

Tactics and Strategies of FIRST Robotics

What are Tactics and Strategies?

A strategy is a vague path to achieve a goal

A tactic is a method that allows the strategy to be executed



Beforehand

Before the season starts, it would be wise to get familiar with the patterns of FIRST competitions. FIRST has a very good reputation of maintaining a few basic aspects of their games.

- FTC always puts two alliances consisting of two teams each against each other
- FRC always puts two alliances consisting of THREE teams each against each other
- Almost all games will contain an autonomous, tele-operated, and end phase

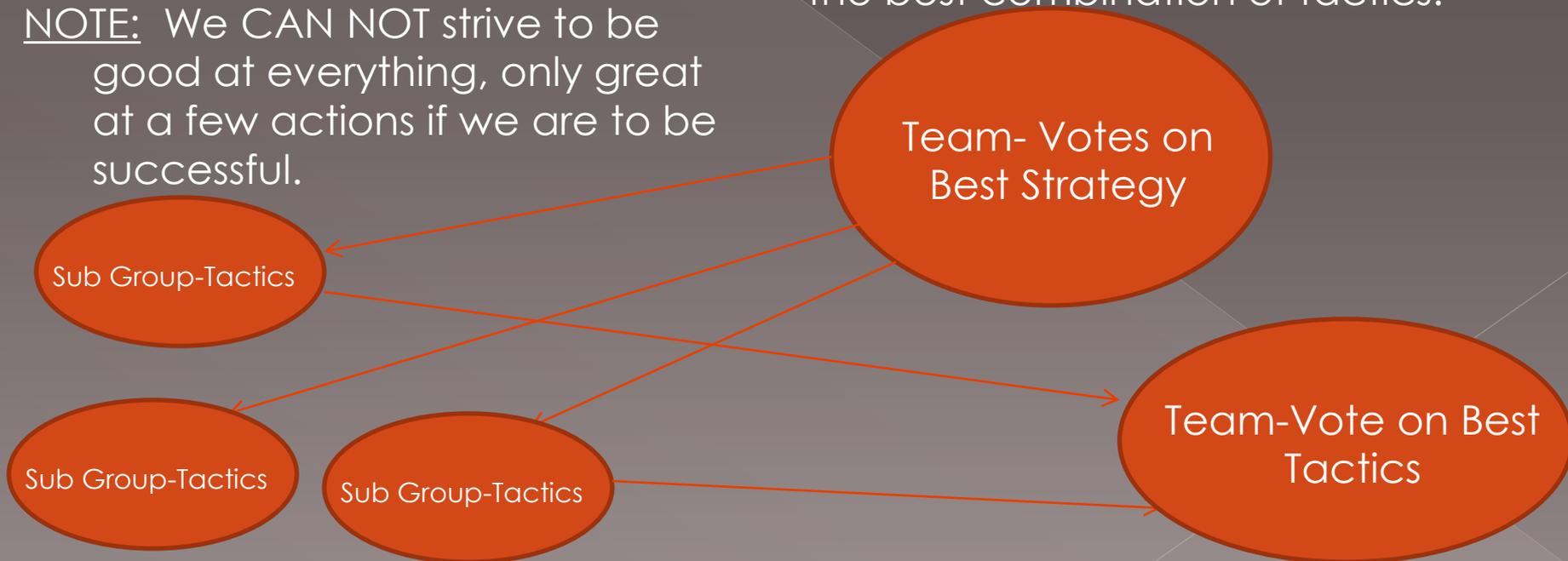
Strategize and Design

The entirety of the team is expected to have a full understanding of the game.

We will converse as a team about what approach we will take to achieve specific aspects of the game.

NOTE: We CAN NOT strive to be good at everything, only great at a few actions if we are to be successful.

After a strategy for the game has been decided on, the team will split into groups to decide on the tactics (or design of the robot) that we will use to allow our strategy to be affective. We will then vote on the best combination of tactics.



Strategy Discussion

- Analyze game tasks (various point combinations) and rank difficulty.
- Look at both offensive and defensive options
- Compare task difficulty to team strengths/goals.
- Anticipate what other teams will choose
 - try to fill the ‘holes’.

Build Season

It is crucial that, during the build season, EVERYONE is constantly aware of the initially planned strategy. Once a strategy and the tactics that are used to produce it are being implemented into our robot, there should be no form of straying off from the initial objectives.

Ergo, no turning back!



It is too risky and time-consuming to turn around on square eleven to walk back to square one only to come back to square eleven with a different means, yet similar end result.

During Competition

Strategy During the Competition Will Be Divided into Two Groups

Strategist(s)

On day one, the strategist(s) will help the scouts with collecting feed back from other teams, such as their maneuverability and ability to complete objectives.

The remainder of the competition would consist of the strategist(s) helping to create a game plan with the rest of the alliance based on the skills of each team.

Scouts

“...if you know your enemies and know yourself, you will not be imperiled in a hundred battles; if you do not know your enemies but do know yourself, you will win one and lose one; if you do not know your enemies nor yourself, you will be imperiled in every single battle.”

-Sun Tzu

Scouts will do two things during the competition:

On day one, they will go around to other teams and getting feed back from them.

On the remaining days, they will be up in the stands to fill out score cards for EACH team of EVERY game.

Drive Team Strategist?

It is recommended that a member of the drive team is NOT the strategist.

- There would be not enough time to collaborate before the competition starts, for they have to be queued beforehand
- The drive team will likely spend most of their time on repairing the robot

Possibility of 'Coopertition' Points



Last season, FIRST introduced a new set of points called 'coopertition' points. If at least ONE robot from EACH alliance successfully balanced on the middle bridge, as shown here, then EVERY member of the alliance would receive at least 2 extra qualification points, which is necessary for making it into the finals.

Thus, the strategist would not only have to collaborate with their own alliance, but with the opposing alliance as well to decide who will go on the 'coopertition' bridge.

