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

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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