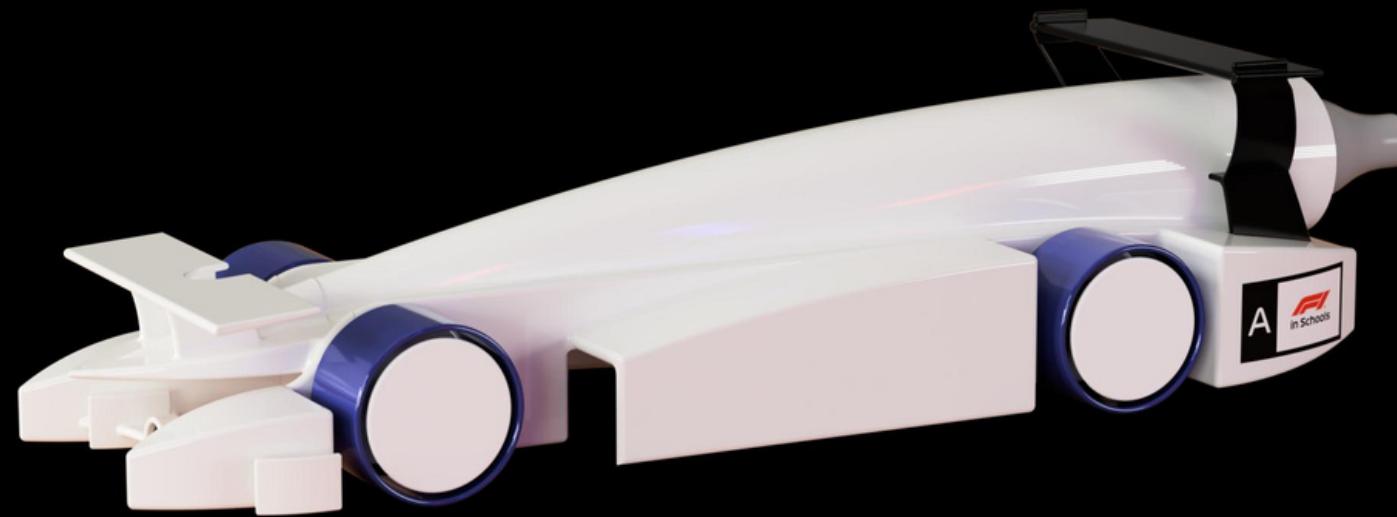


**Radtek**  
MOTORSPORTS



ENTERPRISE & PROJECT  
MANAGEMENT  
PORTFOLIO

**F1 in Schools**  
STEM Challenge

NEWGEN

The logo for NEWGEN features a circular orange icon with a black dotted pattern, resembling a stylized sun or a molecular structure, positioned above the word "NEWGEN" in a green sans-serif font.

# Team Identity

Neil Arora



Team Leader  
&  
Car Designer

Pranav verma



Manufacturing  
Engineer

Ridhi Dhamija



Marketing  
Manager

Shaurya Bhatnager



Graphic Designer

## An introduction

We are Radtek Motorsports. A f1 in schools team, we are participating in the 2022 nationals. Deciding to participate in this competition was a splendid choice. We decided to take part as we want to spread awareness about STEM all across the country. We are much more than a group of students participating in a competition. We have to use this opportunity to the fullest, just like we had in the regionals.

## What's in the name?

The name of any organization has to be one of the most crucial elements of the team. The name has it all. We have given our team the name Radtek Motorsports. Radtek Motorsports was a name that came into the mind of our team leader while sleeping! He broke it down as Rad (meaning appealing) + tech (symbolizing technology). We thought using 'tech' would not make the team unique and would not make it stand out, so we modified the spelling to 'tek'. The name is now in the heart of all the team members. Unlike most teams, this name was unused from any famous quote or a famous formula.

## Our Social Identity

To have a positive social identity means one has a great name among people hence more people sharing the content that one makes. We are present on most social media platforms mainly counting down on Instagram, Twitter, etc. Not only do we advertise our team throughout, but we advertise STEM and F1 in Schools and encourage young minds to take interest in these topics. As the competitors of this competition and as radtek motorsports, we have a dream. We have the opportunity to become world-class thinkers, innovators, and creators. More importantly, we wish to set out awareness of STEM and F1 in Schools.

## Our Logo



The colour blue represents both the sky and the sea and is associated with open spaces, freedom, intuition, imagination, inspiration, and sensitivity. Blue also represents meanings of depth, trust, loyalty, sincerity, wisdom, confidence, stability, faith, and intelligence. It is a serene and calming color that represents intelligence and responsibility.

## How did it all begin?

This team was started in November 2021 by our team manager, Neil Arora! He created the logo, the name known by all of you, the Instagram page, and the merchandise. Ridhi Dhamija was added to the team shortly after (as the marketing manager), followed by Shaurya Bhatnagar (graphic designer). Post regionals, we all felt we were lacking team members, so we added some new, experienced team members, which are Pranav Verma (Manufacturing Engineer) and Neil Malhotra (Sponsorship Manager). Together with this, we found our perfect team and worked dedicatedly throughout the competition.

# Roles and Responsibilities

Neil Arora, the team leader has amazing leadership skills. Even monitored team progress to ensure everyone completed tasks. He created the car design and helped in designing of the same. He was also a major contributor talking in terms of reaching in out for sponsors and managing what everyone says in front of the sponsors.

**Neil Arora**

Pranav Verma, the manufacturing engineer of our team has great skills in manufacturing and keeping everyone calm in a stressful situation. He had also helped our graphic designer out a lot and kept giving ideas for the better functioning of the team. He also helped Ridhi create the designs for the tshirts and merch of our team.

**Pranav Verma**

Ridhi Dhamia, the Marketing Manager and the sponsorship manager had been in-charge for marketing of the team and led out certain public events for the same. While also being the sponsorship manager she had brought in and mailed most of our sponsors to reach them out asking for funds.

**Ridhi Dhamija**

Shaurya Bhatnager, our graphic designer has the highest credit for all the designs of our merch, designing of the portfolio, etc. He had also helped out majorly in the planning of work distribution and team management as a whole. Despite being the youngest, he never felt left out.

**Shaurya Bhatnager**

## Project Management Scrum

Ridhi	Project Management
Ridhi	Financial Management
Shaurya	Team Management

## Manufacturing Scrum

Pranav	CAM - Machining - Finishing
Neil	Design Consultation
Neil	Car Graphics

The success of any team depends on different skillsets provided by the team members. It is how you develop and appropriately structure your team that determines success. Rather than having one person working on an individual area of the project, each area had a team of people contributing with different roles. This overall team structure is called "scrum". Each scrum has an overall leader called a scrum master (SM) who is responsible for the outcome of the scrum.

Between a team with high excellence and performance and an average team, there is a minute point of difference. Doing extra. Having a more communicative, dedicative, cooperative, and skilled team sets us aside from our competitors. That's what we believe will give us success in this competition.

Each member was assigned a role based on aptitude and previous experience, enabling us to exploit each other's talents and cover our weaknesses. We ensured that every aspect of the project was covered under the umbrella of at least two team members' roles, to ensure that there was complete cooperation between us. That brought out the highest possible quality of work, as two minds are always better than one. Of course, a team manager was necessary to allow the project to execute the way it was intended to.

Communication in teams is more than just efficient work. It allows everyone on the team to be educated on any topic that may affect their work. Moreover, it develops trust, builds camaraderie among the team members, boosts morale, and helps employees stay engaged in the workplace. Keeping that in mind, the communication strategy our team led was strong. Along the way, we were always motivating our team members to increase productivity in our team and to create a positive environment to work in.

## Design Scrum

Neil	CAD - Virtual Analysis - Development
Pranav	Research
Shaurya	Manufacturing Consultation

## Enterprise Scrum

Ridhi	Marketing - Sponsorship
Shaurya	Promotional Material
Pranav	Fundraising



# Project Management

Our team's slogan "Fast. Powerful." is there for a reason. We work fast and powerfully, and our car works similarly. While working, we make it a priority to be unique while also being inspired by others. Our goal while managing in terms of winning awards was leading, instead of following. Talking about working ethic, motivation, and results-this team does not settle for anything less than the best. As perfectionists, we paid every attention possible to every detail of our car and enterprise.

Resource management was pivotal to the success of our project. We compiled a spreadsheet of all the resources we would need to execute our project, both monetary and non-monetary. We then ascertained how these resources would be attained, and acted on this. For example, we created a network of technical partners to provide us with resources that we did not have available to us, such as 3D printers and Pit Display materials and tools.

While project management are not easy to learn in theory alone, doing a course does come with benefits. It is worth investing your time in learning project management skills as all employers are giving PM high priority. Project management also brings leadership and direction to projects.

1) The more multifaceted the project, there is more scope for chaos in the organization. That is where proper planning and the importance of project management come in. The primary function of project management is to avoid confusion by outlining a clear plan and a process from the beginning to the end.

2) Having agreed on a project schedule, sticking to it inculcates the discipline required to avoid delays. A pre-determined process through the project lifecycle gives the project a clear path.

3) People are made to work in a team on a project, due to the benefits that accrue through sharing and knowledge of skills. It inspires team members to collaborate on a project.

4) Based on the project scope, some projects may incur high costs. So, it is essential to keep track of the budget. Incorporating project management strategies eases the budget overrun risks.

**1] Defining goals-** Before doing any work, it is necessary to define what one has to do to prevent confusion. Throughout the project, we had clear information about what work has to be completed. At the start of this competition, we had created a document that included what work we needed to get done

**2] Assigning work and drawing deadlines-** Once the work to be done is sorted out, we had to start assigning work to our team members and have deadlines for each work to increase productivity.

**3] Analyzing and revising-**Once the work is sent to the rest of the team, it is discussed in the meetings [conducted daily] and is revised according to the suggestions of the rest of the team members, helping in adding the point of view of other team members

Risks are present in all projects. We analyzed all of the factors of our project at the start and deemed it a high-risk enterprise, as faced the realities of dealing with large amounts of money. In the event we invested in non-refundable costs, for us to cancel the project soon after, we would be in both financial and moral dept to sponsors who have entrusted us. We took several measures to reduce such risks, to make our project much more feasible:

- Identification of risk– All risks associated with our project were identified and given a level of high, medium, or low based on the severity of their consequences. We gave priority to the high-consequence risks.
- Prevention of Risk– We subsequently took action or increased our efforts to prevent these risks from becoming a reality, such as investing more time in financial management, etc.
- Damage Limitation of Risk– In the unlikely event that risk did become an eventuality, we needed to have backup plans and countermeasures to reduce the consequences, to enable the wider scope of the project to continue.

Time management has to be one of the most crucial factors of the team. Without it, we possibly could not have been able to achieve anything in this project. Our time management was on spot. We had deadlines ranging from monthly work to daily work. We had some amount of work which was to be done in a day and a target to be achieved by the end of the week. The work assigned was written in our group messages and also in the calendar on our website. The workload had never troubled any team members, as it was divided well. Due to this, we finished our project well on time.



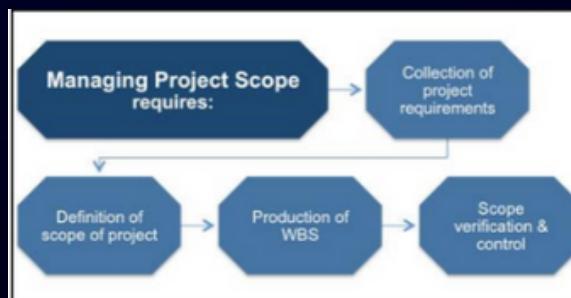
Lack of strategic alignment will see project managers spend countless hours pursuing initiatives. For instance, there may be a priceless idea, but the time may not be right to focus on a project revolving around it. If organization strategies are not crystal clear to the employees, they are bound to lose faith in the mission, vision, and value of the organization. By ensuring strategic alignment in your organization, you can be sure that the benefits of project management will accrue.



# Scope statement

**Scope Statement:** A detailed scope statement document was formed as a reference document throughout the project life cycle. Some of the elements of the statement are as under: Description: To use CAD/CAM software to collaborate, design, analyze, manufacture, test, and then race miniature compressed air-powered cars made from F1 model block for F1 in Schools nationals 2022 Objective: In Scope Elements:

- 2 Identical Race Cars
- Project deliverables to be submitted on time
- Create a recognizable brand identity
  - Provide ROI to sponsors
  - High-Quality Car Renders
  - Detailed Engineering Drawings
- Well Researched Design Portfolio
  - Appealing Verbal Presentation
  - Pit Display matching Team Identity
- Organized Enterprise and Project Management Portfolio Out of Scope Elements:
  - Submitting individual work to F1 in Schools HQ
  - People other than core team member present during judging activities
  - Use Formula 1 Word Marks in the team name, logo, domain name, and social media handle
  - Supervising Teachers/Adults interacting with student teams, judges, or the judging process
  - Seek a ruling from F1 in Schools or any competition official or judge before the event on whether a design idea complies with the Regulations.
  - Outsourcing of any design work, text, and scripting for any project element is allowed
    - Enterprise and Project Management Portfolio of more than 16 pages
    - Design & Engineering Portfolio of more than 11 pages
      - Unusual fonts in documents
    - Submitting documents in a format other than pdf files
    - Pit Display video exceeding 10 minutes
    - Verbal Presentation Video exceeding 10 minutes

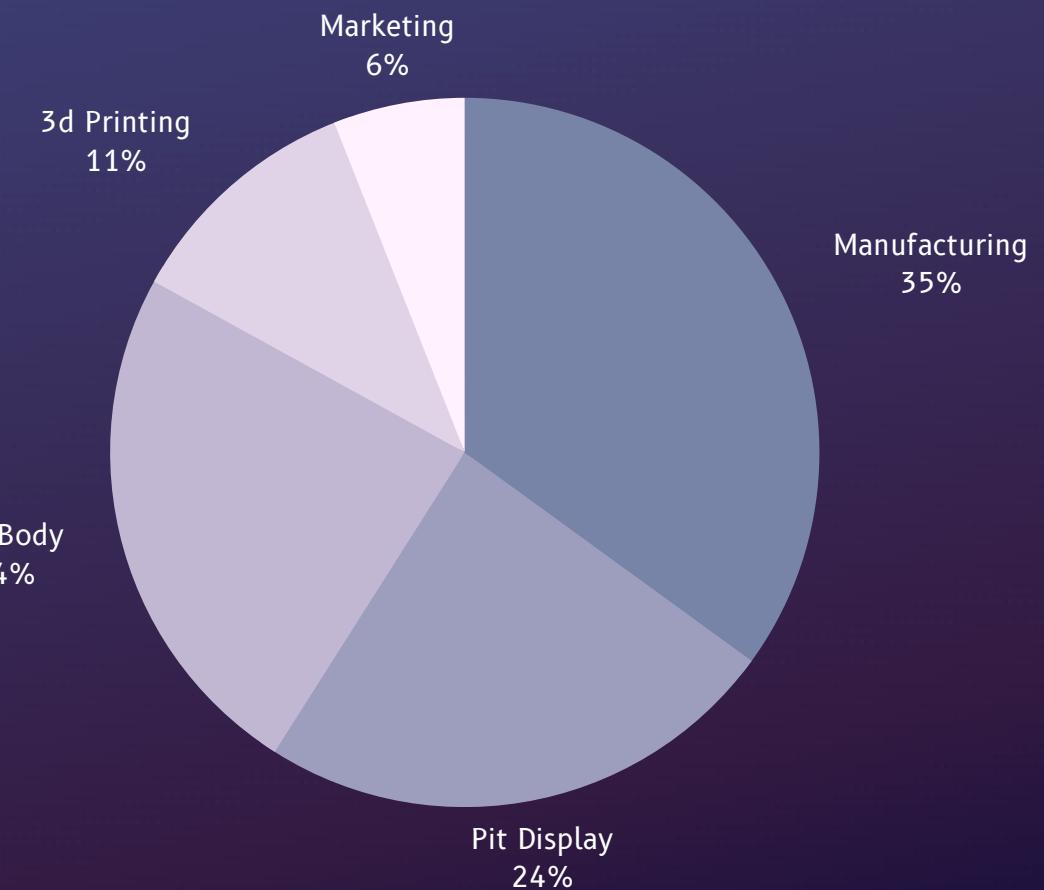
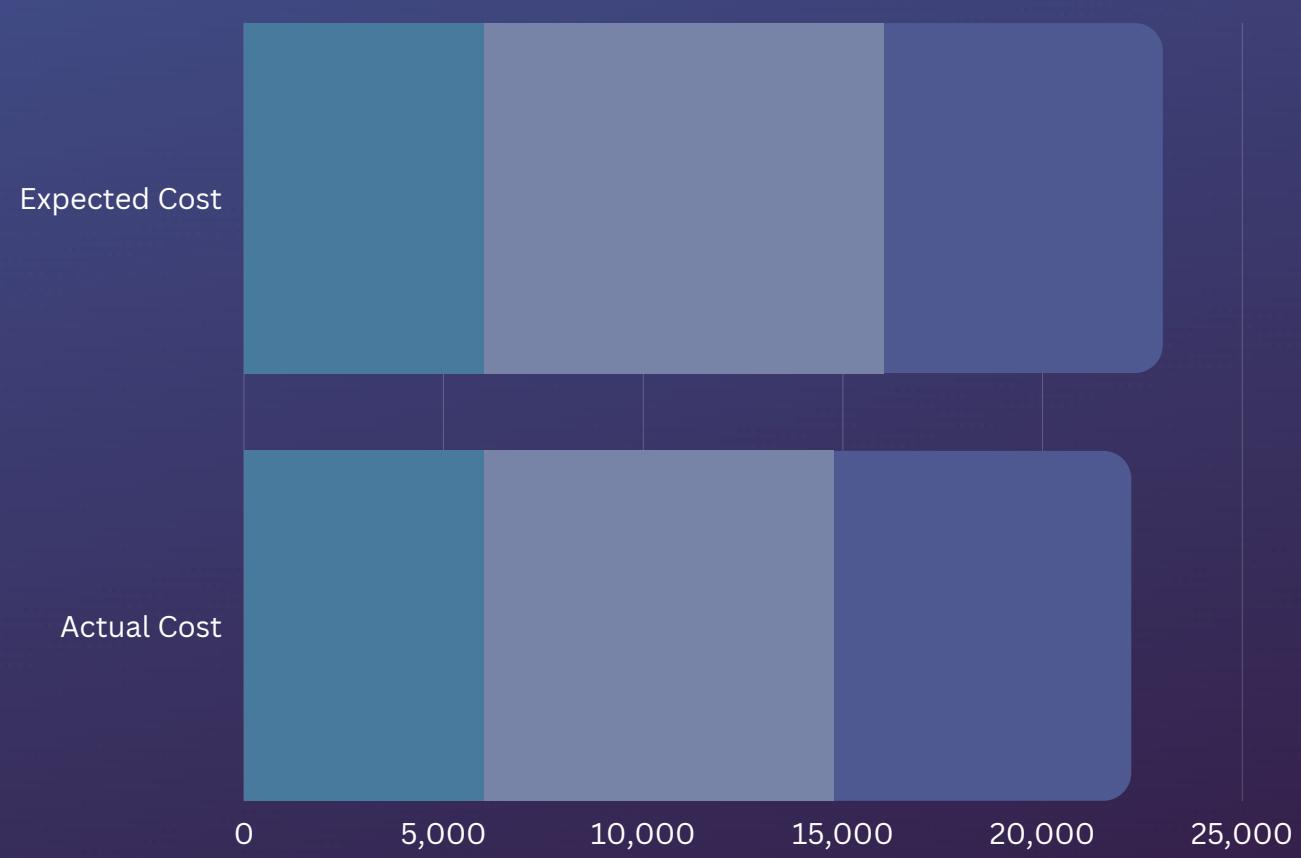


**Key Performance Indicators (KPI):** We will refer to the scorecards provided in the competition regulations for measuring the performance of our project elements **Goals and Deliverables:** We have assigned SMART goals to all our deliverables to help us monitor them for quality. The aim is to achieve maximum marks in accordance with the scorecards. Goals for each deliverables are as follows: Race Car A and Race Car B: • Meet regulations., Weight 50-55g., Final car look: match Car Renders. Replacement Components: • Exactly Match with components used on Race Cars. A4 engineering drawings: • Include isometric views, third angle orthographic projections and bill of materials, Show compliance regulation A4 car renders: • Use different environments. Enterprise and Project Management Portfolio: • 16 page maximum Design & Engineering Portfolio: • 11 page maximum Verbal presentation: and Pit Display: • 10-minute duration

Deliverable	Quality Acceptance Criteria	Testing and Assessment	Acceptance and Sign Off	Timing	Responsibilities
All project Deliverables	To be made in accordance with Scorecards and regulations	Refer Scorecard	Team Manager	During creation of a particular deliverable	As per deliverable
Car CAD designing	Compliance to all Technical regulations while designing the car	Refer to Technical regulations and check dimensions before finalising every design component	Team Manager	throughout design process	Design Engineer
A4 Engineering drawings	They should cover regulation compliance for each rule	Compare with F1 in Schools Technical regulations document	Team Manager	While issuing and making Engg. drawings	Design Engineer
A4 Car Renders	Show every angle of the car in different environments	Visual inspection	Team Manager	While rendering the cars	Graphic Designer, Design Engineer
Verbal presentation video	Creative video	visual inspection	Team Manager	while planning the video content	Graphic Designer
Verbal presentation video	10 minute duration	check on editing software	Team Manager	while scripting and editing the video	Graphic Designer
Pit booth 3D model	size of the booth to match regulations	dimension check in Fusion 360	Team Manager	while designing the model	Design Engineer, Graphic Designer
Pit booth 3D model	include team banner provided by F1 in Schools	visual inspection	Team Manager	while designing the model	Design Engineer, Graphic Designer
Enterprise Portfolio	Readable and understandable	Visual Inspection and reading it	Team Manager	while creating the portfolio	Graphic Designer
Design & Engg. portfolio	Original Content		Team Manager	while creating the portfolio	Design Engineer, Manufacturing Engineer
Car Main body	Car main body precision manufacturing	check CNC machine settings and print sample car and check quality	Team Manager	while entering settings for CNC router at the time of manufacturing	Manufacturing Engineer/ Design Engineer
Wheel	wheel shaft dia to be 7mm for bearing fit	print sample wheels in 3D and check their tolerances	Team Manager	after 3D printing of wheels	Manufacturing Engineer/ Design Engineer
Wheel support assembly	wheel support axle outer dia to be 3mm to fit the bearing	print sample wheels in 3D and check their tolerances	Team Manager	after 3D printing of wheels	Manufacturing Engineer/ Design Engineer
Replacement Components	To exactly match actual parts used on race cars	Vernier Calliper and visual inspection	Team Manager	after 3D printing and during painting	Manufacturing Engineer, Graphic Designer
Assembled cars	car assembly to match car designing	refer engg. drawings and use vernier calliper to check dimensions and do sanding accordingly	Team Manager	after receiving car main body and 3D parts and before start of assembly	Design Engineer, Manufacturing Engineer
Painted car	paintwork as per renders provided	paint a sample car and check	Team Manager	after paint of sample car	Graphic Designer
Painted car	no bubbling of paintwork	visual signs of bubbling	Team Manager	completion of painting	Manufacturing Engineer
Painted car	weight of paint on the car not to exceed 8g	paint a sample car and check before and after weight	Team Manager	before and after paint of sample car	Manufacturing Engineer, Design Engineer
Final assembled car	Decal pasting in correct size and location	refer car renders	Team Manager	while pasting decals	Graphic Designer
Package to be handed to		check that race cars do not move			

**Quality Acceptance Criteria:** To ensure quality for all deliverables, acceptance criteria were created for each deliverable. Testing and assessment methodologies were identified, and Timing and Responsibility was assigned.

# Finance and Resource Management



Finance and resource management is one of the most important aspects of the project management, which in turn is one of the most important factors of the project. Financial management provides pathways to attain goals and objectives in an organisation. The main duty of a financial manager is to measure organisational efficiency through proper allocation, acquisition and management. It provides guidance in financial planning. It assists in acquiring funds from different sources. We were extremely relieved with the amount of costs we were able to reduce from our initial projections.

Going on individual costs, we will now analyse our finance graph. Overall speaking as mentioned before we tried to have as less expenses as possible to increase the amount of savings we can save. The registration for the competition itself took ₹ 2000. 3d printing of the part of the car cost went up to ₹ 2750. The marketing price got to ₹ 1500 and manufacturing took ₹ 8750. The pit display had taken ₹600 At last, the body of the car, the most expensive part was 6000 rs- which made the total expense of the competition ₹ 32,500 only.

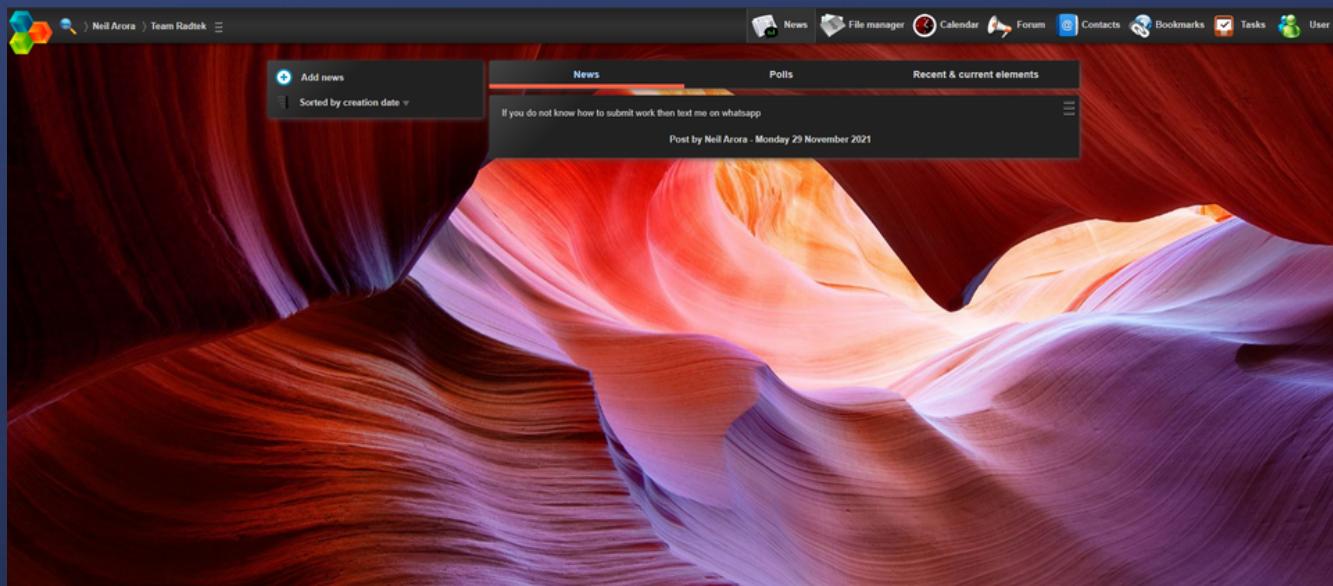
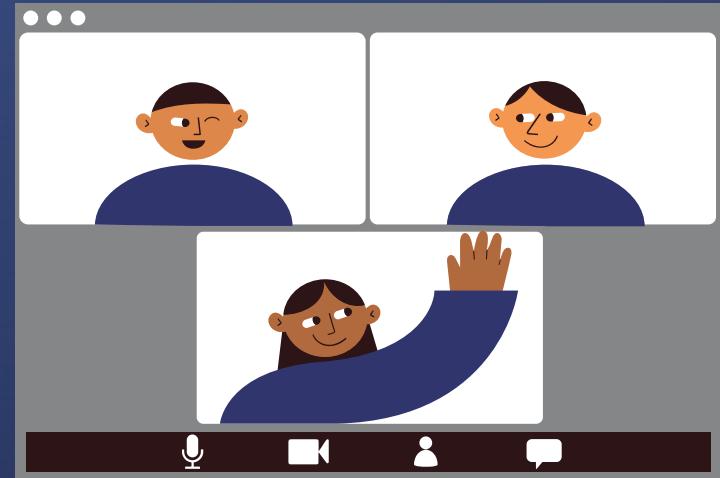
An effective financial management enterprise was dominated for the team to accomplish its goals and missions that we had set out to accomplish at the beginning of the project. Our resource manager and team ensured that one of the most crucial characteristics of the project was treated with upmost importance. This was made sure by us keeping in mind all the important factors such as cost estimation, budget, and financial risks.

From analyzing the data, we soon realized that the car development would no longer be our primary cost. We knew that raising such a significant amount of money within a relevantly short amount of timeframe would be a challenge, but we. Overcome the situation by adopting a solid sponsorship strategy, and by looking for technical and non-technical partners to reduce cost and raising. Our own additional funds-independent from sponsors- by making a crypto currency, making several nft's, donation pages, and many more. These strategies helped us raise money on our own, without having a sponsor to raise the capital for us.

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The platforms we used for our communication were generic and manageable. We even built a personal website for team members to collaborate and view the schedule for the meetings, which were held daily. The forums we used are as follows-

- 1] Whatsapp [information platform]
- 2] Google Meet and School [Communication platform]
- 3] Radtek Motorsports Manager [Personal communication platform]



As mentioned before, Our team has created a website for all the team members to work on. It is called "Radtek motorsports manager" By making this measure, we have ensured the correct management of our assignment and increased the ease of work. The website contains several tabs which are as follows-

- 1] News [Pictures the main events on the platform]
  - 2] File Manager [Contains all the files which are shared]
  - 3] Calendar [Displays the schedule]
  - 4] Forum [Contains the questions and answers related to the team]
  - 5] Contacts [Includes the contacts that are to be shared]
  - 6] Bookmarks [Holds the website links that are to be shared]
  - 7] Tasks [Retains the work that is needed to be completed]
- These tabs have further simplified our course of work and have proved how essential work management is.

Productivity is directly related to the communication that the team is performing regularly. Our team has a meeting with all of us present daily. The meeting duration goes from 2 hours to 3 hours, take a 10-minute break every hour for mental relaxation and have a fun time working on this project as a team. The interaction we have in the meeting is very effective and portrays how essential teamwork is.

# Communication

While taking into account what everyone wants to do and communication is important, in building a perfect team, there should always be a proper leader who can supervise everything and can collect the final thoughts of everyone and put them where it has to be. In addition, we learned that having a good leader that we did is a relief as it was easy to work for others in the team and there had been a positive environment set throughout.



# Lessons Learnt

Growing up, we have always heard that communication is the key. Now, we understand why. Communication is an essential aspect of any team doing a project because it helps know everyone's suggestions and decreases individual workload. It is as Mrs. JoyBell once said "You can talk with someone for years, every day, and still, it would not mean as much as what you can have when you sit in front of someone, not saying a word, yet you feel that person with your heart, you feel like you have known the person for forever.... connections are made with the heart, not the tongue"

While taking into account what everyone wants to do and communication is important, in building a perfect team, there should always be a proper leader who can supervise everything and can collect the final thoughts of everyone and put them where it has to be. In addition, we learned that having a good leader that we did is a relief as it was easy to work for others in the team and there had been a positive environment set throughout.

We all understood the importance of resource management. It may be the first time for most of our members to handle such amounts of grants we received. It was a new experience for all of our members. But then life is all about new experiences. We all got our visiting cards printed for the first time. We had custom jerseys for the first time. As they say, there is always a first time for things!

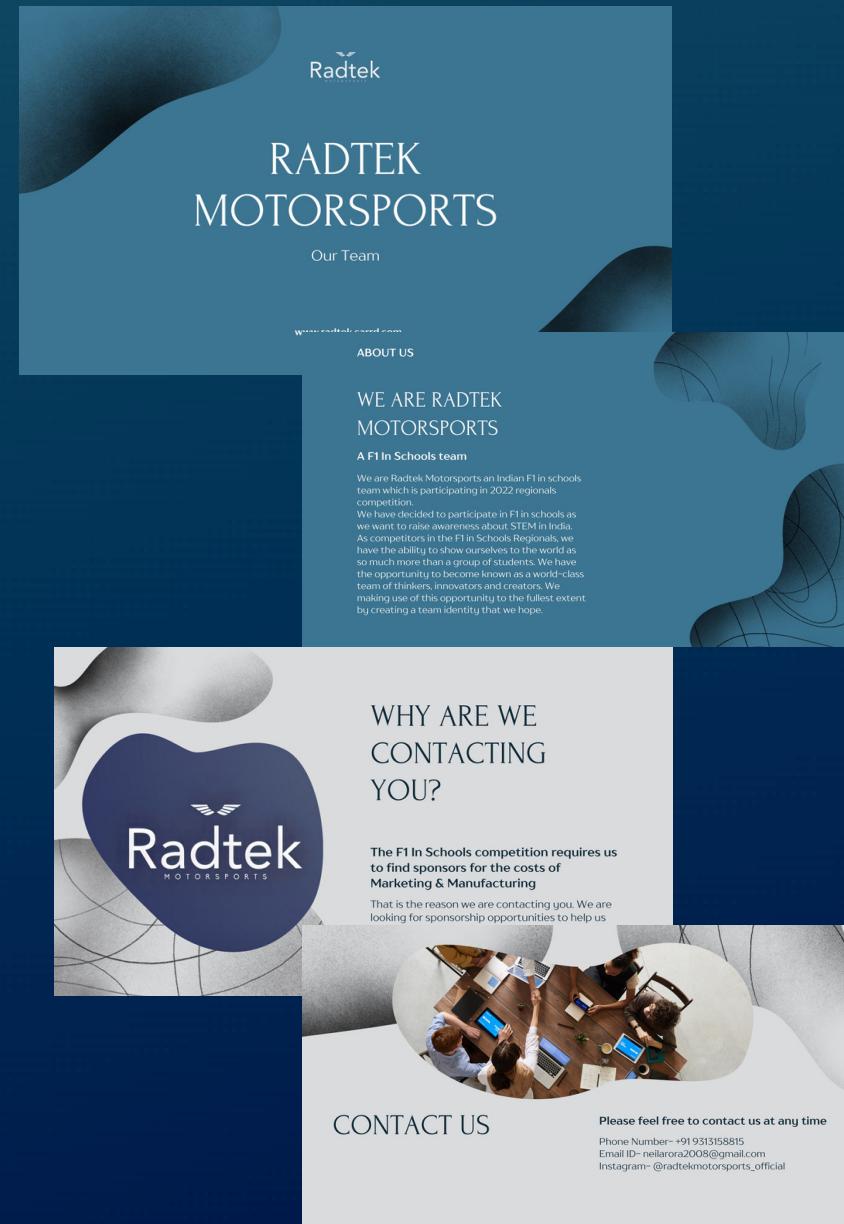


Time management has by far been one of the most crucial lessons we could learn throughout the competition as we had limited time for this round of nationals. After regionals, we had gotten into a habit of always doing work within deadlines and time limits, which relatively made it easier to get work done. We have been proud of how we got work done even while being under these limitations

There were a lot of experiences that could not be added or mentioned on this page but they will always remain in our hearts and brains. We will never forget this exciting experience. This competition helped us learn a lot about the life that is ahead of us. It also prepared us for the same but who knows where one is heading in life. This competition also helps us explore the vast career options. It helps us improve our skills for the future. It helps us understand that whatever you do in life has a learning outcome!

Moral values are a crucial aspect of life as they help distinguish between what's good and what's not and improve decision-making. We get these values as we gain more experience. Throughout this competition, we have learned many lessons, whether it be regarding how to run a team, or how we can manage our resources or time better.

Our Sponsorship Proposal Booklet was the bedrock from which we could implement our new Sponsorship strategies. We strived to create a professional and clean proposal. In it, we talked about us as a team and what made us stand out. We explained what the F1 in Schools is about and that by supporting us, they would be supporting the next generation of Indian innovators and entrepreneurs. We then explained what we could offer as a Return on Investment, and displayed exactly how they would be helping if they did decide to sponsor us by also including our budget.



And many more....

From many hours of research , we realised that businesses and companies relevant to the competition would be most likely to sponsor us. From this, we decided to focus our efforts on approaching companies within education, engineering, manufacturing, technology and automotive industries.

we decided the best strategy would be to email all the companies we know looking for sponsorship. This meant that we could that we could introduce ourselves, talk about the competition and actually have a conversation with them. This was a great opportunity for us not only to gain sponsorship but also to spread our message and awareness about this great competition around our community.

## Sponsorship Strategies

### Sponsorship Docket:

We believed creating a sponsorship docket for companies who gave an affirmative response would be a good idea. A basic template was created including information that would be same for each company i.e. our team info, F1 in Schools reach, sponsorship packages, etc. The benefit a company would receive by sponsoring us was then added and sent to the companies who responded to our emails.

### Sponsorship Hierarchy:

Just talking to companies about sponsorships without any clear prices or deliverables would be very confusing. To avoid this, a sponsorship hierarchy was created. This way, companies willing to pay more or less will have a clear idea of the benefits they will receive. Kind sponsors were not included in the sponsorship hierarchy. Their deliverables were negotiated.

### ROI activities:

A range of ROI activities were listed in the Sponsorship Docket. We made sure we carried out all those activities for the sponsors. The activities can be seen in the table provided here. We delivered to our promise.



As participants of the competition our expenses raised exponentially, and it was definitely a challenge. It was a challenge we ultimately overcame, enjoyed and learnt so much from. Through consistent work, and applying the right strategy, we were able to raise a total of 30,000 from our 3 valued financial sponsors. This allowed all of our ideas become to realities, in terms of car and enterprise development, and also meant we could comfortably cover our travelling and competition expenses. We discovered during the competition that not only could Technical Partnerships substantially reduce costs, but that companies and institutions were also much more likely to provide us with technical support via a product, facility or expertise, rather than providing us with money. We secured such agreements, We soon realized that securing technical partners, no matter where they are from or how big they are was a lot easier than securing financial partners, as it is much easier for establishments to provide us with technical support via a product, facility or expertise, rather than providing us with money. By actively pursuing and creating technical partnerships, we cut our costs by approximately 50%!

The importance of marketing for one's business is that it makes the customers aware of your products or services, engages them, and helps them make the buying decision. Furthermore, a marketing plan, a part of your business idea helps in creating and maintaining demand, relevance, reputation, competition, etc. When it comes to our team, we have been very particular about our marketing schemes. When we started the project was to spread awareness about STEM and F1 in school, which could mainly be achieved by effective marketing strategies, which were adopted by the team throughout the competition.

Marketing is a form of communication, a connection between you and your customer. The relationship between a buyer and seller, the value of a customer to meet their needs and wants. So marketing is important because it is the key to success in the business. Through marketing we may store data, gather information, and analyzed the information to know customer needs and wants, to analyzed customer behavior, to know what's at the heart of their markets. Through marketing we may select the target market, positioning the product in an efficient and effective process. Marketing predicts the prospective customer, potential buyer, and future trends. Through marketing, we may satisfy customer needs and wants by giving them the best experience with their products and giving customer benefits. Through marketing, the product or the business may promote or advertise to the market. The marketing introduces a new product or service, it is important to make advertising to be known to the potential consumer, and customer awareness.

To increase our marketing, we even held an event in our school where we led out some of our posters and cards and posters which had information on STEM to encourage everyone in our school to take interest in this topic. It was a success as many people asked us for more information on our team and agreed on following our social media page. We even put on posters of our team all around the school to reach as many people as we could. The event was a huge success and we are happy that we were able to spread more awareness and get closer to our goal!

On the track, we are rivals, but from it, we are all friends. When possible, we interacted with other teams that we will be racing against or had been in competition before, like team blaze and hyperbolt, Which helped us significantly in many factors. We also interacted with teams more generally, replying to their content and vice-versa, increasing impression of our team .

Our main source of marketing F1 in Schools had been social media platforms- with the main one being Instagram. While interacting with our online audience, we noticed a pattern. The highest performing posts of ours were our fascinating facts in which we spread awareness about STEM and F1 and talked about intriguing events held all across the globe. The main reason we are making a requirement to post on Instagram specifically is that according to data, we have a lot of audience on Instagram. This platform has all people from all age group

A non-fungible token is a non-interchangeable unit of data stored on a blockchain, a form of digital ledger. NFTs can also be associated with reproducible digital files such as photos, videos, and audio. We added NFT on our team to get stakeholders, which will lead us to profit for better manufacturing and materials of our car. We made it on opensea.com. OpenSea is the world's first and largest NFT marketplace. We currently have 2 NFTs i.e.

Purple Star worth of 0.15 ETH  
Snowy Days worth of 0.02 ETH

In comparison to other NFTs, Purple Star and Snowy Days are a bit affordable. We made this with AI technology which asks 3 words.

Each NFT represents a real-world object like music, a video, an in-game item, or a victory sticker. These digital assets are bought and sold online, typically with cryptocurrency. Things like physical money or bitcoin are "fungible," meaning they can be exchanged for one another.

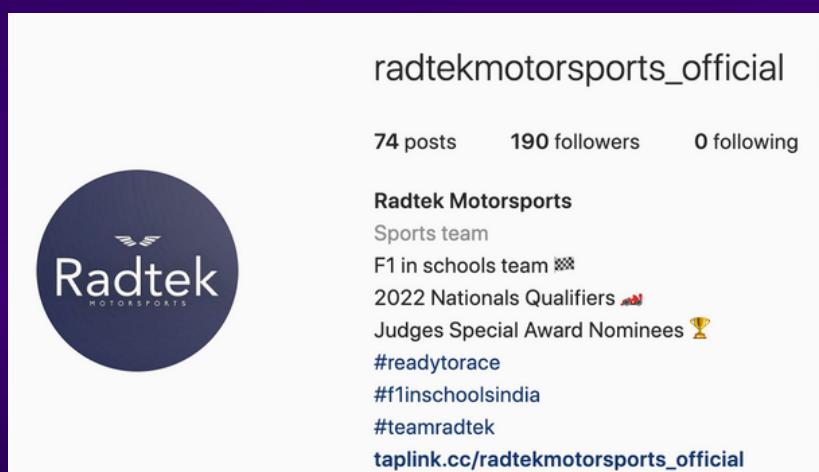
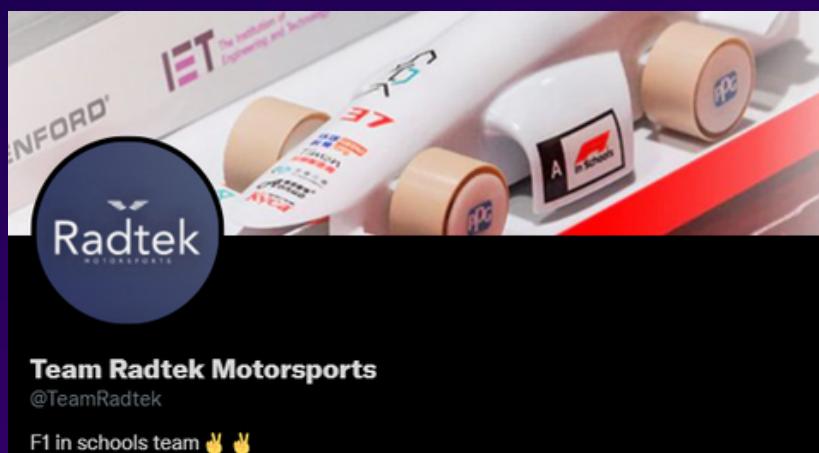
The internet is a blank canvas for anyone to leave a mark and make a name for themselves. We designed our website to do just this, showcasing our team, car and project to the world. The website was designed to be as impactful and concise as possible, while still providing an insight into our team. Our social media feeds were linked to the site, to allow any interested viewers to see our latest and most current content.



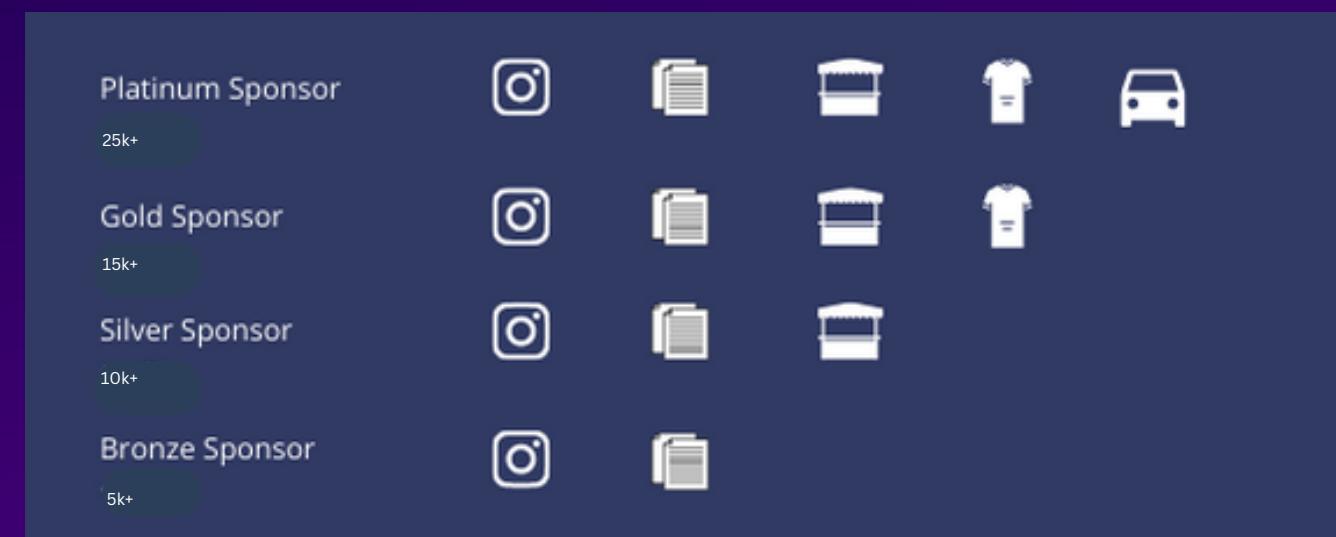
# Marketing

In an attempt to make our team more attractive to sponsors, we devised a number of methods in which our partners could receive a return on their investment. This was a very important thing for the team to consider, as we saw sponsor ROI as mutually beneficial for both our team and our sponsors. When presenting to a potential sponsors, we made sure to emphasize the various returns on investment we could offer with a page dedicated solely to the creative Logo Placement opportunities we offered on our official Sponsorship Proposal .

At every possible moment, we tried to promote our partners on our social media channels, either by specifically posting about them, or by tagging, liking and interacting with their own uploads. This was promised to sponsors in our prospectus, and sponsors were very pleased with this promotion. Our posts directly related to our partners have been seen by over 16 people across the world and counting. Across all platforms, we reached an audience of over 200 and counting. Interacting with our sponsors not only improved our online presence by being connected to these companies, but also increased our content impressions significantly, as some of our sponsors, in turn, promoted our digital content, increasing our number of followers and our impressions, proving this to be a mutually beneficial arrangement.



Although we value all our partners equally and ensure that the benefits of our partnership is mutual for all, it was very important for us to have a clear sponsorship hierarchy established. Included in our Sponsorship Proposal Booklet were our various Sponsorship Levels, we also made clear that we would do our best to cater any other potential marketing opportunities not listed within our options. Varying amounts of logo placement and creative marketing opportunities are what differentiated the different levels of sponsorship which hopefully persuaded our sponsors to increase their contribution and involvement. Ranging from our Bronze Package, all the way up to our Platinum Package, we ensured that all of our sponsors were catered for and that we could make our partnerships as beneficial as possible for both parties.

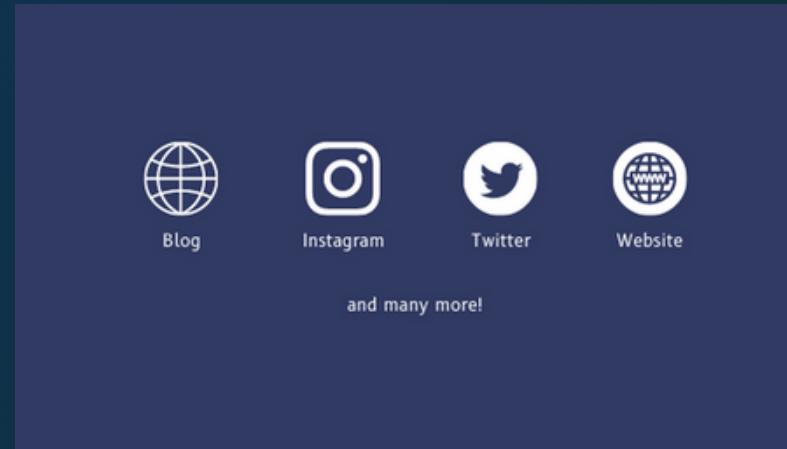


ROI [Return on Investment] measures the gain or loss generated on an investment relative to the amount of money invested. ROI is usually expressed as a percentage and is typically used for personal financial decisions, to compare a company's profitability or to compare the efficiency of different investments.  $ROI = (\text{Net Profit} / \text{Cost of Investment}) \times 100$ . ROI can be made as complex or as simple as the measurer wants it to be, it can be used by a variety of different professionals or companies. A marketing professional could calculate the ROI of a marketing campaign by dividing the campaign's revenue by the marketing expenses directly involved in that campaign. The ROI calculation is flexible and can be manipulated for different uses. A company may use the calculation to compare the ROI on different potential investments, while an investor could use it to calculate a return on a stock. ROI is one of the most used profitability ratios because of its flexibility.

# Return On Investment



# Digital Media



Digital media connects people in ways never before possible, enabling users to maintain friendships across time and distance. It allows those, who are socially isolated or somehow set apart from their immediate physical community, to connect with like-minded or like-situated people. Our team, Understanding the importance of digital media has adopted several ways for the same.

## Social Media

Social media is one of the modern communication tools that have recently proven to be powerful in influencing both informal and formal communication, where millions of potential consumers interact freely. Having the ability to engage consumers in an active interaction where sharing of information is effectual through powerful technological devices, social media is gradually receiving attention from businesses of all sizes.

Social media platforms currently tend to associate with flexibility, effectiveness, convenience, and efficiency in business communication where investors are capable of sharing important information with their stakeholders, who include potential business clients.

Using that piece of knowledge we decided to join as many social media platforms as we could. We first joined Instagram. We posted there a lot. We created post series! We also posted up memes to cheer up our watcher's day! After that, we decided to extend our limits and decided to join Twitter. We have not been so active on Twitter but it is, as they say, something is better than nothing! We posted facts and fun stuff to keep our audience engaged. We would constantly update our audience about what is going on in our meetings and what new things we have built. We used social media to collaborate with other experienced teams and discuss F1 in schools!

## Blog

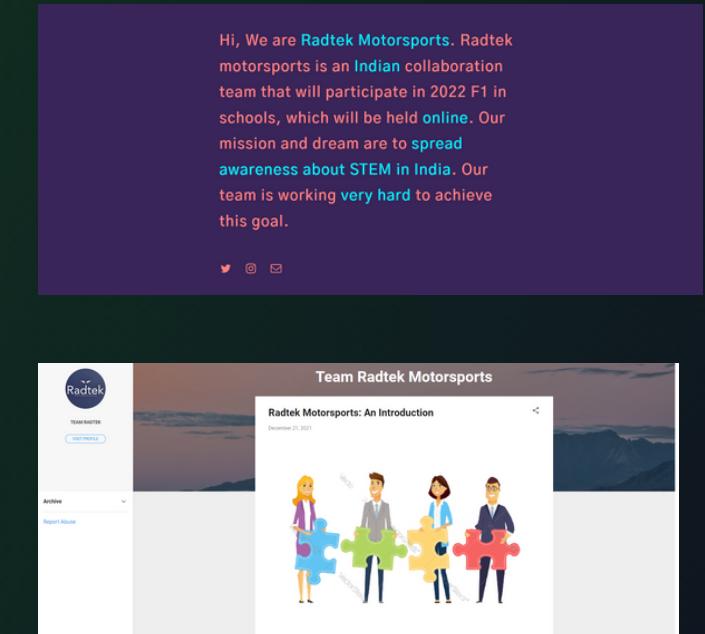
We made an official blog for our brand to spread information and awareness about F1 in schools and team Radtek motorsports. We made a blog channel via Blogger.com a service for publishing blogs by google. It has many features which allowed us to make it as simple and attractive as possible.



## Website

The internet is a blank canvas for anyone to leave a mark and make a name for themselves. We designed our website to do just this, showcasing our team, car and project to the world. The website was designed to be as impactful and concise as possible, while still providing an insight into our team. Our social media feeds were linked to the site, to allow any interested viewers to see our latest and most current content.

Visit all our websites by scanning the QR code here!



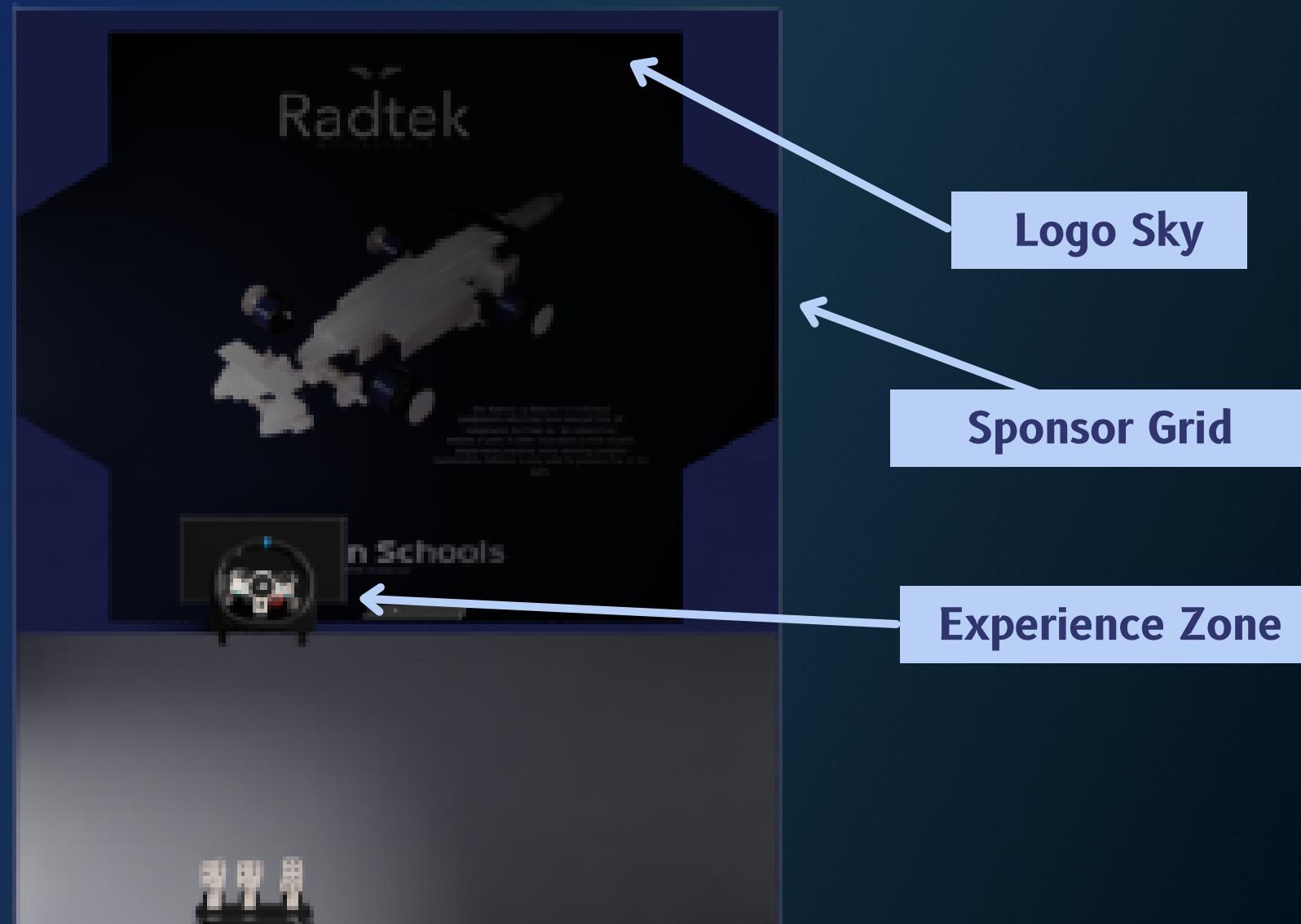
## Podcast

We also designed our own podcast 'Radtix' on Spotify an audio streaming platform, we used a software named anchor which lets the user create and manage the audio volume and effects used. We described about the competition and how does it feel like to be an f1 in schools participant. Till date we only have 3 episodes and are looking forward to make more. The first episode was about introduced our team to the spotify community. In the second one we told how it feels to participate in f1 in schools. The 3rd episode of our podcast was the first special episode where we described how f1 cars work irl and how they work in f1 in schools.

Our Nationals Pit Display showcases the very finest of our team and project, and more. It has been designed to withstand the logistical challenges needed to arrive at the competition, while also keeping sustainability and economy in mind.

Designing this pit display was not easy. Several designs were made before we finalized this design.

All the decals were hand-made and put into the design. The decals were made to enhance the look of the pit display. There was extensive use of AutoDesk Fusion 360 features to make the pit display look attractive and catchy. We tried to make the pit display look similar to our logo and our color palette. We created a sponsor grid in the standing area to showcase our sponsors. We also created a Radtek sky in the pit display to showcase our logo. As entering if you see above you can see our logo above your head. We showcased our car prototypes in the pit display for the audience to get a better understanding of our work! We also put up all our social media in the pit display as QR codes!



# Pit display

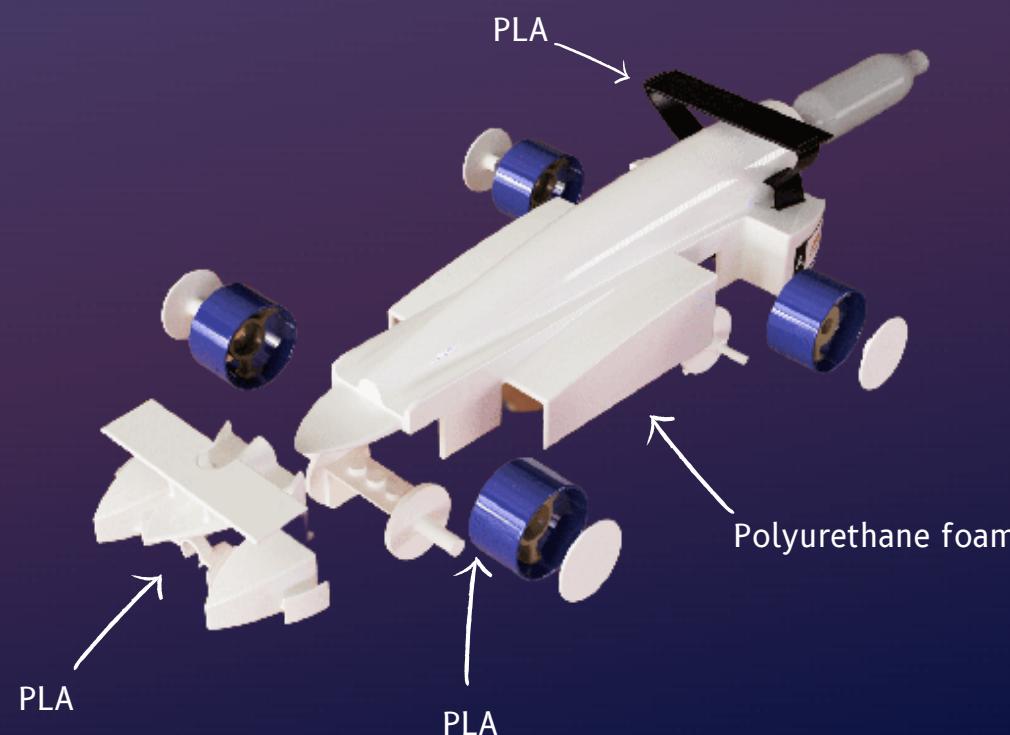




# Sustainability & Materials

When we create any product, we must guarantee that the materials are sustainable, environment friendly, and powerful.  
Likewise, we selected materials that stay intact and are vigorous for our car

The Body of our car is made of Polyurethane foam which is then drilled through a CNC machine and is delivered right to us. The dimensions of the model block are – 22.3cm x 6.5 cm x 5cm. It contains a pre-drilled hole for the CO<sub>2</sub> cartridge. Polyurethanes are formed by reacting a polyol (an alcohol with more than two reactive hydroxyl groups per molecule) with a diisocyanate or a polymeric isocyanate in the presence of suitable catalysts and additives.



For the 3d printed components the options we had were – PETG (Polyethylene terephthalate glycol), Nylon, PLA (Polylactic acid), ABS(Acrylonitrile butadiene styrene) and Carbon Fibre. Nylon is a generic designation for a family of synthetic polymers composed of polyamides (repeating units linked by amide links).

Smooth surface, abrasion resistance. Polylactic acid or polyactide (PLA) is a biodegradable and bioactive polyester made up of lactic acid building blocks. It was first discovered in 1932 by Wallace Carothers by heating lactic acid under vacuum while removing condensed water. During the early times, only low-density PLA was produced. By using lactide as a raw material and through the process of ring-opening polymerization, a high-density version of PLA was finally developed.

One of the major advantages of PLA is its biodegradable nature and the sustainable process by which it is made, making it the environmentally friendly choice of plastic. Under the right circumstances, PLA can break down into its natural elements in less than a month in contrast to the centuries it will take for traditional plastics to decompose. PLA is especially suitable in short lifespan applications such as in water bottles and food containers.

The process by which PLA Is made is also more environment-friendly. In addition to using renewable raw materials, emission of greenhouse gases during production is also lower. Because carbon dioxide is consumed during the growth of corn, the net greenhouse gas emission of the overall PLA production process can even be considered negative. Ongoing studies on the use of alternative carbohydrate sources, such as agricultural and household wastes, even suggest that PLA production can lead to a decrease in overall solid waste.

"Everytime I work for the competition, it feels like a living dream, we have made it this far, and I'm sure we will get better in this round. It was an amazing experiance!

-Neil Arora

"I'd never imagined that a competition could change my learning of Marketing, project management and team work at such a big extent!"

-Ridhi Dhamija

"This was very fun and exciting! I made many new friends and learnt many new things!"  
-Shaurya Bhatnagar

"The experiance was excellent and I do not regret anything while joining this competition and team! I have confidence we will win!"

-Pranav Verma





Thank you

