match/ranking points. During design, students needed to think strategically and cooperate with their alliance in matches. A teacher remarked, "Compared with other robotics courses, this program gives students the chance to really think about how to strategize and collaborate." We hope to hold more robotics competitions in the future, bringing this touching STEM experience to everyone's hearts.

