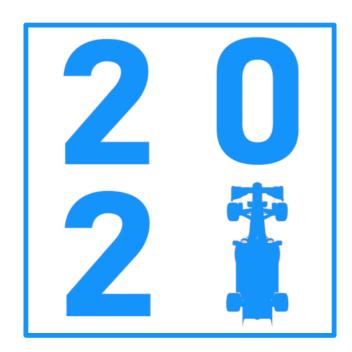


# BACKGROUND GUIDE F1 2021: RACING TOWARDS THE FUTURE



## **HISTORY OF FORMULA 1**

Formula One refers to the set of rules to which all constructors must follow. The cars are set to specifications, which reach to over 1000 pages, and must follow all rules strictly. In the past, the sport was a celebration of the immense power of race cars and its excitement. Nowadays, the sport does more than that. Not only does it continue to provide exhilarating pleasure to millions of viewers, but it also serves as one of the world's largest advertisement grounds, and provides ground-breaking technological advancements to all industries.

Teams were always inclined to propose rules that would benefit them the most. This is the key concept that all delegates must recognize. Formula 1 is a selfish sport, but collaboration is also its most important aspect. As delegates in the F1 committee, you must ensure you fulfill your own needs, while ensuring the survival of the sport (for your own benefit, obviously). The rule of thumb is to prevent the death of F1, and ensure that if a breakdown happens, that damage control is thoroughly applied to save the billion dollar industry.

Formula 1 has, interestingly, always been stuck between a dysphoria of deciding whether it is a sport or a business. In a sport, fairness is a must, and this means that regulations have to ensure that the field is as even as possible. Regulations must also not remain static, as manufacturers with better resources are bound to be able to develop their cars more. However, F1 is also a business, and Manufacturers aren't in the sport for competition. In the modern era, Formula 1 is the incubator for the pinnacle of technology, from engines to aerodynamics, and even to body armor and human survival. Thus, stifling development will stifle the progress of society and also stifle the profits of innovating companies depending on the sport to provide them with a testbed for their new technologies.

The roots of F1 racing go back to the European Grand Prix championships which took place in the 1920s and 1930s. Back then, when cars were first manufactured, the fun of racing had attracted people from all over the world to create faster and faster cars. In 1946, the rules were standardized for the first time by the Federation Internationale de l'Automobile (FIA), the current governing body for Formula One and the automobile industry. (Wikipedia)

In the early years of racing there were around 20 races held from late Spring to early Autumn in Europe. Some races counted towards the world championship, whilst other races did not count and was for entertainment or





testing purposes only. Back then, F1 was at its infancy. Meanwhile, auto racing took on the form of NASCAR and what became Indycar in North America. Auto racing became a deadly yet exciting sport viewed by millions. New technologies, such as ground effect and downforce-generating wings, were also produced. (Wikipedia)

The era of modern Formula One began in the 1970s, with a man named Bernie Ecclestone. He is widely credited with transforming the sport into the multibillion-dollar business it now is. When he bought the Brabham team in 1971, Ecclestone was given a seat on the Formula One Constructors' Association, the earliest association of Formula One teams. In 1978, he was voted as the president of the FOCA. As president of the FOCA, he was able to promote the sport and reshape how it was run, bringing us the Formula One we know today. (Wikipedia)

Previously, the circuit owners controlled the income of the teams and negotiated with each individually. This was inefficient and often cumbersome. Ecclestone realized that if the teams had worked together, the yield from the circuits would be much more efficient and teams would be able to benefit more.

Ingeniously, Ecclestone invented the modern F1 mechanism: a package which circuit owners could purchase. If they decided to purchase the package, they would only usually surrender their trackside advertisements. The revenue from the race, by agreement, would be distributed to the teams. This created the foundation of Formula One and its key aspects. (Wikipedia)

In the 1980s, F1 began to develop further. It can be argued that in the 1980s, F1 reached its pinnacle. Custom-built, turbocharged engines in the 1980s that lasted only one race were producing over 700 horsepower. In 1986, a BMW turbocharged engine achieved over 1,300 horsepower in qualifying for the Italian Grand Prix. The FIA had to curb the technological rise in prowess, and decided to ban turbocharging for then. Fuel limits were also imposed to make competition. Ground effect was banned. Cars became normal, and racing became fairer. However, some teams found other ways to dominate in the sport by developing even more technologies, such as McLaren and Williams. In response, the FIA banned active suspensions and CVT transmissions in 1994. (Wikipedia)



It is notable that the contract between F1 teams and the FIA was further strengthened during the 1980s. The teams and the FIA, alongside Bernie Ecclestone, signed the first Concorde agreement in 1981, thus finalizing the first formal agreement on revenues and regulations in the sport's history. The Concorde Agreement is a contract between the FIA, F1 constructors, and the Formula One Group. It dictates the contractual terms by which the teams compete, how the television revenues and prize money is divided, and all the other related aspects that are key to the championship. In history, there exists seven separate Concorde Agreements, all of whose terms were kept strictly secret: The first in 1981, others in 1987, 1992, 1997, 1998, 2009 and the current agreement in 2013, were all signed. This year, the next Concorde agreement will be signed. (Wikipedia)

The 1990s saw technological advances, horrible incidents, and new regulations. McLaren and Williams dominated the 80s and 90s. McLaren's partnership with Honda saw the most dominant car to date being produced, the MP4/4, winning all but one race and claiming all but one pole position in the 1988 season. Williams pioneered active suspension and the CVT gearbox, and dominated the early 1990s up until 1998, where McLaren, using Mercedes V10 Power Units, claimed the Championship with Mika Hakkinen and David Coulthard. F1 reached a golden age in terms of drivers, with drivers showing their racing prowess to the world. Nelson Piquet, Alain Prost, Nigel Mansell and Ayrton Senna all vied for the championship during that time. In particular, the rivalry between racers Ayrton Senna and Alain Prost became F1's central focus which continued until Prost retired at the end of 1993. (Williamson)

Unfortunately, Senna tragically perished at the 1994 San Marino Grand Prix after crashing into a wall on the exit of the notorious curve Tamburello. The FIA had tirelessly worked to improve the sport's safety standards since that catastrophic weekend, during which Roland Ratzenberger also lost his life in an accident during Saturday qualifying, and Rubens Barrichello became unconscious and had to be saved from choking on his tongue to his death. In response to these regulations that focused on safety, no driver has died in an F1 car until the 2014 Japanese Grand Prix, where young talent Jules Bianchi suffered a horrific head injury when he lost control of his car. In response to this horrible accident, the sport introduced the virtual safety car, which reduced all driver speeds to a certain threshold. (Williamson)

As safety became F1's number one priority, the FIA could install regulations easily that previously would have to be unanimously approved by all constructors. In 1998, the 'narrow track' era began, where cars ran with smaller



rear tyres, a narrower width, and grooved tyres. This was done to reduce cornering speeds and to produce racing. Thus began an age in F1 which regulations were king, which lasted until 2008. During this era, the V10 engine formula provided the best sound, as per most fan's recollections, ever to exist in Formula One. In 2006, the V10 was scrapped for a more efficient V8, and since a lack of rev limits made the V8 engines overly powerful, the V8 was rev-limited to 18000 rpm in 2007, and development was frozen. Traction control (which relied on reducing power to rear wheels when wheelspin was detected) was also banned, with the F1 announcing a homologated ECU to better police engine settings. (Wikipedia) Bridgestone became the sport's sole supplier of tires in 2007, and produced 2 tire specs per race, also known as primes and options. Finally, in 2009, the FIA brought back slick tyres, and in 2010, refueling was banned. In 2011, the FIA defined Modern F1 by introducing the latest innovations. (Williamson)

In 2008, the financial crisis hit, and many manufacturers were severely hurt by such a blow. Honda pulled out in 2009, leaving its team to Ross Brawn who was able to make it into the legendary newcomer Brawn F1, which won the driver and constructor championships that year. Brawn F1 became the successful Mercedes AMG Petrona F1 team today in 2010. BMW and Toyota both pulled out in 2010. Thus, the age of the privateers began, and manufacturers began to decline in influence. Pirelli replaced Bridgestone as tire supplier in 2011. In 2016, 3 tire compounds were available per weekend instead of 2. (Wikipedia)

It is also notable that, during this time, F1 redefined itself as a sport by revamping its entertainment factor. During this time, Hermann Tilke constructed many great autodromes, including the Sakhir Circuit in Bahrain, Sepang in Malaysia, Shanghai in China and also the Turkey Circuit. These modern circuits had been built with entertainment in view: most of them have giant grandstands, crazy architecture, and covered a large area. Tilke also constructed some circuits in countries that were willing to host F1, such as India, Valencia and Korea. Those circuits failed to attract a crowd and were abandoned. To this day, however, Tilke continues to build and revamp venues for countries to host F1 and ensure a grand experience for racegoers everywhere. Unfortunately, Tilke tracks are very similar in terms of design philosophy, and provide for the same type of experience. Thus, many Tilkedromes today, while being a novel design in terms of hospitality, provide racing that is quite repetitive and boring to the audience. (Wikipedia)



Adjusting the focus back onto 2011, the FIA truly began to shape the sport to be what it is today back then. DRS, which is an adjustable rear wing flap, was introduced, alongside a new hybrid energy unit known as the KERS. KERS provided the drivers with 60 kW of boost per lap, and was instantly a hit success. This age was renowned for Pirelli's new tires, which had high degradation and made for each race to be 3-4 stops, like the refueling era before. Unfortunately, this era was also fraught with tyre failures and punished the drivers very extremely for driving hard, which resulted in tyre conservation becoming the norm over the next few years. This made the racing boring to some audience members, but the V8 engine's loud roar still excited the crowd with every pass. (Williamson)

In 2014, F1 moved towards a new age of technology, among which was a new push for efficient technology and fuel efficiency. The engines were radically overhauled as the sport went further than ever before to embrace green technology. The screaming 2.4L NA V8s, which have been in use since 2006, were replaced by 1.6L V6 turbos. After several years of a freeze on engine development, engine power was once again a performance differentiator, with Renault suffering from a lack of power and poor reliability. Honda, which entered in 2015, was famously dubbed a GP2 engine by a frustrated Alonso as the lack of power on straights forced a once strong McLaren to 9th in the Constructor's standings. A twin MGU-H and MGU-K system provided ultimate efficiency and ultimately, was able to push the Renault engine over 1000hp in 2019. A fuel limit was also instituted. Drivers will now have to complete races on just 100kg (about 130 litres) of fuel. That's down from the 150kg or so teams had in 2013, when there was no limit. Meanwhile, engines were limited to consume fuel at no more than 100kg per hour. This switch was negatively received by the audience of the sport, who generally thought that the new, efficient, engines sounded boring and dull, lacking the kick of the old, less reliable engines. (Wired, 2013) Jokes were circulated on the internet describing the new V6 Power Units as sounding like Vacuum Cleaners. The sound was truly horrible in 2014, and ever since, F1 has been trying to recoup it's sound, introducing Ceramic microphones and also a new exhaust design to amplify the noise. (Autosport, 2013)

However, 2014 was a year of tragedy. The young star, Jules Bianchi, tragically crashed at Suzuka into a tractor. He went into a coma and ultimately died one year later. To this day, there is no device that could stop Jule's accident from happening. Even the Halo, which was designed to provide more cockpit protection, saving Charles Leclerc's life at the 2018 Belgian GP, was only good enough to prevent Senna's death from 1994. As F1 moves forward, safety needs to always progress with it.



In 2016, the sport, fed up with Bernie Ecclestone's old fashionedness and stubbornness to change, decided to oust him from the position as CEO of FOM. (Silvestro, 2016) Formula One had been experiencing a multitude of big changes in 2016. It was purchased by U.S. company Liberty Media in September 2016, with the goal of making the sport bigger and better for fans. Liberty immediately began to implement some of its planned revisions, and they started by ousting long-time F1 boss Bernie Ecclestone. Liberty has since then updated the sport, releasing a new graphic experience that has drawn some life back into the sport. The Flying 1 logo, a long-time staple of the sport since 1993, was replaced by a more modern take on the logo. The graphics interface on TV was overhauled. F1 got its own theme, which is quite good to be honest. F1TV brought F1 towards more and more audiences. And thus, we have arrived in 2019, where Mercedes is dominating the sport and teams like Renault have been struggling. And in 2021, those teams will receive a new chance to improve themselves.

Climate change has always been important to the world. With such in mind, Jean Todt, the president of the FIA, launched a new pilot project with Alejandro Agaa called Formula E. Formula E was launched in 2014, and in the first 4 seasons, was seen to be an abomination by the world of motorsport due to the absurd notion of switching cars. This was due to the fact that the batteries could not even last the whole race. However, in December 2018, all of that changed. The Generation II Car was launched, with more power than ever. Formula E's season 5 instantly became a success. Yes, Formula E cars have no noise, and they have less power. However, the close racing and the fan engagement by Formula E, combined with their aggressive marketing strategy towards younger audiences, triggered its massive rise to fame. Manufacturers have also taken notice at the immense technological prowess formula E possesses. Nio, joining as NextEV, was able to use its FE knowledge to create what was then the fastest EV car to ever traverse Nurburgring, the EP9. With Mercedes and Porsche joining Formula E, the spots have all been filled up. However, partnering up with an existing team can result in a successful entry into Formula E. (Saunders, n.d) Formula E has posed a great threat to the survival of F1 and to the supremacy of F1's technology development and relevance, and even challenges F1's supremacy of viewership as the world's premier motorsport.

If Formula 1 capsizes, there is always Formula E to run towards.

Good Luck Delegates. Let's see if we can revitalize the sport, and if not, don't be afraid to jump off a sinking ship.



<u>Sample of F1 Broadcast:</u> https://www.youtube.com/watch?v=pNG4L8-yCPc

# **COMMITTEE BACKGROUND**

The day is October 9th, 2019.

Negotiations are tensing up, and as 2021 regulations are finalized, there is a lot of stress and distrust in the paddock regarding the new regulations, and a lot of uncertainty towards the future of the sport.

As members of the F1 2021 committee, you will be representing different members from the Formula 1 Championship planning and advisory Board, The board will be made up of 3 parts. The FIA's WMSC delegates are in charge of deciding the future of the FIA's endeavours, including F1, which will be their primary focus. Formula One Group is the holding company behind the championship, and owns the commercial rights to the championship. Their focus will be to stabilize the championship and ensure that the championship is stable and sturdy. They must ensure that the sport is financially stable, and able to bring in lots of revenue. Also, they must ensure that their investment does not get squandered by infighting or gross mismanagement. Finally, no sport would be complete without the teams. The 10 F1 Constructors are in charge of racing under F1, and their primary focus is to get exposure for their brand, receive revenue, keep afloat, and develop technology that is useful for their endeavours.

The WMSC is made up of 6 members. The President is the de-facto "chairman" of the committee (Though he does not actually chair the committee) who is in charge of guiding the committee towards smooth discourse and decision making. The other representatives have varying interests towards the sport and may have various connections with other delegates, which is expected to be researched thoroughly by the delegates.

The Formula One Group, or Formula One Media, runs the championship under commercial licensing from the FIA. Time after time, the FOG has been in conflict with the teams, notably the FISA and FOCA disputes. However, it is not solely the FOG which has been in conflict. The FIA-FOTA dispute once threatened to tear apart the championship in 2009. It is still, however, the FOG's primary responsibility to ensure the teams' welfare while at the same time ensuring their own interests are met. Chase Carey, the CEO of Liberty Media, is



the head of the FOG and will be leading famous names, notably Ross Brawn, ex Ferrari team principal. However, Chairman Emeritus Bernie Ecclestone, who was ousted in 2016, is not in good relations with the rest of the board.

Finally, the 10 F1 constructors must ensure that their programs must be profitable, or at least break even. Their interests lie in prize money and advertising coverage, and also to make as good of a car as possible. From 1st Placed Mercedes, who have held that position for 5 years in a row, to last placed Williams, a once great team with an illustrious history, and Renault, whose Billion Dollar Gamble has not paid off. Each constructor is vying for the best package, and their ability to analyze technical regulations will help them with winning the constructor's championship.

Good luck Delegates. You will need it.

## CHARACTERS

## FIA World Motor Sport Council (WMSC) executive representatives:

Jean Todt, President of the FIA

• As president, you will have the power to veto votes and also to force the committee into voting. Your responsibility is to keep the committee's powers in check and force the representatives to come to a conclusion as efficiently as possible.

<u>Michèle Mouton</u>, FIA Women in Motorsport Commission representative. <u>Tom Kristensen</u>, FIA Drivers' Commission representative <u>François Fillon</u>, FIA Manufacturers' Commission

#### Formula One Group:

Chase Carey, Chairman and Chief Executive

• You possess significant power on how the sport is run due to your company's ownership of the Formula 1 Brand.

<u>Ross Brawn</u>, Formula One Managing Director of Motorsports and technical director.

Sean Bratches, Managing Director, Commercial Operations

## Formula One Constructors:

<u>Toto Wolff</u>, Head of Mercedes-Benz Motorsport, team principal of Mercedes F1 <u>Mattia Binotto</u>, team principal of Scuderia Ferrari

• You are the sole team with veto power in the championship right now. <u>Christian Horner</u>, Team Principal, Red Bull Racing



<u>Cyril Abiteboul</u>, managing director, Renault F1 <u>Zak Brown</u>, CEO, McLaren Racing <u>Guenther Steiner</u>, team principal of Haas Formula One Team <u>Franz Tost</u>, team principal of Scuderia Toro Rosso <u>Frédéric Vasseur</u>, Managing director, CEO and team principal, Sauber Motorsport AG. <u>Claire Williams</u>, deputy team principal of Williams F1 <u>Otmar Szafnauer</u>, Team Principal & CEO, Racing Point F1

# **KEY ISSUES TO BE DISCUSSED**

## Promotion of the Sport

- Reaching a wider audience base
  - As formula E took hold as the eco-friendly alternative to the gas guzzling F1, the relevancy of the sport among eco-friendly folks is reducing. However, F1 has never been as popular in the past few years as it is now. The push by liberty saw F1 become more popular among young viewers on average. It is your call to decide which way to go.
- Advertising the sport:
  - How do we continue to make F1 better and better, while advertising and attracting viewership and participation to junior series such as F2 and F3?
- Collaboration, or dominance?
  - Formula E is very ominous, threatening to take technological supremacy and relevancy from F1. Thus, how can you, as the committee, attract the attention of the FIA to continue to assert your dominance as the breeding ground of cutting edge automotive technology?
- Using social media to promote the sport
  - F1's social media has seen an excellent boost in quality, and their Instagram account has become more and more popular. Their YouTube accounts are pumping out very popular, high quality videos about racing events, which serve as great advertising for the sport. How can you, as the delegates, improve the social media spectacle?
- Television broadcasting, F1TV
  - How can you expand streaming to reach more people, while striking a balance with the TV companies for broadcast revenue?



A progression towards the future

- Equality in Motorsport
  - A F4 racer, Billy Monger, who was injured and lost both of his legs in a horrific accident in 2017. He went on to achieve 4 podiums in 2018 in F3. Also notable is Alex Zanardi, who went on to be a successful driver in WTCC and a handcyclist. (Wikipedia)
  - W-Series, a F3 series for women, saw success in its first year, crowning Jamie Chadwick as its first champion. However, gender equality is still a key issue in motorsports. (Wikipedia)
  - Motorsports is financially taxing for young athletes to enter, which results in less growth for the sport and a potential bottleneck for the development for F1. The lack of young drivers is especially important for Red Bull, whose young driver programme has run out of potential replacements in F1.
  - Delegates should strive to eliminate barriers of entry for all people and create an environment which can sustainably grow and capture all audiences.
- Promotion of greener energies
  - Formula E has begun its meteoric rise ever since Season 5 launched, generating a lot of momentum with its more powerful Gen 2 cars. It became a success, and over social media, more and more individuals were enchanted by what some saw as the future of racing. With the entry of Mercedes and Porsche next year, Formula E will become more and more relevant and a threat to be reckoned with in regards to technological relevancy. (express)

## Safety and Security

- Driver safety
  - New helmet homologation regulations were launched in 2019. They
    provided great defense against an increasing variety of dangers
    faced by drivers. The more safety can be improved, the more
    daring the drivers will be, and the better the spectacle for the
    audience. (autosport F1, 2019)
- New technology to ensure safety
  - Racing is a dangerous sport. On August 31st, Anthoine Hubert tragically lost his life in the F2 Sprint Race at Spa Francorchamps. He was 22, and he was a rising star within the sport, having won the Monaco and French Sprint Races. Drivers accept that, once they are strapped in the car, they have a certain chance of dying. However, once a fatality happens, the racing world truly becomes conscious of the inherent risks of hurtling around a corner at 300



km/h. How can you, as a delegate, reduce the risks of injury or fatality, and ensure the drivers that their car is safe?

- Operation security:
  - As F1 is a very key part of the world marketing business, there is a risk of disruption at the event. There is also an inherent risk of terrorism at all FIA formula 1 events. As delegates to the committee, you will need to evaluate the security risks of every grand prix event and assess the needed precautions to combat sudden problems.

#### <u>Technology</u>

Delegates can propose items from the list of the following technological advance. The committee timeline date will be kept and constantly displayed on top of the committee presentation. These mechanics can affect each team differently depending on the research paths of each team.

- Propose from the following list of mechanics:
  - Traction control
  - Blown diffusers
  - o DRS
  - ERS (MGU-H, MGU-K)
    - Removal of complex MGU systems (such as the MGU-H) will lead to more engine constructors participating in the championship, such as Porsche (who cancelled due to the failure of the proposal to remove the MGU-H and enlarge the MGU-K)
  - Refuelling
    - Available in a variety of formats, delegates can choose fuel tank sizes (from 25-150L), Refuelling device flow rates (Time taken to fill tank, from 7s to 35s), and refuelling device efficiency. Keep in mind, this area ties to the Fuel development tree/
  - Alternative fuels
  - Electrification
  - Active Aero
  - Active suspension
  - Automatic/ CVT gearboxes
  - Standardized parts
  - Shark fins
  - Additional aerodynamic appendages
  - Engine formula (1.6L V6, or others?)



- Any engine, that is proposed, can be utilized. However, real world relevance should be considered, especially for constructors.
- The Purists want the 3.0L V10 back!!
- Suspension setups
- Real world applications:
  - Efficiency updates
    - Engine-car technology transfer
    - Transmission advances
    - Drive system updates
    - Hybrid technology
  - Durability Updates

#### Economic Updates

- Cost effectiveness
  - Technical regulations which are cheaper for constructors, or yield the most return for them technically will be favored. However, not all teams will benefit from such.
- Transfer of funds
  - Prize money can be further improved and the redistribution of such can be reworked.
  - The current prize scheme is as follows: (autosport, 2017)



Ferrari3641 (13%)776835.180.9%3Mercedes3661 (19%)979.35.11.1.1Red Bull Racing3652 (16%)88.3.9.35.161.12%.2McLaren36.31 (9%)67.3.9.5.161.18%.6Williams36.31 (9%)69.9.9.10.97.18%.6Villiams36.31 (9%)69.2.9.10.70.9%.5.5Force India.36.31 (9%).12.2.1.10.72.47%.4Coro Rosso.36.31 (9%).12.1.1.10.74.43%.7Renault.36.31 (9%).52.1.1.1.1.1.1.1Force India.36.31 (9%).12.1.1.1.1.1.1Force India.36.31 (9%).12.1.1.1.1.1.1Force India.36.31 (9%).52.1.1.1.1.1.1.1Force India.36.31 (9%).52.1.1.1.1.1.1.1Force India.36.31 (9%).52.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1<		COL 1	COL 2	TOTAL	LST	ссв	OTHER	TOTAL	2016 +/-	2016 CLASS
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	Sauber	36	13 (4%)	49				49	-10%	10
	Haas	-	19 (6%)	19				19	-	8
Total 324.5 324.5 649 68 143 80 940 965 (-3.5%)	Total	324.5	324.5	649	68	143	80	940	965 (-3.5%)	

(autosport, 2017)

 Column 1 payments are calculated based on a team's classification over two of the past three years, while Column 2 payments are based solely on a team's 2016 classification with only the top 10 qualifying.

• The Column 1 pot is divided equally among all qualifying teams, with each estimated to earn \$36m.

• Had Manor survived, that figure would have been \$32.5m, \$1m down on the previous season, but



following the outfit's closure, that payment was shared equally with the other nine qualifying teams.

- As Haas has only completed one season, it does not qualify for Column 1 payments.
- Column 2 is calculated on a sliding scale from first to 10th place with first receiving 19% of the fund, sixth 9% and 10th 4%.
- Ferrari, Mercedes, Red Bull and McLaren have agreed separate deals for constructors' championship bonus payments.
  - Ferrari also receives a long-standing team payment while Williams collects an inheritance payment.
  - Red Bull receives an extra payment for being the first team to sign the current bi-lateral agreement, which runs to 2020, and this totals \$35m.
  - After meeting its agreed target of two world championships, Mercedes earns a special annual payment that matches Red Bull's.
  - Ferrari will receive \$180m, representing almost one fifth of the total 'pot' but \$12m less than last year.
    - That's \$108m more than Force India receives, despite the latter finishing just one place adrift in the constructors' championship.
  - Mercedes won both the drivers' and constructors' championships for the third successive year, but still received \$9m less than Ferrari.
  - Force India and Williams both finished ahead of McLaren in the standings, but each receive less courtesy of McLaren's CCB payment.
- If the pot was shared out equally, each team would get \$94m.
  - That would leave Ferrari's payment down by \$86m while Sauber, the final team to qualify for Column 1 and 2 payments, would receive an extra \$45m. (autosport, 2017)
- Sponsorship:
  - F1 teams should strive to attract more sponsors to the sport, no matter how dodgy they are. However, if the sponsor is dodgy, beware of bounced cheques.
  - Eg: Rich Energy, who is sponsoring Haas F1, had a meltdown in 2019 and terminated their sponsorship deal in June. However, this was a



hoax that was sourced from the displeasure of CEO William Storey, who was then ousted. To this day, Rich Energy, now renamed Lightning Volt, has an unstable relationship with Haas and some are questioning, whether, Rich Energy had money at all or had just joyrided off the fame of HAAS F1. (ESPN, 2019)

# **COMMITTEE MECHANICS**

Race Weekends:

- Once a crisis update for a race has been announced, each race weekend will be 20 minutes long, and will culminate in the announcement of results based off of team's statistics and random events in each of the normal FP1, FP2, FP3, Qualifying, and Race events.
- It will function like an unmoderated caucus, however, delegates will be presented with various dilemmas that require quick resolutions.

New races:

- Proposal of racetrack, FOM
  - A new racetrack may be proposed at any time via a crisis update, by potential tracks who want to host F1, some of which may be connected to certain drivers or teams. The entire council must vote to approve or disapprove of the new racetrack, and a Simple Majority will decide the status of the application
  - Racetracks will attempt to negotiate with the WMSC during a crisis update, with 5 questions. Each track will state what their track has to attract viewers, how much they are willing to pay (which corresponds with ticket sales, advertising, etc.). Each question can be directed towards a certain part of the proposal, after which there must be a representative sent out to discuss the negotiations.
  - Once the bid is negotiated and approved, the proposal will be presented to the committee as a public directive and a simple majority will pass the directive for the track to be added to the calendar.

Constructors:

- Regulation change petition:
- Resource Points: Inspired by the F1 2019 Game, the RP system will be determined by funding. Each team will be assigned a converting factor of somewhere about \$50000 to 1 RP for their car's funding, which will improve with more efficiency and quality control improvements.
- Technological development tokens



- You can also purchase technological development tokens to further research the development of next year's car. Each team is limited to a number of upgrades per 3 races, which can be improved in quantity with these tokens. Purchasing more tokens allows you to research more upgrades, but deducts from your resource points. However, you may need to push forward important upgrades to close off a season.
- Portfolio powers:
  - Ferrari is the only team on the F1 Grid right now to possess a veto. This means that Ferrari has deciding power over the championship's proceedings.
- Driver's Market:
  - The driver's market mechanic, which allows for teams to use funds to purchase drivers and sign contracts with them.
- Driver's academy:
  - F1 teams can sign young talents from the F3 and F2 prize pool to serve as potential replacements for current drivers. However, the young drivers must achieve the FIA super license. The requirement to achieve a super license are as follows: (FIA, 2019)
  - Candidates can be drawn from the current pool of juniors available from 2019's junior formulae rosters. Teams can sign them as either a Development Driver, Simulator Driver, or put them in a development series such as F2 where they will graduate after 1 year to be able to be drafted by the team. At the end of one year as a Junior, the Candidate will have gained enough points to be drafted by a team. (FIA, 2019)
    - A minimum age of 18
    - An existing holder of an International Grade A competition licence
    - A holder of a full and valid road car driving licence for the country listed as the driver's nationality which has not been suspended, withdrawn, revoked, or in any other way prevents the holder from driving a motor car on public roads.
    - Passing of an FIA theory test on knowledge of the F1 sporting codes and regulations.
    - Completed at least 80% of each of two full seasons of any of the single-seater Championships reported in Supplement 1 of the regulations



 Accumulated at least 40 points over the previous three seasons in any combination of the single-seater Championships reported in Supplement 1 of the regulations

Table of Points:

Series		Championship position										
		2nd	3rd	4th	5th	6th	7th	8th	9th	10th		
FIA Formula 2 Championship	40	40	40	30	20	10	8	6	4	3		
GP2 Series (folded 2016, expires post-2019)		40	30	20	10	8	6	4	3	2		
IndyCar Series <sup>1</sup>		30	20	10	8	6	4	3	2	1		
FIA Formula 3 Championship												
FIA Formula E Championship	30	25	20	10	8	6	4	3	2	1		
European Formula 3 Championship (folded 2018, expires post-2021)												
FIA World Endurance Championship LMP1	30	24	20	16	12	10	8	6	4	2		
Formula Regional European Championship												
Super Formula Championship	25	20	15	10	7	5	3	2	1	0		
GP3 Series (folded 2018, expires post-2021)												

(Wikipedia)



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