

## Robotics Mentorships as a Developmental Career Opportunity

Organizations face a leadership challenge that will grow over the next fifteen years as the entire baby boom generation moves through the later stages of their career and into retirement. Smart companies are spending resources to ensure that the next wave of potential leaders have the capabilities and experiences that prepare them for their future roles and responsibilities.

At ESCO we expect individuals to take control and show initiative regarding their career advancement. We offer lots of support and have structured programs related to Leadership Development, cross-functional team projects and stretch business assignments. Additionally, we encourage employees to seek leadership opportunities within the community.

One of the community leadership opportunities we have found especially beneficial for engineers who wish to grow into management positions is volunteering as an ORTOP LEGO Robotics Team Mentor. ORTOP LEGO Robotics mentors act as consultants to a group of nine to fourteen year-olds who must design and build a robot made of LEGO parts that accomplishes set tasks. The mentorship commitment lasts from September through December, and most mentors volunteer approximately four hours per week.

Many of the same competencies we look for in future leaders are tested and honed through the LEGO Robotics mentorship. Here is a list of several core competencies (based on the work of Lominger Limited, Inc. as stated in the book ***For Your Improvement***) that we have deemed necessary for an individual to possess should they wish to move from the role of individual contributor to management:

- Building Effective Teams
- Motivating Others
- Problem Solving
- Conflict Management
- Process Management

LEGO Robotics gives mentors the chance to develop these skills in a meaningful, competitive and deadline driven situation outside of the workplace. Mentors face the challenge of teaching kids how to think like engineers, yet they are prohibited from stepping in and actually doing any of the work. They guide the children through the same steps that engineers use in the workplace: Brainstorm, Design, Build, Test, and Refine. They have to help team member craft project plans complete with milestones and deadlines, deal with the emotional lows when ideas don't pan out, encourage without rescuing, coach kids through personality conflicts and mediate disagreements, and ask questions that lead others to solve their own problems.

In the four years that I have been an ORTOP LEGO Robotics coach I have spent hundreds of hours with mentors who have agonized over the question of how much guidance is appropriate, when should they teach versus just letting kids experiment, should they propose a solution as competition approaches and to what extent do they need to ensure success or allow the kids to fail. Just as in the workplace, these questions never have clear or easy answers. LEGO Robotics mentors learn to adapt their approach to the individual child and to the group dynamics of the team. It's a sometimes frustrating, but ultimately rewarding experience.

In today's global business environment, few engineers will work alone. Teams dominate because multiple brains focused on a common goal are the most effective way to quickly innovate. The same challenges that team leaders will face on the job are inherent in every LEGO Robotics team and it's great for the company when employees can get leadership experience in a setting where the stakes are not quite as high as in the business world.

LEGO Robotics mentorships are a winning experience for companies that encourage their employees to participate, and a winning experience for the students who benefit from the time, knowledge and encouragement those mentors give. To learn more about ORTOP LEGO Robotics, visit [www.ortop.org](http://www.ortop.org).

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