

# **Report to WI Steering Committee on Exploration of District Model Requirements**

Report Date: December 12, 2019

## **Background and Summary**

This purpose of this report is to provide information about the formation of a District structure for FRC events. It was started by Duane Lom, a former member of the FIRST WI Executive Advisory Board, with the help of additional volunteers to explore the various aspects of creating a District structure. This report is not intended to determine if WI should adopt the District structure, but rather to explore the issues that need to be addressed if a District structure were to be considered. Based upon the research done, below is the list of what needs to be considered for a District operation.

There are two timelines to consider:

1. What needs to be addressed in the first year of moving to a District structure?
2. What needs to be addressed after the first year of moving to a District structure?

When first moving to a District structure, one will have to be prepared to adequately address the following:

1. Is there an adequate Executive Management structure in place to establish the Operational group that would handle the work of establishing and running a District?
2. Is there an adequate Operational group in place to establish and run a District?
3. Is there adequate funding to run a District?
4. Is there an adequate volunteer base to run 4-5 District events over a seven week period?
5. Has the equipment been secured for events? (Field perimeter/driver stations, AV equipment, electrical supplies, machine shop, etc.)
6. Have properly located sites been secured for the events across the state?
7. Has equipment storage and transportation been secured?

After the first year, other issues to address are:

1. Is the funding reliable and growing from year to year?
2. Is the volunteer base being developed to sustain year after year activity? Are off-season events being held to develop the volunteer base?
3. How should the FRC District interface with the other FIRST programs?
4. Is the Executive Management group prepared to handle personnel issues, financial auditing requirements, etc.?
5. Is the Operational group staffed adequately to promote growth in team numbers, existing team development and funding?

As one can see from the above list, the decision to move to a District model is not to be taken lightly and requires a dedicated effort to put all the elements in place. In the information provided below, various aspects of the above items are presented from the discussions held with the Directors of Indiana and North Carolina FIRST Districts as well as feedback on the surrounding states operations that would be affected by WI adopting a District structure. Some examination is made on the current state of WI FRC operations to give a perspective of how prepared WI would be to adopt a District model and as an alternative, some suggestions are made on how to improve the current Regional events.

### **Exploratory Committee Members:**

Duane Lom – Former Member of FIRST WI EAB, Robot Inspector, Member of 7 Rivers Regional Planning committee

Greg Billetdeaux - Head Mentor for FRC Team 930, FLL Tournament Director

Carissa Petzinger - Head Mentor for FRC Team 6574, Robot Inspector, FLL involvement

Ernst Arnhold – Mentor for Team 1732, Robot Inspector, FTC involvement and FLL Judge Advisor

### **Additional Input Provided by:**

Renee Becker-Blau – Executive Director of Indiana First

Marie Hooper – President of FIRST North Carolina

Eric Leifermann – Mentor, WAVE Robotics (Experience with MI FRC)

Steve Bissen – Planning Chair of the Seven Rivers Regional (La Crosse)

Mark Moulton – Executive Director of the Seven Rivers Robotics Coalition

Bruce Newendorp – Regional Director of Iowa FIRST

### **Administrative Structure and Finances**

Discussions with Renee Becker-Blau – Executive Director of Indiana FIRST and Marie Hooper – President of FIRST North Carolina. (See Appendix for complete responses from IN and NC).

Key Takeaways:

1. Much like each FIRST team is different, each District is different in how they operate.
2. Both Indiana and North Carolina have an Executive Board and an Administrative Board. (Although they may use different names for the boards).
3. Team growth has been good since becoming a District, however it needs a concerted effort.
4. Fund raising has been good since becoming a District. Indiana did lose a couple of sponsors when the switch was made.
5. North Carolina has an annual expense budget of about \$600,000. Indiana financial data was requested, but not obtained.
6. Lots of details to attend to when making the switch.
7. FIRST HQ does not appear to have a dedicated position to work with Districts.
8. Comments from Eric Liefermann - All of the Michigan events are produced by FIRSTinMichigan (FIM). The Event Coordinator (EC) is responsible for making sure the event is properly planned and executed. ECs are involved in working with sponsors and local media on promotions but this varies. Because event costs are fairly low, (average \$18k last year for 28 events), most of the EC role is about planning and execution, not financing. FIM is ultimately responsible for overall financial management of all of the combined events. Most of the ECs are local but have regular conference calls to coordinate planning.

## Finances

Financial information was obtained from North Carolina (65 FRC teams in 2018). The takeaway from that information shows the following: (All dollar amounts approximate and rounded off).

Operational budget	\$614,000
Property and Equipment	\$59,000
Salary of President	\$72,500
Total Personnel Cost	\$146,000
Funding from FIRST HQ	\$1,000/FRC team

All management of finances occurs at the District level.

## Traveling Setup

Each District has different levels of setup for events. In North Carolina, their setup consists of:

1. Mobile Machine Shop
2. FRC Field
3. Electrical supplies – distribution, pagodas, yellow jackets, etc...
4. Floor protection – foam tiles and hardboard
5. Road cases
  1. Volunteer
  2. Hospitality
  3. Event Office
  4. Judge
  5. Field Supervisor
  6. Lobby (2)
  7. Power supplies (4)
6. Stanchions
7. Misc office materials, printers, banners, etc...

Indiana FIRST has a portable field setup. Daniel Bravo detailed the setup Indiana FIRST uses for all of their official events + IRI. They have a traveling setup that allows them to run an entire event without renting anything other than the venue. For example, this year, it cost them ~\$3000 to run IRI. \$2800 for the venue and the rest on feeding volunteers.

### Key points

- Whole setup fits in 2 box trucks, including the field
- AndyMark stores and transports their setup to each event
- Much of their setup is donated by teams in the area
  - If a team's donation is greater than \$500 to the District, the District will allow that team to use that donation at any time (excluding event conflicts) free of charge for 4 years.
  - 1 team donated all the pipe and drape for an event. For 4 years, if that team wants to use it (say, for their own offseason event), the District will provide it to them to use, free of charge.

- They have a series of portable breaker boxes that is used to run their entire event off of 2 cable drops from the venue. 1 for the competition gym and 1 for the pits.
- Sheets of hardboard for placing beneath the field to protect the venue floors
- Some districts utilize PODs for storing and transporting their setups between events.

According to Eric Liefermann, FIRST in Michigan (FIM) have a total of 6 complete playing fields, each with its own trailer. Everything they need to run the event is in these trailers, except carpet. Carpet is managed under contract with their carpet supplier who delivers directly to site. FIM owns all of this except the field electronics, which are returned to FIRST HQ every year in November.

### Venue Locations

Six potential areas were identified that would be good for districts. (See map below). The goal was to have every team in the state have 2 events that were within 100 miles (as the bird flies) of their home location. There was only 1 team that did not satisfy this - 6732 out of Bruce, WI. The 2 closest districts to Bruce are both within 115 miles. Here are 6 proposed locations, broken into 2 categories:

A study of current team locations along with criteria to have two District events within 100 miles of team locations yielded six potential sites:

Milwaukee, Fox Valley and La Crosse – obvious choices based upon current team concentrations.

Madison, Wisconsin Dells and Stevens Point – reasonable distance for most teams and good areas for potential new team growth.

Additionally 79 high schools in the state have gyms with seating capacity of 2000 or more. The four largest schools are:

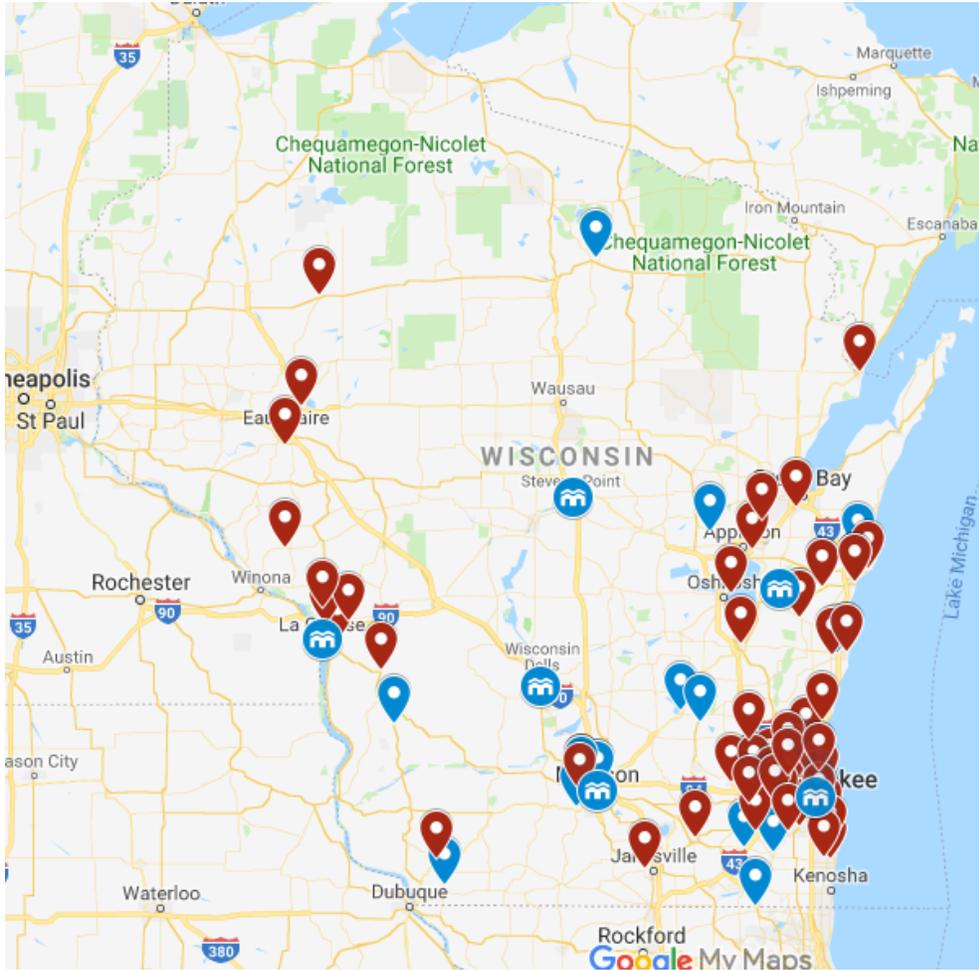
West Allis Central (3800)

Neenah High School (3600)

Manitowoc Lincoln (3500)

Marshfield High School (3500)

### Map of Potential District Locations



 FTC Teams

 FRC Teams

 Potential District Event Locations

(Map Compiled by Greg Billetdeaux 12/18)

## **Key Volunteer Status**

Having a substantial volunteer base with Key Volunteers is an essential aspect of having a successful District operation.

### FTA Pipeline

- At least 2 years as Scorekeeper or Field Supervisor so they can understand how events go, what each role does behind the table, and the general flow of events.
- At least 2 years as FTAA
- Then are pushed towards FTA training, though even districts don't have direct control over this. Only FIRST can directly recommend people for FTA training.

### Wisconsin Volunteers:

- 1 FTA - Chris Budisch
- 2 LRI's - Jeff Pahl and Chris Paulik
- 0 Head Refs
- 3 FTAA's - Justin Cooper, Bruce Van Eyck and Matthew Duffy
- 1 Consistent Scorekeeper (That isn't also an FTAA) - Chris Stack
- 1 Field Supervisor - George McBride

### Takeaways

- Wisconsin has very few people in key-volunteer roles, tending to rely on individuals who've been in the role for many years.
- Only 1 volunteer currently exists in the "FTA pipeline" that would be interested in becoming an FTA, Justin Cooper.
- Key Volunteers are not restricted to only volunteering at non-home events, like some have previously assumed.

## **Off Season Events**

In 2019, Wisconsin had 4 off-season events:

#### Preseason:

Chargers Mini-Regional involving 27 teams in southeast Wisconsin

Seven Rivers Week Zero involving 14 teams in west central Wisconsin

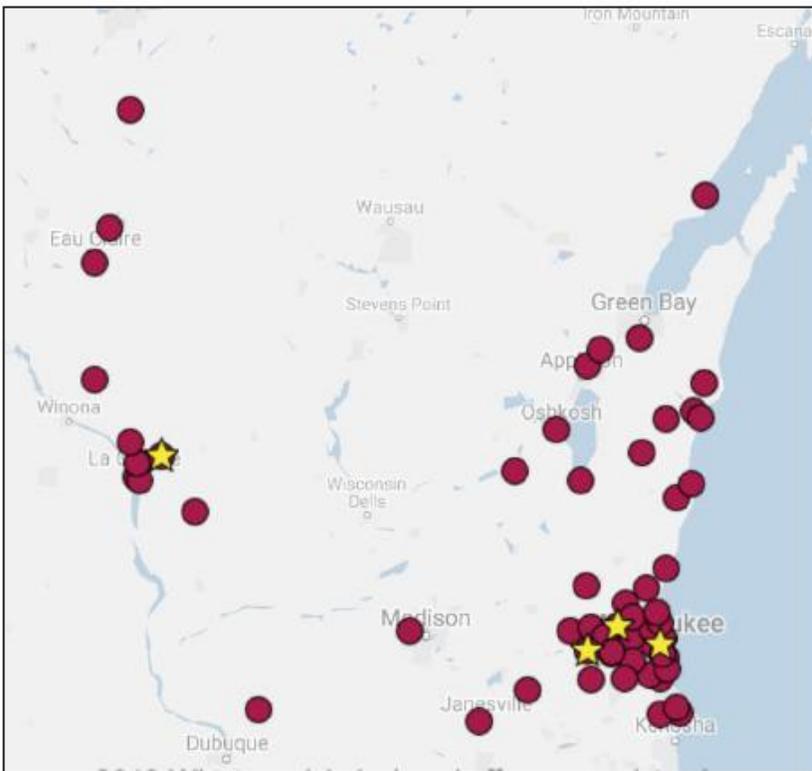
#### Off-Season:

Laser Lights involving 15 teams in southeast Wisconsin

Robofest involving 19 teams in southeast Wisconsin

In addition, there are various demos and scrimmages. Each of these events would have to provide an intentional training ground for volunteer development.

## Map of Existing Off-Season Events



2019 WI teams (circles) and off-seasons (stars)

The function of these events, for pursuing Districts, is finding new venues, training volunteers, and getting teams more playing time. If WI transitioned to Districts, 4-5 events in the first year would be planned, which can be accomplished with 1 field and 1 set of key volunteers, although 1.5 - 2 is preferable. Sustaining current off-seasons events can train a sufficient volunteer core for that load. The off-season events listed above use official competition fields, allowing key field volunteer training.

The preseasons don't use official fields, but still expand the volunteer pool for roles like field reset, reffing, and setup/teardown. Each event is run by a different group, with minimal overlap, creating a pool of experience in planning and running FRC competitions. Other than Robofest, they use high schools that may reasonably host a District competition.

This list does not include demos and scrimmages. Events like the Summerfest demo, Lakeshore FLLFRC demo, 2830 scrimmages, 2826 scrimmages, etc, involve planning, fields, venues, and organizing teams and volunteers. However, they fall outside the definition of off-season competitions.

### *Moving forward:*

The demand for these events is hard to predict, given several suboptimal situations in 2019, and with FIRST removing robot bag day for the 2020 FRC season. However, given more experienced planning committees across the board and slight team growth, growth could be expected.

Laser Lights had low turnout because it was on the 4th of July weekend. They'll move to a different date now that school administration recognizes they don't damage the facility, and bring good publicity.

Robofest is boxed in at Maker Faire and unable to expand. Brookfield East and Divine Savior Holy Angels high schools were considered this year, but were pulled in too late to navigate scheduling conflicts. Both are in play in the future, and could easily host an expanded competition in place of, or in addition to, Robofest at Maker Faire.

### Conversion Timeline

The FIRST website publishes a District planning guide that outlines a one year plan for getting a district up and running.

([https://www.firstinspires.org/sites/default/files/uploads/resource\\_library/frc/rpg/district-planning-guide-final.pdf](https://www.firstinspires.org/sites/default/files/uploads/resource_library/frc/rpg/district-planning-guide-final.pdf))

Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar
6-12 months before events						2-6 months before				1-2 months		Game time

For example, 6-12 months before hosting a District event it shows the creation of a District Leadership entity (Operational director), establishing a 501(c)3, venue selection and so forth. This timeline appears optimistic and likewise does not address the current climate of the necessity for background checks and the top level organizational structure and financial structure needed to oversee a District operation.

#### *6-12 months before events*

- Create District Leadership entity, hire executive director
- Establish 501(c)3 (optional)
- Form Executive Advisory Board, Operating Committee, Planning Committee
- Obtain Commercial General Liability (CGL) insurance
- Select and contract event venues
- Propose key volunteers: FTA, VC, Head Ref, Judge Advisor, LRI
- Select a warehouse or receiving location
- Select method of transporting materials to events

#### *2-6 months before*

- Hold committee meetings
- Recruit volunteers
- Purchase field perimeter and plastics
- Determine and submit “additional play” fee
- Provide proposed event schedule
- Determine event layouts
- Determine signage needs and place order
- Design a website
- Create an emergency plan
- Determine special events (VIP dinner, Judge training dinner, volunteer dinner, etc)

#### *1-2 months before*

- Host kickoff
- Send Key Volunteers to FIRST training
- Receive game specific materials, field electronics, spare parts, and other materials from FIRST
- Purchase event consumables



*WI and neighbors cross-play comparison:*

WI in Regional System		Teams from					
		WI	IL	MN	IA	IN	MI
Can compete in	WI	Green	Green	Green	Green	Green	Green
	IL	Green	Green	Green	Green	Green	Green
	MN	Green	Green	Green	Green	Green	Green
	IA	Green	Green	Green	Green	Green	Green
	IN	Red	Red	Red	Red	Green	Green
	MI	Red	Red	Red	Red	Green	Green

WI in District System		Teams from					
		WI	IL	MN	IA	IN	MI
Can compete in	WI	Green	Red	Red	Red	Green	Green
	IL	Green	Green	Green	Green	Green	Green
	MN	Green	Green	Green	Green	Green	Green
	IA	Green	Green	Green	Green	Green	Green
	IN	Green	Red	Red	Red	Green	Green
	MI	Green	Red	Red	Red	Green	Green

Regional Play - In 2019, Wisconsin FRC teams used 30 Regional slots in neighboring Regionals held in Illinois, Minnesota/North Dakota and Iowa. Teams from those states used 30 slots in the Wisconsin and the Seven Rivers Regional. From that perspective, regional cross-play slots would suffer no ill effects from the formation of a Wisconsin District. It would more so affect teams by possibly requiring them to travel further to events. For example, an FRC Illinois team near Milwaukee may have to travel to Iowa or Minnesota for a regional play slot.

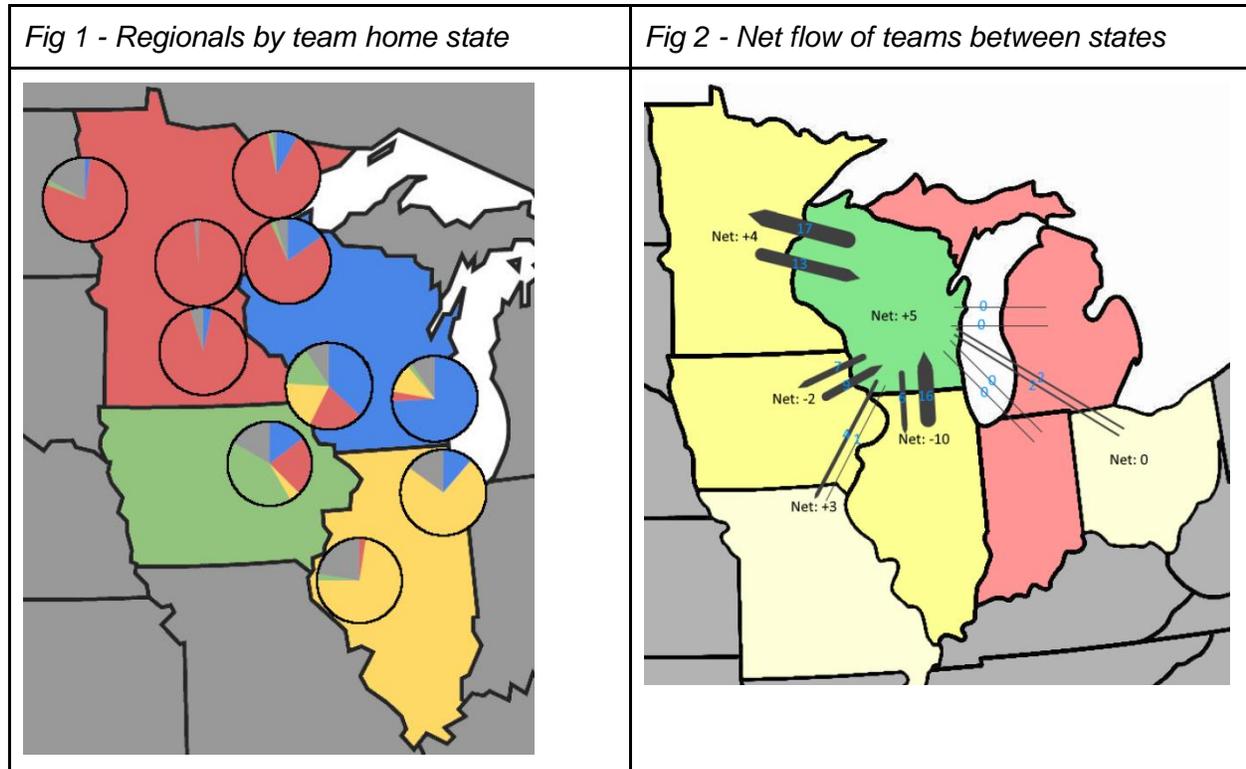
**FRC Team Interplay Across Upper Midwest Regionals (further detail)**

In 2019, the 10 Regionals in WI and neighboring states, IL, IA, MN, and ND (Great Northern Regional is effectively MN) experienced moderate levels of cross-state interplay.

*Fig 1* shows each Regional as a pie chart, showing color coded home states of teams. For example, over Chicago, the pie chart shows that roughly 75% of teams are yellow, so from IL. Interplay was mainly prevalent where the states meet, near the Seven Rivers and Iowa Regionals, which are the only ones in the area where the majority of teams are not from the event’s home state. The MN Regionals in particular are dominated by their home teams, but Milwaukee, Chicago, and Peoria are not far behind in high home state representation.

*Fig 2* shows the flows between WI and states where our teams compete. MI and IN are red because they are in Districts, and the yellows refer to non- vs immediate neighbors. The net flows have more IL and IA teams coming to WI than vice versa. MN and MO are the opposite. The total is WI hosting 5 more out-of-state teams than were sent out in 2019. WI Regionals provided 5 extra spots than were needed to support in-state teams’ demand. As the WI team count increases, and/or teams play more, this net flow should decrease and go negative. In fact, for 2020, with Seven Rivers decreasing in size, this may have already happened.

Overall, if WI switched to districts, it would have an insignificant overall effect on neighboring states' access to Regional plays, although it would shift the makeup, likely shifting IA teams more to MN and IL, and vice versa.



**Seven Rivers Robotics Coalition** - One unique geographic area in WI that would be impacted by WI becoming a District is the La Crosse area where the Seven Rivers Regional (7RR) and the Seven Rivers Robotics Coalition (7RRC) are located. The coalition consists of three Minnesota teams and eight Wisconsin teams. Perspectives of a WI District were obtained from Steve Bissen – Chair of the 7RR and Mark Moulton – Executive Director of the 7RRC:

1. **What would be the impact on the 7RR if WI went Districts?** The 7RR would not continue. Steve feels the local support to run the event would not be sufficient. 50-60% of the volunteer support for the 7RR comes from outside WI. Local WI teams would be busy supporting District events. Likewise, non-WI volunteers would not be motivated to help a WI District event.
2. **What would be the reaction of local donors to a difference between WI and MN teams?** Impact on local donors would be an unknown. For example, one large local donor sees the Regional event as a way to plant the seed for future employees so with no Regional event, they may not be as motivated to help FIRST. Another large local donor may find it awkward to support an event that has no local teams involved. That would work both ways – support for the 7RR with no WI teams and a local WI district event with no local MN teams.
3. **What would be the impact on the 7RRC if WI went Districts?** Most likely the 7RRC would still hold joint training days and a joint Week 0 event. It may put a strain on the relationships between WI and MN teams regarding the joint fund raising efforts because of the disparity of the costs for teams to fund themselves under the two different methods.

4. **What would be other impacts to local MN teams?** Most likely the local MN teams would only be able to attend one event because now it would require extra travel expense to attend a second regional event.

Bruce Newendorp - IA FIRST Regional Director was asked for his views on WI going to a District model:

1. **What would be the impact on the Iowa Regional if WI went Districts?**

The biggest impact is Iowa teams would have fewer choices for events. Iowa teams tend to attend the Seven Rivers Regional but not so much the WI Regional (scheduling conflicts between IA and WI Regionals). This is not a huge deal. The real issue would be if Illinois, Minnesota and Missouri would go to Districts. This would isolate Iowa. If border states are going to districts, IA would like to see a multistate district formed so IA is not isolated.

Loss of WI teams at the Iowa regional would have an impact. Again schedule conflicts affect how many WI teams come to IA each year.

2. **Any donors to Iowa Regional from WI? Any in the works? None**

3. **Any overlap of any team level help IA-WI or WI-IA that would be impacted?**

The only place where there is close proximity is Dubuque and Platteville, but there is no ongoing contact between the two areas.

4. **Any plans in IA to address Districts?**

Nothing planned. IA has 24 FRC teams and growth is slow. IA has a strong FTC program (200 teams) and this is hindering FRC teams from forming. The amount of local state oversight required by Districts would not be justified for 24 teams

### **Alternatives to Districts or Regionals**

With the upcoming change to a “No Bag” approach, there may be alternatives to how a FRC event is conducted either as a “District” or as a “Regional” event. Below, Bruce Newendorp, FIRST Iowa Regional Director shares his ideas on changes to the Regional model. (Note, this was proposed before the “No Bag” rule was implemented).

#### **Regional vs District**

*Given the inherent differences between the regional and district models there cannot be equality for teams between models. However there are areas of inequity that cause frustration for teams. The key inequities we hear from teams are listed below followed by potential solutions elements to consider.*

- *Qualification for Championship- In previous years about 20% of district teams qualify for Championship. Regionals have the possibility to send 7 teams per event regardless of event size. An analysis of 8 random week 4-6 events from 2018 showed anywhere from 3 to 7 of the possible championship openings per event with a total of 42 of the possible 56 were used. The result is significantly less than 20% of teams from regional areas qualify for Championship.*
- *Number of matches - For regional teams the number of matches is dependent on the size of the regional. Large regionals typically provide 8 or 9 matches and small regionals provide up to 12 matches. The number of practice matches obviously also varies with the number of*

teams. District events provide 12 matches plus 2 practice. Districts do this by limiting event size, reducing inspection/work time, fewer practice matches, and allowing unbag time before event.

- District teams can go to regionals but not vice versa - It has been frustrating to teams to see the district teams come to regional events and “take away” some of the possible championship qualification openings. Regional teams have no possibility of qualifying other than regional events.

From the Regional Director viewpoint there is no incentive to make events larger. Teams like smaller events for the reasons listed above and smaller events are easier to implement.

Potential solutions:

- Unbag time- Allow unbag time for regional events or eliminate bagging completely.
- More matches - If unbag time is allowed prior to regional events then it becomes possible to start practice matches late Thursday morning and qualifying matches mid afternoon. This generally mimics the changes that took place at Championship several years ago.
- Championship qualification system - A proposal is to ensure all openings generated at each regional are offered to teams at the event and to vary the number of openings with number of teams at the event. A possible allocation is:
  - $\geq 54$  teams -> 8 openings
  - 43 to 53 teams -> 7 openings
  - $\leq 42$  -> 6 openings
- Establish a qualification ranking system such as shown below. At the end of the event offer openings to teams in the ranked list below until the allocated opening are filled. One possible rank could be:
  1. Regional Chairman Award
  2. Engineering Inspiration
  3. Rookie All Star
  4. Winning alliance(3)
  5. Finalist captain
  6. Regional Chairman Award runner up (new award!)
  7. Finalist 1st pick
  8. Finalist 2nd pick
  9. Finalist highest seed captain
  10. Semi-Finalist 2nd highest seed captain
  11. Rookie Inspiration Award
  12. Semi-Finalist highest seed 1st pick
  13. Semi-Finalist 2nd highest seed 1st pick
  14. Semi-Finalist highest seed 2nd pick
  15. Semi-Finalist 2nd highest seed 2nd pick
  16. More levels could be added if needed

Funding - as an incentive for RD's to support large events provide some funding back to the regional. This could be something like \$100-200 per team provided to the account of each event.

Please consider changes like these to reduce the inequity between regional and district areas. These changes would result in more matches for regional teams, more regional teams at championship, and reduce the disadvantages of larger events. This would go a long ways to alleviate the discontent in the FIRST Robotics Competition regional community we are hearing.

Another idea would be with the implementation of the “no bag” rule; it may not be unreasonable to expect teams to be ready for robot inspections upon load-in. With inspections done sooner, it would be possible to start qualification matches on Thursday afternoon which would get more plays/team at Regional events.

## APPENDIX

### Questions about Indiana FIRST District

dlom 5/24/19

Phone interview with Renee Becker-Blau, Executive Director of Indiana FIRST

#### Background

Indiana became a District in 2015. Initially in 2011 worked with IL to do a combined District. This was started by adding two more regional events and starting a volunteer pipeline. A non-profit was created in 2012. IN was an affiliate in 2001 with mentors having meetings to run the operation.

In 2019 had 57 teams and 3 District events plus a statewide playoff (Will add a 4<sup>th</sup> district event in 2020).

In 2018-19 had 4 off-season events (Invitational (July), Cage Match (Oct), Girl's Event (Sept) and Boiler Bot Battle (Oct/Nov))

#### Administrative

1. **How is IN FIRST organized?** (Executive Board, Administrative Board, Working Committees?) IN FIRST has an Executive Board with Chair, Vice-Chair, Treasurer and Secretary. Banking is handled by Executive Board. Operational staff consists of the full time Executive Director and a half-time Program Director. Volunteers handle the rest of the operations.
2. **What is the reporting structure?** The Executive Director reports to the Executive Board.
3. **How many paid positions?** 1.5, the Executive Director (full time) and half-time Program Director. Would recommend a paid staff of Executive Director, VP of Programs and an Event Coordinator.
4. **How are Executive Board members recruited?** No real recruitment process. Current Executive Board members are passionate about FIRST, but don't have the time to commit to FIRST. Nice to have a larger board to do more for competition coordination, cross-program planning, volunteer development, training, team support and sustainability, community outreach, contact outreach, fundraising and strategic planning. Team development and fundraising holding growth back.
5. **How are all 4 of the FIRST Programs covered?** FRC and FLL Jr. are covered. Next year will be the fiscal agent for FTC. Program Director has a FRC growth focus.
6. **Who and how do you coordinate with at FIRST HQ?** Miriam

#### Finance

7. **Annual Budget (Total and Category breakdown)?** There are statewide event costs (A/V equipment, marketing supplies, clipboards, etc. Then there are event specific costs such as volunteer food costs. Any excess funds are returned to the local teams through FIRST HQ. <\$450,000 of donations and in-kind (AndyMark handles all logistics), operations \$120,000>
8. **Could I get a copy of their Year-End Balance Sheet and Annual Income-Expense Statement?**
9. **Are they a 501(c)3 and how long did they have it before becoming a District?** Started in 2012, 3 years before becoming a District.
10. **How is IN FIRST funded?** Primarily by locally recruited sponsors and the \$1000/team from FIRST.

11. **How many sponsors for District support?** (30-40 Corporate, ?? Institutional, ?? Educational, 0 Government)
12. **Were any sponsors lost in the conversion?** Purdue University and one that was GA based and left when GA became a District.
13. **Has it been easier or harder to recruit sponsors since conversion to a District?** Easier because they can recruit sponsors that are near an event site. Example is Toyota in southern IN, told as they grow teams, an event can be added in southern IN.
14. **What and how much support comes from FIRST HQ?** \$1000/team each year and Key Volunteer training. For events, FIRST provides carpeting, electronics and game field elements.
15. **How much equipment does IN FIRST own?** IN FIRST owns one field perimeter and A/V system.

### Conversion Process

16. **How long did it take to get to a District?** (Time prior to the decision and time after the decision before IN District was operational?) Talks started in 2001, became a District in 2015.
17. **How did FIRST HQ approve an IN District?** (What did they require to be in place and operational prior to becoming a District?) FIRST was interested in the volunteer base and funding. IN Regional was financially unsustainable so HQ was glad to see it go to a District. FIRST HQ did cover the Regional Director's salary for one year, but no other transition grant.
18. **What process did IN use to make the decision?** It was a natural progression from 2001. Coaches and mentors informally made the decision.
19. **Who made the decision and were IN FRC teams directly involved in the decision process?** Decision was made by Coaches and mentors.
20. **Any negative feedback on the change?** State border teams not happy with losing nearby cross-border venues. Coaches and mentors required to attend two events.
21. **What would you do differently in the conversion process?** Make sure to get some startup grants from FIRST, have good A/V specs (Mid-Atlantic District has a good spec) and have correct road cases to transport event materials. Spent \$17k on A/V equipment the first year.
22. **How did students, coaches and mentors adjust to the change?** After 3 years it's a non-issue. Nobody remembers the Regional model.
23. **Any impact of other FIRST programs?** FTC was not brought in right away. As FRC has grown, FTC and FLL teams are growing.
24. **Any impact on surrounding states?** IL was not happy with IN going it alone.

### District Operations

25. **Where are events held?** All at High Schools.
26. **How are event sites selected?** It's a bidding process, sites need to apply to be selected and sites can change locations every year. A better process may be to settle on the same sites each year but is easier to move around with only three events.
27. **How are volunteers recruited and trained?** Current lead volunteers identify potential volunteer talent, which are then recruited at the collegiate level. Scorekeeper role billed as a pathway to FTA. Volunteers given shadow roles. Off season events use shadow positions as the main volunteers. Judge Advisor with HR experience may be helpful. IN FIRST feels their volunteer base is young and strong and their strength.

28. **How are local events coordinated between local staff and IN District staff?** Local event committee reports to the Competition Committee Chair.
29. **How many IN FRC teams go to Championships?** 11
30. **How successful have IN FRC teams been at Championships?** IN teams have raised their level of play and now consistently play on Einstein. IN FIRST feels skills have developed better in students under the District model.
31. **What has been the growth in FRC teams since District model adopted?** Initially no growth, but when a staff was added to recruit teams, growth went up 16%.
32. **Has it been easier to recruit/start new teams since District model adopted?** Easier to sell new teams on less travel and 24 plays for the money.
33. **What is the current biggest challenge in running the operation?** It would be nice to have a funding model from HQ that would encourage team growth. More support to allow the growth in the Executive Director's experience. Donor tracking software investment (Sales Force). Have all four programs under one umbrella. Right now VEX is in a lot of schools and it's hard for FLL to compete for school support because schools have already invested in VEX.
34. **Other** - Should contact Marie Hopper at North Carolina for best small district operations and Washington state for best larger district operations.

## Questions about North Carolina FIRST District

dlom 6/12/19

Email exchange with Marie Hooper, President of FIRST North Carolina

### Background

Became a District in 2016

In 2019 had 70 teams and 4 District events plus a statewide playoff

In 2018-19 had 2 off-season events

### Administrative

1. **How is FIRST NC organized?**
  - a. We are a 501(c)3 and currently run all aspects of FRC and FLL Jr and support the FLL/FTC partner as needed.
2. **What is the reporting structure?**
  - a. Not sure I understand the question.
3. **How many paid positions?**
  - a. 3 Full-time – President, Program Director, Development Director
  - b. 2 Part-time – 6 months only – Event Manager; starting this August a part time Program Manager who will be responsible for FRC team recruitment and support
4. **How are Executive Board members recruited?**
  - a. As a nonprofit, we do not use the term Executive Board in the way that FIRST has used it for their regional events. Our Board of Directors ranges from 15 to 21 as stated in our By-Laws. The Board represents a cross-section of business/industry, higher education and state government. We look to ensure geographic representation as well as skills and business experience. The Board works with the President to identify and recruit new members as terms expire and members roll off.
5. **How are all 4 of the FIRST Programs covered?**
  - a. See 1 above.
6. **Who and how do you coordinate with at FIRST HQ?**
  - a. The President is the primary point of contact with FIRST HQ.

### Finance

7. **Annual Budget (Total and Category breakdown)?**
  - a. See attached.
8. **Could I get a copy of their Year-End Balance Sheet and Annual Income-Expense Statement?**
  - a. See attached.
9. **Are they a 501(c)3 and how long did they have it before becoming a District?**
  - a. We became a 501(c)3 in 2012, so 4 years.
10. **How is FIRST NC funded?**
  - a. Primarily through corporate sponsorships.
11. **How many sponsors for District support? (?? Corporate, ?? Institutional, ?? Educational, ?? Government)**
  - a. See attached sponsorships from 2019.
12. **Were any sponsors lost in the conversion?**

- a. No – we gained more.
- 13. Has it been easier or harder to recruit sponsors since conversion to a District?**
  - a. Easier
- 14. What and how much support comes from FIRST HQ?**
  - a. This is currently in negotiation with all of the Districts and HQ. The current system is \$1000 of the team \$5000 registration fee comes back to the District.
- 15. How much equipment does FIRST NC own?**
  - a. Each District makes their own choice so.... We currently own:
    - 1. Mobile Machine Shop
    - 2. FRC Field
    - 3. Electrical supplies – distribution, pagodas, yellow jackets, etc...
    - 4. Floor protection – foam tiles and hardboard
    - 5. Road cases
      - 1. Volunteer
      - 2. Hospitality
      - 3. Event Office
      - 4. Judge
      - 5. Field Supervisor
      - 6. Lobby (2)
      - 7. Power supplies (4)
    - 6. Stanchions
    - 7. Misc office materials, printers, banners, etc...

### **Conversion Process**

- 16. How long did it take to get to a District?**
  - a. 1 year
- 17. How did FIRST HQ approve an NC District?**
  - a. I asked, they said yes.
- 18. What process did NC use to make the decision?**
  - a. The Board of Directors discussed and voted to approve.
- 19. Who made the decision and were NC FRC teams directly involved in the decision process?**
  - a. FIRST NC nonprofit made the final decision. Yes, teams were involved in helping to discover the pros and cons of making the change.
- 20. Any negative feedback on the change? What would you do differently in the conversion process?**
  - a. There will always be folks who do not agree. Ultimately, though, everyone has come around (with a couple of individual exceptions but not at a team level). We are good with how it all worked out.
- 21. How did students, coaches and mentors adjust to the change?**
  - a. Well
- 22. Any impact of other FIRST programs?**
  - a. Growth
- 23. Any impact on surrounding states?**
  - a. SC is struggling by being land-locked with GA and NC both as districts. VA/MD/DC are also a district.

### **District Operations**

- 24. Where are events held?**

- a. A combination of high schools and university arenas.
25. **How are event sites selected?**
- a. We knock on doors, take recommendations, and visit in person. It is CRITICAL to visit in person to vet the site. You learn all kinds of things on site that a phone call doesn't reveal such as no ac, stairs between the aux gym and the main gym, seating capacity, electrical and internet availability, etc..
26. **How are volunteers recruited and trained?**
- a. Same as for a regional
27. **How are local events coordinated between local staff and NC District staff?**
- a. Currently we are in a state-centric model with everything coordinated centrally.
28. **How many NC FRC teams go to Championships?**
- a. It varies-usually between 12-15.
29. **How successful have NC FRC teams been at Championships?**
- a. MUCH more successful since moving to Districts! It took 2 years but teams are consistently ranking higher than they ever did as a regional.
30. **What has been the growth in FRC teams since District model adopted?**
- a. We are consistently growing between 7-10% each year.
31. **Has it been easier to recruit/start new teams since District model adopted?**
- a. Yes
32. **What is the current biggest challenge in running the operation?**
- a. Looking ahead to adding more events and making the jump to running two events on the same weekend.

## **District Event Observation**

The following observations were from the District Event in Escanaba, MI on March 15-17, 2018 by Duane Lom.

1. Robot inspections start at load-in. 10 inspectors. 2 CSA's. Varies each year how many teams complete inspection on Thursday. This time 19/39 were open on Thursday night. Inspections were comprehensive. Friday competition was delayed 30 minutes due to unfinished inspections.
2. New inspector was trained on the fly.
3. Pit Admin register teams at load-in.
4. Machine shop was minimal. 1 each of drill press, band saw and a mill/lathe machine. Not attended by anyone.
5. District events tend to limit size to around 40 teams.
6. Having a food commons adjacent to the pits and field is handy for team meals and meeting space.
7. First impression is teams are just as chaotic, energized and enthused as a Regional event.
8. For the event field a full gym was utilized with bleachers on each side. Second gym and part of commons used for pits and a third weight room used for the practice field.
9. Pits were 10' x 10'. Team pit structures generally were not elaborate.
10. Separate rooms for Chairman's, Dean's List and Judges meeting room.
11. Not all teams showed on Thursday night. 2 of 39 did not show.
12. 2 UL safety advisors.
13. Lots of teams bring in their own food. Crock pots, etc.
14. Radios were programmed on the field.
15. Minimal policing of traffic both in the parking lot for load-in and pedestrian traffic in the pits and arena. Kids randomly access the field on Thursday night.
16. Volunteers were generally younger than what is seen at Regional's. RSVP people used for safety glasses and some crowd control.
17. Some practice sessions assigned on Thursday night. And some on Friday morning.
18. Spare parts counter located behind and handled by Inspection station.
19. Audience closer to the field like at a Week 0.
20. Teams have good female representation.
21. Very few volunteer shirts worn on Thursday, more seen on Friday.
22. Teams do give out buttons.
23. Safety addressed by teams. Safety meeting on Friday. Nightly safety review of pits.
24. Pits generally cleaned at the end of the day.
25. Kids start scouting on Thursday at load-in.
26. 6 Refs, 14 Judges, 3 UL Safety, 1 FTA, 2 CSAs noted on Friday. Some judges from WI. Judges seemed to be more local businesses. 10 Field resetters. 130 volunteers needed.
27. 2 scholarship booths.
28. Bake sale items available in Commons.
29. Judges and volunteers are fed.
30. A/V system showed usual items, music and sound effects. 30 statewide sponsors highlighted along with national sponsors.
31. Overall A/V show equipment was lower quality than at a Regional.
32. 2 TV stations were filming.
33. Announcers did "dress up".

34. 78 matches planned. 12 plays per team.
35. Rough start with hook-ups and a missing robot in the third match due to inspection problems.
36. Mentor chat – Menomonie – Down state teams come to Escanaba expecting to do well against UP teams. School very supportive of time off to go to two events. Would be nice to see out-of-state teams. Would like to compete in Green Bay area to save travel costs. Thought smaller states have an advantage to get to Champs because of allocation. (Misconception?)
37. Mentor said they went to a district event where some teams had decided ahead of time who they would partner with for playoffs – already had t-shirts made.
38. Second overall impression – all the same stuff as a Regional, just feels like a HS event rather than an arena event.
39. More adults on drive teams.
40. Bowling event Friday night.
41. ½ hour to one hour between matches for a team.
42. No sign up for practice field, nor a time limit. Maybe okay due to short time between matches. Live schedule fed into practice room.
43. 56 matched the first day. 22 the second day.
44. Site was a 730 student high school and an adjacent 300 student middle school.
45. Cannot do practice rounds without inspection completed.
46. MI Works (Vicki) does the VIP event. Rather low key. Did have students give a presentation (well done). About 23 attendees. Gave out free t-shirts. No student ambassador tours.
47. Not much done off-season. Mentors burned out. Lisa handles volunteer training.
48. Venues can be hard to find. Size, power requirements are issues. FIRST will assist in paying for a venue if needed.
49. FIRST sends big sponsor banner, but not displayed – only local supporters emphasized.
50. Kid input – would improve by having a more organized practice area and speed up the day. Time demands are high but okay. Like multiple events because they learn a lot at first event. Not much time to make improvements between meets. Tired kids at day end means less issues at the hotel. Kids like to travel.
51. Some grinding (sparks) in the pits.
52. Tarps to protect floor provided locally. FIRST sends complete arena. Leaves carpet behind. No carpet for practice field, use last year's carpet.
53. Radio's rented from FIRST. FIRST has specifics on wiring and power requirements. Some sites have to rent generators.
54. 2 gym spaces required.
55. FIRST will pay for a venue if at a university.
56. Local costs \$8000, from local sponsor. Have to pay for custodians, kitchen help if used. A/V screens, garbage pick-up. Some pipe and drape from FIRST. May have to rent some – either in-kind or \$1000. Catering \$1000/day for 120 people. Tablecloths. Local restaurant provides the Judges meals as in-kind.
57. Adults quite engaged in actual teams placements in the game.
58. No mascot dance. Lots more random attendees on the field chairs.
59. Wednesday set-up.
60. Parking an issue.
61. Awards – winners at major awards only get an invite to the state meet to compete again for the same awards.
62. Observation – had almost as many people in the stands at our Week 0 with half as many teams.
63. Contacts – Marie Young Event organizer, Lisa Valiquette – Volunteer Coordinator, Dan Cugini – Robot Inspector

#### 64. Schedule

- a. Thursday – 5-10 pm Pits Open
- b. Friday – 8-10:30 am Pits Open
- c. 10:30 – 11 am Opening ceremonies
- d. 11-1 pm Qualification Matches
- e. 1-2 pm Lunch
- f. 2-7pm Qualification Matches
- g. 8pm Pits Close
- h. Saturday – 8 am Pits Open
- i. 9 – 9:30 am Opening Ceremonies
- j. 9:30 – 12:30 pm Qualification Matches
- k. 12:30 – 1 pm Alliance Selections
- l. 1-2 pm Lunch
- m. 2-5 pm Playoff Matches
- n. 5-6:30 pm Awards Ceremony
- o. 6:30 pm Pits close

## **NC District Job Descriptions**

### **President**

#### **Position Description**

Reporting to the Board of Directors, the President is responsible for six areas:

- Develop the *FIRST* North Carolina strategy and annual board approved operating plans and fulfill the operating plan of *FIRST* North Carolina through leadership and execution
- Manage the day-to-day operations in accordance with best practices for nonprofit fiscal and programmatic oversight
- Develop and secure resources in order to meet short and long-term financial objectives (fundraising, advancement)
- Deliver core *FIRST* programming for *FIRST* LEGO League Jr. and *FIRST* Robotics Competition throughout North Carolina
- Chair the State Operating Committee to support the work of the *FIRST* LEGO League and *FIRST* Tech Challenge Operational Partner
- Be the face of *FIRST* North Carolina nationally and regionally

#### **Key Responsibilities**

- Serve as the primary liaison with the *FIRST* North Carolina Board of Directors and *FIRST*
- Develop and execute annual operating plans for *FIRST* North Carolina
- Cultivate new funding sources as well as manage and grow existing partnerships in North Carolina
- Maintain a database of donors, current and potential, as well as other key partners
- Manage staff including: full and part-time positions, VISTAs and *FIRST* Senior Mentors
- Provide resources and tools required for measurable success of the team and program
- Provide leadership and support to key volunteers, funders, school administrators, legislators, the STEM community and the business community in support of operations and programs
- Develop and maintain annual budget plans and reporting
- Develop and maintain annual human resources plans and evaluations
- Develop, direct and implement long-term, sustainable business model in partnership with the Board to support the strategic plan
- Develop, direct and implement appropriate public relations and marketing strategies to support program goals and increase community awareness
- Develop and maintain *FIRST* North Carolina policies, procedures, and standards that reinforce those set by *FIRST*

## **Program Director**

### **Position Description**

Reporting to the President, the Program Director is responsible for four areas:

- Deliver programming for *FIRST* LEGO League Jr. and *FIRST* Robotics Competition
- Plan, execute and manage *FIRST* LEGO League Jr. Expos and *FIRST* Robotics

Competition tournaments

- Develop and deliver Professional Development for teachers
- Serve as the staff liason for planning committees and volunteers

### **Key Responsibilities**

- Serve as the liason with *FIRST* HQ for the *FIRST* LEGO League Jr. and *FIRST* Robotics Competition programs
- Plan and execute the delivery of the *FIRST* LEGO League Jr. and *FIRST* Robotics Competition programs and activities
- Monitor program activities on a regular basis and conduct appropriate evaluations to assess strengths and identify areas for improvement and program enhancement
- Report evaluation findings and recommend changes to enhance programs
- Build relationships and provide leadership to volunteers, coaches, mentors and other key stake-holders
- Conduct presentations and workshops for potential and current team coaches and mentors
- Conduct Professional Development for public and private school teachers
- Work closely with *FIRST* Senior Mentors, VISTAs and others as necessary in executing programs and strategic initiatives
- Participate in teleconferences as needed
- Plan, manage and execute events including *FIRST* LEGO League Jr. Expos and *FIRST* Robotics Competition tournaments
- Coordinate the delivery of services among different program activities
- Ensure that programs operate within the approved budget
- Manage grant implementation for all programs as needed
- Provide timely and accurate program reports
- Assist with bookkeeping and financial documentation
- Perform other duties as requested/assigned

## **Program Manager**

### **Position Description**

Reporting to the President and Program Director, the Program Manager is responsible for four areas:

- *FIRST* Robotics Competition (FRC) team recruitment
- FRC Team Support
- FRC Team Retention
- FRC Team Communication

### **Key Responsibilities**

- Create a plan for reaching out to school district and individual schools to start rookie FRC teams across the state with a focus on counties with no FRC team presence
- Recruit rookie FRC teams
- Support rookie teams throughout the registration process and ensure all paperwork is properly completed
- Provide mentor support, both technical and non-technical to FRC teams as needed
- Communicate to teams as needed for team updates, event information, mentor support
- Create a regular mentor support program through webinars, social media and inperson workshops
- Build relationships and provide leadership to volunteers, coaches, mentors and other key stake-holders
- Conduct presentations and workshops for potential and current team coaches and mentors
- Conduct Professional Development for public and private school teachers
- Work closely with *FIRST* Senior Mentors, VISTAs and others as necessary in executing programs and strategic initiatives
- Participate in teleconferences as needed
- Perform other duties as requested/assigned

## **Event Manager**

### **Position Description**

This position is full-time for 6 months of the year (November to April).

Reporting to the President, and working closely with the Program Director, the Event Manager is responsible for the planning, execution and management of the *FIRST* Robotics Competition District Qualifying Events and the State Championship.

### **Key Responsibilities**

- Serve as the primary point of contact with all venue personnel prior to and during events
- Create all maps needed for successful event navigation
- Arrange and support all electrical and technical needs for successful events
- Arrange transportation and set-up for the Mobile Machine Shop at events
- Manage all on-site logistics for events

## **Development Director**

### **ESSENTIAL RESPONSIBILITIES:**

- Build and nurture strategic relationships with supporter organizations
- Identify opportunities to cultivate new relationships with donors and sponsors
- Conduct fundraising activities to meet specific growth goals in corporate sponsorships and individual giving.
- Begin a major gifts program including identification, cultivation and solicitation of major donors.
- Establish new fundraising special events in three NC regions.
- Direct the annual fund program, including mailings and annual fundraising drives.
- Work closely with the President and Board of Directors. Develop and prepare timely reports on fundraising activities and outcomes.
- As time allows, assist the President in grant seeking and tracking including research, proposal writing, and reporting requirements.
- Oversee fundraising database and tracking systems. Coordinate with communications staff as needed.
- Oversee creation of publications to support fund raising activities.
- Maintain gift recognition programs.
- Demonstrate professional conduct at all times.
- Perform other related duties as requested.
- Some weekend and evening work in line with responsibilities and the key competition events.

### **QUALIFICATIONS:**

The successful candidate will be enthusiastic about developing youth for further education and careers in STEM, be a strong relationship builder, and exhibit strong organizational and writing skills.

S/he will:

- Have knowledge and experience in fundraising techniques, particularly corporate sponsorships, events for individuals, annual fund and major gift fundraising.
- Possess the skills to work with and motivate staff, board members and other volunteers.
- Have the desire to get out of the office and build external relationships.
- Be a self-starter and goal driven to initiate donor visits and fundraising calls.
- Be organized and exhibit follow through on tasks and goals.
- Display a positive attitude, show concern for people and community, demonstrate presence, self-confidence, common sense and good listening ability.
- A bachelor's degree or equivalent experience.
- 3 years minimum experience in professional fundraising, preferably in corporate and individual giving
- Strong office computer skills, especially in Microsoft Office Suite and donor databases.

## Financial Information

### North Carolina FIRST Financial Information

Below are selections from North Carolina's Financial Statements. Full statements are available upon request from [www.firstnorthcarolina.org](http://www.firstnorthcarolina.org).

Form 990 (2017) **FIRST NORTH CAROLINA** **46-1301122** Page **8**

**Part VII** Section A. Officers, Directors, Trustees, Key Employees, and Highest Compensated Employees (continued)

(A) Name and title	(B) Average hours per week (list any hours for related organizations below line)	(C) Position (do not check more than one box, unless person is both an officer and a director/trustee)						(D) Reportable compensation from the organization (W-2/1099-MISC)	(E) Reportable compensation from related organizations (W-2/1099-MISC)	(F) Estimated amount of other compensation from the organization and related organizations
		Individual trustee or director	Institutional trustee	Officer	Key employee	Highest compensated employee	Former			
(18) CHRIS WIDMANN CHAIR-ELECT	0.50	X		X				0.	0.	0.
(19) MARIE E. HOPPER PRESIDENT	45.00			X				72,492.	0.	3,250.

		Prior Year	Current Year
Revenue	8 Contributions and grants (Part VIII, line 1h) .....	462,378.	499,456.
	9 Program service revenue (Part VIII, line 2g) .....	8,068.	12,477.
	10 Investment income (Part VIII, column (A), lines 3, 4, and 7d) .....	0.	0.
	11 Other revenue (Part VIII, column (A), lines 5, 6d, 8c, 9c, 10c, and 11e) .....	4,207.	7,072.
	12 Total revenue - add lines 8 through 11 (must equal Part VIII, column (A), line 12) .....	474,653.	519,005.
Expenses	13 Grants and similar amounts paid (Part IX, column (A), lines 1-3) .....	0.	0.
	14 Benefits paid to or for members (Part IX, column (A), line 4) .....	0.	0.
	15 Salaries, other compensation, employee benefits (Part IX, column (A), lines 5-10) .....	130,101.	145,952.
	16a Professional fundraising fees (Part IX, column (A), line 11e) .....	0.	0.
	16b Total fundraising expenses (Part IX, column (D), line 25) .....	16,378.	
	17 Other expenses (Part IX, column (A), lines 11a-11d, 11f-24e) .....	451,325.	393,599.
18 Total expenses. Add lines 13-17 (must equal Part IX, column (A), line 25) .....	581,426.	539,551.	
19 Revenue less expenses. Subtract line 18 from line 12 .....	-106,773.	-20,546.	
Net Assets or Fund Balances	20 Total assets (Part X, line 16) .....	Beginning of Current Year 242,153.	End of Year 232,801.
	21 Total liabilities (Part X, line 26) .....	81,750.	92,944.
	22 Net assets or fund balances. Subtract line 21 from line 20 .....	160,403.	139,857.

**FIRST NORTH CAROLINA**  
**SCHEDULE OF FUNCTIONAL EXPENSES**  
For the Year Ended June 30, 2018

	Supporting Services			Total
	Program Services	Management and General	Fundraising	
Administrative expenses	\$ 28,539	\$ 4,326	\$ 1,783	\$ 34,648
Capital equipment	570	-	-	570
Contract services	5,026	-	-	5,026
Depreciation	7,316	-	-	7,316
Fundraising	-	-	2,761	2,761
In-kind donations	65,840	16,460	-	82,300
Personnel	116,762	14,595	14,595	145,952
Programs	150,802	-	-	150,802
Team re-grants and support	179,764	-	-	179,764
Volunteers	5,473	-	-	5,473
	<u>\$ 560,092</u>	<u>\$ 35,381</u>	<u>\$ 19,139</u>	<u>\$ 614,612</u>
Total expenses	<u>\$ 560,092</u>	<u>\$ 35,381</u>	<u>\$ 19,139</u>	<u>\$ 614,612</u>

06/25/19

FIRST North Carolina  
Balance Sheet Standard  
As of June 25, 2019

	Jun 25, '19
<b>ASSETS</b>	
Current Assets	
Checking/Savings	
Checking – Suntrust	224,736.29
Total Checking/Savings	224,736.29
Total Current Assets	224,736.29
Fixed Assets	
1500 – Property and Equipment	
1510 – Mobile Machine Shop	26,252.06
1500 – Property and Equipment – ...	32,868.20
Total 1500 – Property and Equipment	59,120.26
1700 – Accumulated Depreciation	-21,585.08
Total Fixed Assets	37,535.18
Other Assets	
1200 – NC Taxes paid at POS	3,149.85
Total Other Assets	3,149.85
<b>TOTAL ASSETS</b>	<b>265,421.32</b>