FIRST Robotics and Scrum@Scale Transforming Our Future by Empowering Tomorrow's Workforce Today!

June 2021 Dr. Mark Buckner

> Agile Education powered by scruminc.



"We cannot always build the future for our youth, but we must build our youth for the future."

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- Franklin D. Roosevelt



Source: Flickr



FIRST is a microcosm of the real world!

FOR INSPIRATION & RECOGNITION OF SCIENCE & TECHNOLOGY









Ages 9-16* (Grades 4-8)



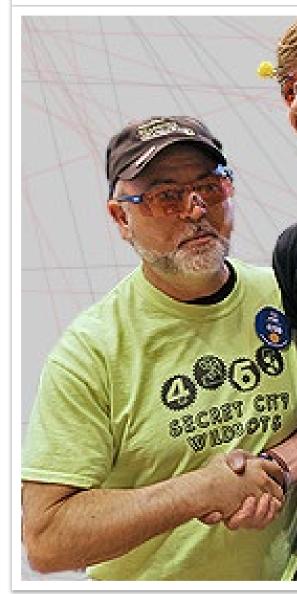




Case Study by Dr. Mark Buckner ©Jeff Sutherland & Scrum Inc 1993 – 2023 Ages 14-18 (Grades 9-12)

110+ countries

\$80M+ scholarship opportunities from **200+** providers



- Dean Kamen

660K students in

300K

mentor, coach, judge, and volunteer roles

20M+ volunteer hours served

3,600 events in

100+ countries

77K attendees at annual FIRST Championship

YOUR HELP MAKES AN IMPACT!

Together, we can show students of every age that hands-on problem solving using STEM is fun and rewarding, and is a proven path to successful careers and a bright future for all.

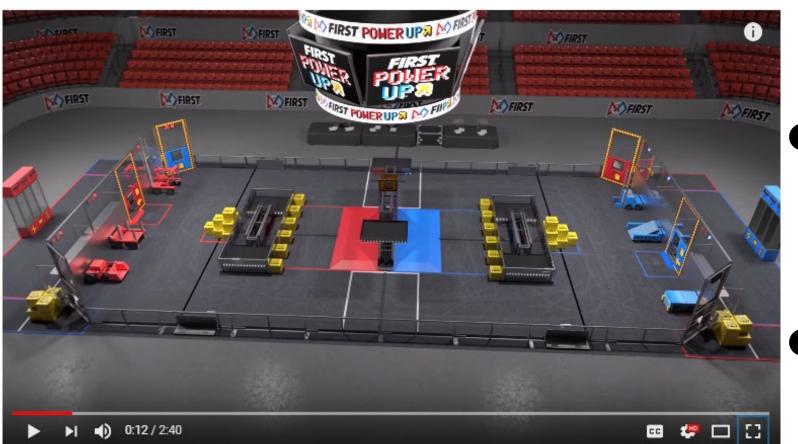
WON'T YOU HELP TODAY?





<u>https://www.firstinspires.org/</u>

What if your team had to dream up, design, fabricate, build, program & learn to operate a brand-new product in 6 weeks?



 Much of the team changes each year

1st Saturday in January



Case Study by Dr. Mark Buckner ©Jeff Sutherland & Scrum Inc 1993 – 2023 • \$5,000 BOM

• \$500/match

Volunteer workforce

Most start w/ little to no technical experience

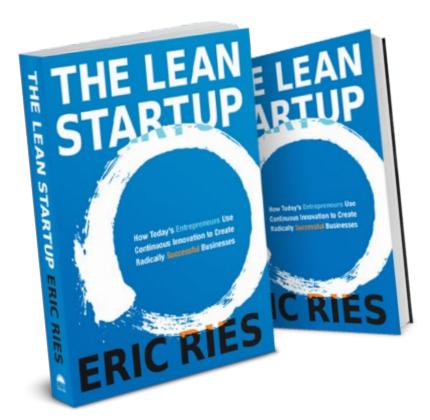


6 weeks

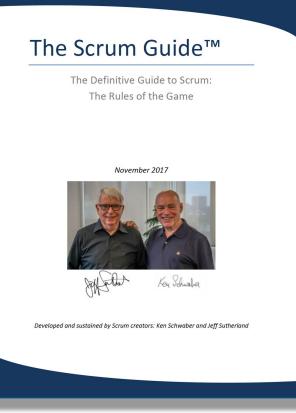




We run our "Team" like an Agile Startup







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Design Thinking



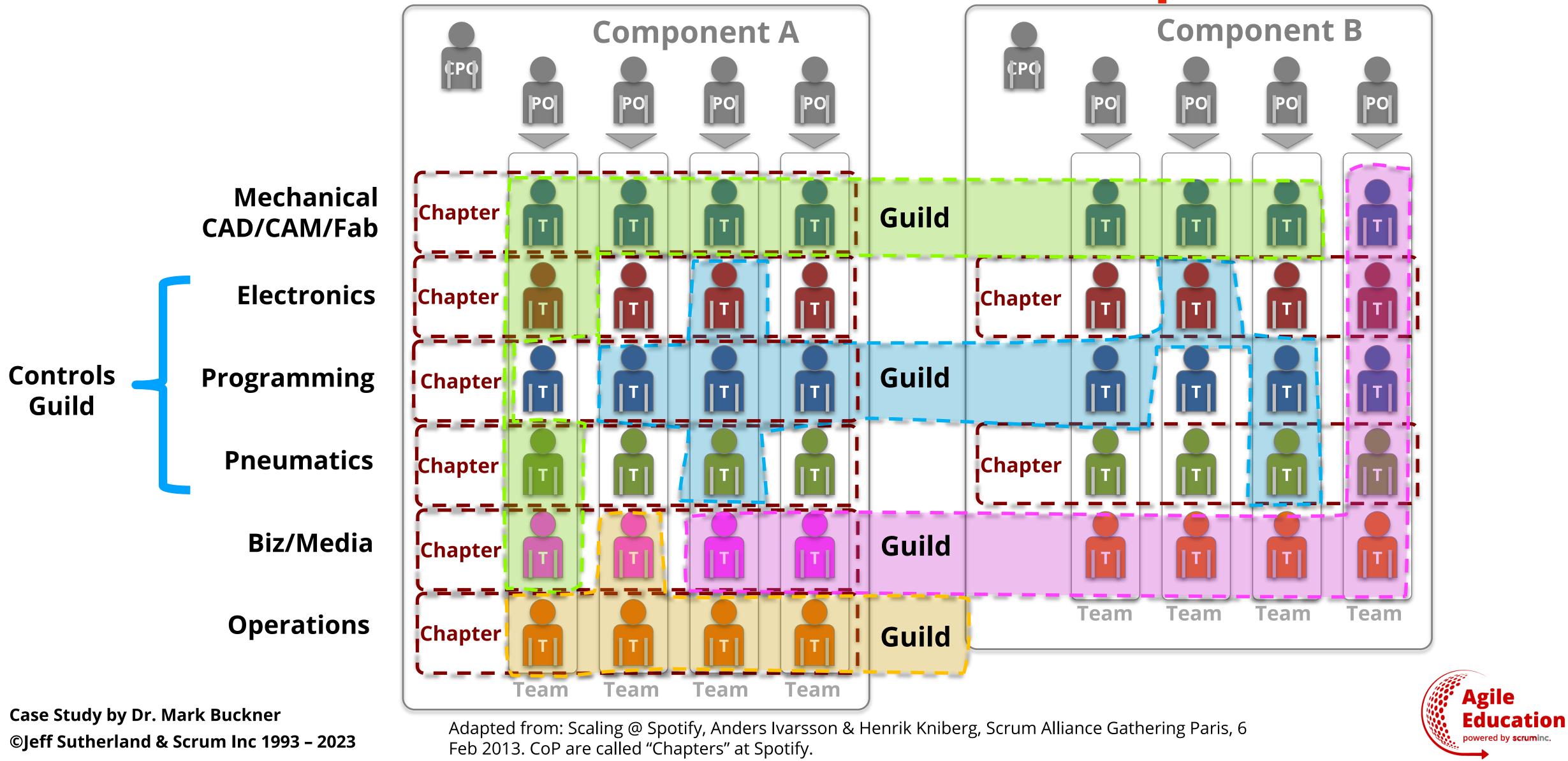
Sprints for Complex Products?

The Scrum@Scale[™]Guide The Definitive Guide to Scrum@Scale: Scrum Scaling that Works Version 1.0 – 10 February 201 2006-2018 Jeff Sutherland and Scrum Inc., All Rights Reserved Scrum@Scale is a registered trademark of Scrum Inc. ased under Creative Commons 4.0 Attribution-Sharealike Licen edu Scrum

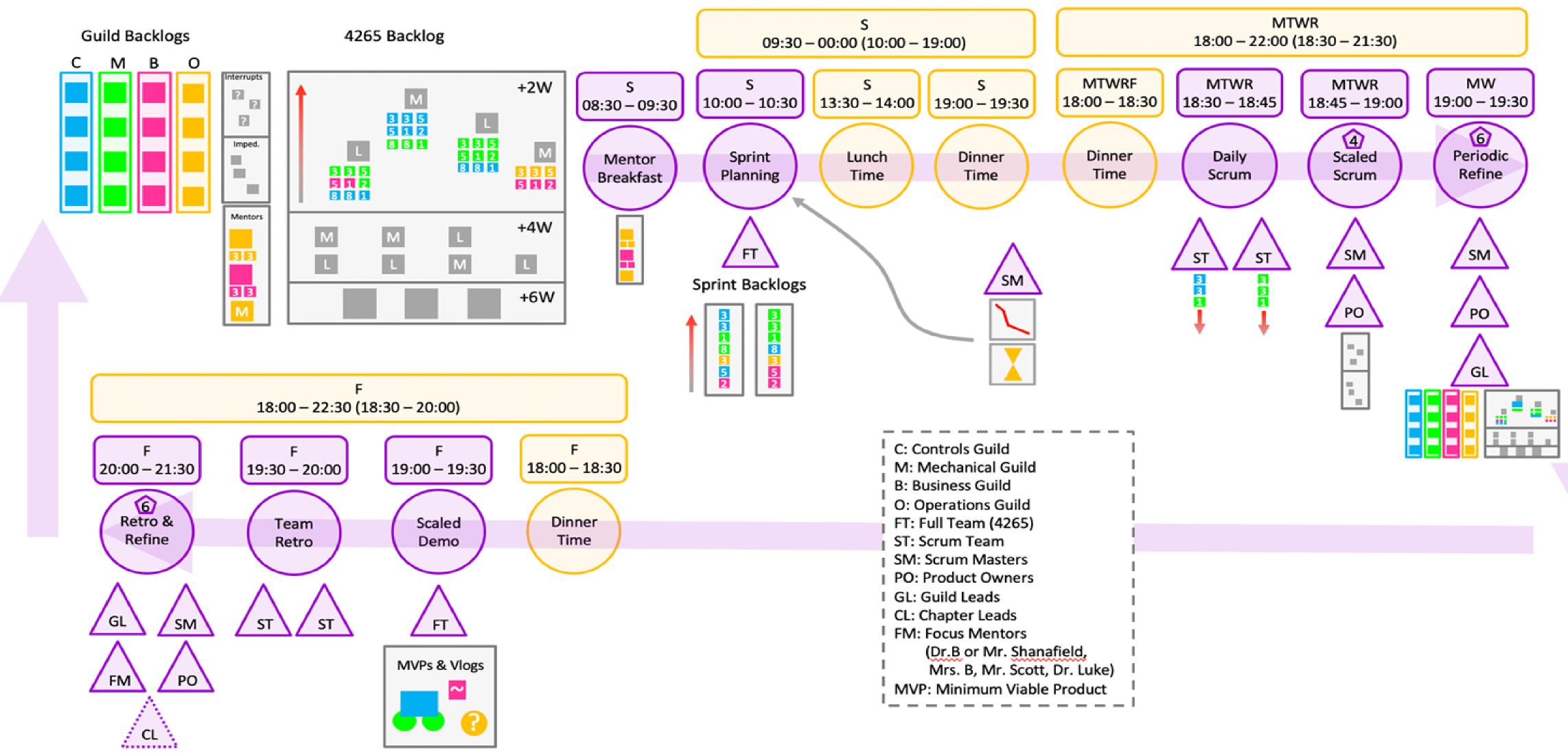




Different Cross-Team Coordination Mechanisms Serve Different Purposes



Scrum@Scale Interactions

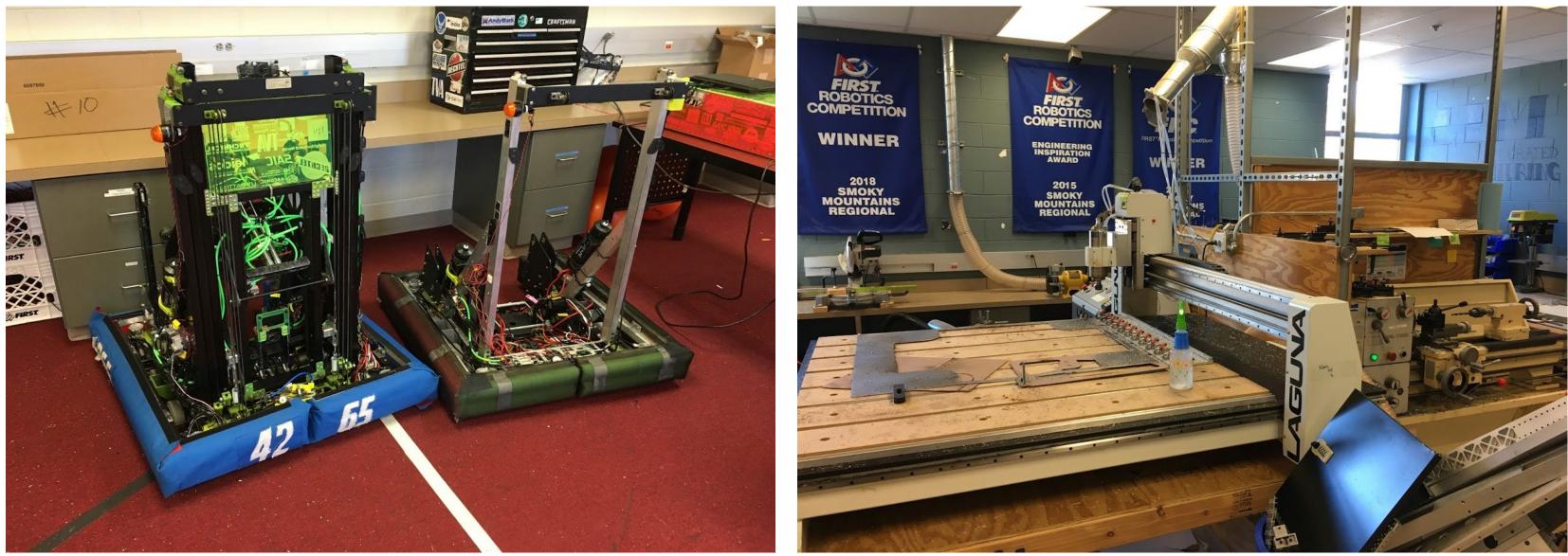






Scrum Room



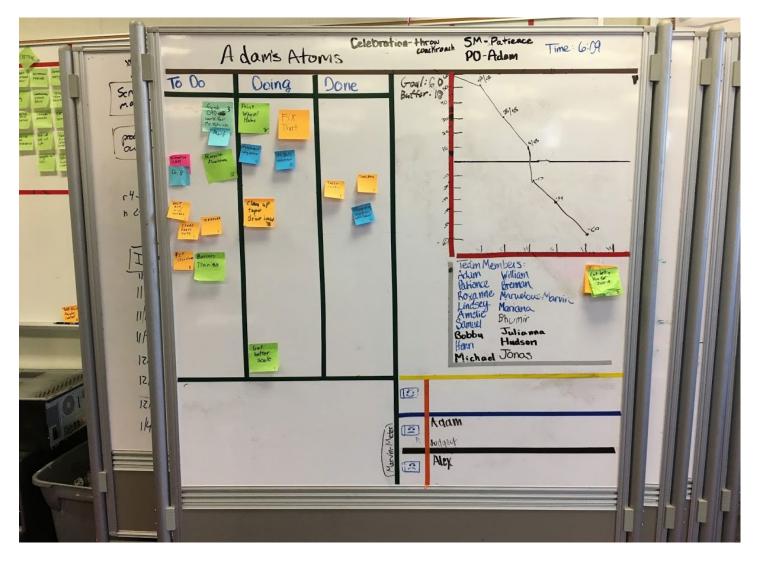


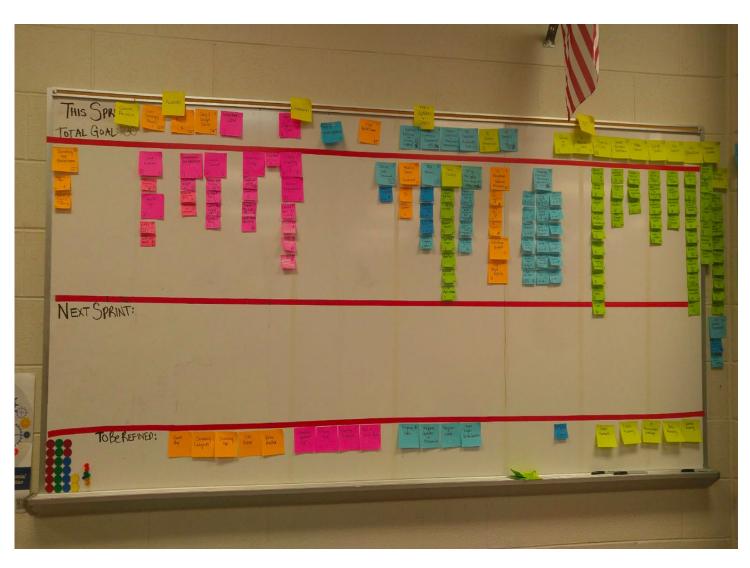
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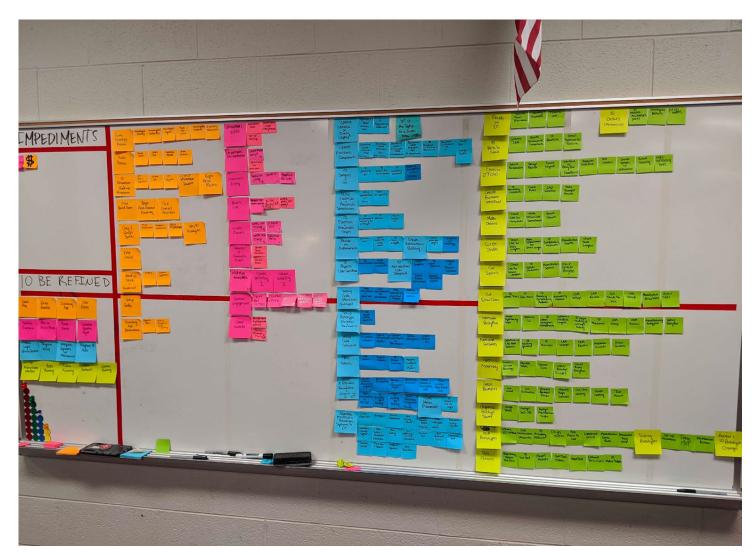


Cross-Team Coordination & Communication











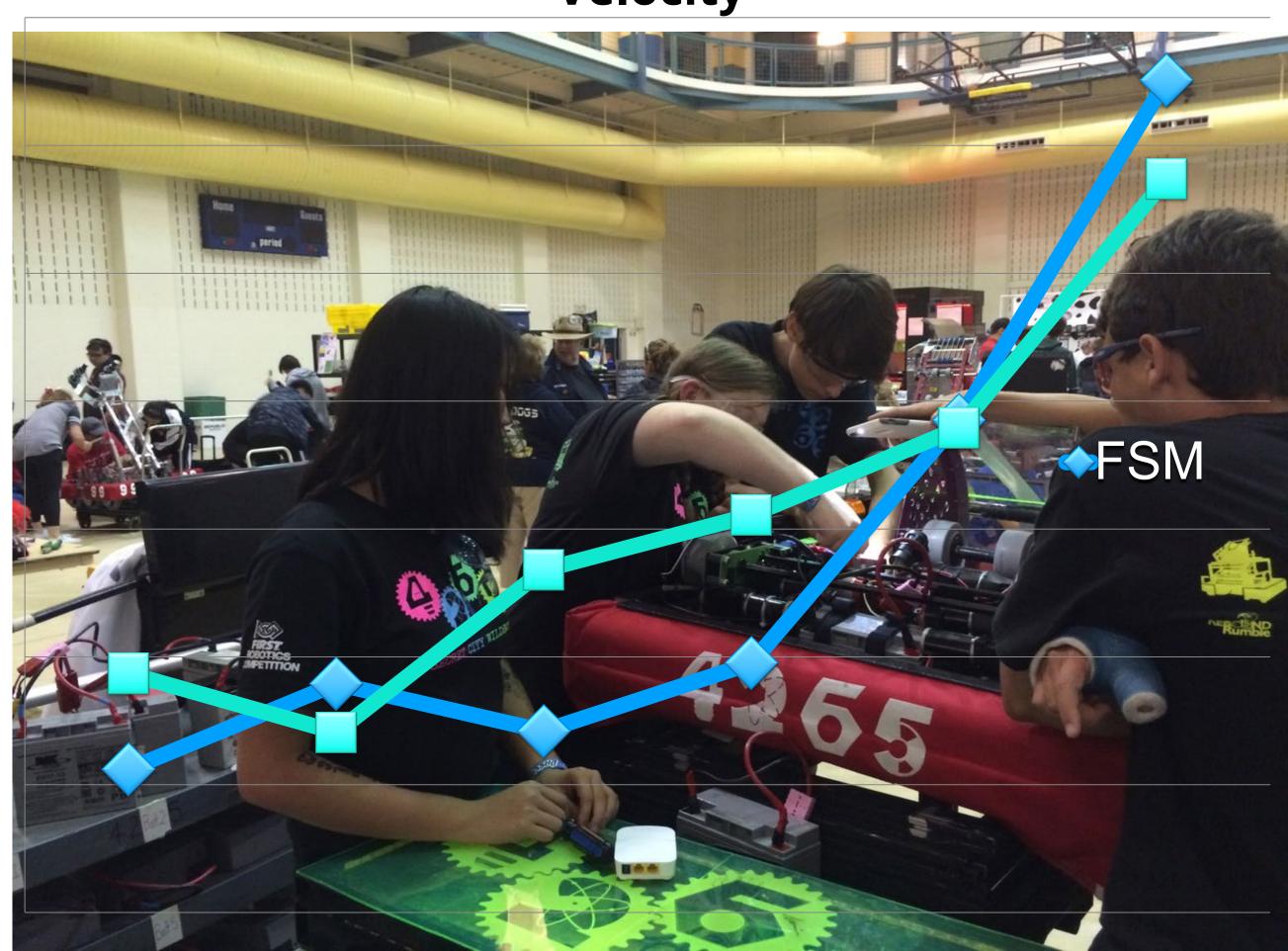




Scaling Good Scrum Rocks! Velocity 700

Find and Second Second Points 300 **200** 100

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Week 1 Week 2 Week 3 Week 4 Week 5 Week 6



FIRST®Robotics Competition

WINNER

2015 HOPPER SUB-DIVISION

FIRST Robotics and Scrum@Scale A Force for Good! Empowering Tomorrow's Workforce Today! Come Join the Insurgency!

