Best Practices for Creating Team Goals

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Introduction

This guide was created by *FIRST*® Robotics Competition Teams 581, Blazing Bulldogs, and 1678, Citrus Circuits, in collaboration with *FIRST*® HQ. Thank you to Teams 581 and 1678 for helping us create this guide!

This guide is intended to be a foundational resource for creating and setting goals for *FIRST* teams. It was created specifically for *FIRST* Robotics Competition teams looking to formalize and elevate their goal-setting practices. We believe much of the content is applicable to all *FIRST* teams. It focuses on applying the principles of SMART goals (see SMART Goals) to the unique challenges and opportunities within the *FIRST* Robotics Competition season.

This guide focuses on why and how a team can set goals. Teams can use the information provided and involve their entire team or smaller groups (such as team captains). It is up to each team to decide how they want to run their goal setting.

Goal Setting for *FIRST*® Robotics Teams

Setting clear, intentional goals provides direction and purpose for the entire team and serves as a critical foundation for decision-making throughout the season. Effective goal setting informs strategic design by defining where the team aims to go, shaping priorities, guiding tradeoffs, and aligning efforts across the team. This resource is designed to help your team establish meaningful, achievable objectives that lead to a successful season.

Teams should also review additional Team Management Resources from *FIRST* for additional helpful information.

Why Set Goals?

The decision to set goals moves beyond just the robot and is vital for the team's health and effectiveness. Goals serve several key purposes:

- Creating alignment among team members, especially leadership.
- Providing a common purpose to work toward.
- Acting as a conflict resolution tool when making difficult decisions.
- Increasing delegation capacity.
- Supporting a more complicated organization.
- Helping the team achieve a broader impact within the community.
- Helping the team learn and grow year over year

Types of Goals

FIRST Robotics Competition teams can set goals across five main categories to ensure a holistic approach to success:

- **Goals related to Student Outcomes:** Focus on individual learning and growth.
- **Goals related to Community Impact**: Measure outreach and influence.

- **Goals related to the Robot:** Focus on functionality and system performance.
- **Goals related to Competition Result:** Aim for a specific level of Competition success.
- **Goals related to Awards:** Target recognition for culture and/or robot awards.

The Goal-Setting Process

To get started developing goals, teams should consider and evaluate several factors related to their own team, including:

- Specific areas the team wants to grow or improve in the future.
- Team resources (time, knowledge, materials, funding, etc).
- Past performance as a team (this can be at competitions, in shop, in the community, etc):
  - When evaluating past performance and areas of improvement, it is important to clearly set the foundation for a "blameless culture" among the team. Failures, mistakes, and errors are typically a result of processes which can be improved, and never individual people.

Once the team has identified areas for future improvement and areas they would like to maintain at their current level, the team should identify a minimum number of goals they would like to set for each area. This can be as specific or open as needed. Some examples could be goals for in-shop, District Event performance, community outreach, team communication, or each sub team. From here, teams should begin generating goals.

The goal-generating process should be deliberate and inclusive of team leadership to ensure consensus and buy-in from the rest of the team. It is also important to create a range of different goal types, not just award or robot goals.

Goal Setting Examples:

- The team identified that their robot had major electrical failures that caused their robot not to move in 6 of their 20 qualification matches last season. For next season, they have a goal of, "no electrical failures in matches."
- The team identified that they have a large class of seniors graduating this year. For next season, they have a goal of, "recruit at least 14 new members."
- The team identified that they want to continue to compete at the highest level in *FIRST* Robotics Competition. For next season, they have a goal of, "Win our Division at the World Championship."
- The team identified that they are too limited due to funding. For next season, they have goals of "Hold 2 fundraisers to raise $1,500."
- The team identified that they have low attendance at meetings because members were confused about when meetings were held. For next season, they have a goal of "Keep our standard meeting schedule the same every week in season. If scheduling additional meetings, share with the team at least 24 hours ahead of time."
- The team identified that from their rookie year while they learned a lot, they want to have a robot with more capabilities. For next season, they added a goal to "Add a least 1 additional mechanism beyond the standard KitBot"

Leaders must set aside time for brainstorming to capture a wide range of potential goals, emphasizing specificity with expected results. Goals should be categorized as:

- **Objective Goals:** Often statistically driven, based on past performance, and aim for challenging growth.
- **Subjective Goals:** Based on student learning, team culture, and aligning with the team mission.
- **Early Alignment**: Crucial goals must be set, finalized, and communicated to the entire team very early in the season (e.g., August/September), ensuring all team members are aligned toward the same strategic objectives before the *FIRST* Robotics Competition season begins.

SMART Goals

Using the "SMART" goals system is a way to ensure goals are thorough, complete, and actionable ideas. SMART stands for:

- **S**pecific - Set goals with appropriately narrow scopes using real metrics.
- **M**easurable - Define what evidence will prove you are making progress.
- **A**ttainable - Goals should be challenging but possible.
- **R**elevant - Goals should be clearly related to our team mission, values, and subteams.
- **T**ime-Bound - Goals should have deadlines.

Some goals are already naturally SMART goals, but some will need reworking like the examples below:

Example 1: Scouting

The team identified that though they perform well in qualification matches to rank in the top 8 consistently, they struggle to select complimentary robots in alliance selection due to having limited information on other teams' robot capabilities. To address this, the team decided they should improve their scouting subteam.

> **Starting Goal:** Scout as many matches as possible.

Because the team has evaluated their resources and areas they want to maintain or improve, they should be able to quantify what "as many matches as possible" means. This will make the goal more Specific and Measurable. Adding the names of the competitions the team will be competing at makes the goal more Relevant and Time-Bound.

> **Modified SMART Goal:** Scout all qualification matches at the Smoky Mountains Regional & Tallahassee Regional.

From here, the team can turn their SMART goal into specific projects and deadlines. The team now knows they need to have a scouting systems ready by their first Regional, that they need to train team members to use their scouting system in every qualification match, and that they need team members to be responsible for scouting at each Regional.

Example 2: Communication

The team identified that there is often uncertainty about how much work on a project was completed at a previous meeting, so team members do not know what they will be working on at their next meeting or how much longer it will take to complete. Team members also spend too much time during each meeting getting caught up on a project's status instead of working on a project. To improve this, the team decided they need to share this information more regularly.

> **Starting Goal:** Communicate better.

Because the team has evaluated their resources, they know they have a small leadership team who will not be able to communicate all details of all projects at all times without a significant time sink which could lead to burnout. The team usually only uses word-of-mouth and occasional emails to communicate with team members. The team understands that communicating project status every meeting may be a better goal, but that it would not be Attanable at the current time given their resources. Because of this, the team decides that having this "better communication" happen once a week in-person is a reasonable but challenging change for the size of their team.

> **Modified SMART Goal:** Hold a 15 minute "Project Updates Meeting" at the start of every Monday meeting to better communicate project status.

From here, the team can communicate this plan with the entire team and start applying their SMART goal to their Monday team meetings. To further define the goal, leaders could determine how long each part of the meeting should take, what information should be covered, if/how notes should be taken, or who should speak for each project.

Example 3: Robot Performance

The team has identified that while their robot can be competitive when fully operational, it often struggles to perform consistently in high-pressure matches due to durability issues, accuracy problems, and limited practice time. To address this, the team decided to focus on improving overall robot performance through structured testing and refinement.

> **Starting Goal:** Make the robot perform better.

After evaluating their resources, build schedule, and available practice time, the team recognized that "perform better" is too vague to guide action. To make the goal more **Specific** and **Measurable**, they defined performance in terms of repeatability, reliability, and execution of core game tasks. By tying the goal to specific events, the team also made it more **Relevant** and **Time-Bound**.

> **Modified SMART Goal:**
> Achieve a robot that can successfully complete its primary scoring task at least 85% of the time during practice matches and all qualification matches at the San Antonio District Event.

With a clear SMART goal, the team can now plan concrete actions and deadlines. They know they need scheduled practice sessions before the event, a checklist for pre-match inspections, time allocated for tuning and maintenance between matches, and a small group of students responsible for tracking performance data and identifying issues during competition.

Metric-Driven Progress

For any objective, a clear, quantifiable measure of success must be established. This turns subjective goals (like "better education") into objective tasks (like "completion of new member training and one veteran project").

There can be some common pitfalls that teams can get stuck in when generating SMART goals, or goals in general:

- **Words to avoid without providing context:** "better/worse" "more/less" "earlier/later"
  - Example - Starting Goal: Finish the practice field one week earlier than last year. SMART Goal: Finish the practice field by January 25th, one week earlier than last year.
- **Projects as goals:** If a goal is to "train all new members on robot assembly in the Fall", you may be tempted to just make the goal "new members build a robot in the offseason." However, it can be easier to lose the true motivation behind the goal when narrowing it down to one specific project.
- **Over constrained goals:** Creating too many goals, giving too much detail, or setting arbitrary metrics can lead to contradiction or a lack of direction from your goals.

Measuring and Checking Goals

Once goals are defined, they should not be static; continuously measure and check in on them!

Teams should ensure goals are visible, like posting them in the shop, and set a schedule to assess their progress. As a general principle, it's recommended to do one check-in half-way through the timeline and one check-in at the goal deadline. Critically, after each competition event, the team must discuss how they are tracking for each goal and what needs to be adjusted to meet the goals.

Learning and Celebrating Goals

At the end of the season, it's important to review all goals to be able to learn from. If a goal is missed, the team should analyze why it happened, viewing it not as a failure but as a learning opportunity for future growth and improvement. This analysis helps the team understand if the goal was too ambitious or what external factors may have prevented its achievement. These insights can be fed back into subsequent goal setting processes for the next season.

Teams should not only look at what goals they did not meet but celebrate the goals they did accomplish! It's equally important to discuss the goals met and what led to them accomplishing the task? Are there things the team did to ensure they met the goal and are there lessons they learned that can be applied to future goals?

Additional Resources

- *FIRST* Team Management Resources
- RoboSports Network's Goal Setting Presentation
- *FIRST* Robotics Competition Team 581 - SMART Goals
- FIRST Robotics Competition Team 125 - Building to your Capabilities : *FIRST* Robotics Competition Team 125 - Building to your Capabilities