

TEAM DYNAMICS

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INTRODUCTION

- I'm a sophomore at Beaverton High School
- "Three years" of FIRST
 - 1 year of FLL
 - 1 year of FTC (Revamped Robotics 12808)
 - 1 year of FRC (Beavertronics 5970)

DIVISION OF LABOR

How do we split up our team to maximize efficiency?

OUR SUB-TEAMS

- Fluid sub-teams based on the time of the year
 - Summer season
 - Early competition season
 - Late competition season
- The main roles of almost all members change over time
 - The members' interests change
 - The needs change as well as time goes on
 - We let members choose their roles but encourage not jumping around too much

SUMMER SEASON

- In the summer season, we recruit rookies
 - A primary purpose of this season is training them
 - After training, we let the new members decide what they want to work on during the season.
 - Positions *are not* permanent!
- What do the veterans do?
 - The main role of all veterans are instructors
 - Veterans also work in divided sub-teams to teach efficiently
 - Grant writing is led by the veterans
 - We also choose our leadership structure for the oncoming season
 - We have one captain and two upcoming captains

EARLY COMPETITION SEASON

- This phase is generally during the league season
- Our official sub-teams are assigned, but can still be changed
 - Every member participates in the Industrial Design Process
 - Roles include PTC/CADD, programming, and building
 - Members have several roles on the team

LATE COMPETITION SEASON

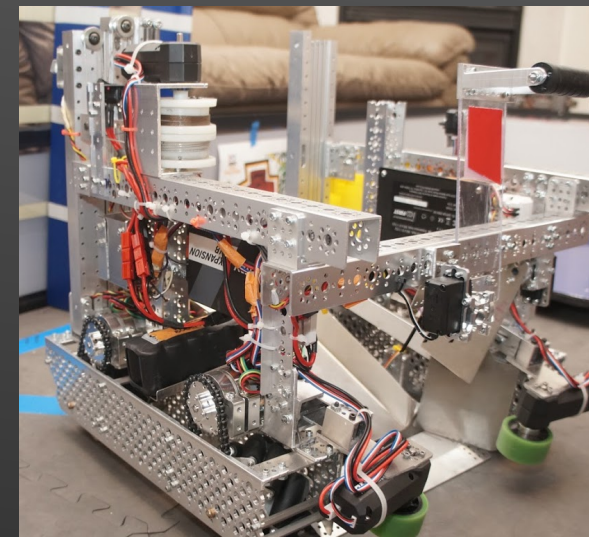
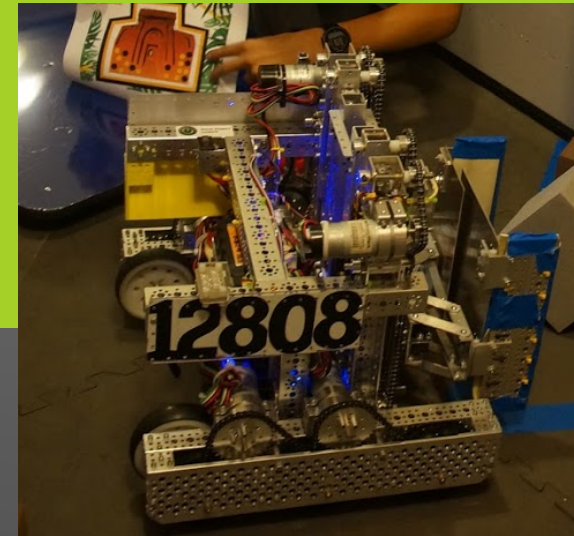
- Late competition season is from super-quals to worlds
- As the season goes on, many roles aren't needed as much
 - These roles include building and PTC/CADD
 - Roles that need more work include the Engineering Notebook
- Roles on the team that are still needed become more set-in-stone
 - All of the rookies generally know what they want to do for the team

MEETING STRUCTURES

How and when do we meet as a team to complete tasks effectively?

MEETING SCHEDULE

- Normal meetings scheduled 3x per week for 2-3 hrs.
- If we have time sensitive goals, we hold meetings every day for 3+ hrs.
 - Example: over Thanksgiving Break in building a new robot
- Sub-team specific meetings
 - Example: Driver practice meetings are held at variable intervals
 - Summer season: 1x per week
 - Early competition season: 2x per week
 - Late competition season: 4x per week
- Individual members come much more frequently for certain tasks
 - Example: programming has to be done when nobody else is working on bot



DECISION MAKING

- The Industrial Design Process
 - Prototype -> Design -> Build -> Implement -> Test
 - All hands on deck!
 - Prototyping sub-groups
- Settling disagreements
 - Not always a democracy, but majority rule still plays a part
 - Data and evidence needed to support an idea in prototyping (example: % success rate)

INTEGRATION OF ROOKIES

How do we recruit, train, and fully integrate our rookie members for the competition season?

OUR ROOKIE YEAR – CREATING A TEAM

- Revamped recruits from our community: friends, family, and neighbors
- All recruiting is done early in the summer
- In our first year, all but one of us were rookies
 - Training and learning was our #1 priority!

TRAINING STRUCTURE

- Training timeline
 - **First half of summer:** Work on projects (defense bot, improving old bot, grant writing)
 - **Second half:** Formal training (soldering, power tools, EN guidelines, etc.)
- Projects always have a purpose
 - Grant writing
 - Practice for the engineering notebook during the season
 - Building a defense bot
 - Teaches the basics of building

LESSONS LEARNED

- Healthy ratio of veteran to new members is 1.5:1
- Our struggles last season mostly stemmed from too many new members
 - Success in awards
 - Robot maintenance and build speed
 - Organization of the competition pit
- Sub-team assignments
 - Packing too much of the team on EN (doesn't accomplish much)
 - Success: never too many builders at a time!

THANKS FOR LISTENING!

- Contact us at revampedrobotics@gmail.com
- Like us on Facebook: [facebook.com/RevAmpedRobotics](https://www.facebook.com/RevAmpedRobotics)

Have a nice day :)