



FIRST[®] Five-Year Strategic Plan
(2013-2017)





Growing tomorrow's generation of innovators for more than 20 years

Nearly a quarter of a century ago, world-renowned inventor Dean Kamen laid out a vision, the fulfillment of which may now be within reach: *to transform our culture by creating a world where science and technology are celebrated, and where young people dream of becoming science and technology leaders.*

To achieve this vision, Kamen founded *FIRST*[®] (For Inspiration and Recognition of Science and Technology). *FIRST* inspires young people to pursue careers and become leaders in science and technology by engaging them in exciting mentor- and values-based robotics programs. Since 1989, *FIRST* has excited and inspired hundreds of thousands of youth. A majority have gone on to pursue science and engineering degrees and enter related fields.

The *FIRST* experience does more than build skills and prepare students for careers in science and technology; it inspires students and transforms lives. We have three differentiating factors that enable us to do so: 1) we offer the ultimate robotics program (*FIRST*[®] Robotics Competition, or FRC[®]); 2) we offer a complete K-12 progression of programs; and, 3) we promote a strong values system.

FRC is the most intensive robotics program in the world, providing students an experience as close to real-world engineering as they can get. Dubbed the “Varsity Sport for the Mind™”, there is truly nothing else like it. We know that FRC has transformative impact – longitudinal studies have proven that FRC students are 66% more likely to attend college full-time, twice as likely to major in science and engineering, and four times as likely to pursue an engineering career.



In addition to FRC, we offer alternative robotics programs from kindergarten through high school. Junior *FIRST*[®] LEGO[®] League (Jr.FLL[®]), *FIRST*[®] LEGO[®] League (FLL[®]), and *FIRST*[®] Tech Challenge (FTC[®]) offer learning experiences to students of all ages. Participation in any or all of these programs will awaken a student's keen interest in pursuing coursework in science and technology. By progressing through each program and ultimately to FRC, students gain a full suite of technical skills and ongoing encouragement, making it more likely that they will pursue careers in science and technology.



science and technology, but also in life.

FIRST is about much more than robots. We promote a values system – with core values such as Gracious Professionalism^{® 1} and Coopertition^{® 2} – that fosters teamwork, cooperation, respect, self-confidence, mutual gain from competition, communication skills, and leadership. FIRST students are prepared not only to succeed in 21st century careers in

“STEM education will determine whether the United States will remain a leader among nations and whether we will be able to solve immense challenges in such areas as energy, health, environmental protection, and national security.”

– President’s Council of Advisors on Science and Technology

To date, FIRST has seen tremendous success. Although our primary emphasis is on North America, we operate in more than 60 countries. The 2011-2012 season engaged more than 280,000 youth worldwide, along with 100,000 Mentors, Coaches, and Volunteers. We continue to receive recognition and accolades for our efforts, including playing an important role in President Obama’s “Educate to Innovate” initiative.

The need for FIRST today

Despite our growth and success to date, FIRST is needed now more than ever. In its 2010 report on K-12 education, the President’s Council of Advisors on Science and Technology explained how increasing the effectiveness of science, technology, engineering, and mathematics (STEM) education in the United States will greatly benefit the nation’s economic competitiveness and overall welfare. However, as the same report relates, the United States consistently ranks in the middle of the pack, or lower, in student performance in science and mathematics when compared with other developed nations.

We know that without the encouragement of adults and the engagement of student peers that are at the core of all FIRST programs, students begin falling behind in science and technology at an early age, which can not only deter interest in science and technology careers, but also have more serious consequences for success in

¹ Gracious Professionalism[®] is a way of doing things that encourages high-quality work, emphasizes the value of others, and respects individuals and the community.

² Coopertition[®] is displaying unqualified kindness and respect in the face of fierce competition. Coopertition is founded on the concept and philosophy that teams can and should help and cooperate with each other even as they compete.



life. For example, only one in five sixth graders who fail math will reach 12th grade on time, and only 21% will graduate either on time or within one additional year. Studies indicate that, after the age of 10 or 11, children's attitudes toward science start to decline, further diminishing their science aspirations.

Addressing these issues head-on

We can and must do more to address these issues head-on. To build on our success and achieve our vision, we must:

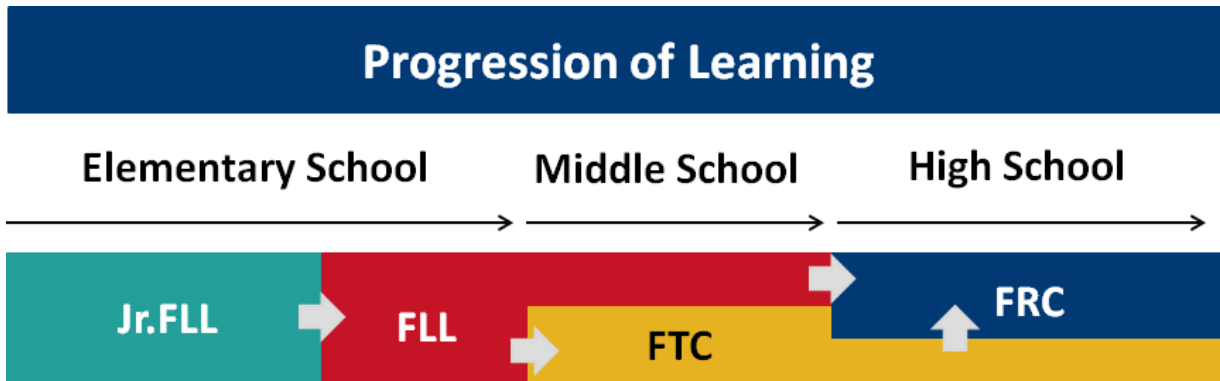
- Engage many more students in our programs by developing a broad-based awareness among young people of how much fun being a member of a *FIRST* robotics team can be.
- Engage more students at a young age to get them excited about science and technology and keep them from falling behind.
- Keep students involved throughout their school years through a progression of learning, so that they see the opportunities in and are prepared to succeed in 21st century science and technology careers.
- Better influence culture by becoming part of the fabric of communities.

The path to achieving our vision

Our proven way to achieve these goals is to vastly expand the availability of *FIRST* programs while making them more accessible and sustainable. To that end, we will focus on a few key priorities over the next five years:

- **Make FRC, the ultimate robotics program, more available, accessible, and sustainable** – to enable as many students as possible to have this transformative experience, we will implement a new, higher-value, lower-cost competition structure that enables students to compete more often and closer to home, while maintaining the same high-quality FRC experience.
- **Better leverage our four programs to enhance the progression of learning** – to engage more students at a young age and enhance the complete *FIRST* K-12 experience, we will better link our programs and make it easier for teachers and parents to help students advance from one program to the next, and ultimately to our flagship FRC program.



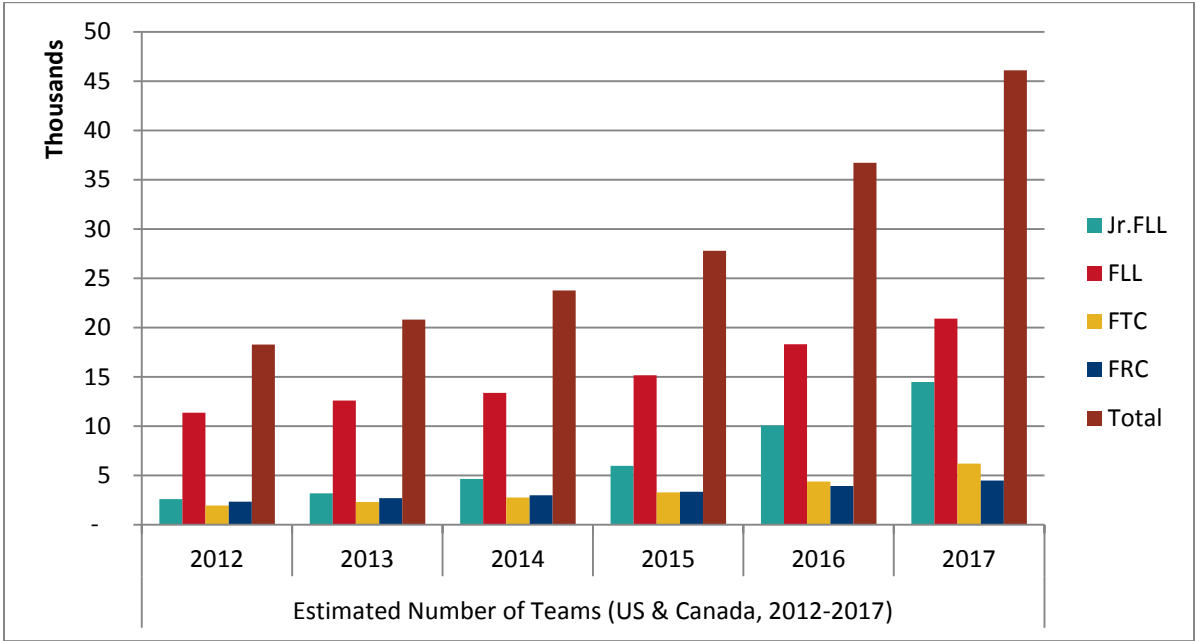


- **Build and strengthen the *FIRST* leadership team** – to support our growth, we will enhance our leadership team, build more centralized capacity to generate funding and market our programs, and work more closely within local communities across the country to recruit and support teams.
- **Create a more efficient, responsive organization** – to support our growth, we will implement more robust systems and processes that are more responsive to the *FIRST* community and better monitor our performance, allowing us to continually learn and improve.

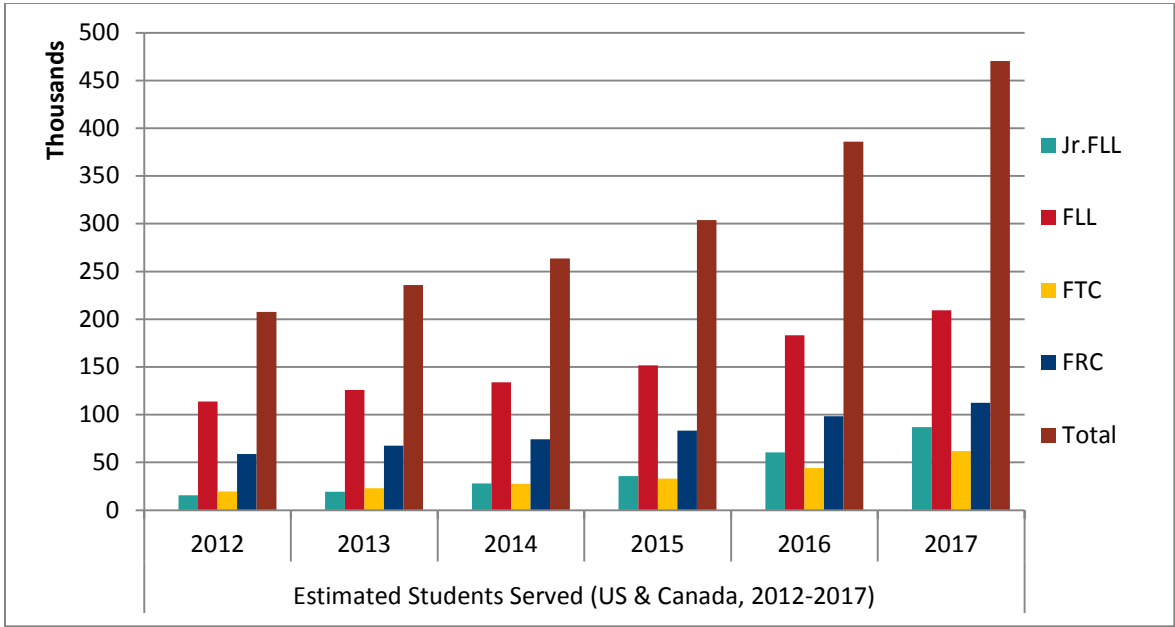
The combined effect of these initiatives will accelerate the growth of all *FIRST* programs in North America. By 2017, we envision close to 4,500 FRC teams, 6,000 FTC teams, 20,000 FLL teams, and 14,000 Jr.FLL teams reaching approximately 450,000 students in that year alone. Extending the *FIRST* experience to many more students throughout their school careers will make a tremendous difference in their lives, their schools, and the standing of the U.S. within the global community of scientists and educators.

Making this Strategic Plan a reality will go a long way toward closing the gap in student performance in science and mathematics, and will give generations of young people a welcoming path to become leaders of the future. Ultimately we will measure success by how effectively *FIRST* programs inspire young men and women to declare college majors and pursue careers in science, technology, engineering, and math.

Estimated *FIRST* Teams (US & Canada 2012-2017)



Estimated Students Served (US & Canada 2012-2017)

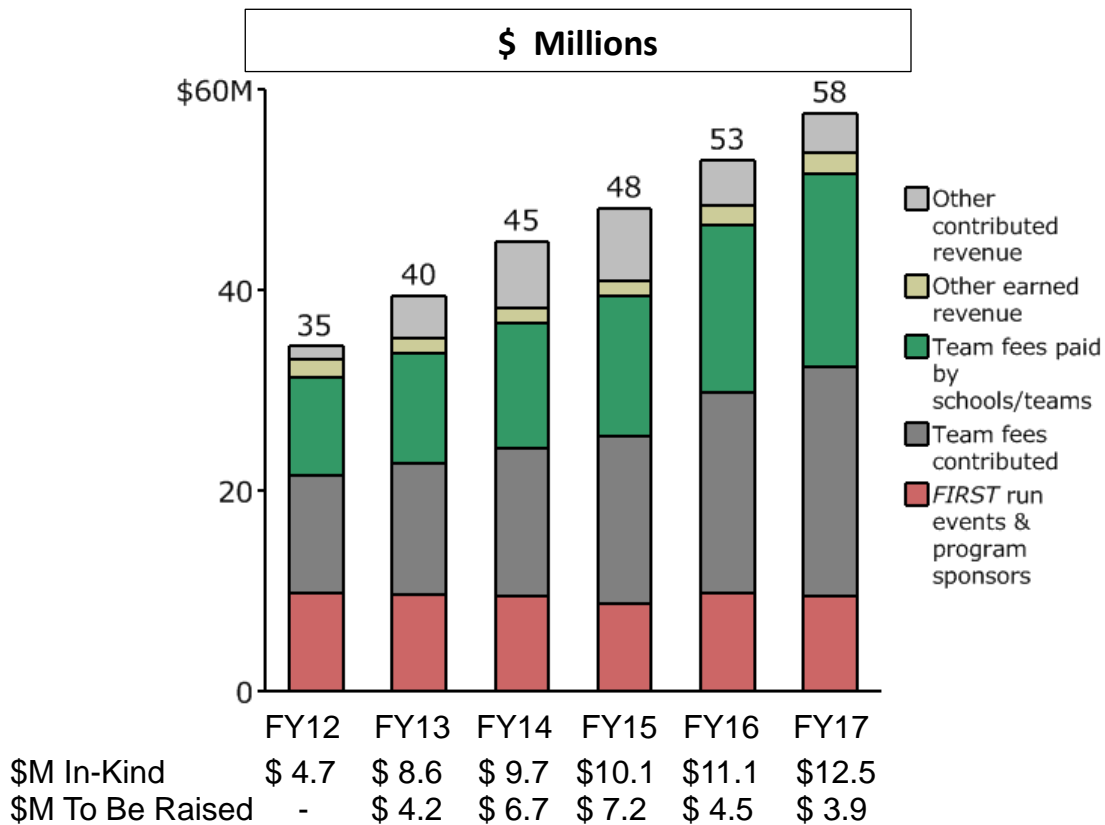




Financial projections

Implementing the initiatives in our plan to achieve our growth goals will require additional investments over the next five years. The estimated Financials for *FIRST* headquarters through 2017 are shown below:³

**Estimated *FIRST* Annual Revenues
(2012-2017)**



³ Note: Other earned revenue will include revenue from sources such as merchandise sales and passive royalties. Other contributed revenue will include revenue from sources such as individual donations and grants for longitudinal studies. The chart does not include "pass through" and in-kind expenses/revenues.