

The ROI of *FIRST*

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If you're familiar with any of *FIRST*'s programs, you've become aware of a few acronyms:

- *FIRST* (For Inspiration and Recognition of Science and Technology)
- YPP (Youth Protection Program)
- TIMS (Team Information Management System)
- VIMS (Volunteer Information and Matching System)

In the financial and business world, one of the leading acronyms is ROI.

A few years ago, as a *FIRST* Tech Challenge (FTC) mentor, I met with my team and we were brainstorming ways the robot could score in the dynamics of the challenges presented at the kickoff for the new season.

I asked them, "Where will you get the most immediate ROI?" It was an expression that was alien to them. "What is this ROI?"

To business people, Return On Investment (ROI) is a measure of profit or return that is earned on an investment.

I was asking students to consider ways that they could score quickly, with a minimal investment of resources and time. After all, using sensors or creating an autonomous program, for most teams (especially rookies) is typically the last evolution in robot development.

In our first meet, after watching another team use a cardboard "shovel" on a drive train as an immediate way of scoring in the driver controlled period of the game, my team came to the field with an improved version made out of plastic donut packaging before the day was over. And they had points on the scoreboard!

I've had the good fortune to be a volunteer for a team that successfully made not one, but two trips to the world championship.

Success comes in small steps. ROI is not always immediate, thus financial strategy for long term investments.

But *FIRST* Tech Challenge teams don't have long term to create a world championship robot – they have weeks, or months at best.

So I started looking at ROI in other terms. Longer terms. What fundraisers the team did which yielded the highest results in the shortest amount of time. How students could acquire scholarships through the *FIRST* programs. Team building skills. Collaborative opportunities with other teams and networking with sponsors to build relationships. Understanding how to create a budget and a business plan. Life skills. Skills that will help them get a high school summer internship or job, or after high school, or after college.

But the bigger picture, as far as ROI is concerned, is when volunteers as parents, professionals, teachers, come together for events. Relationships between these people, so critically necessary to run a meet, appear. A social network develops between the volunteers, temporarily outside of work, or Facebook, Twitter, Snapchat, LinkedIn, and the other “social” applications that technology has given everyone a proclivity for. A human factor. You’re sitting next to someone at lunch and ask, “So what do you do when you’re not involved in robotics?” And suddenly there’s a connection that you’ve never had before.

These aren’t the people you work with day in and day out. It doesn’t matter if you’re an insurance agent, an automotive mechanic, a professor or teacher, a financial advisor, or a stay at home parent. It doesn’t matter whether or not you understand programming, CAD, or design.

These connections can lead to something more: New friendships, new business opportunities. I’m aware of one team mentor who owns a software company. He finds his interns through student programmers and designers in *FIRST* robotics teams. Win-win for him and students!

ROI for mentors and volunteers is this: collaboration/cooperation, team building, leadership and community involvement, face to face networking both socially and business wise, a potential pool of interns or new hires (both students and adults) if you’re looking. You understand a work ethic and a commitment to tasks because the people you’re working with are not paid to do this. They’re here because it’s fun.

Broaden your ROI, involve your sponsors, ask them, not just for finance, but engage them, ask them to attend, or even volunteer at an event. See what their sponsorship actually does for STEM students. Demonstrate the ROI factor to your sponsors is equal to, or greater than, your own.

A few things you may ask your sponsors to consider:

- How much time does HR spend looking for the “right” candidate for a job?
- Recruiters charge 20%, 25%, up to 30% for their services while coming to a robotics event costs a bit of your time
- NASCAR sponsors and athletic endorsements cost millions, compared to sponsorship of a *FIRST* Robotics team

Sponsors are in good company! A complete listing of *FIRST*’s major sponsors is available at <http://www.firsinspires.org/annual-report>.

Based on my *FIRST* experience, my definition of ROI is:

Resources

Opportunities

Inspiration

If you are already a coach, mentor, volunteer, or if you sponsor a *FIRST* robotics team, thank you! If you are not, please join us! Visit www.firstinspires.org for more information.