



**Medtronic Leadership in Support of the
FIRST Robotics Program in Minnesota:
A Case Study of STEM Support**

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FOR INSPIRATION AND RECOGNITION OF SCIENCE AND TECHNOLOGY

FIRST



***For the Inspiration &
Recognition of
Science & Technology***



FIRST's STEM Focus

FIRST seeks to inspire America's young people to pursue future careers as our nation's technicians, engineers and scientists – to fill the increasing number of these critical positions.



STEM Need

U.S. News & World Report, 2/21/14
(William H. Swanson, Chairman and CEO of Raytheon)

- **“Millions” of unfilled STEM jobs in U.S.**
- **600,000 of those in manufacturing**
- **1.3 Million more STEM positions in 5 years**

What is FIRST?



- 501(c)(3) Educational Nonprofit
- Suite of K-12 Competitive Programs
 - FIRST Robotics Competition (FRC) (Grades 9-12)
 - FIRST Tech Challenge (FTC) (Grades 7-12)
 - FIRST Lego League (FLL) (Grades 4-8)
 - Jr. FIRST Lego League (JFLL) (K-3)
- 350,000 Students
- 64,000 Mentors
- 66,000 Volunteers

FIRST Robotics Competition (FRC)




- High School Teams of 20-25 Students
- Build Big, Sophisticated Robots
 - 6 Week Build Season
- Compete in Big Arenas




Key Impacts:

- **Twice as Likely to Major in Science or Engineering in College**
- **Three Times as Likely to Major in Engineering, Specifically**



FRC in Minnesota Today

from 2 Teams in 2006 to:



- **186 Teams**
 - **More than Boys Hockey (156 Teams)**
 - **36% Penetration of All High Schools**
 - **56% Accessibility to MN H.S. Students**
- **4 Regional Competitions**
- **MN State High School League Sanctioning**
- **4,851 Students, Mentors & Volunteers**



Medtronic Support Rationale



- **Building of Future Employee Base**
 - **Direct**
 - **Indirect**
- **Strengthening Minnesota & America**
 - **Getting Back to a Manufacturing Economy**
 - **Technological Leadership**



Medtronic Support

- **Senior Executive Champion**
- **Recruitment of Peer Companies**
- **Foundation Side Support**
- **Business Side Support**



Medtronic Support in MN

- **\$351,000**
- **47 Teams**
- **2 Regional Competitions**
- **Regional Operations**

84/186 2014 MN Teams Supported by Healthcare Companies



- **Medtronic: 47 Teams**
- **Boston Scientific: 15 Teams**
- **St. Jude Medical: 9 Teams**
- **Lake Region Medical: 5 Teams**
- **Covidien: 3 Teams**
- **UnitedHealth: 2 Teams**
- **Minnetronix: 1 Team**
- **Nonin Medical: 1 Team**
- **Nordson Micromedics: 1 Team**