
DIFFERENT TAKE

A section that focuses on sport, history and culture ... and a touch of humor

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“Since I started my career with a small independent, it is very much unfinished business for me – going back to an independent team and seeing what we could achieve.”

Adrian Newey and Sebastian Vettel celebrate victory in the Malaysian Grand Prix, April 2011
Photograph: Red Bull Racing

“For me, Formula One design is a blend of art and physics. You come up with fresh ideas, novel solutions, from the artistic side of the brain. But if they fail in the wind tunnel, you have to discard them.”



ADRIAN NEWEY

ART, PHYSICS ... SPEED

Adrian Newey is probably the most successful racing car designer ever, winning championships with three different Formula One teams, including Red Bull Racing, where he has been Chief Technical Officer since 2006. Here he talks with Brunswick's **Anita Scott**

“The only things that count are the speed and reliability of the car. There is no premium on styling.”

“You can come up with two solutions that are aerodynamically identical. At that point, if one looks slightly more attractive than the other, then you go with the more attractive-looking one.”

“Dietrich Mateschitz, the Red Bull co-owner, is passionate about motor sport. And it's good for business. When we won the British Grand Prix for the first time in 2009, Red Bull saw a clear increase in sales.”

“When I was 15 I used to race on the local track. But very quickly I became more interested in trying to make the car go faster by modifying it.”

“The cars are covered with hundreds of sensors and data recorders, and dozens of gigabytes of data are gathered each time the car runs. But if the car is handling poorly, you won't see from the data what the car naturally wants to do, because the driver will adjust his driving style to compensate. So trying to match the data with what the driver is saying, that's the key.”

“Red Bull purchased the assets of Jaguar Racing in 2004. There had been a lot of hiring and firing ... that gave rise to a blame-type culture where people would rather do nothing than do something risky and get the blame if it didn't work. We tried to break that down, to encourage people to explore, take risks, try different things ... be creative.”

“One of the things we did pretty quickly was get all 130 engineers into one big, open-plan-area in the factory and arrange it to encourage communication.”

“I’m probably the last guy in the industry still using a drawing board. I often start with a pencil sketch and then it’s just A4 paper, developing it on the drawing board.”

“I prefer verbal communication. You don’t need an e-mail that goes two feet across the desk to the person sitting next to you.”

“My drawings are scanned in. They tend to be pretty accurate – I draw to within about half a millimeter or so. Then if it is to be manufactured, we use computer-controlled machinery. Or it may have to be evaluated in computational fluid dynamics – which is aerodynamics by computer simulation.”

“During a normal week at the factory, I probably spend half my time wandering round, talking to the engineers. The rest of the time, I spend standing at my drawing board.”

“We do not restrict the flow of information between departments – this means a more creative and positive atmosphere around the factory. It’s important that people feel valued and involved in what’s going on.”

“In many ways, design is like a language. Getting ideas from my head on to paper – and then I’ll communicate them to the rest of the company.”

“We probably have about two hours’ worth of meetings a week. But only if there’s a well thought out agenda – and only if we think it will breed ideas.”

“Quite often there are philosophical decisions to be made in terms of coming up with solutions that are elegant, ones that might initially be less efficient than other more brutal solutions. If it’s elegant, novel – then ultimately there can be more development potential than with the brutal solution.”

“Ultimately, it’s just about speed.”

“One thing that worries me is the trend to make the regulations ever more restrictive year on year. If that continues, eventually the cars will all look the same, and indeed will be the same.”

“In terms of the sort of people I admire from the past within motor racing, I would say Colin Chapman, the founder of Lotus, and Gordon Murray [of Brabham and later McLaren], both of whom came up with some very creative designs. And another chap, Jim Hall, responsible for Chaparral in America.”

“Success in Formula One tends to be cyclical – if you go back to the 1960s it was the big manufacturers such as Ferrari, Maserati, and Alfa Romeo that were dominant. Then independent teams started to be successful – then manufacturers again. Now the independents are back. If you have a good budget and a good engine, there is no reason why you shouldn’t do a good job.”

ADRIAN NEWEY

1977-1980 Studies aeronautics and astronautics at the University of Southampton and writes thesis on ground-effect aerodynamics, which immediately lands him job with Fittipaldi Automotive.

1982 Joins March Engineering, designs the March GTP car which wins two consecutive IMSA titles.

1984-1986 Designs the cars that win Indianapolis 500 and CART championships in 1984, 1985 and 1986.

1986 Returns to CART as race engineer for Mario Andretti. Rejoins March, becoming technical director when Leyton House takes over the team.

1990 Joins Williams as chief designer. Williams-Renault is the dominant force in the 1990s, winning 58 grands prix, four Drivers’ and five Constructors’ titles.

1997 Joins McLaren, takes Mika Häkkinen to two world Drivers’ Championships.

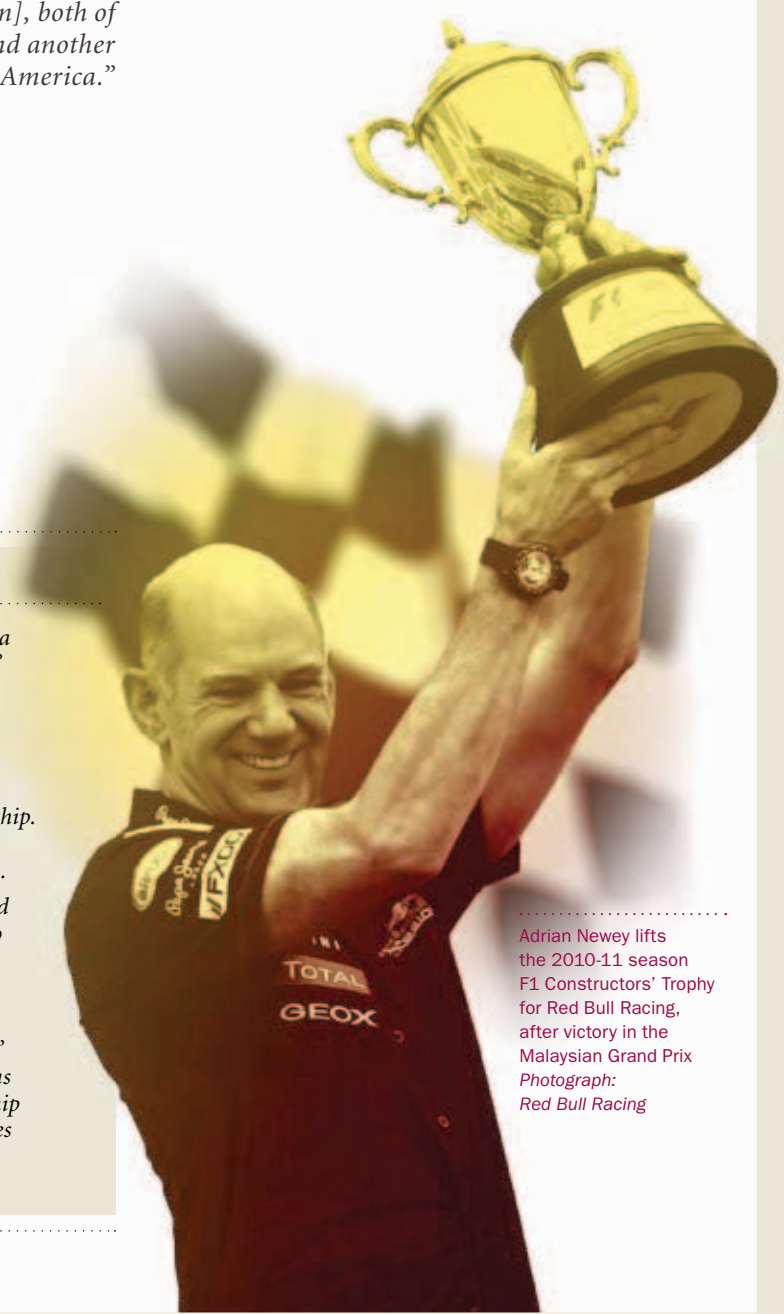
2006 Joins Red Bull Technology.

2009 Red Bull takes six wins to grab second in the Formula One Constructors’ Championship. Sebastian Vettel also places second in the Drivers’ title race.

2010 Red Bull drivers Vettel and Mark Webber land nine wins to take the Constructors’ crown. Vettel claims the team’s first Drivers’ title.

2011 Vettel secures the Drivers’ title in Japan and Red Bull wins the Constructors’ Championship in South Korea, with three races still to go before the end of the season.

“At the end of the day, Formula One is a show. And people don’t turn it on because they’re interested in the technology or the cars or the design – they’re watching for the entertainment, for escapism. I think the important thing for Formula One is that it continues to put on a good show.”



Adrian Newey lifts the 2010-11 season F1 Constructors’ Trophy for Red Bull Racing, after victory in the Malaysian Grand Prix
Photograph: Red Bull Racing

Anita Scott is a Partner in Brunswick’s London office. She loves classic cars.