

# The Business of Formula One

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## Sport needs dash of excitement

Concerns over funding damp hopes for a more competitive season, say *Roger Blitz* and *James Allen*

Lewis Hamilton, Formula One's reigning world champion, is hoping not to have it all his own way this season as he sets off in pursuit of another title.

"You're hoping that it's a bit of a better year for the likes of McLaren and Ferrari so that we have more people to race," the 30-year-old Briton said in an interview this month.

Stars such as Hamilton, who drives for Mercedes, are meant to have an unsentimental, single-minded approach to their sport. And deep down, Hamilton clearly does.

But his hankering for a more competitive season speaks volumes for the state of F1. For all the global reach of the sport and the excitement associated with fast cars, wealthy backers and exotic race locations, these are difficult days.

Funding issues are proving troublesome. The big question among F1's team principals, owners and investors is: Where is the money coming from?

Big TV rights deals secured in the past 12 months by the English Premier League – £5bn over three years in the UK market alone – and the US National Basketball Association (\$24bn over nine years) make sports such as F1 tremble. If football and basketball are picking up bigger slices of the TV rights pie, where does it leave the rest?

F1 receives some \$1.5bn a year – not a bad showing. But growth is hard to envisage. F1 appears to be in managed decline, on the basis of most indicators such as TV viewing figures, race ticket sales and number of participants, while TV rights fees are fairly static. Sponsorship deals trickle, rather than flow.

The German Grand Prix, a mainstay of F1, may not take place this year due to financial issues with the promoter, as interest in the sport in Germany declines.

Some good news is that race hosting fees are increasing, thanks to deals to stage Grands Prix in Mexico, Azerbaijan and Qatar. But stakeholders question the long-term viability of hosting three races in the Middle East – Qatar joins Abu Dhabi and Bahrain on the calendar – and Germany is not the only European Grand Prix where promoters are struggling to make the numbers add up. Lack of new money is being felt



Staying in F1, let alone being competitive, is a daunting challenge

acutely on the grid. Towards the end of last season, two teams went into administration, Caterham and Marussia, while questions remain over the financial resilience of Sauber, Force India and Lotus.

Staying in F1, let alone being competitive, is a daunting challenge. All teams are struggling to find new sponsors, while the hybrid turbo engines, introduced last season, more than doubled a team's engine bill to \$20m a year.

Marussia (now renamed Manor Marussia F1) has been thrown a lifeline and is being rescued by a consortium including Ovo Energy boss Stephen Fitzpatrick and ex-Sainsbury's chief executive Justin King.

Fitzpatrick is a brave man. He has committed to a budget of £60m a season, funded from the team's prize money from last season and from sponsorship linked to its drivers, but also from his wallet.

The plight of Caterham and Marussia has thrown a harsh spotlight on the unequal distribution of F1 prize money.

Ferrari receives a fixed upfront fee of \$100m, Red Bull \$70m, McLaren \$50m and Mercedes and Williams roughly

\$10m each from a separate fund, from which the other teams are excluded.

This unbalanced distribution will persist through to 2020. But there is little sign of the big teams being willing to yield on this. No surprise, then, that the smaller, less-established teams have started to voice their frustrations publicly.

There is a real prospect that one or all of the independent teams may fail before the end of the season. Force India is struggling to make it to the first race, because of problems with suppliers.

Although there are signs that F1 chief executive Bernie Ecclestone is willing to offer a financial leg-up to the three teams struggling for survival, suspicions remain that he is eyeing a new make-up of the grid, involving fewer teams fielding either a third car or a B team.

To his detractors, Ecclestone is a barrier to the change that teams and other stakeholders consider vital for the sport's growth. For example, he eschews social media.

He is not blind to the sport's shortcomings though. F1 narrowly avoided a "lousy" championship last season, he said in his end-of-season review, thanks

**On track:** Mercedes F1 driver Lewis Hamilton brakes during a testing session at the Catalunya circuit in Montmelo, near Barcelona

Reuters/Albert Gae

to the competitive tension between Hamilton and this fellow team driver Nico Rosberg.

His solution is a makeover, with more exciting-looking cars, and noisier engines producing in excess of 1,000 horsepower which are more of a challenge for drivers.

Others think the solution is to move on from the long and colourful Ecclestone era. The 84-year-old survived an end-of-season coup attempt engineered by Donald Mackenzie, the co-founder of F1's biggest shareholder CVC Capital Partners, who wanted to shoehorn on to the F1 board a new chairman with executive powers. Ecclestone would have none of it, although it would be a stretch to say that his position is now unassailable.

However, this is not the first season to begin with question marks about Ecclestone's future. In all likelihood it will not be the last either. Somehow, the shrewd, F1 chief finds a way of hanging on – to the frustration of some and the admiration of others.

But regardless of his survival prospects, the long-term problems have not gone away. Maurizio Arrivabene, Ferrari's team principal, wants a "real revolution" in the way the sport presents itself to fans. So does McLaren's chief executive, Ron Dennis.

For this season, F1 may struggle to set the world alight with an exciting championship. Certainly, the early signs from pre-season testing are unpromising. Hamilton's Mercedes team has looked confident and is working hard on improving reliability – the only factor that prevented it from winning every race last season. It remains the team to beat.

Ferrari has shown some signs of significant improvement but will not be title contenders. McLaren is back to the drawing board as it beds in a new hybrid engine with partner Honda.

This leaves Red Bull and Williams as the main challengers to Mercedes. But they must catch up fast. Red Bull managed three Grands Prix wins last season, Williams none.

Williams uses the same engine as Mercedes, so it will be hard for it to beat the works team. The best hope for a competitive season rests with Red Bull and its Renault engine.

It does the sport no good if teams such as Ferrari and McLaren are uncompetitive. As Hamilton said: "The more people, the merrier. If the cars are close, you can have real races where you're overtaking and battling and that's what I love doing."

For the world champions and F1's fans, it may just be wishful thinking.

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## Traditional heartland cedes to non-European venues

### Tracks

Longstanding events have disappeared to be replaced by Grands Prix in Asia, the Americas and the Middle East, writes *Simon Gray*

As the 2015 Formula One season begins, there are still uncertainties about the calendar. Despite revenues that in recent years have topped \$1.5bn, track owners and organisers of the 20 races struggle to make money and in some cases just to stay in business.

The past two decades have seen a steady shift away from F1's traditional heartland in Europe toward new venues, especially the Middle East, two races this year, Asia, four, and the Americas, four. Longstanding events in France, Magny-Cours; Portugal, Estoril and Italy – the San Marino Grand Prix at Imola – have disappeared, perhaps forever.

There are fears European race organisers cannot compete with the public subsidies that enable events elsewhere to be run at a loss. "We do face a disadvantage," says Derek Warwick, president of the British Racing Drivers' Club, the British Grand Prix host.

The main uncertainty this year concerns a mainstay of the series since its establishment in 1950, the German

Grand Prix. The race is scheduled to take place on July 19, but there appears virtually no chance it will be staged at the Nürburgring circuit, as planned. The sport's official schedule states the venue as "to be determined".

The track is currently owned by auto parts company Capricorn after its previous owner collapsed into bankruptcy. A deal to stage the race with F1 chief executive Bernie Ecclestone – who bid unsuccessfully to acquire the circuit from the state government of Rheinland-Pfalz – is thought unlikely.

In the heyday of seven-times world champion Michael Schumacher a decade or more ago, the passion of German fans for F1 was such that Grands Prix were staged at Nürburgring and Hockenheim, near Heidelberg, each season. More German drivers have emerged at the top of the sport, yet attendances have dipped and the two tracks have staged a Grand Prix alternately, saying they cannot afford the losses incurred by holding a race each every year.

The talk of last year's race at Hockenheim was the empty spaces in the grandstands. However, there is speculation that some financial help from world championship team Mercedes, based in Stuttgart, might pull together a deal for another race at Hockenheim in 2015. Further ahead, however, it looks cloudy.

The problem for race organisers is that with Ecclestone's Formula One Management and its subsidiaries cornering the income from TV rights and

corporate hospitality, nearly all their revenue comes from ticket sales – and since the onset of the financial crisis, fans have been less willing or able to pay anywhere between €100 and €500 for a race weekend. Meanwhile, in many cases the hosting fees paid by organisers are subject to a 10 per cent automatic increase every year.

Financial issues were a factor in the disappearance from the calendar after 2008 of the French Grand Prix, another of the original events, after plans to build a track near Paris fell through.

Italy, another country that once hosted two Grands Prix, is also facing an uncertain future in F1. SIAS, the company that runs the Monza circuit, is discussing an extension to its contract, which has two more years to run. With F1 Management demanding higher fees, there are fears that the world's oldest surviving Grand Prix circuit may no longer be staging a race by the time its centenary comes around in 2022.

At one point it looked as if the British Grand Prix at Silverstone, where Ecclestone repeatedly warned that facilities were substandard, might go the same way as France. But the BRDC has won a deal to stage the race after changes to the circuit's layout and the construction of pits and a hospitality complex.

"Year after year, we have to struggle to make it work financially, by extracting as much revenue as we can from the Grand Prix weekend," says Warwick. "We have great backing from our mem-



Italy's Monza circuit

bers, but it would be nice to get more support from the British drivers and some of the teams and of course Bernie."

Warwick acknowledges that Britain is reaping the benefits of an outstanding crop of drivers, led by current world champion Lewis Hamilton. He believes the public interest in France was probably eroded by the dwindling number of French F1 drivers.

It is a longstanding complaint at circuits in Europe that motor-racing does not benefit from the same public financial backing as in Asia and the Middle East, where a Grand Prix is perceived as a nation-branding showcase. Energy-rich states are not scared off by the escalating fees they have to pay for the right to stage an F1 Grand Prix.

However, Warwick is optimistic F1 will not abandon its European roots, pointing to the revenues accruing to the series organisers from TV rights on the continent. "We will be here when others disappear. There are races happening now in faraway places that won't be there in 10 years' time."

## Innovations sound a note of controversy

### Engines

Some teams stand to benefit more from the new hybrid turbo, says *James Allen*

Motorsport has always been a laboratory for the automotive industry. It was in racing that innovations such as disc brakes, seat belts and steering wheel-mounted gearshift levers were pioneered, all standard equipment today.

But when it comes to the overall direction of travel in automotive technology, it is the road car industry that maps out the route. F1 brainpower is then engaged to get there more quickly.

This was never more true than with the 1.6 litre V6 hybrid turbo engines, introduced to F1 in 2014 to replace the 2.4 litre V8 engines that had powered F1 for the previous 10 years.

Their introduction was not without controversy; F1's veteran ringmaster Bernie Ecclestone was opposed to the hybrid formula from the start and has not softened his stance. The impetus for the engines came from the governing body, the FIA, backed by the automotive industry. Manufacturers such as Renault and Mercedes pushed for it and Honda said it would return if hybrid turbos were introduced. Honda has been good to its word and has partnered with McLaren starting this season.

But Ecclestone had two main concerns; cost and the lack of noise. He was

right about the cost. A supply of engines to customer teams went from about \$10m per season for the V8s to more than \$20m for the hybrids, and played a role in the collapse of two teams (Caterham and Marussia) and financial difficulties for three other teams, Lotus, Sauber and Force India.

The noise issue is more subjective. While for some the ear-shattering exhaust note of a racing engine is a visceral thrill, to engineers it is the sound of energy wasted. Hybrid turbo engines are quiet because they are the most efficient internal combustion racing engines ever produced.

Covertly, the manufacturers and the governing body have worked on solutions using engine mapping and exhaust pipe modifications with the result that the 2015 engines are clearly louder, judging from the pre-season testing.

More pressing is the issue of competition. A change of the order of hybrid turbos brings a risk that one manufacturer will get it more right than others.

In this case, Mercedes saw the opportunity and invested heavily in the hybrid energy recovery side, producing an engine that was head and shoulders above the efforts from Renault and Ferrari. As a result, the Mercedes team dominated last season, winning 16 of the 19 races. It looks set to clean up again in 2015, if the pre-season testing form is anything to go by.

F1 is a merciless sport where progress waits for no one. Which is precisely what makes it such a valuable hotbed of innovation.

## The Business of Formula One

# Ecclestone still firmly seated at the top of the F1 pyramid

### Succession

The chief executive shows no sign of wanting to step down from his role, writes *Roger Blitz*

Sitting among a group of journalists after the end of last season, Bernie Ecclestone mused on his future.

"My ex used to say I'll die in a motorhome on the circuit," joked the 84-year-old Formula One chief executive.

The way things are going in F1 political circles, this may well come to pass. There is a body of opinion among teams and F1 shareholders that he is holding back the sport's development.

Yet F1 has singularly failed to prepare for life after Ecclestone and the new season is no different.

Over his decades at the F1 helm,

Ecclestone has made many enemies. But he has resisted all attempts to unseat him, and having succeeded in foiling the latest attempted coup, he remains firmly in control.

The billionaire former car dealer, is widely praised for turning F1 into a global sport, taking it to new markets. He has done so in his inimitable style.

As he happily acknowledges, much of F1's dealmaking with heads of government, race promoters, sponsors and team investors is completed with a "typical Ecclestone handshake".

People trust him, he says. "When I shake hands with them, they don't need a contract, they know it's done, that's the end of it," he says.

"It takes an awful long time to get that sort of reputation."

Donald Mackenzie would rather contracts were the norm in F1 business. The co-founder of CVC Capital Partners, the private equity group that is F1's

leading shareholder, while grateful for Ecclestone's contribution over the years to F1 profits, has long been exasperated at his chief executive's way of doing business.

More pertinent is CVC's long-term plan to exit F1. It continues to harbour hopes for floating the business. But Ecclestone, who has been involved in a number of high-profile legal battles and opposes a listing, is seen by CVC advisers as a stumbling-block.

Last year, he lost his position on the F1 board when he was called to stand trial in Germany on bribery charges. The charges were dropped midway through the trial when he agreed to pay the German court €100m.

Mackenzie concocted a plan to push Ecclestone aside. Towards the end of last season, he began sounding out the F1 hierarchy about his strategy.

Ecclestone would stay on as F1 chief executive – for the time being. But the

CVC co-founder proposed bringing in a new chairman of the F1 board, one with new executive responsibilities. This chairman would take on some of Ecclestone's duties, and F1 would phase out and replace Ecclestone.

Paul Walsh, former boss of Diageo, was lined up to take on the role. The F1

To some extent Ecclestone has emerged from this coup attempt with his position strengthened



board was all set to expect the change. F1 team owners, sponsors and others waited for it to happen.

At the last moment, Mackenzie appeared to get cold feet.

The F1 board held a meeting but the proposal was never put forward. Why? No one has established why Mackenzie

put his plan on hold. What was clear was Ecclestone's opposition to the idea. He had set his face against it and made it known he was determined to carry on.

Mackenzie blinked. A frustrated Walsh withdrew his interest in the chairman's position, no longer trusting Mackenzie to invest in the role the necessary power to effect change, although he later agreed to come on to the board as a non-executive director, with former Ferrari chairman Luca di Montezemolo.

And back on the F1 board is Ecclestone, his seat at the table having been restored. So to some extent, he has emerged from this coup attempt with his position strengthened.

At the end of a year which began with the looming prospect of jail, he is free to manage the F1 circus in his very individual way, as he has done for decades.

Not everything has gone his way. He vigorously opposed the introduction of

hybrid turbo V6 engines, which came into effect last season, and wanted a return to the old V8 and V10 engines. But there is little prospect of winning that battle.

In other areas, F1's progress is, as ever, down to the wily old dealmaker. The financial struggles that led to two teams being put into administration continue to blight F1 and it is largely down to Ecclestone to grant support to those cash-starved teams battling for survival.

And so the start of the 2015 season looks very much like the start of many previous ones – Ecclestone at the top of the F1 pyramid, looking down on the structure he largely created and all its component parts.

He may be older, but those who watch him regularly say he has lost none of his drive. Ecclestone is wedged in the F1 driving seat and proving impossible to shift.

# Fascinated by speed, and driven by the fear of failure

**Interview** Red Bull's Christian Horner thrives on the adrenalin of the sport, writes *James Allen*

There have been several outstanding team managers in the history of Formula One. Enzo Ferrari was one, Alfred Neubauer of Mercedes in the 1950s another and Sir Frank Williams. Christian Horner is undoubtedly one of them.

The words of F1 commentator Murray Walker, describing a man who won his first world championship as a team principal at the age of 36 and went on to win four in succession with Red Bull Racing between 2010 and 2013.

His management credentials have led to Horner being tipped on numerous occasions by Bernie Ecclestone as the man he would like to see succeeding him when the time comes to retire.

However the 41-year-old, who was

awarded the OBE for services to motorsport in 2013, has no desire to leave the cutting edge of inter-team competition for the chief executive role in F1 management.

"Bernie's a remarkable guy," says Horner cautiously. "He's taken F1 to where it is today. But no one person can replace him. As far as I'm concerned, I enjoy what I do, I enjoy the competition, working with a group of people to get the best out of them. I love competing."

From the age of 13 Horner wanted to become an F1 driver. "I was always fascinated by speed... My father was always an enthusiast and once I found a passion in racing, I had something in common with him, so from my childhood onwards we spent a lot of time going to karting tracks and racing



Christian Horner 'eureka moment' led him to stop racing — Daniel Lynch

in the various categories. I had a very clear focus of what I wanted to do and be at that age."

His formal career as a racing driver began when he left Warwick School in 1991. He won the Formula Renault scholarship and competed in the British Formula Renault Championship the following year. He was moderately successful, working his way up the racing ladder.

However, his "eureka moment" came in the feeder series for F1. He saw Juan Pablo Montoya hurling his car into the first corner, at an angle Horner knew he could not achieve. It was time to grow up and stop racing.

"I immediately thought: 'I can't do that,'" says Horner. "The skill, the courage and commitment that he had, I knew I couldn't match. It was the turning point of my life. I was 25 when I stopped racing, I loved the teamwork and I wanted to apply what I knew about it into building and running a team."

With his father, Garry, Horner set up the family team – Arden International Motorsport, a multiple formula racing team – in 1997 and over the following years he focused on developing the team.

He looked at several options for obtaining control of an F1 team before Dietrich Mateschitz, owner of the Red Bull energy drinks brand, headhunted him to manage his F1 team. In the 10 years since Red Bull entered F1, Horner has led the team to four world championships and 50 Grands Prix victories.

But how do you keep an F1 team in the sweet spot year after year? "It's the fear of failure. That's what drives us forward," says Horner.

"When you win a Grand Prix, it's the culmination of everything coming

together. Not just trackside, but behind the scenes... Once you have felt that, it becomes addictive."

The drivers grab the trophies, but the effort behind the scenes to provide them with a winning car is vast. Each team builds a car each season, rolling it out for a test programme six weeks before the first race and then developing it to find more performance as the year goes on.

"The car we will race in Melbourne was created by 200 design engineers," Horner observes.

"It was produced within four and a half weeks and assembled within five days; that's 6,500 components that had to come together – that's teamwork at its ultimate."

Last year, the Milton Keynes-based Red Bull Racing squad slipped behind Mercedes. The reason was the introduction of hybrid turbo engines. Mercedes invested more resources early on than Red Bull's engine partner Renault, leaving Horner frustrated by the lack of power his drivers had at their disposal.

"Their [Mercedes] car is fantastic and they have a great engine," says Horner. "We are going to do all we can to give them a hard time. We've had a positive run in testing so far. The drivers think that the car is a step forward."

"[Renault] has come up with some more power. Whether it's enough to take on Mercedes is a different matter, but the great thing about this year is that we have development allowed during the season."

"So, what we start with is not what we will finish the season with."

It is clear Horner is hungry to regain the crown his team enjoyed from 2010 to 2013. And, with the Melbourne Grand Prix almost upon him, the race for supremacy begins again.

# Combining forces harnesses commercial opportunities

**Sponsorship** Teams are realising that collaborating off the track brings benefits, reports *Kate Walker*

Formula One has been accused of being out of touch with reality. In an era of tightened belts and environmental responsibility, the sport has been viewed as an anachronism, running on excess and fossil fuels.

Much of this is down to title sponsorship: corporations offering vast sums to racing teams in exchange for prominent advertising and access.

However, things may now be changing. Ron Dennis, chief executive of McLaren, made waves this year when he said: "Title sponsorship doesn't exist any more as a concept."

"If you look at what title sponsorship would normally be, it would be somewhere between 40-50 per cent of your budget," he said. "Where the budgets are for a competitive team, no company will come in and give you that kind of money."

"Therefore, what you do is cut it up into bite-sized pieces, so you get a range of companies with similar philosophies to join you on the car."

But it is not only about the car. The fabric of F1's global audience is largely middle class and entrance to the paddock brings access to global business leaders, politicians and decision makers.

In an attempt to take advantage of this, teams such as Ferrari, Force India and Red Bull are starting to work together to offer their sponsors and partners shared networking opportunities at races.

Where once, each team would guard

their VIP guests, they are now considering creating spaces within the paddock where guests from competing teams can meet and do business.

For the bulk of F1 sponsors, however, the public platform is what they seek and for companies wanting international brand awareness – global TV viewers number 500m – F1 is seen as the sport with the best business-to-business reach.

Since ending its partnership with Vodafone at the end of 2013, McLaren has run without a title sponsor. But the British race team has been taking a different approach to sponsorship for many years, creating symbiotic relationships in which both partners receive something of value.

In 2011, it partnered with GlaxoSmithKline in a deal that initially saw market-appropriate GSK branding appear on the car at F1 races. As the partnership has grown, however, GSK started working with the parent McLaren Group, drawing on McLaren's

Entrance to the paddock brings access to business leaders and politicians

experiences in racing, manufacturing, data analysis and management to improve efficiency, streamline the R&D process and drive development of GSK's products.

F1 is also about the unique business opportunities the sport affords. Official tyre supplier Pirelli – whose logo appears on every car run and team uniform worn over the course of a Grand Prix weekend – is also the title sponsor of the Spanish and Hungarian Grands Prix as part of a separate deal with com-

mercial rights' holder Formula One Group, run by Bernie Ecclestone.

The combination of supply deal and sponsorship gives Pirelli greater exposure and has been part of the Italian company's F1 marketing strategy since 2014, three years after it became the sport's tyre supplier.

Early praise for Pirelli's efforts to improve the quality of racing was followed with heavy and public criticism in 2013 when the tyres supplied suffered numerous spectacular failures.

However, more conservative tyre development in 2014, coupled with a focus on promotion through race sponsorship and trackside signage, has seen Pirelli remain a vital part of the F1 circus.

Long-time McLaren sponsor Johnnie Walker also increased its presence in the sport last year when it became the official whisky of F1. The McLaren deal continues, however. By working with the commercial rights holder, Johnnie Walker's parent brand Diageo will secure more exposure: trackside signage will treble and it will see increased paddock access and more flexibility with corporate ticketing opportunities, both areas out of a single team's control.

Perhaps one of the biggest signs of the changing approach to sponsorship in F1 since the tobacco money disappeared can be found at Ferrari, where the role of team principal has been filled by Maurizio Arrivabene.

A familiar figure inside the confines of the F1 paddock, Arrivabene went from managing Philip Morris's Ferrari sponsorship to running the race team. One of his first acts has been the creation of a dedicated commercial department, a first for Ferrari.

With the Philip Morris deal due to expire at the end of 2015, even the biggest brand in the sport is having to revise its commercial approach.

# Cars painted with lack of imagination

**Livery** Teams struggle to make their brand more visually appealing, writes *James Allen*

For a sport where the participants go to endless lengths to refine details of their cars using the latest technologies, it is disappointing that the design of most of the liveries for this year's season appear rooted in the 20th century.

The colour scheme of an F1 car is the team's identity statement, it defines who it is and what it stands for. This is quite straightforward for manufacturer teams such as Mercedes and Ferrari; they have to reinforce their automotive look and feel in silver and red respectively.

But for teams such as Williams and McLaren, the livery changes according to which sponsor is paying the bills and the thinking has not evolved much in the past 40 years. In the 1990s glory days of Nigel Mansell and Damon Hill, Williams cars were blue and white. Today they are predominantly white with a Martini stripe across the top.

The 1980s McLarens of Senna and Prost were red and white for the then sponsor Marlboro and Lewis Hamilton's 1998 title winning car was silver and red for Vodafone.

Today, with no title sponsor for a second season, McLaren has a real quandary about what colour to

paint its cars that will shout "McLaren". McLarens have been silver since the days of their association with Mercedes, which ended in 2009. The silvery-red hybrid livery they launched the car with last month met with disapproval from fans, so it is back to the drawing board before the first race in Melbourne.

Given the range of materials available to make a visual impact, the lack of imagination in F1 liveries is disappointing, says Nick Downes of Interstate. The London-based design company devised the serpent look for Eddie Jordan's Benson and Hedges sponsored cars in the late 1990s.

"F1 is about going beyond what is accepted; it's innovation," he says. "It should be about creating personality. F1 used to be the best, but other sports have caught up. They [F1] are not the pacesetters any more."

Innovative thinking was responsible for one of the most famous Grand Prix team liveries in 1934. Grand Prix cars were then coloured according to the country of origin; Italy was red and Germany was white. Mercedes was preparing its cars to race in the new 750kg weight-limited formula and found they were overweight. The white paint was stripped off to save a few vital kilos and Mercedes raced with polished aluminium bodywork. The 'Silver Arrows' legend was born.

Williams racing car



Claire Williams, deputy team principal of the team named after her father, Sir Frank, accepts the mantra is "If it doesn't make the car go faster, then it's of secondary importance". But she says her marketing group puts significant effort into making the cars look good.

"The livery is a tool; it's a simple canvas to showcase our partners," she says. "We take it seriously because I want to make our brand look premium."

This year the Martini stripe is painted on to the cars, but last year, as the deal came in quite late, Williams had to apply stickers. It took five hours to "dress" the cars each time before they went out on track.

Ferrari has the most iconic livery in F1, a scarlet car is what fans expect, but this leaves little room for innovation. At best Ferrari can add some white accent colours, but it cannot overdo it and lose the purity of the brand.

As it faces declining popularity, especially among younger generations, F1 is going through a process of reinvention. Teams are trying to devise a new look for the cars, to be introduced in 2017.

It is hoped that this will provide more of a "wow factor" to attract younger viewers.

Perhaps this is also the moment for teams to take a fresh look at liveries and make their cars not only visually stunning, but also imaginative, giving the teams more of an individual brand.

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## The Business of Formula One

# Trucks, boats and planes, a race behind the scenes

**Logistics** Early planning is essential to ensure seamless transportation, writes *Roger Baird*

Minutes after the first car crosses the finishing line at the Grand Prix in Melbourne, a second race begins.

This is the scramble to move up to 10 teams, comprising 300 tonnes, or 20,000 individual items of F1 kit, to the Malaysian Grand Prix in Kuala Lumpur two weeks later.

A small high-tech village has to be transported each time F1 moves on. This includes racing cars, generators, TV cameras, right down to industrial ovens, coffee machines and mannequins that allow teams to display their merchandise outside their 6,000 sq ft motorhomes.

In this year's 20-race season, including test days, an average F1 team will spend 170 days away from their bases, clocking up 100,000 miles by land, air and sea at a cost of almost £10m a team.

Williams race team co-ordinator James Boughton says: "We do not normally source things locally, so absolutely everything we need has to come with us. We are self-sufficient and this means we can guarantee the quality of our equipment at all times."

The planning for this vast logistical operation begins a long time before the race calendar is provisionally announced in December. For example, rooms for the 2016 Australian Grand Prix will be booked as the team checks out this year.

Our first meetings to discuss flights for the 2015 season took place last September, before the calendar was fully confirmed," says Boughton. "You then need to be able to react quickly should dates change."

Teams take about 80 people to a race, comprising drivers, engineers, caterers, and marketing and management staff. Teams also invite their sponsors, and at blue-ribbon events, such as Monaco, numbers swell to 200 people for the biggest teams.

What teams describe as 'flyaways', races outside Europe, present the greatest challenges. Of the 20 races, 11 are outside Europe this season, meaning that teams will ship the cars and other essential items by aircraft, while more general equipment such as electrical cables and catering equipment go by sea. Because of the complex timetable, teams have five sets of sea freight travelling the world and as a result have five sets of general items to furnish their motorhomes.

The key partner of the teams is DHL, which signed a commercial and marketing agreement for an undisclosed fee with the sport's commercial rights holder in 2004, to handle its freight.

DHL's motorsport unit runs a dedicated team of 80 staff, 170 trucks and up to seven Boeing 747 freighters to ship the F1 circus around the world.

Pier Luigi Ferrari (no relation to the sport's car family) is deputy managing



High life: races outside Europe present the greatest logistical challenge — DHL

director of DHL Global Forwarding and has handled motorsport cargo for the company since 1982.

"You must never forget you are putting on a show," he says. "And our passion is that everything gets there on time."

New circuits tend to offer the biggest headaches he says, because relationships and ways of working have to be established.

The Monaco Grand Prix maybe the most glamorous highlight of the season, but it is one of his team's biggest challenges, adds Ferrari.

"Monaco is a small tight space. It can be tricky for taxis to operate. So for almost 200 trucks it is very difficult."

Another key element in the F1 season is information technology. Tata Communications signed a multiyear deal with the sport's commercial rights holder for an undisclosed fee in 2012.

Tata Communications managing director of F1 business Mehul Kapadia says: "At the track, WiFi is as important as water."

Kapadia heads a team of 18, three of whom arrive at the track on the Friday the week before race weekend. They take three days to set up complex IT systems that are in place when the teams begin to arrive in the middle of the week.

F1's chief technical consultant, Eddie Baker, says that it traditionally takes 30 days to set up and test the systems that this group handles.

Tata provides 1 gigabit of bandwidth at the track. Kapadia says that when Tata first began to supply F1, it upped its capacity 10-fold. That has now been increased by 100-fold. This allows F1 to transmit high-quality pictures in the latest high-definition TV and also to direct some of the cameras at tracks around the world from F1's technical base in Biggin Hill, in the southeast of the UK.

"The relationship helps us innovate and create products and services. It is also a showcase for potential new customers."

If we can do this for F1, then we can do it for anyone," says Kapadia.

## Oil companies search for a perfect mix

### Fuel

The days when racing cars ran on a witches' brew of chemicals and additives are long gone, says *Simon Gray*

For the past decade, F1 rulemakers have tried to ensure that the fuel used on the track closely resembles that used by ordinary drivers. Now, changes over the past two years are making fuel economy as critical to teams as it is to everyday motorists.

The days when F1 cars ran on toxic witches' brews of 'rocket fuel', containing chemicals and additives, are long gone. Oil companies see motor racing as a way of raising their profile and a testing ground for developments that will benefit their mainstream business.

The switch last year from normally aspirated V8 engines to turbocharged V6 power units, coupled with a one-third reduction in the maximum amount of fuel F1 cars can use in a race, has changed companies' approach to formulating fuel, according to Guillaume Biondi, F1 technical co-ordinator at Total, which supplies Red Bull.

"You are limited to 100kg of fuel for the race," he says. "If you want to deliver the maximum horsepower, you have to make it the most efficient possible — efficiency equals performance."

The change in regulations is an opportunity for fuel to make a significant contribution to the cars' performance and reinforces the importance of collaboration between fuel suppliers and engine builders.

Chan Ming-Yau, a fuel technology specialist at Petronas of Malaysia who has worked with Mercedes, says fuel is not developed in isolation. "The key to success is the synergy of engine, vehicle and fluids, including lubricants and functional fluids, which are developed together to maximise performance."

The sport's authorities are also anxious to demonstrate that F1 is not wantonly disregarding the environment or

wider economic benefits. The regulations require fuels to be predominantly composed of compounds normally found in commercial fuels; only minuscule amounts of non-hydrocarbon compounds are permitted.

The teams must supply the governing body with two five-litre samples of the fuel blend they plan to use before each race for approval. Further samples are tested during the event to ensure the fuel complies with the composition rules and is identical to the 'fingerprint' of the previously approved samples.

The risk of losing world championship points through even an inadvertent breach of the regulations is one reason why teams and their suppliers are not constantly looking for fuel upgrades throughout the season.

"In the past, we have done four or five upgrades a year," says Andy Cowell, managing director of Mercedes AMG High Performance Powertrains unit at Brixworth in Northamptonshire. "But you risk putting so much effort into the

Mainstream: rule changes are making fuel economy as critical to teams as it is to everyday motorists



prove-out and in transporting fuels around the world that not enough brain time is going into the next fuel and making that performance step bigger. We are better off having one or maybe two big upgrades per year."

Biondi says that Total's challenge in F1, delivering the maximum performance over a 300km race distance with 100kg of fuel, is now the same as providing fuel for road cars whose drivers want maximum mileage from a tank. "That's why there is not a specific team working on F1; they are the same people responsible for products for road cars," he says.

"We use ideas from road cars in F1 and generate ideas from the racetrack that will feed into our next generation of consumer products. It is an interesting way of working and the most flexible and efficient."

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