

ENTERPRISE PORTFOLIO
F1 IN SCHOOLS™ WORLD FINALS
AUSTIN, TX 2016

 INFINITUDE



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NICOLE KASCAK
Team Manager

Nicole has been a team manager for the past 3 years and truly understands the meaning of organisation. She is a driven leader that undertakes all her tasks in a professional manner as well as helping to drive the team forward.



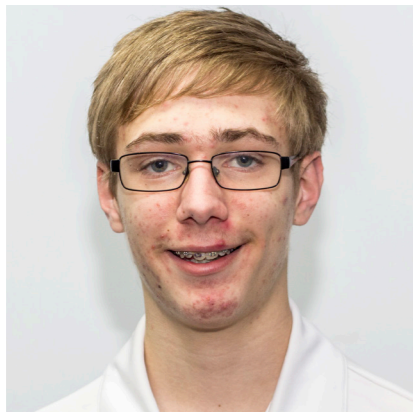
JESSE STEVENS
Design Engineer

Jesse is a passionate member of the team who applies his upmost effort in engineering the Infinity world finals design. He has a wealth of knowledge that will provide Infinity with the best car they can put forward.



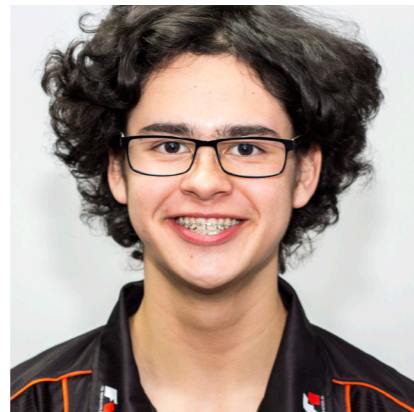
JOEL BRIGHT
Marketing Manager

Joel strives to achieve the best possible outcome for the team in his role of Marketing Manager. His expertise in public speaking and overall morale, provide him with an adequate skills set to take on the World Finals and bring Infinity to glory.



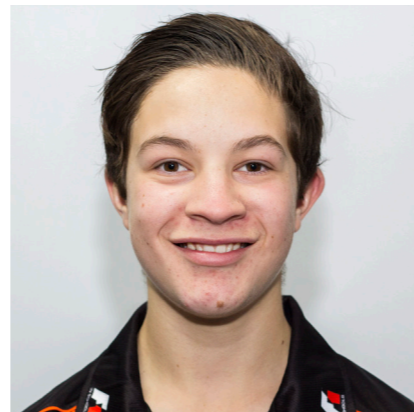
LUKE BATTJES
Innovations Engineer

Luke is always striving to do new things to achieve the best possible end result. He is very committed to producing a car that's not only fast, but filled with emotion that will blow the rest of the competition away.



PETER RUSSELL
Graphic Designer

Peter's role in the team is to create and incorporate the Infinity brand into all of the team's work. His British eye for detail proves to be an irreplaceable merit for the team.



WILL CLIFTON
Structural Engineer

As Structural Engineer, it is Will's primary responsibility to design and build the team's Pit Display for the World Finals. Will liaised with different industry partners to complete the construction to the highest possible standard.

COLLABORATIVE SCHOOLS

BRIGHTON SECONDARY SCHOOL (BSS)

Brighton Secondary School is a co-educational school located in the beach suburb of Brighton in South Australia. BSS has a long standing history in the F1 in Schools™ Technology Challenge, with 3 teams previously making it through to the World Finals. One of the most prestigious teams to come from BSS is Cold Fusion, who gained the title of 2012 F1 in Schools World Champions. BSS has one of the most reputable F1 programs in the world and is highly regarded as one of the world's best at providing enhanced STEM learning for all of its students.

ST BEDE'S COLLEGE

St Bede's College is a Catholic College located in the coastal suburb of Mentone, Victoria. The school is relatively new to F1 in Schools™ and is currently developing the opportunities of success, with the school's first team to compete at the National Finals proceeding straight through to the World Finals. St Bede's College is extremely proud of Infinity and what it has been able to achieve and hopes that this competition brings a new light to STEM education.

NAME BACKGROUND

The team began by researching a multitude of words that had connotations to motorsport (e.g. fast, determined, etc.) A theme began to emerge that struck a chord with the team: words relating to infinity. This appealed to the team as it embodied their values of being fluid and dynamic. One of the variations was Infinity, meaning having endless qualities. The team settled on this name as it was seen to have limitless possibilities.

GOALS

The definition of a goal is, "An observable and measurable end result having one or more objectives to be achieved within a more or less fixed timeframe." (Business Dictionary, 2016.) The team understood the importance of applying goals to every task to apply consistency, organisation and a standard of excellence to all tasks completed by each team member.

Goals that we set out to achieve throughout the project were under 5 key areas: project management, finances, marketing, graphics and engineering. You can see the team's goals and our evaluation of them on page 11.

VALUES

Strong values are at the core of Infinity and are what help drive the team on the road to success. These values help the team members work together, progress and aim for the best in an efficient and consistent way. It is a key aim of Infinity to reflect these core values in all tasks.

- Honesty
- Boldness
- Trust
- Freedom
- Team Spirit
- Modesty
- Fun
- Fluidity
- Integrity

SUPPORT MEMBERS

MICHAEL WALKER

Michael is a long time F1 in Schools participant that has contributed to the graphic design elements of the competition. Michael is very passionate about graphic design, particularly computer aided design in the field of rendering.

SUKHBIR GILL

Sukhbir is a passionate engineer that has an interest in manufacturing. He has given his expertise to Infinity's engineering team to help team members solve and innovate through collaboration techniques.

In order to successfully promote the team it was necessary to follow a clear strategy. Without having a strategy the team wouldn't have been able to keep a consistent and clear brand.

The strategy consisted of the use of 5 main areas as outlined below. These areas being: sponsorship, social media, general media, merchandise and marketing events.

SPONSORSHIP

The technique of promotion is a powerful and highly effective tool. Infitude was fortunate to have promotion at its disposal. The team's sponsors had both local, national, and in some cases international links. In turn this meant Infitude was exposed to the global community on many occasions. The promotion provided by the team's sponsors proved to be vital in their efforts to raise awareness of the Infitude brand.

One such example was in the time leading up to the competition, Re-Engineering Australia promoted the team in their newsletters which were distributed globally. Additionally, Bright's Transport and Abacus Visual Solutions, two major sponsors, promoted the team through their contacts Australia wide.

In the area of social media, the Melbourne contingent's local council, the Kingston Council, were so generous to promote Infitude through their social media page, giving many living in the area information about the project.

The opportunities industry partners gave Infitude to expand their brand through both newsletters and on social media was crucial for them to achieve their goals in marketing. Being promoted both internationally and nationwide, in addition to community initiatives, made Infitude's marketing strategy extremely strong and in depth.

MERCHANDISE

To both promote the team and showcase Infitude's excellent brand, merchandise was displayed in both gift bags and individually on the Pit Display. Merchandise was given out to judges, business associates and many individuals who were keen to see the Infitude logo on well known items.

PRIMARY MERCHANDISE



FIGURE 1: GIFT BAG

Gift Bags As an incentive for people to visit the Pit Display and become engrossed in it, the team handed out gift bags. Inside the custom branded gift bags were four custom merchandise articles as well as a team brochure and business card. The belief behind giving each individual a gift bag was that each individual could have a lasting memory of the team's brand and remember the team after the competition.

SOCIAL MEDIA

The use of Social Media has helped the team connect with its followers, regardless of whether they are in Adelaide, Melbourne, or elsewhere. Platforms including Facebook, Twitter, Instagram and Snapchat have ensured the team was able to connect with audiences of differing demographics.

FACEBOOK

The Facebook page ensured that the team could reach the widest range of demographics. Text based content accompanied with photo or video content relating to the activities undertaken by the team were shared on the page. The launch of Facebook Live in early 2016 provided the team with a unique opportunity to connect with followers instantly. This platform also served as an outlet to promote the team's sponsors to the 500 followers of the page.

TWITTER

The Twitter account served as a way to connect with other teams and stay up to date with how fellow competitors were progressing. This platform also served as a tool to promote sponsors.

INSTAGRAM

Instagram provided followers with visual content. On this platform, the focus is more on the composition of the visual content rather than the written text that accompanies it, unlike Facebook and Twitter. The platform is primarily dominated by the younger age demographic, so this was taken into consideration when planning content to publish.

SNAPCHAT

With a growing user base, it was hard to ignore social media giant Snapchat. Here, the team could target the under 20 age group, primarily comprised of their peer groups. The team utilised the platform by showcasing events they attended and behind the scenes activity almost in real time, posting photos and videos of the team available for followers to view.

Candy Candy was one of the team's more innovative marketing ideas and was a real eye catcher when it came to attracting public interest. The candy produced has the Infitude logo on it and is considered to be primary merchandise due to the fact that the presence of it is visually appealing and will bring more people over to the booth.



FIGURE 2: CANDY

SECONDARY MERCHANDISE



FIGURE 3: USB

USBs After detailed research, the team saw the best way to incorporate their brand into secondary merchandise was to market customised USB's which showcased the Infitude logo and are appealing for the user. The USB's were a hit with many business professionals taking the item due to it being required in day to day business.

MEDIA

RADIO

The team was privileged to work with ABC Radio and Spencer Denny to have a 10 minute long interview, where everyone in the team explained their roles and the future for Infitude. This allowed the team to have a reach over the whole of the country giving extreme exposure.

FUNDRAISING

Fundraising was not only an opportunity to raise money for team expenditure but to gain exposure. Fundraising was undertaken largely with the local rotary club, enabling the local community to get involved. The team was fortunate enough to be given opportunities to interact with the community at BBQ's. This expanded the local area's knowledge on the program and the team.

ARTICLES

Many different magazines / websites presented an interest in promoting the team. The team endeavored in contacting media companies for promotion. These platforms were usually accessible globally expanding their brand reach. Articles acted as a quick and easy promotion source.

SUPPORTERS

DR ALAN MONTAGUE

Infitude was privileged to be involved with RMIT (Royal Melbourne Institute of Technology) University lecturer Dr Alan Montague. After meeting Dr Montague at a networking lunch, the team were more than happy to take business advice from him as well as sponsorship advice. In turn, Dr Montague promoted Infitude through his wide variety of contacts including RMIT University (Royal Melbourne Institute of Technology) community which opened up doors to the team, not otherwise possible through other means. In addition, Dr Montague put forward a small donation of \$50 to the team.



FIGURE 4: PEN

Pens Pens were seen as an outstanding opportunity to showcase secondary marketing. The product clearly showed off the team's branding and backed up the Primary Marketing. Being a common item with many people, pens were a way of entrenching people at the Pit Display and giving people something to remember the team by.



FIGURE 5: KEYRING

Keyrings Showcasing an overhead view of the team's car, the keyrings were the final article of secondary merchandise.

COMMUNICATION

VERBAL

With the team being split into two small sides it was vital that there was quality communication within the small groups. There were weekly meetings that were scheduled between the two sides. These meetings were always minuted and were organised by state coordinators. A key priority was that everyday there was an update on progress and information about what tasks needed to be completed. This allowed the team to keep track of what was being done and let everyone stay focused.

PHYSICAL

It was a priority that the team spent as much time as possible physically together. Trips to Adelaide and Melbourne were bi-monthly and were spent primarily on team bonding and doing work that would have been difficult over electronic communications. These trips greatly advanced the team bond as well as developed critical relationships with team supporters. With the whole team staying together an optimal amount of work was achieved and greatly outweighed the costs involved with travel.

ONLINE

Skype The most effective way to run weekly meetings was through an online communication program. By using the video call feature on Skype, the team was able to have weekly face to face communications during full team meetings. Skype’s high resolution meant that visual evidence of progress that had been made could be shown to both sides of the team.

Slack When it came to written communication, the easiest and most efficient way to communicate was using an online service called Slack. Written communication during the periods when the team did not use Skype and were not together, which accounted for 95% of the time, was essential. Slack was particularly easy to use with its excellent private and team messaging section, along with its chats which were able to be created under certain headings such as ‘Marketing’ or ‘Engineering’. Without the ease of using Slack as the team’s written communication tool, the progress made from the beginning of the project would have been much different.

Trello Trello, an online project management solution, developed to be one of the most important forms of communication for the team. It was highly important that each team member understood what needed to be completed, and Trello, with its card based to do lists, made it easy to see at a glance. Trello became extremely important with the situation the team was in, with its members split in excess of 600 kilometres apart. Without a program such as Trello, the team’s organisation would have been significantly affected, however, with it, the team has benefited infinitely.

Google Drive Like any business, Infinditude needed a safe, secure and easy place to store its files, and Google Drive provided the obvious solution for this. Not only did Google Drive provide an easy way to store files but it was connected to Infinditude Mail accounts which was extremely convenient. It proved strikingly beneficial and straightforward for the team to use Google Drive throughout the duration of the competition.

DELEGATION

All tasks were required to be delegated to individuals. The team had a policy to not just assume tasks were going to be done, but organise that every task was completed by the correct individual. This system meant that every little job would be done on time and correctly.

RESOURCE MANAGEMENT

Resource management meant not only looking after monetary resources but also physical resources. When monetary support was received or in kind sponsorship it meant that the team had to manage everything for optimal economic benefit. Every choice made by the team had to be carefully thought about, not just individually, but primarily as a team.

RISK MANAGEMENT

There were going to be obvious risks when the team started on their journey. In order to cope with them best a plan was needed for any relevant issues. By naming problems that might arise, a solution was given as well as a rating. By doing so the team were able to comprehend them, along with putting them into perspective. Working with F1 in Schools World Champion Jane Burton, the team was able to put in place measures for optimal elimination of issues. By having these tables in place it enabled guidelines to be followed when issues arose as well as fix them in a timely and appropriate manner. When the team came across risks that weren’t already planned out in a chart, there was a 4 step solving system to follow.

MEMORANDUM OF UNDERSTANDING (MOU)

Being a collaboration team, at the start it was important to make roles and allocations clear. This would be a reference point that could be referred to if there was any miscommunication. The MOU was collectively written by both team parties as well as the in-country coordinator. It allocated roles, meeting times and finance allocations.

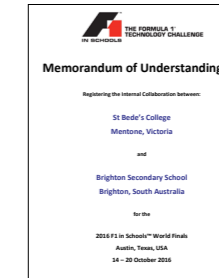


FIGURE 6: INFINITUDE MOU

1. Assess
2. Measure
3. Manage
4. Evaluate

By following these simple steps it allowed protocol to be followed as a team and eliminate risks as soon as possible.

POTENTIAL RISK	RISK RATING (10 = HIGHEST RISK, 1 = LOWEST RISK)	PREVENTATIVE MEASURES
Loss of monetary support	7/10	Spare money saved for emergencies.
Illness of team member	6/10	Communication in roles so everyone knows what task a team member is doing in case they aren't able to do it.
Unavailability of team member	5/10	A good time line that is open for breaks.
Argument within the team	3/10	Meetings as team to discuss any negative feelings the team are facing.
Loss of time	7/10	A complete schedule that incorporates loss of time.
Loss of personal commitments due to F1 time	6/10	A healthy balance of F1 commitments, School and Social life.
Loss of team member	9/10	An alternative option on who or whom can take over that individual's role.
Role Miscommunication	6/10	An easy to follow chart of every single role and whose responsibility it is.
Elements uncompleted	9.5/10	A plan of completion on when everything is to be started and finished so nothing is forgotten.

FIGURE 7: INFINITUDE RISK ASSESSMENT PLAN

FINANCIAL MANAGEMENT

At the beginning of the project, Infitude set out key areas where funding was required. This was done to ensure all expenses that were required to be covered received funding. The team split into its different divisions to devise separate budgets. This allowed the team to work more productively with finances at the beginning of the project when only potential costs were known. After combining the individual budgets, the total estimated expenses were A\$55,000. The funds Infitude required were then raised through sponsorship, fundraisers and donations.

After setting out the projected budget, the team committed themselves to being meticulous in their financial management. As a result, it was crucial that the projected budget was accurate and that they did not exceed the allocated amounts where possible in each separate section. Infitude decided on using Google Sheets to keep track of the team's revenue and expenses at any given time, as it aligned with their use of Google Drive. The team's finances were reviewed and updated on a weekly basis and additionally, all costs were approved by the team member in charge of finances. Any cost above A\$100.00 had to be authorised by the person in charge of finances before it was spent. The team set up an individual ANZ (Australia and New Zealand) bank account to have a clear way to view the funds. All funds coming in and going out went through the bank account unless an ABN (Australian Business Number) was required, in which case the team used the school's bank accounts. The skills Infitude developed in regards to financial management, particularly revenue, expenditure and the analysis required around it, enabled the team to control their finances efficiently and effectively.

QUALITY CONTROL

Quality control is the maintenance of a certain standard of quality. This came in effect for the team in project elements. It was crucial to Infitude that everything was maintained at the same quality. The team agreed to certain standards that would be met by all its members and in every aspect of the project to the best of our ability. Without this, there was the possibility of having different standards of work resulting in an overall weaker performance. A plan was enabled to ensure the criteria was met and was completed in each element. Following the plan, the idea of reviewing and assessing work was enforced properly, as well as encouraging teamwork and collaboration.

ACTION	DESCRIPTION
Plan	Decipher a plan and organisational system in line with criteria.
Do	Use the plan.
Check	Evaluate the work with another person and compare it to Infitude standards.
Act	Resolve any issues that there might be with the quality of the work.

GROUP	EXPENSE	PROJECTED	ACTUAL	%UNDER/OVER
Travel	Accommodation	\$10,000.00	\$13,523.69	+35.24%
	Flights	\$15,000.00	\$16,256.00	+8.37%
	Participation Fee	\$5,000.00	\$6,350.88	+27.02%
Marketing	Merchandise	\$2,000.00	\$2,030.00	+1.50%
	Pit Display	\$10,000.00	\$8,195.00	-18.05%
	Uniforms	\$2,500.00	\$2,030.00	-18.80%
Engineering	Bearings	\$2,500.00	\$1,765.00	-29.40%
	Manufacturing	\$2,000.00	\$245.00	-87.75%
	Testing	\$1,000.00	\$20.00	-98.00%
	Finishes	\$500.00	\$120.00	-76.00%
	Composites	\$900.00	\$300.00	-66.67%
Miscellaneous	Packaging	\$1,000.00	\$1,692.00	+69.20%
	Postage	\$100.00	\$84.00	-16.00%
	Storage	\$500.00	\$345.00	-31.00%
	Travel ADL-MEL	\$1,000.00	\$1,346.00	+34.60%
TOTAL		\$55,100.00	\$54,560.57	-0.98%

FIGURE 8: PROJECTED AND ACTUAL PROJECT EXPENDITURE (ALL COSTS IN AUSTRALIAN DOLLARS)

GANTT CHART

The team found it crucial that all time management systems were used effectively and professionally. Having systems in place allowed Infitude to successfully follow schedules therefore resulting in having adequate time and effort for each task. By researching diverse tools that previously had positive results for collaborations similar to ours, Infitude concluded that Gantt charts were the best option. Gantt charts are a series of horizontal lines that show the amount of work done or production completed in certain periods of time in relation to the amount planned for those periods. By combining progress with timelines it enabled the team to minimise different forms of human errors and unexpected issues. Incorporating Gantt charts with online technology meant we could introduce a Gantt chart that was interactive, in order to eliminate errors due to time management.

TIME MANAGEMENT

With F1 in Schools being such a time consuming program, Infitude saw it as a priority to balance our personal time correctly. With the members being at a prime age for time consuming activities such as sport and spending time with friends and family, Infitude had to look at what it meant for F1 to be a priority. The team shared ideas on this including availability and desired outcomes. This led to the production of team schedules which outlined meetings and deadlines while taking into consideration other commitments. Having this simple solution left Infitude with a clear idea of how to balance our time as well as the importance of seeing the team as a priority.

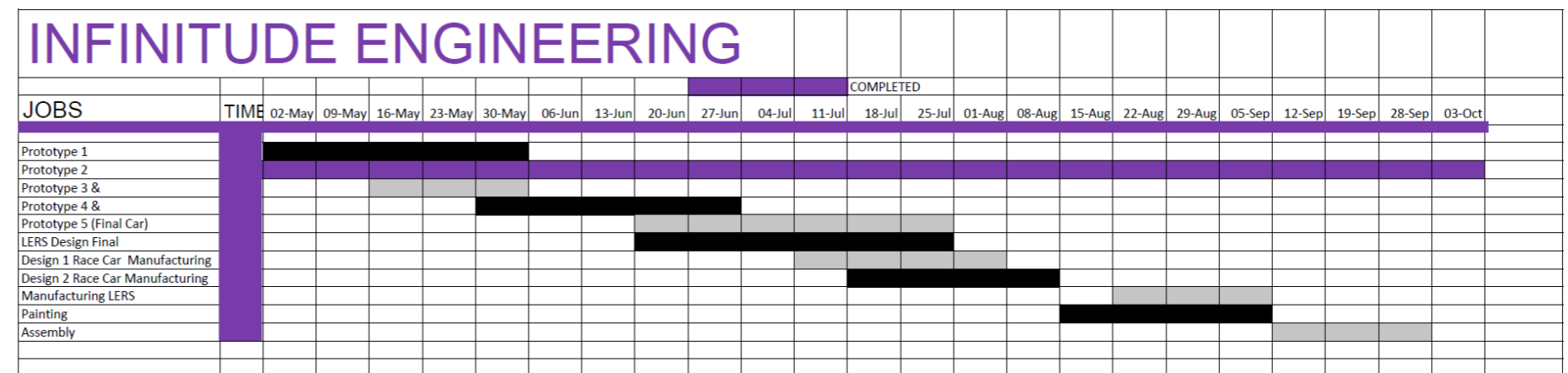


FIGURE 9: ENGINEERING GANTT CHART

TEAM IDENTITY

Team identity was crucial to the recognition of the team in virtual and real life. Team identity extended far beyond our visual appearance, including the “tone” of the team’s verbal and written communication and body language. By maintaining a strong team identity when approaching sponsors, giving presentations, publishing posts on social media and preparing written communications, it was easy to maintain a consistent and professional brand voice across all team related endeavours.

BRAND DEVELOPMENT

The creation of our brand was a lengthy process. Key considerations included team input acceptance and ease of brand recognition. Several alternative designs were presented to the team for review, until we were able to narrow down the choices. Colour ideas were also brainstormed for team’s brand. The team recognised the need to have a colour that conveyed a sense of strength and possibility. Eventually, the team settled on purple. Purple has a traditional association with high value, as in ancient times purple dyes were one of the hardest to produce, and could only be afforded by monarchies.

LOGO

Our logo is a powerful representation of the Infitude identity. It was important when developing our logo that it had to embody the team’s qualities and values of being fluid and dynamic to work around any challenges, creating a sense of infinite possibilities. To match these characteristics, it was obvious to choose the infinity symbol. This is no ordinary infinity symbol as it is comprises two distinct parts to symbolise the two teams combining into one with symbiotic aims. Whilst working in different states, the teams maintain a close link with each other, dynamically working to create a team with infinite potential. This symbol, automatically creates a link with the team name—Infitude, the attitude of creating infinite possibility. The symbol creates instant brand recognition. Words aren’t necessary to convey our team spirit and attitude.



FIGURE 13: EARLY DESIGN CONCEPT



FIGURE 14: PROGRESSION OF INFINITY SYMBOL

UNIFORM DESIGN

For the World Finals, Infitude has outfitted each member with three uniform variations: casual, racewear and formal. The team believe that it should have a strong presence and therefore needs to create a visual reminder of a team that is together to achieve in all situations whether travelling, competing or attending formal occasions.

The casual attire is comprised of a screen printed, short sleeve shirt. This shirt is for when the team requires identification but does not require the practicality or formality of the racewear or a formal shirt. Such situations include travel and eating out.

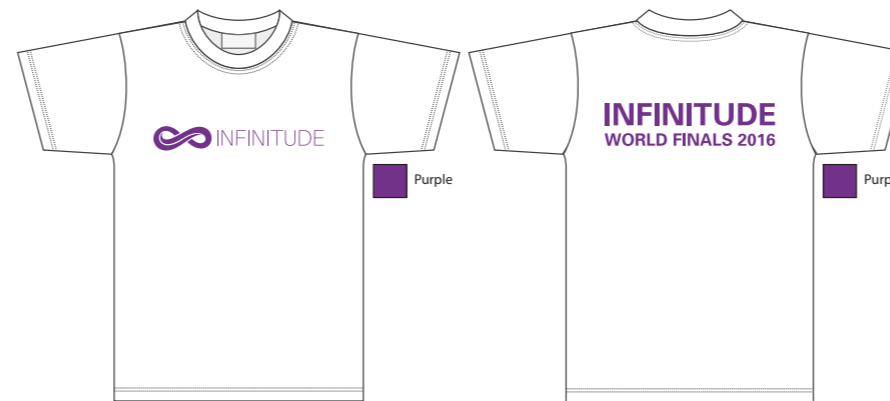


FIGURE 10: CASUAL SHIRT MOCKUP

The racewear uniform is comprised of a sublimated, short sleeve shirt and black trousers. The shirt includes the logos of all sponsors that are entitled to placement on our racewear shirt as per sponsorship arrangements. Our highly regarded sportswear partner, Captivations, were able to design and manufacture high quality racewear shirts for the World Finals. The design creates a strong presence and conveys a strong brand presence.



FIGURE 11: RACEWEAR SHIRT MOCKUP

Our formal uniform is made up of a long sleeve, formal shirt, embroidered with the Infitude symbol, black trousers, and black leather shoes. This uniform is used for formal purposes such as giving presentations or visiting sponsors. Once again, the use of this attire is to convey a strong presence and help sponsors and other key stakeholders see our professionalism as a team.



FIGURE 12: FORMAL SHIRT

BRAND GUIDE

It was important that we were able to apply our brand consistently across both print and digital media. To assist in this, the Infitude Brand Guide was created in order to ensure the consistent usage of our brand assets used external parties to the team.

The document contains information relating to the placement, colouring, minimum whitespace, usage of the logo, as well of details of the team’s official typeface, Aileron.



FIGURE 15: CURRENT LOGO DESIGN

PIT DISPLAY

The pit display is a crucial part of the team's image. Hence the team invested much energy and finances into it.

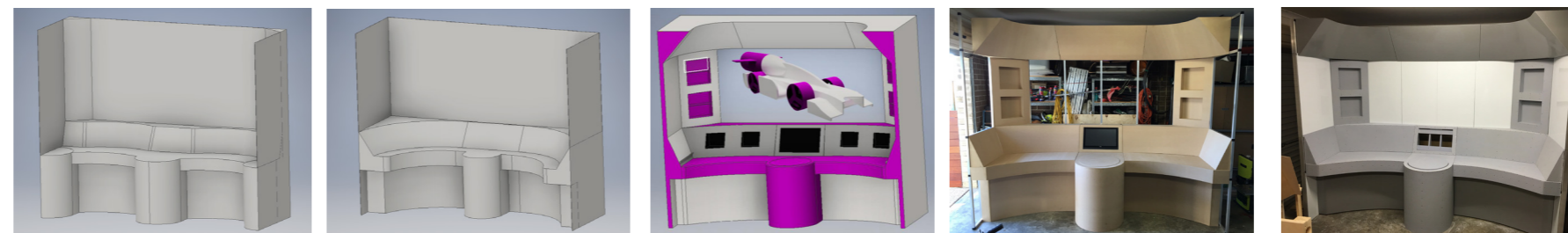
The design process commenced by establishing the key features of the display unit. The team wanted to incorporate interactive IT devices, plenty of shelf and bench space, lighting to draw attention. It was also important for the display unit to be inviting, engaging, and present information and display materials in a non cluttered manner. The team settled on the final design because it maximised display space for merchandise, portfolios and cars, in a very succinct and open manner.

Much research and deliberation went into the choice of material. The material needed to be lightweight for ease of assembly and freight, easy to work with, strong and affordable. Timber-based materials could not be considered given the restrictions for international freight.

Early in the process, the team worked with a company to manufacture the pit display out of glass-reinforced plastic (GRP), better known as fibreglass. To assist with the fibreglassing process, a full-scale prototype was constructed out of medium-density fibreboard (MDF). This created a mold for the final fibreglass construction. Unfortunately, the cost of the fibreglass was prohibitive. The time, energy and cost of the wooden prototype however would not go to waste as it provided an accurate idea of the overall look and size of the completed pit display, as well as accurate measurements for signage and packing boxes. It also allowed the team to make adjustments to various components of the pit display in order to meet shipping and handling constraints.

After further research and testing of various materials, the team decided to use three main materials for the Pit Display:

1. Aluminium tubing for the display's frame. Aluminium provided the strength to support the entire display unit, including its benches, cabinets and signage. Its durability also allowed the team to complete several set ups and dismantling qualities without wear to the frame's joints or the need for careful and slow construction given the 2-hour time limit that the display unit will need to be erected in.
2. MultiPanel, a high-density polyurethane composite material for all weight bearing components. This material is low-cost (80% cheaper than fibreglass) and lightweight (70% lighter than fibreglass). This material is environmentally-friendly, and 100% waterproof should the unit get wet or is exposed to high humidity during shipping.
3. A medium-density polystyrene foam for all the other components. This was sprayed with a thin layer of polyurethane to create a hard outer shell suitable for painting and applying strip lighting and signage. The team used foam for these components because of its lightweight characteristics and its ease to be cut and shaped with a CNC router to create the required contour.



FIGURES 16 TO 20: PROGRESSION OF PIT DISPLAY CONCEPTS



FIGURE 21: COMPUTER GENERATED RENDER OF ARTWORK



FIGURE 22: FINAL PIT DISPLAY

TECHNOLOGY

The Pit Display incorporates innovation and technologies. One such technology is Augmented Reality, enabling the projection of a 3D model of the car onto the pit display, portfolio pages and business cards. This ought to provide an unforgettable pit display experience to any visitor.

The display unit also utilises a screen that displays tweets from pit display visitors that choose to tweet a message of what they enjoyed about their experience to the hashtag *#OneTeamInfinitePossibilities*. This ought to provide added interaction, enjoyment and anticipation. A tweet will be chosen after a set interval of time and the winner given a selected product of the team's merchandise. This ought to entice people to come back time and time again.

Although foam proved to be an excellent material, there were some frustrating experiences with it. As it is a medium-density material, there needed to be extreme care when handling it for it dented, chipped or snapped easily. It also meant that extra money had to be spent on packaging materials to prevent damage during shipping. The use of polystyrene foam also meant that prior to painting, the surface would need to be prepared thoroughly with fillers and sanded to a fine finish to achieve the high gloss finish desired.

The final product was a unit the team is very proud of, creating an inviting, engaging, interactive space the team can promote itself with.

CAR

The car is the centre piece of the team's engineering and manufacturing know how. Its aesthetics and performance ought to intimidate competitors and be an expression of the team's professionalism, polish, innovativeness and endeavour to be number one. From its design and aerodynamic mass packages to the final premium surface finish, the car will exemplify the STEM elements of the competition. For more on the car, please read the engineering folio.

Sponsorship was a critical element to our team's project. Sponsorship enabled Infinitude to secure the monetary support that was necessary to fund the critical components of the project, such as flights, accommodation, pit display, etc. The team aimed to secure sponsorship from a combination of local and national engineering firms as well as reinforcing the team's already existing business partnerships. The team took an innovative but logical approach to gaining sponsorship, which proved to be highly beneficial.

APPROACH

In order to be highly profitable from approaching sponsors the team ensured they were consistent in all avenues of approaching interested companies. It was a priority they devised a sound structure in approaching our sponsors and collaborators. Below, their methodology for approaching sponsors is explained.

INITIAL CONTACT

Infinitude first approached sponsors by emailing them as well as submitting online forms, enquiring about possible funding. Following on from the email, the team phoned the company. This ensured that Infinitude was meticulous in their approach. By emailing and phoning companies the team enabled companies to have two points of contact if they were at all interested in sponsoring the team.

SPONSORSHIP PROSPECTUS

Infinitude's sponsorship prospectus was a document that gave potential sponsors a brief overview of F1 in Schools™ and what it encompassed. It presented them with an outline of the different sponsorship packages the team provided as well as details on how to contact the team. The prospectuses were distributed to companies electronically via email and in some cases via a hard copy. The document had a profound effect on Infinitude's potential sponsors as after it was distributed it had an approximate 70% success rate.

FACE TO FACE DISCUSSION

After the first contact was made with potential sponsors and the Sponsorship Prospectus had been distributed to them, some face to face meetings were held at the request of the potential sponsor. During these meetings the team discussed, in more detail what the competition was and in particular what their budget constraints and requirements were. Face to face meetings led to a successful sponsorship campaign.

SPONSORSHIP PACKAGES

Infinitude developed four separate sponsorship packages that industry partners could choose from, which was detailed in the sponsorship prospectus. It meticulously explored the return on investment (ROI) that the sponsoring company would be entitled to, with each package providing a tailored amount, all depending on the amount of funds or the worth of products provided to the team.

The four packages were:

- Gold: AU\$10,000 and above
- Silver: AU\$5,000 and above
- Bronze: AU\$1,000 and above
- Product Sponsorship (Depending on worth of products provided)

The distinct and contrasting levels enabled companies of all sizes to weigh up the benefits against their desired contribution amount and make a clear cut choice best suited to their own financial and product limitations.

RETURN ON INVESTMENT

Infinitude's Return on Investment (ROI) was developed to best suit the company who was sponsoring the team. Therefore, each sponsor received a specifically tailored return on investment based on the amount of funding and/or worth of product/s they provided the team with. For instance, the return on investment for a Gold Sponsor included a more prominent spot for the company's logo on the Pit Display and uniform, their logo was placed on the car, the company was given a thank you post on the team's social media outlets and also their logo was put in the team's brochure and on the website. Silver and Bronze category sponsors were given a similar version of this, however it was scaled down depending on the amount of funds donated or products provided.

Gold | \$10,000+

The Gold sponsorship package, the top level of sponsorship Infinitude had to offer, received the most favourable return on investment. For this level, the logo of the company was placed prominently across all project elements including a prestigious position on the car. Other elements such as the Pit Display, the team's uniform and all the team's competition documents had the company's logo on it. It was also agreed upon that a gold sponsor would have their logo on the team's website and that the company sponsoring this level would have a large presence on our social media outlets. The final aspect to the ROI for the gold sponsorship level is receiving an article of merchandise from the team, being the gift bag and also receiving a fully finished race car as a sincere thank you to the company for helping the team along its journey.

Bronze | \$1,000

The lowest sponsorship level on offer from Infinitude was the Bronze sponsorship level, where the business received a very minimal return on investment (ROI). For their generous donation of \$1,000.00, the company received a small logo on the team uniform, subject to availability. Also, as a part of the ROI for this level the company received a logo in the portfolio only and a mention on the team's Facebook page and website. As a final thank you from the team, the company taking out the Bronze sponsorship level received a certificate of thanks.

Silver | \$5,000

The Silver sponsorship, the second highest level of sponsorship Infinitude had to offer received a similar, but slightly smaller return on investment compared to the Gold sponsorship level. The logo of the company sponsoring this level received a smaller logo on the team uniform and the logo on a small portion of the team's competition documents. Also, the company was mentioned on the team's social media outlets and had a smaller presence on the team's website. As a final thank you to the sponsor who sponsored the team on this level, they received a prototype car.

Product Sponsorship

The fourth sponsorship level on offer from Infinitude was Product sponsorship. This level was chosen by many companies who were unable to offer any monetary sponsorship, but were able to assist the team with products. The return on investment for this level was negotiated between the team and the company and it all depended on the worth of the product/s given to the team. Therefore, if the product/s were of high worth, the Gold sponsorship level return on investment was given to the company, or if the worth of the product/s were low then the bronze or silver sponsorship level return on investment was given to the company.

OUR SPONSORS

National Sponsor



Australian Government
Department of Defence



SPONSORSHIP PROSPECTUS

A part of Infitude's approach to industry was to create a thorough document detailing the fundamentals of F1 in Schools™. Subsequently, the team created a Sponsorship Prospectus which outlined background information on the challenge and Infitude. In the prospectus, the team put forward the diversified sponsorship packages that the team's marketing contingency agreed on as well as their associated benefits. Additionally, Infitude incorporated an innovative section in the prospectus, where they discussed the educational purpose of the competition to the team's sponsors. There was a belief within the team that adding this unique section into the prospectus would have benefits for both the team and its industry partners. In turn, this idea would enhance Infitude's potential sponsors insight into the competition that they would be supporting, as well as further developing their knowledge as to how the competition embodies the future of education around the globe.



FIGURES 23 TO 25: SPONSORSHIP PROSPECTUS

PARTNERSHIP EVENING

At the end of Infitude World Finals journey, so many people that supported, collaborated and sponsored the team along the way attended the Industry Partnership Evening. The evening allowed the team to thank all that assisted with the project. This event included the official presentation of the team's uniform and gifts to those who contributed to the team's journey. It allowed the final good bye for the team as well as a reflection on what had been done.

TOP SPONSORS

DEPARTMENT OF DEFENCE (AUSTRALIA)

The Department of Defence (DOD), a continued supporter of the F1 in Schools™ program is a major employer of engineers in Australia. As a result they have a strong desire to employ young engineers coming from Science, Technology, Engineering and Maths (STEM) programs (of which F1 in Schools is the largest). After the National Finals, the Department of Defence was committed to supporting all those competing for Australia at the World Finals. Infitude was delighted to receive \$10,000 from the Department of Defence. The much needed funds automatically qualified the DOD as a gold sponsor. Infitude was happy to promote them through their resources.

BRIGHT'S TRANSPORT

Specialising in bulk transport services, Bright's Transport has been an avid supporter of the F1 in Schools™ program since the beginning of 2015. After approaching Bright's Transport for potential sponsorship, Infitude has had their support from the Victorian State Finals 2015 to the Australian National Finals in March 2016, all the way through to the World Finals in October 2016. Having taken out the gold sponsorship at every level of the competition Infitude is proud to have Bright's Transport as a continued industry partner.

FUNDRAISING

Fundraising was a great opportunity for Infitude to connect with the team's supporters and the local community while allowing the team to raise much needed funds. Each fundraising event was seen as an extra point of interaction where the team was able to promote Infitude and the F1 in Schools™ program. It was vital that the team represented themselves positively at each fundraising event to ensure they raised awareness of their brand.

ROTARY CLUB SAUSAGE SIZZLE

The Rotary Club of Glenelg is an international service organisation whose stated human rights purpose is to bring together business and professional leaders in order to provide humanitarian services. The team were fortunate enough to secure a position at the local shopping centre in Glenelg to conduct sausage sizzles using the Rotary Club's equipment on many occasions. The aim for the sausage sizzles was to raise much needed funds for the team. The team were successful in raising \$943.95 from these sausage sizzles. Additionally, the public event gave Infitude an opportunity to partner with many wonderful community groups.



FIGURE 26: SAUSAGE SIZZLE

BRIGHTON SECONDARY

The team, throughout the lead up to the competition, collaborated with Brighton Secondary School, a school which has actively participated in the F1 in Schools™ program for many years. The school prides itself on the fact that they have had a team win the World Finals of the competition. The team was given access to the school's sophisticated and precise CNC Routers and 3D Printers. The benefit for the team was that using these machines meant Infinitude was able to progress smoothly while running a highly complex and detailed engineering program to develop and manufacture the team's car. Not only did the team's collaboration with Brighton Secondary School entail using their facilities, but many individuals who were previous scholars and previous competitors in the program gave their time to help the team in the fields of Project Management and Engineering. Infinitude's collaboration with Brighton Secondary was vital to the team's progress, particularly in regards to engineering, as it gave the team the ability to continue their engineering development program with ease.

LEADING MINDS AUSTRALIA

Through Brand South Australia, the team attended a verbal presentation workshop held and hosted by the highly renowned public speaking company, Leading Minds Australia. Throughout the day long workshop, presentation techniques were discussed and explored in depth by Leading Minds, enhancing the team's understanding of how a sophisticated, but highly effective verbal presentation should run. Additionally, the workshop enabled the team to meet Dean Evans, the CEO of Leading Minds Australia. After speaking with Dean about the rigors of the F1 in Schools™ program, and in particular the verbal presentation the team had to prepare for the competition, he graciously agreed to help out the team. Dean worked with Infinitude for several days on the technique of the team's verbal presentation, shaping it to help create a sound structure and basis behind their content. He also helped to develop each team member's speaking skills, which ensured we were best prepared for our highly important verbal presentation. Infinitude's collaboration with Dean Evans, the CEO of Leading Minds Australia gave the team insight into how the perfect verbal presentation should run, and through his help the team enhanced their skills in the field of public speaking.



FIGURE 27: ADELAIDE CONTINGENT WORKING WITH DEAN EVANS

MERCEDES AMG PETRONAS

While collaborating with nano-fabrications specialist, Mark Cherrill from Mercedes, the engineering division of the team devised innovative ways of manufacturing the chassis of the car. During our collaboration with Mark he demonstrated industry standards, excellent manufacturing programs and tolerance on physical geometry. Not only did he demonstrate these important elements, but he also stressed to the team's engineers the importance of quality control. The team's collaboration with Mark Cherrill from Mercedes has given the engineers of the team both understanding and insight into the importance of the manufacturing process of the car, and how manufacturing has a direct impact on the design's performance.



FIGURE 28: ADELAIDE CONTINGENT WITH MARK CHERRILL

PETER BROWN

The engineering division of Infinitude had the privilege of collaborating with senior design engineer for SMR Automotive, Peter Brown, who specialises in Computer Aided Design. While working with Peter Brown the engineers were able to discuss revolutionary shape modeling tools as well as the aerodynamic principles which were important for the car. Through having these in depth conversations with Peter Brown, the engineers of the team were able to achieve ultimately what they were striving for through his experience in the field of F1 in Schools and through his knowledge of car performance. The collaboration undertaken with Peter Brown was pivotal for the team to progress in engineering, his assistance has proven to be something Infinitude benefited highly from.



FIGURE 29: ADELAIDE CONTINGENT WITH PETER BROWN

AUTODESK AUTODESK.

Infinitude collaborated with Austina Kang, the Marketing Director at Autodesk, to develop effective ways to portray the team's story as well as a well thought out method of approaching industry to gather sponsorship. With Autodesk just recently releasing its new software 'Autodesk Fusion 360' the Marketing Manager of the team saw it a prime opportunity while on a business trip in the USA to visit Autodesk's facilities in San Francisco. After meeting and discussing arrangements with Austina Kang, he set up a meeting while back in Australia to discuss ideas. Both Austina, and the team's marketing manager devised a clear plan regarding promotion of the team's story to the public, hitting at the emotive side of things to get people involved. Additionally, in regards to approaching companies, the team were recommended to approach local firms and put forward the worldly promotion Infinitude had to offer. Infinitude's collaboration with Austina Kang, the marketing director at Autodesk was vital in terms of a project outcome, particularly in regards to furthering the team's capabilities in marketing.

GOOGLE

While in the USA on business the Marketing Manager saw an opportunity to collaborate with Google to ensure the website was graphically balanced. While visiting Google he developed a contact with a Software Engineer who was able to help the team on the design of its website. With an inside knowledge of the balance required for the design of web pages, Infinitude's collaboration with Mike Gainer, a Software Engineer from Google proved essential to developing the best possible website the team was able to create.

It is an amazing opportunity to compete at the world finals. This opportunity has led to collaboration with incredible people, innovation of optimal ideas and the creation of future pathway opportunities for all team members. Infintude worked consistently and tirelessly for the last 6 months to achieve new heights. A sense of achievement and satisfaction of the quality of Infintude's efforts has been experienced by each individual within the team. Nevertheless, there were obvious issues and problems that had to be overcome this made Infintude come together in a more cohesive manner and gave the team a sense of strength and desire to succeed through any challenge.

FOCUS	GOAL	STRENGTHS	EVIDENCE	WEAKNESSES	IMPROVEMENTS
Project Management	To ensure that planning and execution of the project is carried out in a timely and successful manner by all members of the team.	<ul style="list-style-type: none"> Tasks completed on time due to the consistent use of Gantt charts by all, excellent documentation 	<ul style="list-style-type: none"> 90% of tasks completed on time 	Communication (distance between states) <ul style="list-style-type: none"> Slack (low access rate) Distance between States Time difference (e.g. misalignment of school holidays) 	<ul style="list-style-type: none"> More face to face interaction, both physical and virtual
Finances	To raise AU\$55,000 by August 2016 and to keep expenses within budget.	<ul style="list-style-type: none"> Good relationships with previous sponsors Strong Marketing strategy High level of communication Financial Records Team managed bank account 	<ul style="list-style-type: none"> 80% of sponsors retained from National Finals Prospectus utilised High volume of emails, presentations, sponsorship approaches, etc. Spreadsheet accessible by all team members Statements and online access to bank account for easy management 	<ul style="list-style-type: none"> Low Levels of Motivation during financial difficulty Low success rates when sponsors approached via email 	<ul style="list-style-type: none"> More support from all team members Consistently using various communication methods to approach sponsors, not only reliant upon email
Marketing	To promote the team's brand and raise awareness to students and industry professionals throughout the competition.	<ul style="list-style-type: none"> Brand promoted via Social Media Wide contact base Appealing to a diverse range of demographics 	<ul style="list-style-type: none"> 170% increase in Facebook followers since team launch 145 contacts in database 53% of followers aged 13-17, 46% aged older 	<ul style="list-style-type: none"> Low audience sample number Not enough business professionals approached Not enough newsletters Time Frame not adhered to 	<ul style="list-style-type: none"> Undertake more promotional events to appeal to a wide range of people Approach more business professionals Send out newsletters on a consistent basis Use more effective methods of approaching sponsors to ensure a higher success rate
Graphics	To create a brand that appeals to a wide range of audiences.	<ul style="list-style-type: none"> Professional brand created Appealed to a wide range of audiences Consistent brand 	<ul style="list-style-type: none"> 87% approval rate of brand (Market Research Survey) 53% of followers on Facebook aged 13-17, 46% aged older Infintude Brand Guide formulated 	None	<ul style="list-style-type: none"> Ongoing market research
Engineering	For the Engineering team to create a design that gains infintude the most points it possibly can in the lead up to and during the competition.	<ul style="list-style-type: none"> Quality control ensured Complies with most rules apart from breakages caused by testing results Car helps market the team effectively 	<ul style="list-style-type: none"> Virtual to Physical geometry stayed the same (+/- 0.5mm) Only designed to break rule T5.6 	<ul style="list-style-type: none"> Singular CAD program knowledge (CATIA) 	<ul style="list-style-type: none"> Look into different CAE Programs (Fusion, Solidworks)