

PDO Committee Report to FUM Board of Directors

September 15, 2023, revised October 4, 2023

Introduction

FIRST in Upper Midwest (FUM) formed a volunteer committee to explore whether FUM should establish a Program Delivery Organization (PDO) for FIRST Robotics Competition (FRC) in our region.

The FRC program in Minnesota, North Dakota, and South Dakota is currently managed by FIRST, where FIRST holds all formal responsibility for recruiting and supporting teams and delivering regional competition events. Regional planning committees are partners of FIRST in presenting regional events and are composed of volunteers that take responsibility for assisting with fund raising and providing volunteers, among other tasks.

A Program Delivery Organization inverts the relationship, such that the PDO takes ownership of recruiting and supporting local teams and running local events. FIRST provides the broader FRC program and some support. PDOs have been an initial step in shifting to the district model of competition in a number of regions. Recently, FIRST has also handed off PDO responsibility to local nonprofits without a conversion to districts.

This document presents the results of the volunteer committee's research.

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Committee Charge

The FUM Board of Directors created a specific set of questions for the PDO committee to answer. The text in the box below is copied from the call for participation and describes the questions to be answered and constraints on what the committee could consider.

Charge

The committee will make a recommendation to the FUM Board of Directors that answers these questions:

1. What are the benefits and challenges of FUM becoming the PDO for FRC in our region? Based on this assessment, provide a recommendation about whether FUM should become the PDO for FRC in our region.
2. What geography makes the most sense for the PDO? In answering this question, consider both the current regional competition model and a hypothetical future move to a district competition model.
3. What activities will the PDO be responsible for, and what staff would be required for those activities?
4. What is a rough annual budget for the PDO, assuming the current regional competition model?
5. What are the one-time expenses involved in converting to a PDO?

The committee should consider these questions in the context of FUM's vision and mission. Specifically, it should prioritize student experience, considering both the quality of team member experience and the number of students impacted, both now and in the future. The committee should not consider whether the competition model should change from the current regional model, but should consider the impact of both a regional and district competition model in answering questions 1 and 2.

The committee will adopt and submit one report answering the questions listed. It should work toward consensus as a group, ensuring that the report represents major points of view on the questions submitted. The report should discuss in detail both the answers adopted by the committee and points of view that were considered but not adopted. A final decision on whether or not FUM becomes a PDO will ultimately reside with the FUM Board of Directors, but the board is seeking a comprehensive assessment from this committee to inform that decision.

Committee membership

FUM appointed these members of the FRC community in our area to the committee.

Member	Background
Zoey Berghorst	Member – Team 8298 Event Volunteer - FIRST Championships 2023 – Queuer, Student Ambassador
Ian Frankel	Member - Team 3926 Founding Leader - Minnesota Rainbow Robotics Inclusivity Alliance Member and Co-Creator - Minnesota Student Advocacy Board Event Volunteer - EMCC 2022 – Game Announcer 2023 Championship Dean’s List Winner
Jesse Frost	Event volunteer at regionals 2015-2019, NMRC events 2017-present Mentor - FRC Team 3134 and Team 3275
Rory Held	FUM Board Member
Bryan Herbst	Alumni (2007 – 2010) of 2052 KnightKrawler 2010 Dean’s List Finalist Mentor for 2052 since 2011 Event volunteer- FTA since 2015, previously served as a robot inspector, field supervisor, and FTAA. FIRST in Upper Midwest board member, previously treasurer and currently vice-chair. Current event committee chair Minnesota State High School League championship committee chair Minneapolis Regional Planning Committee member
Steve Peterson (committee chair)	Founder, treasurer, and former board chair of FIRST in Upper Midwest FRC event volunteer – 2012-present (Control System Advisor, Robot Inspector, Judge Advisor, FIRST Technical Advisor) Mentor – Team 3081 (2011-2018) and 2470 (2019-2020) Minneapolis Regional Planning Committee member
David Westerberg	Lead Mentor Team 4009 2023, Build Mentor For Team 4009 2018-2022.
Jeremy White	Mentor/coach - Team 2823 - 2013-present. Event Volunteer – Scorekeeper and Control System Advisor
Jess Yaganeh	Student: - 2010 - 2013 WE ROBOT 2705 captain. Mentor: - 2014 - 2015 Athena’s Warriors 3182 communication mentor. - 2015 - 2016 WE ROBOT 2705 lead mentor. Volunteer: - 2014 Hartford District robot inspector & field reset - 2015 10000 Lakes practice field attendant - 2019 Chesapeake Bethesda district UL safety advisory - 2021 Upper Midwest Region awards DL judge & interviewer, & FIRST innovation challenge judges - 2022 Lake Superior judge & DL judge, Great Northern judge, North Star judge & DL judge, FIN Tippecanoe DL judge, FIRST Championship judge, MN State Championship event ambassador, & EMCC queuing.

- 2023 Northern Lights Impact judge, North Star @ La Crosse judge, 10000 Lakes JAA, FIRST Championship judge, & MN State Championship queuing, future: Rainbow Rumble scholarship judging - July 2023.
- planned STEM Advocacy Day at the MN Capitol in 2021 - 2023.

A lot more roles & events for the rest of the FIRST programs (FTC, FLE, & FLLC). Primarily from the years 2015 - 2021.

Sandy Olson from the FUM Diversity, Equity, and Inclusion committee participated as an observer.

Information sources consulted

The committee interviewed a range of members of the FIRST community via Teams calls. The interviews included:

- Representatives of other PDOs
 - Kevin Ross – FIRSTWA
 - Gail Alpert – FIRST in Michigan
 - Renee Becker-Blau - FIRST Wisconsin
- FIRST staff
 - Ken Rosen, Regional Director, MN
 - Miriam Somero, Senior Manager, Domestic Field Operations, FIRST
 - Nicole Schossow, Regional Director, MN, SD, ND
 - Laurie Shimizu, FIRST Senior Mentor
- Minneapolis Regional Planning Committee
 - Mark Lawrence
 - Laurie Shimizu
- FUM board
 - Gene Jasper
 - Bryan Herbst, Rory Held, and Steve Peterson, who are all FUM board members and members of the committee, discussed their experiences on the board

In addition to those listed above, the committee invited representatives of the Great Northern RPC and FIRST in Missouri to participate but did not receive input from them.

The committee also considered written information from the Minnesota Robotics Coaches Association. The committee studied the IRS Form 990s of FIRST Chesapeake, GeorgiaFIRST Robotics, High Tech Kids, IndianaFIRST, INGENUITYNE (NE FIRST), FIRST in Michigan, Mid-Atlantic Robotics, FIRST North Carolina, FIRST in Texas, VirginiaFIRST, and Washington FIRST Robotics. Finally, the committee members brought a wide range of perspectives from their own experiences to the conversation.

The interviewees were provided a list of questions in advance of their interview, but the list was used as a conversation starter and wasn't used to constrain the discussion during interviews.

Questions

The committee considered five questions about a PDO, and our consensus is provided for each question below. This section first answers the questions that are information requests, and then addresses the questions that request recommendations from the committee.

What are the benefits and challenges of becoming a PDO?

Benefits

We believe that there are three primary benefits of becoming a PDO:

- Potential for improved fundraising.
 - Donors in our area are already solicited by many people. This includes FIRST for national support, the regional planning committees for regional support, teams for team support, and the other PDOs in our area for program support. Shifting to a PDO will allow us to streamline the messaging around fund raising in our region. Further, FUM has generally only done opportunistic fundraising (e.g. Competitive Robotics Hubs and Argosy grants), and this would allow FUM to fund raise much more widely. Finally, based on our research and interviews, we heard that many funders are reluctant to provide large sums to a volunteer-driven organization like FUM is now. They prefer an organization with paid staff and the continuity that provides.

At the same time, donors prefer to donate locally, so we believe that the combination of a respectable organization with a coherent local message will allow us to increase overall funds raised.
 - Having the fundraising operation for regional events under the FUM organization would allow us to raise money for the whole picture. We can combine requests for event support with requests for team support, or for other vital activities. We will have more flexibility in offering sponsorship packages that will appeal to a sponsor. Today the region operates in a model where FUM manages the budget for most out-of-season programs with very little fundraising, whereas FIRST via our Regional Directors does a tremendous amount of fundraising, but largely does not participate in any out-of-season programs.
 - Having a combined fundraising operation also would allow FUM to more directly approach the state about providing funding for teams, which is done in other states like Michigan. Having staff would allow FUM to staff a governmental relations position to ensure that our organization is heard at the legislature when funding decisions are made. This is not something that FIRST is able to support.
- Increased local influence over local content delivery
 - The committee heard that there's a desire to better adapt events to local conditions, whether it is smaller changes like the event schedule or larger changes like moving to smaller events or a conversion to the district model. The bottom line is that being a PDO allows us to shape the events in our region to reflect local needs.
- Presents a more consistent view to teams and the broader public.

- Right now, there is some confusion about the role of FUM versus the role of FIRST versus our Regional Directors (and “FRC Northland”) versus FUM and other various volunteers. Having FUM be a more active and visible organization would allow us to simplify and clarify the message. Teams and the broader public could understand that FIRST controls the overall program, but that FUM coordinates the local story.

In order to illustrate the benefits that additional fundraising, staff, and local control could create, we collected examples of team support activities that would benefit students and teams. This list is not intended to be all-encompassing and isn’t intended to be a list of everything that FUM should do.

Team Support Activity	Rationale	Resources needed
Increase number of off-season FRC events	Creates additional learning opportunities at events for students	Additional fundraising to pay for transportation
Expand MinneTrials concept	For two years local volunteers have piloted the MinneTrials (formerly Turtle Trials) fall learning competitions. This project would expand this program to a larger number of teams	Fields Funding for events
Mentor/teacher stipends	Increased team participation in areas where there is a lack of team volunteers	Funding for stipends
Paid governmental relations	FUM and teams have been pretty effective at the legislature explaining the need for our programs. A paid governmental relations consultant would help expand that and could help us secure recurring funding for teams	Funding
Central booster club	Teams that do not have the resources to create and operate their own 501(c)(3) would benefit from having a fiscal host for tax-deductible contributions. This model has been effective in other parts of the US.	Staff time to manage program
Teacher training events	Use paid staff to create and deliver training for teachers who are overseeing teams.	Curriculum development Stipends for trainers Organizer of events
Increase number of Jumpstart events	An increased number of in-person Jumpstart events would help deliver hands-on training to a larger number of teams.	Get more content created Stipends for organizers Arranging events
Travel stipends	This would be direct support for team members who would not otherwise be able to afford to attend events	Funding
Championship trip subsidy	For many teams, it can be difficult to fundraise for a trip to Championship on a short timeline. FUM could fundraise to help teams with the cost of champs attendance. FUM could also subsidize pit transportation to Champs, which is often a substantial burden on teams.	Funding

DEI initiatives	FRC has a persistent gap in program participation that we continue to want to close, and have not yet identified a replicable model that we can use consistently at a team level. This is an area that will likely require substantial investment over a period of years to address.	Funding/staff
FUM volunteer recruitment/recognition	With a larger set of activities, FUM will need to further develop its own volunteer management capabilities to support its activities aside from event and team volunteers	Funding/staff
Scaled up hub program	Scale up the hub program, including stipends for those running hubs, training, etc.	Funding/staff

Challenges

The committee spent a substantial amount of time discussing challenges and risks. It is normal for new business ventures to have risk, and normal business practice is to identify risks and potential mitigations. The committee brainstormed risks and identified potential mitigations of becoming a FRC PDO.

Risk	Mitigations
Could cause turnover in event volunteers	<ul style="list-style-type: none"> • Good communication • Continuity • Staff involved in volunteer management • Retain existing regional planning committee structure
Mistaken assumptions/underperformance on fundraising could have a big impact	<ul style="list-style-type: none"> • Hiring competent development staff • Develop plan with FIRST for a couple years of transition that specifically addresses fundraising • Build a rainy day fund
Hiring the right initial staff is very important and early mistakes would be difficult to recover from	<ul style="list-style-type: none"> • Get help in hiring • Provide competitive salaries • Consider candidates throughout the region and align their location to where work needs to occur
Would take on responsibility for insurance and risk management, in conjunction with FIRST	<ul style="list-style-type: none"> • Ensure proper insurance coverage • Develop policies and procedures around risk management • Follow risk management recommendations from MN Council of Nonprofits • Make sure FUM has crisis communications help that's ready if there's an issue • Follow FIRST risk management and youth protection policies
Would need to continue to manage fundraising relationships with teams.	<ul style="list-style-type: none"> • Have clear expectations and communicate them well
Concerns about lack of identity for FUM and how it is different from FIRST	<ul style="list-style-type: none"> • Drive brand awareness and PR to help development staff

	<ul style="list-style-type: none"> • Consider whether FRC Northland brand is a stronger one and switch to that if so
Board lacks skill as a group in managing employees	<ul style="list-style-type: none"> • Engage an organizational development consultant • Prioritize new board members with experience in staff management
Unclear how to fund startup costs	<ul style="list-style-type: none"> • Need to identify startup costs to bootstrap fundraising operation • Identify sponsor for transition costs
Continuity of regional planning committees during transition	<ul style="list-style-type: none"> • Collaborate closely with RPCs to develop a transition plan that they can support • Have similar operating arrangement between RPC and FUM that exists today with FIRST <p>Ensure that donor relationships are maintained</p>

What activities will the PDO be responsible for?

The PDO will need to:

- **Raise funds**
FUM will need to raise more money than it has historically, without relying on *FIRST* development staff.
- **Maintain staff**
An initial staffing model for the PDO is to continue the current staffing model for regional events in our area, which is one 50% time regional director, and one 25% time regional director. We are not including the Senior Mentor role in this staffing model, because in our conversations with *FIRST* staff it was pointed out that the Senior Mentor role is a team support role, not a regional event support role that the PDO would be taking on. We selected two people as the staffing model after talking to the Michigan PDO, which currently operates a 500 team district operation with two paid staff. District PDO operations are more labor intensive than regional PDO operations, which is reflected in Scenario D below.
- **Recruit and support teams**
FIRST works with PDOs to set team growth goals, and the PDO would be accountable for delivering on those goals. Today those goals also exist, but are between the Regional Directors and *FIRST*.
- **Run successful events**
Today responsibility for delivering events is a combination of the Regional Planning Committee, Regional Director, and an Event Manager (currently contracted by *FIRST* and provided by Show Ready Events). The PDO could keep some, all, or none of those structures in place but regardless would be accountable for the event as a whole.

What is a rough annual budget for the PDO?

We created four budget scenarios. Each scenario is represented as an ongoing operating budget, and does not include any one-time startup costs or subsidies. Budgets are presented on a cash basis.

These models represent the committee's best efforts at identifying costs. It represents a blend of information provided by FIRST, by PDOs, and from examination of IRS Form 990s filed by other PDOs.

One of the scenarios considered here was a District PDO. That option was considered here only to determine whether it was a viable operating model, and should not be considered a recommendation.

The attached spreadsheet contains the budget models for each of the scenarios.

Scenario A – baseline

This scenario assumes that FUM continues to operate on its current model.

- All volunteer, no paid staff
- Opportunistic fundraising
 - State grants
 - Grants that need a local host
 - Company match for FUM activities

This model provides approximately \$50,000 in team support on an annual basis.

Scenario B – Paid staff, increased fundraising, not the PDO

In this scenario FUM hires a small staff to deliver local team support, but does not take on the PDO responsibilities.

- Part time executive director that handles fundraising
- Other staff as needed by program requirements (assumes 0.5 in model)
- Paid bookkeeper

In this scenario we assumed an increase of team support from the current \$50,000 annual level to \$150,000. Doing so with paid staff requires a fundraising increase of \$205,000.

Scenario C – Paid staff, increased fundraising, regional PDO

In this scenario, FUM hires a small staff to perform FRC program delivery using the regional model, and also delivers local team support.

- Part time (75%) executive director that participates in fundraising
- Part time (50%) development officer that leads fundraising
- Program managers as needed by program requirements (assumes 0.5 person in model)
- Paid bookkeeper

This scenario also assumes an increase in team support from the current \$50,000 annual level to \$150,000.

We assume here that the existing fundraising for regionals of approximately \$510,000 continues, and the increase in paid staff and focused development resources raises an additional \$340,000.

During the period of transition from FIRST running the regional to the PDO, it's possible that FUM may be able to negotiate some revenue from FIRST to support the transition. This is not reflected in scenario C because it is not ongoing revenue.

Scenario D – Paid staff, increased fundraising, District PDO

This scenario builds on Scenario C, but envisions that the region transitions to a district event model. The main differences from Scenario C are:

- Full time executive director
- 40 team district events for 200 teams
- One district championship
- Program service revenue from FIRST

This scenario also assumes an increase in team support from the current \$50,000 annual level to \$150,000.

This scenario requires approximately \$200,000 more fundraising than scenario A, which is about the same as imagined in scenario B and less fundraising than Scenario C, due to the FIRST per-team payment to the district. FUM would need to specifically focus on maintaining the funder base during a transition from regional to district event model.

What are the one-time expenses involved in converting to a PDO?

For Scenario C, FIRST continues to be responsible for competition equipment in the regional model, without regard to whether the regional is delivered by FIRST or a local PDO. There are no identified capital expenditures required for Scenario C.

For Scenario D, the primary capital costs are required field equipment. In 2023, the capacity of district events ranged from 28 to 42 teams, with a capacity of 40 being most common. Assuming 200 teams, two or three full fields would be required for district events spread over five weeks. Depending on the nature of event production, a single field could cost between \$100,000 and \$200,000.

This table estimates major one-time operating expenses that would occur if FUM took on staff.

Expenditure	Amount	Notes
IT equipment	\$1500/employee	Laptop
Organizational development consultant	\$5000	Consultant to work with board on transition to having staff

Recommendation 1 – Should FUM become the PDO for our region?

We do not recommend that FUM become the PDO for FRC in the region unless FUM is interested in pursuing a district model in the future. We are **not** recommending that FUM move to the district model (that is outside the scope of this committee’s charge and was not something the committee explored), but believe that becoming a PDO would only be of benefit if FUM intends to pursue the district model in the future.

Transitioning to a PDO carries a high amount of risk, cost, and effort for FUM. While becoming a PDO to operate the existing regionals would allow FUM to realize some of the benefits described in this report, we do not believe that those benefits outweigh the challenges FUM would need to overcome if FUM is simply taking over delivery of the regional events.

In particular, the committee felt strongly that the teams in our region would not see a noticeable change in their experience if FUM operated our regionals as the PDO. Based on the data we collected, we believe that moving to a district model would be necessary for FUM to meaningfully impact the team experience during the competition season.

As the committee illustrates in budget Scenario B, there are additional opportunities for FUM to impact the team experience outside of considering different event models that FUM could choose to take on without becoming the PDO.

These conclusions are consistent with direct feedback that the committee heard from established PDOs who stated that their regions saw most of the benefit of having a PDO due primarily to the simultaneous move to the district model. Some of those sources specifically stated that they did not believe that establishing a PDO would make sense if there was no intention to transition to a district model.

Recommendation 2 – What geography makes sense for the PDO?

We discussed three scenarios for geographic coverage: Minnesota only, Minnesota + North Dakota, and Minnesota + North Dakota + South Dakota.

If FUM becomes the PDO, our first preference is that FUM cover Minnesota + North Dakota + South Dakota. This is because it maximizes the benefit to students. This option should be selected only if FUM is willing to raise and spend substantial resources to grow the team base in South Dakota.

Our second preference is that FUM cover Minnesota + North Dakota. This has more student impact than Minnesota alone, and recognizes the impact that a Minnesota-only PDO would have on North Dakota teams. This could also be a transitional choice for FUM, with South Dakota coming under the FUM geography at some point in the future when there are more teams in the eastern part of the state.

We do not recommend a Minnesota-only PDO, because of how it isolates the existing base of North Dakota teams, particularly if FUM converts to a district model.