

FIRST GLOBAL CHALLENGE

دبي DUBAI

2019

Celebrating Opportunities

2019 Impact Report



The Transformative Impact of an Opportunity

Education has the power to transform and uplift. Potential exists in people everywhere, but they don't always have the opportunity to put it into action. For many youth around the world, the *FIRST* Global Challenge is that opportunity. A *FIRST* Global robot is more than a robot – it's a chance. A chance to experiment, to learn, to grow, to connect, and to shine. Our goal is to connect youth worldwide with the tools and opportunities that will ignite that light within.

The theme for 2019 was "Ocean Opportunities," and teams learned about real-world challenges related to cleaning up the world's oceans. Every year millions of tons of pollutants negatively affect marine life and global populations. This Challenge brought attention to this critical issue in order to educate ourselves and take action to preserve our oceans and wildlife. With the tagline "United by land, connected by oceans," the Challenge drove home how, just as we are all connected in the global challenges we face, we must also be united in our efforts to tackle them.

This year we saw students take the Ocean Opportunities theme to heart and organize many pollution cleanups in their communities. Many organized outreach sessions for local youth, engaging them on the importance of STEM and the kind of impact it can make. Teams additionally connected with, and received support from, a variety of government officials – an important step in spreading STEM education access in communities around the globe. Just as a ripple transforms into a wave, each opportunity we open for a student is further amplified when they turn around and pass that inspiration on to others.

For many participants, the 2019 *FIRST* Global Challenge in Dubai was just the beginning. The impact of their participation will no doubt continue far beyond the day they left the competition floor. In the following pages, learn more about our impact in 2019.



**370+
mentors
empowered
teams**

**1,465+
students
directly
impacted**





39+ female-majority or all-girl teams

**36% female participation
(530+ girls)**



“

I believe that with STEM, every girl is capable of solving any problem. Participating in this competition means a lot to me because through this I get to encourage other female youth that we are not to limit ourselves. We can do whatever we plan, provided we are determined.

—Jessica, Team Ghana 2019 student

Founder's Letter



Dean Kamen

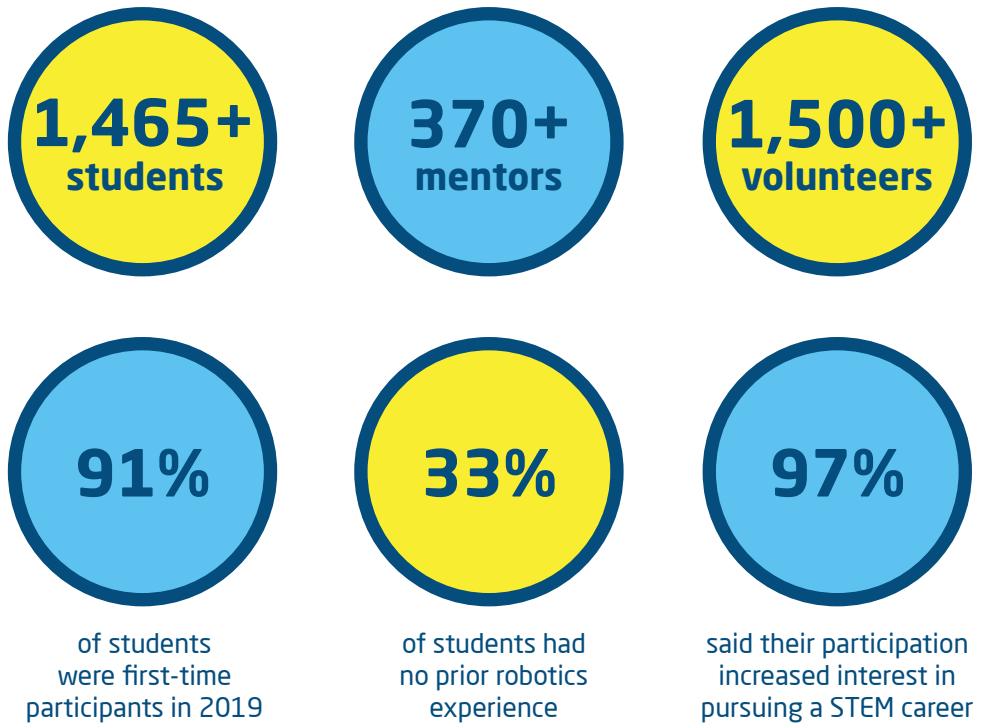
At *FIRST* Global we believe in empowering others to find opportunities. Strength lies in seeing advantages instead of obstacles to entering the fields of science and technology, alliances instead of barriers to enable cooperation among nations, and hope instead of hurdles to achieve a shared understanding of the world's problems. We are building a global community of students, mentors, teachers, and supporters who will change the world.

The 2019 *FIRST* Global Challenge, held in Dubai, marked the largest event to date. From Afghanistan to Zimbabwe, 191 teams participated, including Team Hope, a group of refugee students. While watching the teams compete with their robots, one could see the geographic and cultural borders dissolve as the students communicated, cooperated, and solved problems together using the universal language of technology.

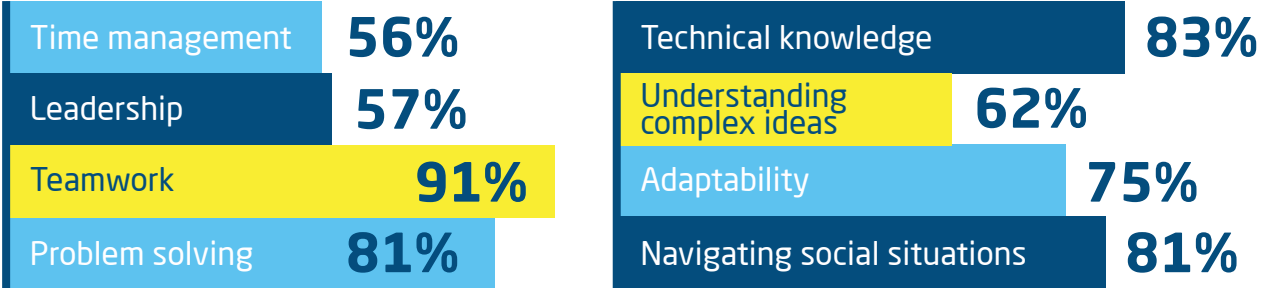
Today, the impacts of the extraordinary challenges facing the worldwide community are felt by all. In this complex environment, it is more important than ever to focus our energy on empowering the youth of the world to become changemakers. *FIRST* Global is helping to create the next generation of problem solvers, bestowing on them the confidence and technical skills to overcome challenges and ensure we have a better future.

Thanks to your support, we are helping the youth of the world to see challenges as opportunities to learn, innovate, and overcome, but there is still so much that can be done. As part of the *FIRST* Global community, you are helping us further the mission to expand our impact around the world. We look forward to continuing this momentum with you.

By the Numbers



Students Improved Skills in...



These skills are identified by the World Bank as the "most essential skills required by employers." According to their data, over 420 million young adults around the world under the age of 25 are not well-equipped in these skill areas.
Note: percentages are representative of a sample of participant responses.

Teams Represented = 191

Afghanistan	Botswana	Cuba	Greece
Albania	Brazil	Cyprus	Grenada
Algeria	Brunei Darussalam	Czech Republic	Guam
Andorra	Bulgaria	Denmark	Guatemala
Angola	Burkina Faso	Djibouti	Guinea
Antigua & Barbuda	Burundi	Dominica	Guinea-Bissau
Argentina	Cabo Verde	Dominican Republic	Guyana
Armenia	Cambodia	Ecuador	Haiti
Australia	Cameroon	Egypt	Honduras
Austria	Canada	El Salvador	Hong Kong, China
Azerbaijan	Cayman Islands	Equatorial Guinea	Hope (Refugees)
Bahamas	Central African Rep.	Eritrea	Hungary
Bahrain	Chad	Estonia	Iceland
Bangladesh	Chile	Eswatini	India
Barbados	China, People's Republic of	Ethiopia	Indonesia
Belarus	Colombia	Fiji	Iran
Belgium	Comoros	Finland	Iraq
Belize	Congo, Dem. Rep. of the	France	Ireland
Benin	Congo, Rep. of	Gabon	Israel
Bermuda	Cook Islands	Gambia	Italy
Bhutan	Costa Rica	Georgia	Jamaica
Bolivia	Cote d'Ivoire	Germany	Japan
Bosnia & Herzegovina	Croatia	Ghana	Jordan

Kazakhstan	Mongolia	Romania	Syria
Kenya	Montenegro	Russian Federation	Tajikistan
Kiribati	Morocco	Rwanda	Tanzania
Korea, Republic of	Mozambique	Saint Kitts & Nevis	Thailand
Kosovo	Myanmar	Saint Vincent & the Grenadines	Timor-Leste
Kuwait	Namibia	Samoa	Togo
Kyrgyzstan	Nepal	São Tomé & Príncipe	Tonga
Laos	Netherlands	Saudi Arabia	Trinidad & Tobago
Latvia	New Zealand	Senegal	Tunisia
Lebanon	Niger	Serbia	Turkey
Lesotho	Nigeria	Seychelles	Turkmenistan
Liberia	North Macedonia	Sierra Leone	Uganda
Libya	Norway	Singapore	Ukraine
Lithuania	Oman	Slovakia	United Arab Emirates
Luxembourg	Pakistan	Slovenia	United Kingdom
Madagascar	Palestine	Solomon Islands	United States of America
Malawi	Panama	Somalia	Uruguay
Malaysia	Papua New Guinea	South Africa	Uzbekistan
Mali	Paraguay	South Sudan	Vanuatu
Malta	Peru	Spain	Venezuela
Marshall Islands	Philippines	Sri Lanka	Vietnam
Mauritania	Poland	Sudan	Yemen
Mauritius	Portugal	Suriname	Zambia
Mexico	Puerto Rico	Sweden	Zimbabwe
Moldova	Qatar	Switzerland	

= new in 2019!

**Teams met
with 30+
government
officials**



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**We are proud of what
we do – training young
leaders with more abilities,
talents, and a beautiful
way of thinking, believing
in peace, friendship, and
equality. We are talking
about technology and
robotics, but behind that
we are talking about
unification and changing
the world together.**

–Mohammadreza, Team Iran 2019 mentor

How A Team of Refugees Rose to the Top

Comprising a team fittingly called “Team Hope,” five teenage Syrian refugees were keen to show what they were made of on the competition floor. Attending the 2019 *FIRST* Global Challenge in Dubai was an opportunity for them to demonstrate overcoming the challenges of their pasts to do their part in helping to make the world a better place through robotics.

“We are a group of young Syrian refugees who did not lose hope and ambition despite the difficult circumstances we faced after fleeing to Lebanon. We may have lost our homeland, but we haven’t lost our minds or our potential.”

Over the course of the three competition days, the team worked hard on and off the field to prove just that. Soon they found themselves on an alliance for the playoffs.

In a true nail-biting finale, Team Hope competed alongside Team Belarus, Team Moldova, and Team Norway to make the top score in the last match of the playoffs, edging out the other alliance by 23 points. They won gold.

As the results were announced, all of the alliance’s members couldn’t help but jump to embrace one another as the crowd erupted in cheers. Considering Team Hope’s inspirational journey to the finals, their victory highlighted the team spirit and Coopertition® that had brought the international community together to provide solutions to major issues facing the planet. The team is an inspiring embodiment of what hope and opportunity can ignite.

“If you decide to be successful, there is nothing that can stop you, even if you are called a refugee. Our small group shattered the stereotypes of the word ‘refugees’ and served as a tribute to Syrian youth, showing the great influence of motivation and perseverance in achieving success and overcoming all obstacles.”



“**‘Hope’ always wins in the UAE.**

H.E. Omar Al Olama, Minister of State for Artificial Intelligence, UAE



**Teams held
45+ outreach
sessions**



// Opportunities like the *FIRST* Global Challenge ignite the flame of innovation within thousands of students each year. Young people are creating the future as we will live it. We have to not only pay attention, but also play our part. One by one, we will light the flame for others to follow.

—Team Belize 2019

How One Student Started a Cleanup Movement

Before joining the *FIRST* Global Guinea-Bissau team, José would normally go to the Port of Bandim, the biggest fishing port in the country, to buy fish with his family. However, after joining the team and learning about the year's Ocean Opportunities theme, he was inspired to organize a cleanup event to do something about all of the pollution he saw there.

Sponsored by 10 local institutions, they brought together over 80 volunteers for a full day of cleanup. Not only did they remove lots of trash from the port, they also took action to help curtail this issue at its source by holding outreach. They raised awareness of the dangers of pollution and the importance of keeping the port clean. The team was even interviewed by two national radio stations about their efforts.

Realizing that no issue can be solved overnight, the event's organizers and sponsors have expressed dedication to continuing the battle against pollution in their country.

"It was an amazing job done by the students. Robots really can help us clean the ocean!" said one of the team's mentors. "However, there is still a lot to be done. We need more materials and equipment, and people have to learn to recycle and put the garbage in the right place and not in the sea."





Teams
organized 28+
cleanups



**“
We are proud
that we can
be a part of
the global
movement
to help make
change happen.”**

—Team Australia 2019

From No Robot to Award Winners in Two Days

For Team Bahrain, attending the *FIRST* Global Challenge wasn't even on their radar until just four days prior to the event, leaving them with no time to build a robot. The team made the trek to Dubai and proceeded to open a *FIRST* Global robotics kit for the first time two days before their first match, knowing they would be competing against teams that had spent months fine-tuning their robots.

Although they felt that the odds were stacked against them, with the encouragement of their mentor, they set to work with the blueprints they had prepared. And in the wonderful spirit of Coopertition®, volunteers and other teams went out of their way to help Team Bahrain. Despite the difficult start, with a total of about 10 hours of work, the team's robot held its own and won half of the game matches they played in.

"I told them, 'Accept this challenge and see how it goes,'" said the team's mentor. "Imagine how, if you built this robot, at the end of the day how you would feel if you achieved that.' And they made it real."

In recognition of their accomplishment, the team was awarded the bronze medal for the Rajaâ Cherkaoui El Moursli Award for Courageous Achievement.

"Building a robot, competing, and winning some of the matches is not an easy thing. This experience has shown the students to believe in themselves and not limit themselves with anything. If we set a goal for ourselves, we can definitely achieve it."

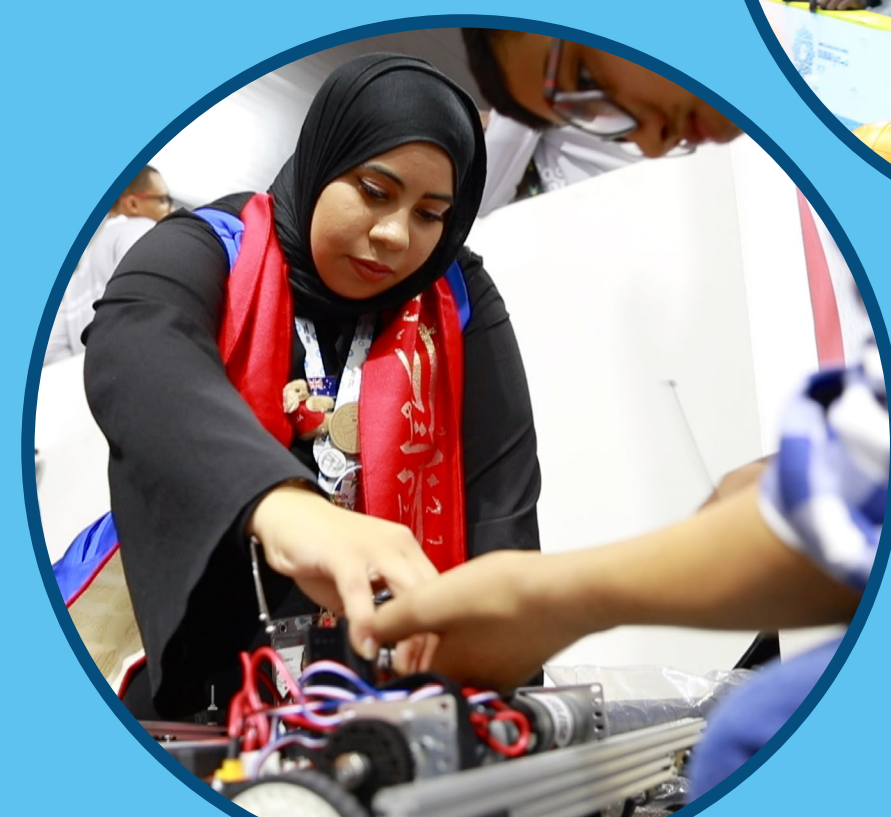
In Bahrain, the team was already involved in teaching robotics to young students, but their *FIRST* Global experience provided a unique opportunity that has equipped them even further to not only build up themselves, but also those around them.



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**Don't limit
yourself.**

Team Bahrain 2019 mentor

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The most important thing we learned from the event was through the help we were given unselfishly; the kindness and the way the teams communicated showed us that the key to this event is not how we are pitted against each other, but how much we are here for each other.

—Team North Macedonia 2019

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