Planning Your NRL Competition

Things to Consider:

Total Number of Possible Teams

How many teams will be coming? What is the low and high estimate? This will be important in determining how much pit space you will need, as well as how much time the competition will take.

Total Number of Days of the Event

You will need to determine the amount of time the competition will take and how much time you have during a specific day to hold the competition. Keep in mind that Registration and Safety Inspection take time. For the competition itself, it's a good guideline to figure on 8 minutes per match. This allows for time to remove robots from arena and load a new match. Most competitions should be able to be held in one day.

Date of the Event

This depends on how many competitions you will have during the year. You may want one earlier in the school year and one later. New teams generally need a few months to build their robot, so you won't want your competition earlier than November. All regional competitions should be held before the National Competition, which will be over the third weekend of May each year. You may find an event happening in your area that you can tie the competition into.

Venue

The options are unlimited. Some good suggestions are:

- Technical Schoo, College/University with a Manufacturing/Engineering program
- High School with a large Gymnasium or Fieldhouse
- Manufacturing, STEM or MakerFaire type Events
- Manufacturing Companies
- Fairgrounds
- Convention Centers
- Malls / Storefronts

When planning your venue, think about the following:

- How many participants will there be?
- How much space will we need?
- What kind of outside exposure do we want?
- What cost is involved with different venues?
- Will the electrical needs be sufficient?
- If outdoors, what is the backup plan for bad weather?
- How accessible is it for the teams?

Funding

How will you pay for your competition?

Some of the costs may include:
- Venue rental
- Satellite rental
- Arena rental
- T-shirts
- Office Supplies
- Bleacher, Table & Chair Rental
- Audio Visual Rental – LCD projector/Screen/Sound System
- Banners and/or Signs
- Badges or Wristbands
- Walkie-Talkie Rental
- Safety Equipment
- Food/water for volunteers
- Awards, Prizes and Trophies

Fundraising Ideas:
- Grants (Local, State & Federal)
- Event and Program Sponsorships
- Local Manufacturing Companies
- Spectator Entrance Fee
- State Educational Institution
- Food sales at event
- Selling tshirts, videos, photos, etc for a profit
- Donations of items & prizes from Companies (often easier to get items than $)

Arena

Do you own your own arena? If not, what arena will you use? How will it be transported to the venue? Who will set it up and tear it down? Are there any restrictions at the venue such as size of doors you need to fit through, etc. If at all possible, it is also helpful to have a test arena available. This allows for testing while actual matches are going on in the main arena.

Pit Area

Estimate on the high side the number of teams that you plan to participate in your competition. You will need to allocate a 6' or 8' table for each Pit plus some room for each team to be able to safely work in their assigned area. You will also need to draw a layout to show the best use of the space & what your actual space requirement will be. Keep in mind that you will need power to each of the tables for battery charging, etc.

Safety Inspection Area

The Safety Inspection team will need a table for inspection sheets, the scale & the signup sheet. It is recommended to have each team sign up when their robot is ready to be inspected. That way the inspectors know which robots to start with. If possible, it is good to have the test arena close to the Safety Inspection Area.

Robot Impound Area (if used)

You will need a table or two to impound robots and their transmitters that have past safety inspection, so teams will not be allowed to make any modifications or changes. It is recommended to have at least one volunteer staff the impound area.

Emcee / Sound System

You will need a microphone for the emcee and preferably a sound system. The emcee can entertain the audience with music as well as information about the matches and the program.

Staffing (volunteers needed)

There are many areas where volunteers are needed.

- 1 – 2 Registration Staff – Robot checkin procedures
- 1 – 2 Pit Runners – Arena and Staging Area operations
- 3 Judges – Rules interpretation and winner determination for matches
- 1 Scheduler – In charge of the flow of the brackets
- 1 Referee – Arena operations during Matches. Certain rule interpretations
- 1 Transmitter Impound Personnel – Transmitter Impound operations
- 2 or more Safety Inspectors – In charge of internal & functional inspections of robots
- Security – Make sure only authorized personnel are in the pit area
- Documentation Reviewers – Review the documentation for each team
- Emcee – Commentary during matches & in between to entertain & inform audience
- Pit Runner – Assist the Bracket Coordinator to make sure teams are queued up for matches
- Video Staff – It is a good idea to have someone designated to video the competition
- Sound Tech – If you have a sound system, you will want someone assigned to play music when needed, adjust the volume, etc.

Awards, Trophies and Certificates

You should have some kind of recognition for the winning teams. It is up to you how many you choose to recognize, but it is recommended to at least recognize the top three winners. Here are some suggestions:

- Trophies for 1st, 2nd and 3rd place
- A prize from a local supporting business
- Trophy, certificate or prize for Best Engineered Bot
- Trophy, certificate or prize for Good Sportsmanship
- Trophy, certificate or prize for Coolest Bot
- Trophy, certificate or prize for Best Documentation
- Some amount of financial help toward the National Competition

Engaging Manufacturing's Next Generation

Public Relations/Marketing
It is to your advantage to get as much publicity as you can. Send press releases to the following:
- Local Newspapers
- TV stations
- Radio Stations
- Trade Magazines
- Local Manufacturing Organizations
- Manufacturing Publications
- Schools
- Businesses

This is an exciting event for audiences to watch and offers a great way to expose the public to the manufacturing industry. Exposing the educators to our program and the tie-in to STEM brings greater exposure to the program also. Utilize social media to generate interest in the program and competition.

Security
The amount of security needed depends on your location, layout and amount of students. We recommend you have at least one person assigned to make sure that people in the pit area have a badge or wristband. The Security person should also be checking to make sure that everyone is obeying the safety rules. Safety glasses are an area that students need improvement with.

Catering, Food vendors, close restaurants, etc
You will need to plan ahead. Most likely your event will span over a meal time. Have some kind of food option available to teams and spectators. If nothing is readily available, ask a team or school if they would provide hot dogs, pizza & other refreshment for sale. This can be a way to fundraise for their team. You should also decide if you plan to provide food for your volunteers.

Set up and Tear Down (Arena, Pits, etc.)
You will need a team to set up the arena and tear it down after the competition. It is also helpful to have a team that will set up the pit area which includes tables, chairs, extension cords, power strips and numbers on the pit tables.

Fire Extinguishers
You will need fire extinguishers available throughout the area. One should be positioned at the arena at all times. Your local Fire Marshal can give you the requirements for your specific set-up.

Insurance
You will need special insurance for your event for the day. Contact your carrier to see if they can provide that for an additional cost.

Create Layout of Venue
You'll want to create a layout of how you will set everything up. Be sure to include the following:

- Arena
- Judge's Table & chairs
- Bleachers or chairs for audience
- Safety area
- Registration Table
- Awards Table if you have one
- Video area
- Pit area (show all tables & how they will be set up)
- Sound system & speaker location
- Make sure to leave space for loading & unloading robots into arena
- Photo Area

Typical Schedule for the Competition Day
1. Set up (if available, set-up the day prior)
2. Registration
3. Safety Inspections
4. Opening Ceremony
5. Competition Rounds (lunch break)
6. Awards Ceremony
7. Tear down and Clean up

Use the NRL Event Planning Checklist to ensure a successful event.