

# **NEW KENT ROBOTICS BUSINESS PLAN**

RANDY HINTZ

804-466-0358

[NEWKENTROBOTICS@GMAIL.COM](mailto:NEWKENTROBOTICS@GMAIL.COM)

## CONTENTS

Introduction .....	3
Purpose - Vision .....	3
Advantages for participants and Community .....	3
Why FIRST?.....	4
Priorities .....	4
Location: Build & Meeting Space .....	4
Requirements/Desires.....	4
Possibilities .....	5
Recruiting .....	5
Key Players that Need to be Recruited: .....	5
Getting the Word Out .....	6
Budget .....	6
Yearly Cost for the team .....	7
Additional Cost First Year.....	7
Funding.....	7
Charitable Organization: 501c3.....	7
Meeting Space Donations .....	7
Team Administration .....	8
Team Member & Parent Handbook .....	8
Liability Waivers.....	8
Schedule .....	8

## INTRODUCTION

I am Randy Hintz. My family moved to the New Kent County, Cooks Mill development in January 2013. I work from home as a computer programmer for a company headquartered in Duncan, SC. My wife, TinaMarie, homeschools our three children. TinaMarie is the secretary of the Cooks Mill HOA, and we recently started attending Journey Christian Fellowship in Quinton.

In 2016, our son Michael was introduced to robotics through a week-long summer course hosted by "Lord of the Bricks", a robotics team in Mechanicsville. That fall, he joined the team, and I signed up as a team mentor. For three years, we commuted 40 minutes to team meetings twice a week or more. I soon became a coach, and I watched amazed as Michael and his teammates grew in confidence, technical knowledge, and teamwork. While the impact has been worth the travel time, we believe the time has come for us to bring what we have learned to our community in New Kent.

## PURPOSE - VISION

Our vision for New Kent Robotics is to provide a community-based organization that advances STEM awareness (Science, Technology, Engineering and Math). This will be accomplished initially by organizing a robotics team that would compete in FIRST Tech Challenge (FTC) targeting students aged 13-18. Alongside robot design, building, programming and competition, this team would provide outreach in the community, offering opportunities for other students to be exposed to STEM fun. The FIRST organization also provides opportunities for younger students with FLL (FIRST Lego League) and FLL Jr. New Kent Robotics would be an umbrella to help get teams started in those areas as well.

There are currently no Middle & High School competitive robotics teams along the I64 corridor between Mechanicsville and Newport News, surprisingly, not even in Williamsburg. We aim to fill that void and bring the benefits of competitive robotics to area students. A new extracurricular program that advances STEM awareness would be a boost for the New Kent community.

## ADVANTAGES FOR PARTICIPANTS AND COMMUNITY

Studies conclude that students who engage in a robotics team are much more likely to enter STEM based studies and careers. However, it is equally noteworthy that these students are more proficient in communication, time management, conflict resolution and problem solving. These are skills useful for advancement in any career choice! You can see more about some of these studies here: <https://www.firstinspires.org/about/impact>.

Students who compete in FIRST programs like FTC have access to \$80 million in scholarship funds through about 200 different scholarship providers. See <https://www.firstinspires.org/scholarships> for more information. Also, extracurricular robotics helps distinguish students on their college applications, opening more opportunities for higher education.

A youth robotics team helps to boost community pride and unity. Residents and businesses will connect with “their” team, and any team success will be shared by the community. It also increases the community appearance for potential residents and businesses.

## WHY FIRST?

There are two main organizations for Middle & High School competitive robotics, FIRST and VEX. The main reason for choosing to compete in FIRST is familiarity. Having been involved with FIRST for 3 complete seasons, I am familiar with the organization, other people involved, and the flow of a season. The FIRST organization is a community that works to help each other, providing tools to help kids and teams to be successful. Knowing who to contact within FIRST will help our team be successful in their rookie season and beyond.

FIRST continually communicates an atmosphere of “gracious professionalism”. In other competitive areas this might be called “sportsmanship”, but it sincerely goes deeper than that. Every member of every team, every coach, mentor and volunteer, they all work towards the success of ALL teams in FIRST. At competitions, it is common to see members from a veteran or advanced team helping out a team that is struggling, lending parts or tools, even working alongside them for hours. Between events, teams share knowledge and resources, leveraging and deepening the friendships developed during competition.

An additional reason for choosing FIRST is the programs that are available. FIRST offers programs for a younger age range than VEX, with FLL Jr. for students as young as 6. The FLL and FLL Jr programs use LEGO parts for building – and this is very accessible for these kids by starting with something that is familiar.

## PRIORITIES

For New Kent Robotics, the first two priorities are 1) securing a location for team meetings, and 2) recruiting team members, mentors/coaches and sponsors. It would be ideal if we can find a location for meetings first, or at least early in the process. It is much easier for potential team members, mentors/coaches and sponsors to envision the team if we know where meetings will be taking place.

## LOCATION: BUILD & MEETING SPACE

### REQUIREMENTS/DESIRES

- **Donated:** We will not have enough money to pay for space. So, we are specifically looking to have space donated to the team. This would include any building maintenance (HVAC, roof repairs, etc.) and electricity. We may be able to partner with other local businesses for maintenance if needed. Wi-Fi with internet access would be appreciated if available, but is not a requirement. I have hot-spot access on my phone, and hopefully some team members will as well.
- **Space requirements:** 1,000 sq. ft. is the minimum for a FTC team; more space might be needed if we plan to eventually allow for FLL teams. 1,000 sq. ft. would allow for:

- A practice competition field (the field is 12'x12', and we should have a 3' perimeter around. So 18' x 18' is needed for the field.)
- Area for build tables (min 14' x 14')
- Area for cabinets/tools (like a drill press)
- Area/room for programmers (min 12' x 12')
- Dedicated or Shared: Ideally, we would like dedicated space – meaning the space for the team meetings will only be used by the team and not accessible to others. This will allow for security and for flexibility of meeting times. However, dedicated space may not be possible, and we will find ways to be flexible. If the space is shared, we would need the ability to lock up tools, robots and other equipment. If we have dedicated space with minimum outside access, then this may not be as crucial.
- Customizing the space: If we have dedicated space, we would want to talk to the owners about possible enhancements and customizations. For instance, we might want to add cabinets and counters, allowing for storage and placement of countertop tools like a drill press. We may also want to add fresh paint.

## POSSIBILITIES

We can add to this list as needed until we find the appropriate meeting space for our team.

- Rick's Local Deli/Absolutely Outdoors plaza – there are two empty store fronts. Would the owners be willing to donate one of those areas for this purpose?
- New Kent High School? I have contacted the principal, Chris Valdrighi, and received an initial reply. It was rather generic and noncommittal. There has been no reply to a second email.
- Private schools in the area?
- Other business space nearby?
- Journey Christian Fellowship? Once new facility is built at soonest.
- Other churches?
- Civic organizations – Lions Club, Ruritan Club, American Legion, etc.
- Cumberland Community Center?
- Old New Kent High School building?
- Private residence – garage or basement. Many teams operate this way. It would not be ideal, but may be required at the beginning.

## RECRUITING

### KEY PLAYERS THAT NEED TO BE RECRUITED:

- Another coach: there is a lot of work to be done, and I need another adult who will be enthusiastic about chipping in and doing the work.
- Team members: we need to find the kids that will benefit from a robotics team and who are willing to put in the work to achieve team goals. We need to communicate that not every member needs to be a design/builder or programmer. We also need drive team, photo & video, community & sponsor relations (newsletter/blog/social media), marketing.
- Sponsors: We will need money, and the best way to get this is through business sponsorships. Also, there will be supplies and materials that can be donated by sponsors. We can connect

to potential sponsors by visits, emails and phone calls. A listing of many New Kent public businesses can be found here: <https://www.newkentbusinessdirectory.com/>. Is there a way we can find businesses outside the New Kent area that are owned by or have key players who are New Kent residents?

- Mentors: Mentors can provide specific help or guidance in their area of expertise. A mentor can be a sponsor representative or a team member's parent. They do not need to attend every meeting, only as needed or available. Mentors help take some of the load off of the coaches, and are vital to success.
- Community in general: We want the entire New Kent community to support our team. While we are getting started, this may take the form of individual sponsorships or meeting space donations. Throughout the season, the team's success will be translated into community success.

## GETTING THE WORD OUT

- Home school groups: Area home school groups have some way to contact all members, facebook, email, etc. Although no groups are based in New Kent, we could contact Mechanicsville and Williamsburg groups to find New Kent residents (or students willing to drive in for meetings).
- Journey Christian Fellowship & other local churches: We can contact the leadership of local churches, asking for help with prayer for our new team, recruiting, and word of mouth. We should ask if there is a way they would feel is appropriate to get the word out among their congregation, hopefully electronically, via email, facebook, or other social media.
- High School and Middle School: even if this is a community based team, we should contact the principal and science/math teachers to see if they know students who would have interest in the team. Also, find out what teachers are involved in business, marketing, and organizations like FBLA.
- FIRST - Once the team is registered, we will be available in team searches on the website.
- New Kent/Charles City Chronicle: They should be willing to publish an article (PSA) about this startup. Not only would this be good for recruiting, but it is also good exposure for any sponsors on board at that time.
- Flyer: We should develop an information brochure as a recruiting tool. This can then be left with churches, schools, businesses, posted on bulletin boards, etc. If we can secure a location first, that would be ideal. Also, it would be good if we can find a local printer to donate this product.
- We should look on Facebook and other social media for New Kent community groups.

## BUDGET

Note that in our cost below – team uniform and travel costs are not included. The intention is that these costs will be absorbed by each team member's family, in addition to the activity fees listed under funding. Items indicated by an asterisk (\*) can be flexible, we could exist without these items, or we may be able to find less expensive alternatives.

## YEARLY COST FOR THE TEAM

FTC Team Registration	\$300
Competition Registration	\$800
Robot Parts	\$3,000
Game Elements *	\$500
Miscellaneous Supplies	\$500
<b>TOTAL</b>	<b>\$5,100</b>

## ADDITIONAL COST FIRST YEAR

Robot Part Kit	\$500
Field Perimeter *	\$1,200
Facility Customization *	\$200
<b>TOTAL</b>	<b>\$1,900</b>

## FUNDING

Funding will come from 3 sources: sponsors (usually local businesses or larger corporations with a family member tie), fund raising events, and activity fees paid for each team member. The following is an example of how this might look.

Sponsors (4 @ \$500 + 10 @ \$100)	\$3,000
Fundraising (car wash, spirit night, etc.)	\$500
Team member activity fee (6 @ \$250)	\$1,500
<b>TOTAL</b>	<b>\$5,000</b>

What about the county, schools, library? If this is a community team, and the only robotics team in the community, we may be able to get sponsorship grants from the county.

## CHARITABLE ORGANIZATION: 501C3

We need to make sure that sponsors can claim their donations on their taxes, and that means operating as a 501c3 charitable organization. The cost to become a charitable organization is not inconsequential: we would need to register as Virginia corporation with board members (\$50/year) and then apply for 501c3 (\$275 one-time fee).

Our previous team, "Lord of the Bricks" in Mechanicsville, operates under Pierian Spring Foundation. They have offered to allow us to operate under their organization as well. This is worth considering, and maybe we do this for the first year to get started.

## MEETING SPACE DONATIONS

Once we have space – there are items that we would need/desire that could easily be donated.

- Folding tables, folding chairs, office chairs
- Tools (Drill Press, Scroll saw, Cordless Drill, Jigsaw)
- Inkjet or Laser printer, with ink cartridges (*teams print a lot of documents*)

- Refrigerator & Microwave (*snacks for long meetings*)
- Couches (no more than 2) & easy chairs (*relaxed seating for brainstorming sessions*)
- Large screen TV – 55" or larger (*presentations, training, CAD sessions*)
- Cabinets and countertops (*storage and countertop tools*)
- Raw lumber/Paint (*depending on customizations*)

## TEAM ADMINISTRATION

### TEAM MEMBER & PARENT HANDBOOK

We will develop a handbook to clearly communicate expectations of team members. Some areas that will be highlighted:

- Code of conduct
- Safety
- Meeting and Event attendance expectations

The handbook will also clearly define what is expected in the way of Parent Help and Responsibilities. Some areas that will be highlighted:

- Activity fees
- Sponsors & Fundraising
- Help at meetings & events

### LIABILITY WAIVERS

Each team member/parent/guardian will need to sign a liability waiver so that the team organizers and facility owners are safe from any injury repercussions.

## SCHEDULE

Depending on how quickly location and recruiting come about, we can decide if we want to compete in the 2019-2020 season, or wait until the following year. The following schedule is aggressive, and can easily be slowed down if needed:

April 2019	Secure Location
	Recruit one additional coach (possibly mentors)
	Design and print information brochure
	Recruit 2-5 additional team members
	Start recruiting business sponsors
May 2019	Collect meeting space donations
	Clean up/modify meeting location
	Order robotics parts
June 2019	Start meetings