

# P Enterprise Portfolio

## Photon Racing T 19

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ABEC 3 5 7

mynzo

yatra



ATHENA  
EDUCATION

INDIAN  
TRAVEL HOUSE

masters'  
union

NDTV



# Team Identity



## Who are we?

There is no team identity without the six highly passionate and determined members of Photon Racing. Each of us has a unique story: some aspire to master the art of managing the team, while others aim to develop their engineering skills to become chief designers for an F1 team. We believe this competition will be the gateway for us to advance in our journey and show everyone our story. We are six highly dedicated members from India with a goal to make it big. Our ambition and passion are the only fuel we have, and we plan to set a new standard in the F1 in Schools World Finals 2024.

## Team Name

Imagine being as fast as the speed of light. Nothing can travel faster than 300,000 kilometres per second (186,000 miles per second). *Prima facie* Photon Racing seems to be derived from the ideal of speed. This was a part of it: from the very conception of Photon Racing, creating the fastest car was always a goal, and innovation was our vehicle to get there. Photon Racing has evolved, not just as a beacon of speed, but as a 'beam of light' for the community that surrounds us. We are deeply involved in social and environmental sustainability missions, and we hope to illuminate the lives of, not just our juniors, but for all those involved with us.

# PHOTON RACING

Figure 1.1: Team name in team font

## Team Logo

The process of designing a logo needs to cater to two specific areas: grabbing the viewers' attention and communicating our value. The central element of the logo is the stylized letter 'P'. It features a slanted line, which makes the viewer feel a sense of speed, as if the line itself was warping backward due to uncontained, raw velocity and power.



Figure 1.2: Team logo

Finally, we believe our logo connects to our brand values (Marketing, 4) by integrating how engineering is reflected in the precision of the stylised 'P' reflecting technical prowess. Sustainability is integrated by using the idea of minimalism and efficiency in the logo and innovation is highlighted in the forward leaning 'P' and the hidden message of racing by the lower-case R below the P.

## Team Colours

Purple was a deliberate choice for us, moving away from the initial cyan and black to a colour that not only resonates with the team's personality but also conveys elegance and sophistication. This switch was strategic for several reasons:



Figure 1.4: Colour scheme used

**Innovation and Uniqueness:** By choosing purple, a colour less frequently seen in the racing world, we communicate our dedication to innovation and standing out from the crowd.

**Memorable Visual Presence:** Purple is visually striking against the typical palette on the track. This colour ensures that the Photon Racing brand, from car to uniforms, draws attention, making a memorable impression on spectators and sponsors alike.

**Link to sustainability:** Purple is traditionally associated with wisdom and insight. This aligns with sustainability, as it implies careful consideration of resources and environmental impact.

## Team Font

Presenting information about the team in different portfolios is extremely important. Therefore, the team decided to make two decisions. The first decision included to decide between the font family. The choice was made between 'Serif' and 'Sans Serif.' After a comprehensive review we decided to go ahead with the sans serif font family. After tremendous experimenting and understanding, the purpose of each font and its usage, we decided to use 'Telegraf' for our headings and 'Gotham' for our main textual features. Our analysis included understanding of how different fonts are effect appearance and readability.

## Team Brand

We decided to incorporate two design elements in our header and footer. For the header, we included diagonal lines, creating a sense of direction and movement that aligns with the theme of racing. It also contains our logo which adds a touch of relatability to our brand. While, the footer, features a sleek bar that combines dark and purple strips. We believe this adds a layer of urbanity, which is a theme we wanted to portray for our racing team. Moreover, the design resembles a progress bar, symbolizing continuous progress and high performance for our team. Finally, the trapeziums placed in the header also represent drift marks which are an essential element of racing.

## Team Uniform

Uniforms are unique apparel worn to standout out between a crowd of numerous teams. Therefore, the team went through different selections of garment and designs. Eventually, we decided on three different garments:

### Photon Racing Jacket:

We followed an unique gradient pattern of dots and lines are along the lower body and sleeves which symbolised motion and speed—key elements of the racing world. The front displays our Photon Racing logo on the chest, along with the team member's name, role, and a small national flag. The F1 in Schools logo is positioned on the sleeves.

### Photon Racing Shirt:

Like the jacket, the shirt has all our sponsors and their logos. The design looks like different tire marks, similar to drift marks made by a vehicle.

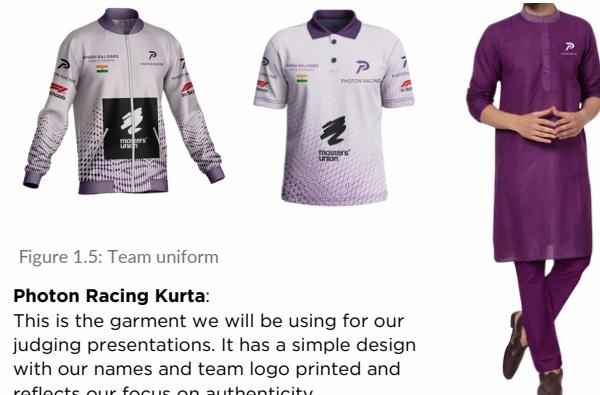


Figure 1.5: Team uniform

### Photon Racing Kurta:

This is the garment we will be using for our judging presentations. It has a simple design with our names and team logo printed and reflects our focus on authenticity.

We wanted our presentation attire to convey simplicity and to represent who we truly are. While we recognize that the purple may be a bit bold, we believe it suggests luxury and royalty.

## Team Deliverables



# Marketing



## Marketing Goals

Before we began any marketing efforts, we needed to understand our goals to ensure we could achieve what we set out to accomplish. We defined key factors: market size and target audience. The market size was relatively large, consisting of a substantial population from Tier 1 cities in India, while our target audience spanned all ages, with a particular focus on teenagers. With these parameters in place, we established four main marketing goals:

- Promote STEAM Development in India:** Our objective was to enhance the excitement of young Indians in the fields of STEAM.
- Promote Our Hobby, Talent, and Interests:** As a team passionate about engineering, we wanted to share our enthusiasm and skills with a wider audience. This goal allowed us to connect with others who have similar interests.
- Promote F1 in Schools:** A major objective was to elevate the visibility of the F1 in Schools program. By promoting F1 in Schools, we aimed to attract more students to this program.
- Promote Learning Through the Process:** We wanted to emphasize our commitment to learning through every step of the project, from design to execution.

## Marketing Budget

Before starting our competition, we set out ambitious marketing targets that would require a budget. However, due to the scarcity of time, we decided to move forward with only four. On top of that, the events we had planned were the ones that would take the most money. However, the ones we were left with were either done in the form of sponsorship

1. Developing Diwali Stalls:
<ul style="list-style-type: none"><li>WorldSpa</li><li>Park Place</li><li>Sell Diyas for diwali</li></ul>
2. Ingénix (if possible, keep only F1 related for 6 months)
3. Influencer Marketing
4. Blinkit:
<ul style="list-style-type: none"><li>WorldSpa contact</li><li>Powered by photon racing express delivery type message</li><li>Market on Instagram Ads</li><li>Market on Facebook Ads</li></ul>
5. Air India commercial
<ul style="list-style-type: none"><li>World Spa contact</li><li>Play Photon Racing commercial on in-flight entertainment system for one day</li></ul>
7. Pinewood derby racing:
<ul style="list-style-type: none"><li><a href="https://www.southshop.org/events/club-scouts/pinewood-derby/official-pinewood-derby-car-kit-177006.html">https://www.southshop.org/events/club-scouts/pinewood-derby/official-pinewood-derby-car-kit-177006.html</a></li><li>Track is already semi-made</li><li>Pitch as bonding activity, can be integrated into Diwali stall</li></ul>
8. F1 dinner hosted with fans

Figure 2.1:  
Photon Racing  
marketing  
ideas

The event highlighted in red are the ones that took the most of budget or had to be done using a contact. This was also one of the reason behind the elimination of them.

## Brand Values

Figure 2.2:  
Photon Racing  
Principles



Photon Racing was clear on three principles: engineering, innovation, and sustainability. All our ideation, thoughts, and work are based on these three principles. They provide us with a framework for how each task should be completed. Listed below are the goals:

Sustainability	Engineering	Innovation
We aim to be a net-zero team. To achieve this, we will run a crowdfunding campaign and offset our carbon footprint completely.	We aim to master our engineering theories. Our goal is to create a car that finishes in under 1 second.	We aim to integrate design principles with enterprise management ensure maximum efficiency and foster innovation.

Figure 2.3: Photon Racing Principle Goals

When looking for marketing ideas, we sought concepts that aligned with our values. An example would be the school events we hosted which incorporated all three principles. Sustainability was reflected in our decision to have the session online. Engineering was highlighted through the different modelling techniques. Finally, innovation was showcased by presenting our wind tunnel to the audience.

### Reach

Foremost, we leveraged the Community Action Service (CAS) Community at Heritage Xperiential School. Through an engaging event, we introduced the F1 in Schools competition to fellow team members. Expanding our reach beyond school, Photon Racing partnered with NDTV. Our feature on NDTV allowed us to bring the story of Photon Racing to a national audience. We were thrilled to receive endorsement from Indian Olympian Manu Bhaker. Manu's support gave us an invaluable edge by adding an aspirational element to our brand. Together, these efforts showcase F1 in Schools as an extraordinary platform and highlight us as committed to shaping a sustainable, technology-driven future. We believe with these efforts; we had a Deep Engagement reach of over 5,000 and overall reach of over 500,000.

## Marketing KPIs

The first concept we wanted to understand, and implement was our marketing KPIs. We wanted to understand how to use them and how we could influence them for our benefit. We categorized each of our marketing KPIs into specific, measurable, achievable, time-based, and relevant goals.

### KPI #1: Increasing Brand awareness

Increase social media reach by 50% (S,M,A) and secure at least two press mentions (S,M,) in relevant publications within three months. (R, T)

#### Progress Made:

- Over the last 90 days, we reached 18,329 accounts, which is a 1230% increase. This means we were able to achieve one part of our KPI.
- Over the last 90 days, we were covered by NDTV, a major publication site. Additionally, we were also covered in our school newsletter; however, the reach is far less than that of NDTV's.



Figure 2.4: Instagram analytics

### KPI #2: Engagement Rate

Achieve a 10% increase in social media engagement (S,M,A) (likes, shares, comments) on all posts and a 15% increase in event attendance (S,M,A) within three months. (R, T)

#### Progress Made:

- Over the last 90 days, we reached a total of 288 engagement points, which is a 72.3% increase. This means we were able to achieve one part of our KPI.
- Over the last 90 days, our stem society: Ingénix, which is based off F1 in Schools saw a 50% decrease in members from 60 to 30.



Figure 2.5: Instagram analytics

### KPI #3: Lead Generation

Generate 30 new sponsorship leads within three months (S,M,R,T)

#### Progress Made:

We had listed a list of 50 potential sponsors. In total, we were only able to contact 25 and successfully convert 20-30% of them into actual sponsorships.

# Marketing



## Behavioural Economics

One of our team members attended a session from the school's economics teacher on behavioural economics. We then realized that using



Figure 3.1: Session held in school  
behavioural economics is extremely important in F1 in Schools. After all, we are providing a service for our consumers, for which we must understand their psychology and how they operate. For this, we decided to use three different types of techniques to ensure maximum benefit for ourselves.

### Social Proof:

We wanted students, educators, or F1 enthusiasts follow and support Photon Racing. We shared team achievement on social media to build credibility. When people see a strong following, they're more likely to join in.

### Scarcity:

We hosted limited events. For example, Photon Racing released an exclusive mentorship program for younger F1 in schools' kids, making it a time-limited opportunity encourages fans to participate right away.

### Loss Aversion:

We showed people what they might miss out on by not engaging with Photon Racing—such as giveaways, exclusive F1 in schools QnA and a chance to support a young STEM team from India.

## Segmentation

To ensure Photon Racing achieved meaningful impressions and maximum outreach, we developed a segmented marketing strategy based on two axes: students and non-students on one axis and people-we-know and others whom we-don't-know on other axis. This resulted in a four-way segmentation, allowing us to tailor our communication and channel effectively for each segment.

**Students Whom We Know:** Primarily our schoolmates at Heritage School, this segment was reached through targeted events and activities organized by our Community Action Service (CAS) Community.

**Non-Students Whom We Know:** This group consisted of family, friends, and community members within our local networks. For them, we used a grassroots approach, sharing our progress and goals at gatherings and through social media.

**Students Whom We Don't Know:** Reaching students outside our immediate circles required broader visibility. To connect with them, we leveraged media coverage through our partnership with NDTV and endorsements from Indian Olympian Manu Bhaker.

**Non-Students Whom We Don't Know:** For this broader audience, including industry professionals and general viewers, we utilized support from our sponsor, HP and others.

## NDTV x Photon Racing

**Brand Value:** Engineering and Sustainability

**Marketing KPI:** #1

**Behavioural Economics:** Social Proof



Figure 3.2: NDTV interview

Our participation in the NDTV Yuva event was a pivotal marketing opportunity for us. The program is renowned for championing youth empowerment. It connected us with a wider audience. By sharing our journey and insights on national television, we significantly enhanced our visibility and credibility. Moreover, through this event, we were able to hear other members of the community in similar or opposing fields, which we believe helped us learn about different perspectives.

Finally, this event was also a great opportunity for us to find potential sponsors and mentors. This event attracted people from various sectors, including heads of CSR departments and media professionals.

## Crowdfunding x Photon Racing

**Brand Value:** Innovation and Sustainability

**Marketing KPI:** #3

**Behavioural Economics:** Social Proof and Scarcity

While the initial idea behind the crowdfunding sources was to secure a sustainable amount of sponsorship from the public, we realized it added two incentives for us. Firstly, the crowdfunding video was sent to at least 100 people. This served as a great incentive for us to reach out to people about our process and link our social media. Moreover, when someone donated, they would post a screenshot in the group, which reinforced the idea of social proof and led to more people donating.

On top of that, we used this as a source to improve our sustainability efforts. Whatever carbon we were going to emit, we planned to offset it by planting trees, which we clearly highlighted in the video. By attaching a purpose, we believe

are more likely to donate. Another idea we had was to give a name to each tree, but we checked with our sponsor, and they said it would require a substantial amount of manpower.



Figure 3.3: Crowdfunding

## Hosting a F1 school information session x Photon Racing



Figure 3.4: Hosting a session

**Brand Value:** Innovation, Sustainability and Engaging

**Marketing KPI:** #2

**Behavioural Economics:** Loss Aversion and Scarcity

We hosted an F1 information session at our school through the science society, Ingenix, which was founded by members of Photon Racing. The goal of the session was to introduce students to Formula 1 and the F1 in Schools competition. During the event, we explained how the competition works.

This helped us develop a strong bond with our peers who became more interested in our project and wanted to learn more.

## Influencer Marketing x Photon Racing



Figure 3.5: Meeting Manu Bhaker and Junaid Khan

**Brand Value:** Innovation

**Marketing KPI:** #1

**Behavioural Economics:** Social Proof

We partnered with two influencers: Manu Bhaker, the Olympian who won a bronze medal in the Paris Olympics, and Junaid Khan, a budding actor in India. We realised this played as an influential role as it helped us establish brand credibility.

# Sponsorships



## Return on investment

We created three different ROI. While we had one generalised ROI on logo placement on different deliverables, which has been expanded in a table to the right of the page, we had two different ROIs which we believed played to the emotional appeal of sponsors.

### 1. Community of Companies

F1 in Schools is a prestigious global STEM competition, supported by leading companies like ARAMCO, which fosters innovation, engineering, and teamwork among students. By sponsoring our team, you align with a community of companies that share similar values of sustainability, technological advancement, and educational empowerment.

Figure 2.1: ROI#1

#### Why is this ROI beneficial to sponsors?

It allows companies to enhance their brand reputation by being part of a prestigious, international STEM initiative. We also thought that associating with other influential companies reflects positively on their commitment to innovation and education. Additionally, it shows a commitment to supporting youth and education in the STEM fields, which is often viewed favourably by stakeholders.

#### Improvements

We could enhance networking opportunities by arranging exclusive events or virtual meet-ups where sponsors can connect.

### 2 Education Support

Sponsoring an Indian STEM team at a prestigious global stage like F1 inspire countless young minds across the country. It sends a powerful dedication, innovation, and education are valued and supported by lead. Your sponsorship can motivate other students to pursue their passion for technology, engineering, and mathematics, showing them that opportunity compete and excel on an international platform. This support also importance of nurturing local talent, fostering a culture of innovation that next generation to dream big and make meaningful contributions to STEM fields.

Figure 2.2: ROI#3

#### Why is this ROI beneficial to sponsors?

This ROI would appeal to companies looking to build a socially responsible image. Supporting education and youth empowerment aligns with the corporate social responsibility goals of many organizations. This sponsorship also offers companies a way to invest in the future workforce and foster talent that could potentially benefit their industry.

#### Improvements

We could create more interactive educational content, such as workshops or webinars led by industry experts from the sponsor's team.

## Sponsorship Hierarchy

Sponsorship formed the foundation for our team's operations. Recognizing and appreciating each sponsor's value was crucial. Emulating the nature of an F1 in Schools team, we brought uniqueness to our sponsorship bands. Instead of traditional categories like gold, bronze, and silver, we created categories such as Title, Education, and Mobility based on contribution levels.

<b>Title</b>	<i>(Benefits)</i> A title sponsor enjoys maximum visibility with prime logo placement and frequent social media mentions, ( <i>Mutually Beneficial Relationship</i> ) illustrating their brand prestige and reach through alignment with a high-profile competition.
<b>Technology</b>	<i>(Benefits)</i> A technology sponsor gains substantial exposure with logos on key areas of the car and T-shirt, plus regular social media features, ( <i>Mutually Beneficial Relationship</i> ) enhancing their brand's technological image through association with innovation.
<b>Mobility</b>	<i>(Benefits)</i> A mobility sponsor gains logo placement on the car's sidepods and T-shirt, along with regular social media exposure, ( <i>Mutually Beneficial Relationship</i> ) highlighting dynamic and innovative solutions.
<b>Education</b>	<i>(Benefits)</i> An education sponsor gains visibility through logos on the car's sidepods, T-shirt, and social media recognition, ( <i>Mutually Beneficial Relationship</i> ) while supporting STEM education and demonstrating commitment to community and youth development.
<b>Growth</b>	<i>(Benefits)</i> A growth sponsor benefits from logo placement on the car's wheel hubs and T-shirt, along with social media mentions. ( <i>Mutually Beneficial Relationship</i> ) Despite a smaller contribution, they gain valuable exposure that fosters goodwill and brand growth..

Figure 4.1: Deducing our sponsorship hierarchy

## Return on Investment

Sponsorship is an agreement made by two parties in which both parties are beneficial. At this level, leveraging opportunities to big companies is highly limited and tough to reach. Therefore, we tried to build a model that helped us predict which sorts of benefit will provide the maximum amount of ROI and thus including them in our desk.

*Formula: ROI (%) = Net Gain from Sponsorship:*

ROI	Sponsorship	Reach	Visibility Factor	ROI%
Logo placement: Main Body	5,00,000	3,00,000	1.0	60%
Logo placement: T-shirt (right upper back)	3,00,000	1,00,000	0.6	20%
Networking Opportunities	1,00,000	500	0.1	0.05%
Product Sampling Opportunity	50,000	1000	0.3	0.003%

Figure 4.2: ROI calculation

The Visibility Factor measures the exposure of sponsors by evaluating the placement of their logos. High-visibility locations, such as the main body of the vehicle or the centre of uniforms, provide significant exposure, thereby enhancing audience impressions and engagement.

This helped us conclude that logo placement on the T-shirt and car provided some of the best ROI, offering maximum benefit. We presented this calculation to our sponsors, who were very impressed with our work. We obviously offered more detailed calculations for every ROI we provided so we could quantify their help. However, we realized that calculating the net gain involved a fair number of assumptions, which could reduce the model's accuracy. We suggested refining the model further for more accurate results.

## Sponsorship Deck



Figure 4.3: Sponsorship Deck

To acquire sponsors properly, we thought about creating a proper sponsorship deck: This deck tells the story of our journey, goals, and accomplishments, emphasizing our dedication to innovation, engineering excellence, and sustainability. We highlight our engineering design and sustainability initiatives, including our goal to become a net-zero team through projects like tree planting. The deck also includes a clear budget breakdown, sponsorship tiers, and the benefits sponsors receive, such as logo placement on our car, team uniforms, and digital media exposure.

# Sponsorships



## Mutually Beneficial Relationship

### HP x Photon

Through our partnership, HP gains visibility for the HP Reverb, helping them break into the VR market with strategic exposure on our pit display. This aligns with HP's CSR goals by supporting young entrepreneurs in STEM—future innovators and potential HP employees—building brand loyalty and a talent pipeline in one move.

### Mynzo x Photon

Our partnership with MYNZO created a mutually beneficial relationship, as we helped raise awareness about their sustainability mission and the importance of reducing carbon footprints. In turn, MYNZO provided us with the tools to offset our own carbon emissions, aligning our team with sustainable practices and enhancing our environmental responsibility. This collaboration not only supported MYNZO's growth as a start-up but also strengthened our commitment to sustainability.

### Yatra x Photon

Our partnership with Yatra creates a mutually beneficial relationship by aligning their brand with the core themes of F1 in Schools: mobility, innovation, and transportation. By showcasing Yatra's commitment to sustainable and future-forward mobility solutions, we help raise awareness of their green initiatives. In turn, Yatra gains visibility among potential future customers.

### Athena X Photon

Our partnership with Athena Education establishes a mutually beneficial relationship, as we offer them visibility by displaying their posters prominently in our pit display and organizing a session at our school. This exposure positions Athena as a supporter of academic excellence and helps them connect to their target Audience. In turn, our team benefited from Athena's educational resources: we had a session with their in-house physics professor on the concepts around an F1 car and with the help of there we constructed a wind tunnel which we used for testing.

### Photon X Dassault

Like ABEC, we used Dassault systems for our CFD testing. Their software gave us accurate readings. In return, the F1 in schools from our teams were able to benefit from this knowledge and similarly applied for the sponsorship from Dassault.

## Case Studies

We understand that our sponsors are experts in their fields, and their valuable input can help us in the competition and serve as a learning opportunity. Through this, we gained insights into various aspects of the competition, such as business, engineering, and design.

### ABEC x Photon

**Skills:** Engineering

**Sponsor Type:** Growth

We collaborated with ABEC Bearings to secure a 50% discount on high-quality bearings, yielding an immediate \$720 benefit for our team. Recognizing the value they provide, we recommended ABEC to other F1 in Schools teams from our school. We realised by suggesting them to 11 other teams and hoping at least 5 will qualify for the national championship, (where bearings come into use) there could be substantial sale from our school alone, hence covering the cost of sponsorship. Also, this could create a cyclical sale impact. This ensures a substantial ROI. This partnership not only helped our team but strategically positioned ABEC for long-term business growth. To reinforce this partnership, we prominently displayed ABEC's logo on our pit display and the main body of our car, enhancing their brand visibility and showcasing their support to all visitors and participants.



Figure 5.1: Bearings provided by ABEC

### Mynzo x Photon

**Skills:** Sustainability and Engineering  
**Sponsor Type:** Growth

We leveraged Mynzo in two distinct ways. The first step was to implement Mynzo's emission tracking system. This was crucial for monitoring our team's emissions,

allowing us to calculate overall emissions and reflect on our environmental impact. This aligns with the "Community of Companies" aspect of the ROI, as it positions Mynzo as an innovator committed to sustainability. The second step involved creating a podcast with the owner of Mynzo. He introduced the company and helped us develop strategies for integrating sustainability into our F1 in Schools project. This initiative ties directly into "Educational Support" by providing our team with practical insights into sustainable practices and by showcasing Mynzo's leadership in fostering a sustainable future among young minds, which enhances their brand perception in the STEM community.

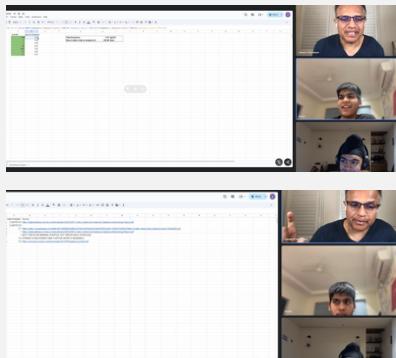


Figure 5.2: Interviews and session with MYNZO

## Crowdfunding

**Skills:** Engineering  
**Sponsor Type:** Growth

When we were trying to understand various funding sources, we realized we were missing out on a very important source that probably had a great impact: the public. Through crowdfunding, we can raise a great amount of money if we are able to sell ourselves and sell our project. To achieve this, we created a video. It was a funny video to maintain engagement with everyone and ensure that they were able to understand our project simply. It supports "Educational Support" by helping the public understand the technical and creative aspects of the F1 in Schools project,

fostering a wider appreciation for STEM and innovation among all audiences.

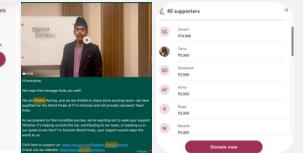


Figure 5.3: Our income from crowdfunding

### Synapse x Photon

**Skills:** Creativity

**Sponsor Type:** Education

We used Synapse to assist us with the portfolio designs. They helped us understand how each design would enhance the portfolio's quality. Moreover, they hosted design workshops that allowed us to explore the artistic field of design as well. This activity strongly supports the "Educational Support" ROI benefit by offering our team hands-on experience in the design process and developing creative skills that are essential in STEM. The design workshops provide a platform for learning and creativity.



Figure 5.4: Design help from Synapse

### Gulmehar x Photon

**Skills:** Marketing

**Sponsor Type:** Growth

We collaborated with Gulmehar, an NGO that uses sustainable flowers and employs women to create Diyas. We asked them to make Photon Racing Diyas, which we gave to some of our stakeholders.



Figure 3.5: Diyas

The stakeholders were very happy to receive these Diyas and it helped develop the trust needed between members.

# Digital Media



## Our Design Process

From what we understood, we realised F1 in schools had a target audience across age groups and across people. However, each group had a different set of expectations and had a different method of viewing the platform. Attached below is a short table that summarises how we encouraged:

Age Group	Content
Teenagers (13-18) years old	Quick and engaging posts like Instagram stories videos that highlight efforts, trends, or key moments, making the message easy to share and engage with.
Adult (21-30) years old	Regular updates to keep our work on top of mind for our audience. They included facts, and behind-the-scenes glimpses.
Parents (30-55) years old	In-depth posts or videos, that explained our efforts in detail. They also highlight our sponsorship ROI,
Grandparents (55-70 years)	Combined detailed content with personal interaction. We had in-person discussions about our initiatives.

Figure 6.1: Target Audience Chart

Digital media was a space where we could combine everything about ourselves—our identity, our marketing, and our sponsorships. We selected specific segments from each aspect and posted content on social media accordingly.

## SMART Goals

### Specific:

Growing our social media following by sharing engaging content that highlights our F1 in Schools journey. Enhance our team visibility with regular updates, behind-the-scenes insights, and consistent, high-quality posts. We did this through the help of our graphic designer and understanding various creative designs.

### Measurable:

Our goal is to grow our Instagram following by gaining 500 new followers over the next three months. We aim to achieve an average of 200 likes and 50 comments per post, maintaining engagement by posting a minimum of four times per week

### Achievable:

We will work closely as a team to create a well-structured

content calendar, ensuring consistency and quality in our posts. By using hashtags effectively and actively engaging with the F1 in Schools community and related accounts, we aim to broaden our reach and strengthen our presence within the community.

### Relevant:

We aim to enhance team recognition and attract potential sponsors by showcasing our progress and achievements. By building a strong online presence, we can share our journey, inspire other students interested in STEM and F1 in Schools, and highlight the impact of our efforts.

### Time-bound:

We will implement the social media strategy starting next month, with monthly reviews to track progress and adjust as needed.

## Choosing our Platform

While choosing our platform we took made some careful considerations on how to choose what. This is because we had limited resources and time to have a cross platform posting segment

### Step 1: Identify Key Factors

#### User Base:

Large (3 points), Medium (2 points), Small (1 point)  
Analysed on: Target audience

#### Engagement:

High (3 points), Medium (2 points), Low (1 point)  
Analysed on: Number of active users

#### Content Type:

Supports your preferred content (3 points), partially supports (2 points), does not support (1 point)  
Analysed on: Posting options

### Step 2: Rate Each Platform

We rated each social media platform (e.g., Facebook, Twitter) on these factors and sum the Points

To start, we looked at different platforms and how they needed to be implemented. Afterwards, our head of marketing conducted research on the various types of platforms and created the table attached to the right. Therefore, our final choice ended up being Instagram, Twitter, YouTube and Website. However, due to time constraints, we were only able to focus on Instagram and YouTube. Instagram is where we established a visually impactful presence aligned with our team's branding and goals. On hindsight, it would have taken minimal effort to repost the information on twitter. We should have also explored the band categories of LinkedIn which would have helped us with sponsors.

Platform	Userbase	Engagement	Content Type	Total
Twitter	3	3	2	8
Facebook	2	2	2	6
Instagram	3	3	3	9
YouTube	3	2	2	7
Website	1	1	3	5

Figure 6.2: Platform choosing methodology

## Choosing our Method of Posting

While choosing our method of posting we took made some careful considerations on how to choose what. This is because we had limited resources and time to create various methods of posting content. We also wanted authentic and high engagement content which would be relevant in that moment.

### Longevity:

Short-term (1), Medium-term (2), Long-term (3)

Analysed on: How relevant the content will stay

### Format:

Text (1), Image (2), Video (3)  
Analysed on: The format itself

### Reach:

Low (1), Medium (2), High (3)  
Analysed on: How many people will be seeing the post

Platform	Longevity	Engagement	Format	Reach	Total
Reel	3	3	2		11
Story	2	2	2		8
Post	3	3	3		6

Figure 6.3: Content choosing methodology

Therefore, through this method we were able to incorporate a priority list on how each method had to be posted. Moreover, that's how we divided our team and ensured that we were getting the necessary engagement from each segment. The order is as follows: Reels, Stories and Posts. We finally thought about analysing articles and other sorts of media. However, our efforts were not completed.

# Digital Media



## Website

Our website was an important element that we focused on. In terms of target audience, the website was more for the elderly and adults. The website served as a medium for our sponsors because the information present on the website was created with the information being presented formally, contrary to what was being posted on other social media platforms such as YouTube. The website covered information on sustainability, innovation and engineering and served as a medium for us to formally introduce ourselves. It helped us provide information to the public about the general progress we are making as a team.

### Linkage to SMART goals:

The website aligns with our SMART goals by serving as a comprehensive information hub that supports our broader visibility efforts. While Instagram and YouTube are our primary platforms for frequent, visually engaging updates, the website provides a stable repository for formal content aimed and those interested in our team's long-term journey and impact in STEM.

### Platform Analysis:

Despite scoring lower, the website was chosen for its strategic role in conveying detailed information that complements our social media efforts. Its unique positioning allows us to target sponsors and an older demographic which enhances our credibility



Figure 7.1: Pictures of our website

## Instagram

### Moment Marketing

By building on topical moments and trending topics, we were able to build a higher reach and target a wider set of people including those whose interests go beyond Formula 1. This helped us with 2 things: first raising more awareness of who we are and gaining more support and second staying connected with real life events. We did this by posting stories when we thought it was most relevant, like paying tribute to Jules Bianchi, highlighting Danial Ricciardo, and sharing funny memes and reels. Additionally, we updated our audience regularly on race and competition news and celebrated events outside the F1 world like Independence Day and Diwali to keep our content interesting.

### Instagram Ads

Since Instagram had our main audience, we decided to leverage that social media the most. We posted short form content like reels to catch attention with our target demographic. One of the most important reels in our journey was the fundraiser video, which we turned into a reel. We allowed it to gain traction for 3 weeks before we boosted the post to increase reach. Originally, it had 903 views, however, after we boosted it increased to 11091, an increase of 10188 people, or a 1128% increase in reach. We also got more clicks on our fundraiser, where we got 410 visits. Furthermore, our own post on our NDTV interview got 2223 views, with 46% non-follower interactions. However, our interview with NDTV allowed us to get 36400 views, as we were posted on their account with their 3.2 Million Follower account. Even more encouraging was that the one-on-one interview with our only female member also gave us 23200 more views, further boosting our reach.

### Competitor Analysis:

Studying successful social media accounts of other F1 in Schools teams and STEM organizations led to us identifying effective strategies such as using trending audios and following popular trending reel templates to gain more traction.

### Linkage to SMART goals:

Instagram is a perfect match for our SMART goals, almost as if they were crafted with this platform in mind. Its extensive user base and high engagement allow us to pursue specific, measurable growth targets, such as gaining 500 followers in three months and averaging significant interactions per post. The platform's visual and interactive features, like Stories, Reels, and Carousels, support our goal of consistent, high-quality content that showcases our F1 in Schools journey. It is the backbone of our engagement.

### Platform Analysis:

Instagram was the only platform which scored 9 out of 9 point because of its usability and appeal to all target audiences. We realised Instagram was the only place where our engagement was the most and we should have posted more on Instagram to boost our platform appeal.

### Our posts on Instagram



Figure 7.2: Instagram posts

### Instagram analytics

The primary audience is concentrated in Gurugram (42.2%) and Delhi (38.8%), with minor representation in Bangalore and New York. This indicates a strong local following in India.



Figure 7.3: Instagram Analytics

Action: Ensure that all digital media has strong local presence. Due to the urban nature of these Tier 1 cities, we realised we could have also highlighted some global talking points as well.

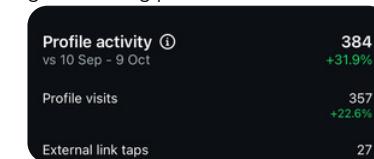


Figure 7.4: Instagram Analytics

There's been a slight decrease in profile visits (down by 18.3%) and a minor number of external link taps (24), indicating that while people are

viewing the profile, fewer are taking the next step to engage with linked content.

## YouTube

Our YouTube channel was a platform we initially dedicated relatively little time

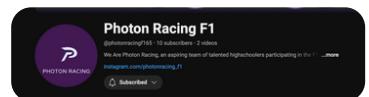


Figure 7.5: YouTube Channel

to, which prevented us from developing it effectively. We primarily used YouTube for posting long-form content; however, we later realized that we could have also leveraged YouTube Shorts to share the same reels. Additionally, YouTube helped us maintain sponsor engagement, as it became the home for our podcasts and interviews. Our NDTV interview was also posted there, which significantly contributed to our goals.

### Linkage to SMART goals:

YouTube connects with one specific goal of maintaining sponsorship engagement.

### Platform Analysis:

Even with low platform analysis, we had to post on YouTube for sponsorships.

## Challenges

We faced quite a lot of challenges in digital media due to limited time and not allocating resources properly. Moreover, a major stream, Tik Tok is banned in India.

# Sustainability



## Our goals, Our work and Our Vision

### Our Vision:

Sustainability is at the core of F1's mission: to become a carbon-neutral organization by 2030. This goal is of great importance to us, and we've embraced it in every aspect of our team.

Sustainability for us extends beyond simply reducing carbon emissions; it involves building partnerships and conducting our work around the principles of environmental responsibility. These values are also foundational to Photon Racing (see Page 4, Marketing). Here's how we approached sustainability across different segments to establish ourselves as a sustainable team:

### Our Collaborations:

#### (Understanding)

##### Collaboration with MYNZO:

MYNZO, which stands for "My Net Zero," was our first sponsor, underscoring our commitment to sustainability. Through MYNZO, we accomplished two things:

1. We gained access to a carbon footprint calculator. — This was a session led by MYNZO experts on carbon calculation (Sponsorship page) and exploring how this could be scaled to benefit our team.
2. Through a podcast, we learned what sustainability means on an individual level, then expanded to understand its impact on sporting events and how MYNZO could support F1's broader goals.

This session was highly informative, showing us that sustainability goes beyond simply planting trees.

### Our Work:

#### (Implementation)

##### Crowdfunding Campaign:

Our crowdfunding campaign had a twofold purpose: raising funds and planting trees, with the proceeds allocated to tree planting to completely offset our footprint. After the campaign ends, following the competition, we will update our social media (@photonracing\_f1) with progress on the trees planted.

### Virtual Meetings:

To further reduce our carbon footprint, we conducted our meetings online, minimizing travel associated with in-person gathering.

### Dashboard:

#### (Understanding)

We had a session with representatives from the Million Miyawaki Foundation.

#### (Implementation)

One of our team members decided to take it further by developing a dashboard for them. The dashboard tracks all the trees planted and the donations received for the initiative.

## Our sustainable practice

The primary focus of our competition was the creation of the car design and how to leverage its sustainability to our advantage. It also involved the aspects related to sustainability. After the car design, the process that would take the most effort was the pit display, which served as a key area for incorporating our sustainability efforts. We have used these two case studies to understand how we could have been more sustainable.

Before we began any sustainability work, we wanted to create a lifecycle for sustainability. Through this lifecycle's circular flow, we aimed to

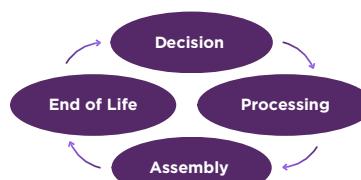


Figure 8.1: Design flowchart

identify areas where the team was lacking in sustainability and how we could improve. This approach proved influential, as it helped us easily recognize our shortcomings and how we could improve as a team. Attached below is the case study for car manufacturing and the pit display. We should have conducted more analysis for other deliverables.

## CAR MANUFACTURING

1. Material Selection: We chose Polyurethane and Polyamide 12 for their strength and durability. However, their production and disposal processes have environmental impacts.
2. Processing: 3D printing allowed us to minimize waste by using only the material necessary for each part.
3. Assembly: During assembly, we faced challenges regarding the use of potentially toxic materials.
4. End of Life: The end-of-life disposal of materials, particularly those with limited recyclability like Polyamide 12, presented a sustainability challenge

### Steps we took?

To avoid producing excessive physical prototypes, we utilized CFD simulations extensively. This allowed us to refine the car's shape virtually, testing for aerodynamic efficiency without repeatedly printing new models.

### What should we do?

We should focus on enhancing our sustainability approach by using bio-based PA 12, which has a lower environmental impact. Additionally, we should select adhesives that are not only easy to recycle but also eco-friendly, further reducing waste and supporting a more sustainable design process.

## PIT DISPLAY

1. Material Selection and Processing: We chose flex board for its durability and recyclability, making it the most sustainable material option.

2. Assembly: For assembly, we selected adhesives that allow for easy disassembly, ensuring components can be reused or recycled. Energy-efficient lighting, such as LED and solar lights, was incorporated to reduce energy consumption.

3. End of life: At the end of its life, the display can be dismantled, with all parts recycled or disposed of responsibly.

### Steps we took?

We chose flex over other materials because we realized it offered the most efficient and easily manageable recycling process. We also decided to use energy-efficient lighting, such as solar lights and other sustainable sources, to ensure reliable and eco-friendly operation.

### What should we do?

We wanted to opt for digital displays over printed posters to reduce waste, and ensure components are easily dismantled for future reuse. To boost sustainability in our pit display, we should have considered using recycled materials for construction, eco-friendly paints, and reusable elements like modular frames.

## Our sustainable practice

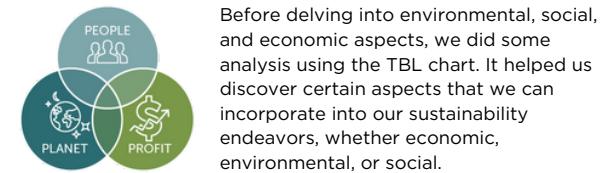


Figure 8.2: Triple bottom line chart analysis

**People (Social Impact):** We wanted to engage and empower our team and the community by promoting F1 in schools education,

**Planet (Environmental Impact):** Through the help of Mr. Abraham (CEO of Mynzo) we understood different sectors of environment sustainability. The first thing he told us to focus was on the basics: 3Rs and different carbon capture techniques.

**Profit (Economic Impact):** We took help from our parents to understand economic sustainability. We wanted to optimise resource allocation to keep costs low while maintaining high standards. We wanted to develop strong partnerships and target sponsor on aspects including CSR.

# Sustainability



## Environmental Sustainability

Before we started implementing any ideas, we decided to create a cost and time chart to decide on action plans for environmental sustainability. With the TBL approach and the we decided on three actions that we would take as a team to ensure we are environmentally sustainable.

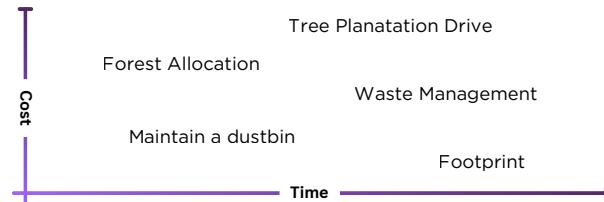


Figure 9.1: Environmental Sustainability Graph

### Creation of Our Footprint Tracker and Tree Plantation Plan:

With the support of our sponsor, we developed a footprint tracker to estimate our carbon emissions. This tool predicted that we would release 8 tonnes of carbon during the competition. Our ambition is to be a team that promotes environmental continuity, so after the competition ends, we will initiate a tree-planting drive to further reduce our carbon footprint.

ACTUAL	Material	Units	Quantity	kgCO2 emissions
	Polyurethane	gm	102	0.83
	PLA	gm	45	0.05
	Stainless Steel	gm		0.00
	Nylon	gm		0.00
	Acrylic Sheet	gm		0.00
	Primer	ml	80	0.08
	Paint	ml	500	1.36
	Ceramic	gm	9	0.01
	PEEK	gm		0.00
	Decals	gm	7	0.00
	Flex Boards	gm	120	0.00
	Monitors 90W	Q	2	0.00
	Solar lights	W	120	0.00
	CO2 Canisters	Q	8	0.40
	Flight8E83	Q	10	3,040.00
	Flight8E84	Q	10	3,040.00
	Zbedroom	Nights	7	1,755.60

### Forest allocation:

With the help of our sponsor, we calculated the number of trees needed to offset our carbon emissions. Instead of organizing our own tree-planting drive, we partnered with the sponsor to allocate a section of a forest specifically for us.

### Waste Management:

Our Head of Enterprise worked closely with the project management team to identify and manage resources efficiently, minimizing waste. For example, all food waste from meetings was composted, creating a small 'photon racing' compost supply.

## Social Sustainability

Like what we did in environmental sustainability, before we started implementing any ideas, we decided to create a cost and time chart to decide on our action plans. With the TBL approach and the chart, we understood the action we needed to make the best impact for the people of the planet.



Figure 9.2: Social Sustainability Graph

### Mentoring two kids about F1 in schools:

As a STEM team from India, we realized we could serve as an inspiration to many students. To achieve this, we hosted mentoring sessions for two kids from our community, introducing them to F1 and sharing details about the competition. We provided individual tutoring, meeting with them bi-weekly and covering topics from manufacturing to project management. Our goal is for one of these teams to reach the global finals.

### Supporting local business:

We received sponsorship from two local businesses: Beeta, specializing in manufacturing, and Drop, our uniform provider. Both played an influential role by sharing their experiences and aspirations as local business owners in India.

### Diya Purchases:

As the festive season of Diwali was ongoing, the Yash foundation were painting Diyas, which were to be given away, free of cost. Photon racing decided to take matters into their own hands, and have pledged that 100% of our project profit will be donated to the Yash foundation.



## Economic Sustainability

Like what we did in environmental sustainability, before we started implementing any ideas, we decided to create a cost and time chart to decide on our action plans. With the TBL approach and the chart, we understood the action we needed to make the best impact for the people of the planet.



Figure 9.3: Economic Sustainability Graph

### CSR session:

Before diving into economic sustainability, we wanted to better understand the term 'Corporate Social Responsibility' (CSR), which is frequently used by corporations. Since we are running our team like a corporation, we decided to have a session on CSR to learn more about its significance. We explored what CSR initiatives look like in large companies like Microsoft and discussed potential events we could host. Unfortunately, due to time and cost constraints, none of the suggested initiatives were feasible to implement.

### Resource management:

Resource management was linked with waste management. For our resource management, everyone was responsible for updating a document that tracked the number of resources used and the types of materials. We named this the Photon Racing Inventory. Whenever someone needed something, instead of focusing on buying new materials, we checked the inventory and either ordered what was missing or used what we already had.

### Sponsorship:

We ensured cost efficiency by securing both in-kind and monetary sponsorships for products and promotions. This approach not only helped us manage expenses but also allowed us to focus on our sustainability goals. By emphasizing CSR in our team's mission, we were able to gain quicker support from companies that share those values. This alignment with CSR principles made it easier for us to attract like-minded sponsors who were enthusiastic about contributing to our cause.

# Pit Display



## Our Design Process

Our team's trade display represents our vision and identity, and this mentality guided the design process. The first step was identifying a design flowchart and following it step-by-step. Through the design cycle, we focused on five key aspects: ensuring strong design concepts, incorporating sustainability, leveraging marketing strategies, engaging sponsorships, and utilizing digital media to enhance our presence. Each element was carefully integrated to showcase our commitment to both innovation, sustainability and engineering. Attached below are the details of our design process and how we executed it to align with our team's values and goals.



Figure 10 .1: Design process

### DESIGN CONCEPTS

#### Colour Scheme & Typography:

We chose a colour palette of purple and white with typography that reflected our team's identity and align with our branding goals.

#### Graphics & Layout:

The layout was designed to maximize visibility and ease of interaction. We incorporated dynamic graphics to engage visitors

#### Lighting:

Strategic lighting was used to highlight key elements of the display, ensuring visibility from all angles and creating an inviting atmosphere that draws attention to important features.

### TEAM IDENTITY

**Merchandise:** We created eco-friendly merchandise to promote our team and encourage visitor engagement. ensure the sustainability of our trade display.

**Interactive Elements:** We incorporated interactive elements, such as touchscreens to enhance the visitor experience and create an immersive connection with our team's journey and achievements.

**Brand Engagement:** Through clear and consistent branding, our trade display encouraged visitors to engage with our team. We showcased our uniform and used various brand features to showcase the design

### TIME CONSTRAINTS

With limited time, we realized that developing our portfolios correctly and creating engaging pit display content were both essential. To tackle this, we assigned our Chief of Graphics, Sieya, the responsibility for creating the necessary deliverables. Our focus centered on innovation, emphasizing our brand value: simplicity through "jugaad" while ensuring functionality. We achieved this by incorporating VR elements to highlight entrepreneurship and developing an interactive game. Given more time, we would have refined the design further to make it truly unique.

### SPONSORSHIP

**Sponsor Logos:** We ensured that sponsor logos were displayed prominently on our trade display, ensuring they received maximum visibility.

**Sponsor Benefits:** Our sponsors received significant brand exposure through our trade display, as they placed various items for their company on display

### Design vs Actual

This image is a hand-drawn version of our pit display. We envisioned this as the look we wanted for our World Finals pit display, so while designing it online, we focused on making it as realistic as possible.



Figure 10 .2: Hand Drawn Design

Every detail, from the colour scheme to the layout, was carefully planned to create a cohesive and professional appearance. As a result of this thoughtful planning, our actual pit ad display closely matches the drawing. This alignment between the design and the final product ensured that we were able to create a visually appealing and functional display that effectively represented our team's identity and values. Finally, some of our design inspiration came from other world-winning files.

### Packaging and Materials

We realized that new regulations would complicate the transportation of any new pit display materials. Therefore, before printing any content, we carefully reviewed the regulations, including weight limits, and planned accordingly. This helped us develop an effective strategy, allowing us to create a baseline pit display using this approach. Finally, we ensured that our materials and packaging incorporated sustainable elements, which are highlighted on the sustainability page.

### Innovation (User experience):

#### Manufacturing Jig:

We showcased a manufacturing jig as part of our pit display to bring an aspect of your engineering process to the competition. This element will allow visitors to gain insight into the precision of our project and highlight the technical skills of the competition.

#### Immersive Video Experience:

To create a dynamic and memorable experience, we incorporated an immersive audio-visual element. By using headphones with surround sound, visitors can dive into either our crowdfunding video or the Photon Dash game. This setup engages our audience to experience the brand's story in an interactive way. Additionally, we collaborated with Vir(our friend) for a customized music composition that enriches this experience

### Entrepreneurship:

#### HP - Reverb:

Incorporating HP Reverb in the POS display emphasizes a partnership with a well-known tech brand. Its high-quality virtual reality capabilities can enhance the immersive experience of our pit display. For the sponsor, it could also be an introduction to a great market.

#### Athena Ivy Playbook:

Featuring the Athena Ivy Playbook in our POS marketing adds an educational dimension to the display. It is something of interest to the sponsor as well because it covered their market group and helped us advertise them successfully.

#### Yash Diyas and Gulmeher Diyas:

Including Yash Diyas and Gulmeher Diyas brings a local element to the display and supporting sustainable entrepreneurship. These Diyas not only highlight a connection to local artisanship but also reinforce a commitment to social responsibility and sustainability. They can serve as a unique, tangible takeaway or souvenir.

### SUSTAINABILITY

**Environmental Responsibility - Bonsai Tree:** A bonsai tree in the display serves as a living symbol of environmental conservation, representing our partnership with MYNZO. The bonsai is a powerful representation of growth and ecological awareness.

**Waste Management - Dustbin:** We included a dustbin in the display to emphasize the importance of proper waste disposal and cleanliness. We believe this reinforces our commitment to a clean and sustainable. It also subtly reflects our team's brand values of attention to environmental details.

