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1. The team.

Next step.

The target: more podium places.
Munich/Hinwil. They're certainly on the right path, but there's still a way to go. After a promising debut year in Formula One, the BMW Sauber F1 Team is gearing up for the next step in 2007. In the coming season, the newly established team will continue to pursue its development agenda as planned. The sporting target is clear: more podium places in 2007. At the same time, staff expansion at Hinwil is scheduled to be completed, bringing the total workforce in Switzerland to 430. By the end of the year the new building complex will also be finished, and the BMW Sauber F1 Team will have reached its full complement.

"In 2006 we exceeded our own targets. Now expectations are rising faster than the team can keep up. That's the penalty for excelling yourself", says BMW Motorsport Director Mario Theissen, going on to spell out the team's strategy: "2007 is the second and final year of our development phase. We aim to make it onto the podium on our own merit. If the top teams show any sign of weakness, we want to be ready to jump into the breach. Wins on our own merit are not realistically on the cards for 2007. We are aiming for that in 2008. Then in 2009 we want to be in contention for the championship title."

The BMW Sauber F1 Team's first year in motor sport's top-echelon event has undeniably whetted the appetite for more. On the podium twice, in the points 15 times, a commendable fifth place in the constructors' championship – the BMW Sauber F1 Team fared better than anyone had anticipated. "That really was more than the experts would have expected of a newly formed team", says Theissen. "The grand prix stage is gradually revealing the sheer hard graft and single-minded effort going on behind the scenes."

125 employees have already been taken on at Hinwil and another 30 are to follow, all of them having to be integrated there as well as being networked with the almost 300-strong Formula One workforce in Munich. It is no easy task when dealing with such numbers, as you simply can't afford to lose sight of the big picture. So far everything has run according to plan. Theissen is acutely aware that the rate of growth cannot be accelerated, particularly as many members of staff have been temporarily relocated and are carrying out

their tasks in rented offices before moving into the finished complex in Hinwil. This will house not only test facilities, laboratories and development departments, but office accommodation as well. Things are still rather crowded at Hinwil, but the end of the stopgap solutions is in sight.

For all the new faces there might be at Hinwil, those of the team drivers are familiar ones. Nick Heidfeld (GER) and Robert Kubica (PLN) will be battling for championship points as the team drivers. Sebastian Vettel (GER), who has been working as the Friday driver ever since the Turkish GP in 2006, is the official test and reserve driver. Theissen comments on this sparkling cocktail of established routine and fresh blood: “We are very satisfied with our line-up. Nick is our experienced man. He is fast and reliable and has the know-how to take the team forward. All that makes him a firm fixture and an important reference point for the engineers and the other drivers. Robert has already proved that he is fast, and he’ll catch up on the routine side. The two of them work well together and engage in healthy competition out on the track. As for Sebastian, we will be giving him the opportunity to drive on Fridays as well. He will learn from the other two.”

Heidfeld, who collected the most points for the team in 2006, says this: “After our good maiden season we now have to continue along our path. But one mustn’t expect too much as the higher you go, the more rarefied the atmosphere gets. In our first year we picked up 36 points and fifth place in the championship. But the fourth-placed team walked away with 86 points. That’s worlds apart.”

“I learnt a lot in 2006”, says Kubica, “and in 2007 I want to put it into action and learn more. To be standing on the podium for the first time after a Formula One race was an incredible experience. I want more of it.”

Sebastian Vettel outlines his task: “The better I get to know the car and the team, the more I can support them with my test work. I will make every effort to do as much groundwork as possible for Nick and Robert.”

It will be interesting to see what effect the switch to a single tyre supplier has in 2007. The Formula One teams will all be lining up with Bridgestone Potenza tyres over the coming season following the withdrawal of Michelin from the World Championship. BMW had been supplied by Michelin in Formula One since 2001, while Sauber can look back on the experience collected with Bridgestone between 1999 through to 2004. “A single tyre supplier will close the performance gap between the teams”, confirms Theissen.

In addition to the new tyre stipulations, there have also been changes to the regulations in other areas. The major technical modifications include further restrictions on engine specification. The powerplants introduced for 2007 will provide the technical basis for the teams' engines up to and including the 2010 season. Engine speed is capped at 19,000 rpm and the units once again have to cover two GP weekends, although the Fridays are now exempt from this rule. In 2007 the Fridays will feature two 90-minute sessions in which the teams may send out a maximum of two cars. This will mean much more on-track action on the first day of the weekend. Testing, however, will be substantially reduced, with the teams each allowed to cover a maximum of 30,000 kilometres in 2007. In 2006, the BMW Sauber F1 Team racked up 43,659 test kilometres alone between January and the end of the season.

Successful debut season in 2006.

The fledgling team made light of an extremely short start-up phase – there were just six months between BMW's decision to acquire a majority stake in Sauber and the team's presentation – to achieve surprising success in its debut season. Between them, BMW Sauber F1 Team drivers made 19 appearances in the qualifying top ten (Heidfeld = 10, Kubica = 5, Jacques Villeneuve = 4), while the best starting position was Heidfeld's third place on the grid in Monza. The team also recorded 15 points finishes (Heidfeld = 10, Villeneuve = 4, Kubica = 1) and got its hands on two trophies, courtesy of Heidfeld's third place in Budapest and Kubica's repeat performance in Monza. The reliability rankings, meanwhile, show the BMW Sauber F1 Team in fourth position with 22,281 race kilometres completed. The team finished its first season on the grid in fifth place in the constructors' standings.

"Even more important than the good results", underlined Theissen, "were our consistent improvements in performance. Far from falling back relative to our competitors, we managed to achieve measurable advances under the pressurised conditions of a season in progress. That showed us that we're on the right path."

The BMW Sauber F1 Team started the 2006 season with Heidfeld and Villeneuve as its race drivers, while Kubica belied his lack of experience by posting some outstanding performances from the outset in both testing and during practice on the Fridays of the race weekends.

At the 13th grand prix of the year in Budapest, Kubica was handed his chance of a race drive in the second F1.06 alongside Heidfeld. The Pole did everything asked of him under extremely challenging conditions, and crossed the finishing line in seventh place having raced for 51 laps on intermediate tyres. However, a combination of unexpectedly high tyre wear and an empty fire extinguisher – the container had shed its two-kilogram load of "light water" in a brush with a barrier – meant that Kubica's car was found to be two kilos short of the minimum weight in the post-race technical inspection.

His consequent disqualification, though, could not detract from a consummate exhibition of racing skill. A few days later the team parted company with Villeneuve, and Vettel took over the role of Friday driver at the Turkish GP. Providing sound technical feedback and topping the time lists, he duly followed in Kubica's footsteps to be confirmed as test and reserve driver for 2007.

Results BMW Sauber F1 Team 2006.

	Nick Heidfeld			**Jacques Villeneuve**			
	Q	Races	Pts	Q	Races	Pts	Team placing
BHR	10	12	–	11	DNF	–	–
MAL	15	DNF	–	14	7	2	6
AUS	8	4	5	9	6	3	5
SMR	15	13	–	12	12	–	5
EUR	15	10	–	9	8	1	5
ESP	10	8	1	14	12	–	5
MCO	16	7	2	15	14	–	5
GBR	9	7	2	10	8	1	5
CDN	13	7	2	11	accident	–	5
USA	10	accident	–	6	DNF	–	5
FRA	12	8	1	18	11	–	6
GER	16	DNF	–	14	accident	–	6
	Nick Heidfeld			**Robert Kubica**			
HUN	11	3	6	10	DSQ (7)	–	6
TUR	6	14	–	9	12	–	6
ITA	3	8	1	7	3	6	5
CHN	8	7	2	9	13	–	5
JPN	9	8	1	12	9	–	5
BRA	8	accident	–	9	9	–	5

Time flies.

The contract was signed in June 2005 and by 2006 the BMW Sauber F1 Team was marking its debut in the FIA Formula One World Championship.

22nd June 2005	At a press conference in Munich, BMW's takeover of the majority stake in Sauber AG is announced.
	Credit Suisse extends its sponsorship contract by a further three years and becomes the official partner of the BMW Sauber F1 Team from 2006.
July 2005	Joint working groups are set up, the first meetings are held in Munich and Hinwil, and the integration process begins.
September 2005	Staffing requirements are laid down and more than 100 applicants for new jobs are invited for interviews in Hinwil.
16th September 2005	BMW announces it has signed up Nick Heidfeld.
14th November 2005	The name "BMW Sauber F1 Team" is confirmed.
24th November 2005	The BMW Sauber F1 Team and Petronas sign a four-year contract in Kuala Lumpur. The Malaysian oil and gas company becomes the premium partner of the team.
28th November 2005	First test in Barcelona for the Sauber C24B interim chassis with the BMW P86 V8 engine.
1st December 2005	Jacques Villeneuve is confirmed as team driver.
15th December 2005	The BMW Group and Intel announce a comprehensive partnership. Intel also becomes an Official Corporate Partner of the BMW Sauber F1 Team.

20th December 2005	Robert Kubica is signed on as the team's test and reserve driver.
1st January 2006	BMW completes the shareholding takeover.
16th/17th January 2006	The BMW Sauber F1 Team presents itself to the public in Valencia. The BMW Sauber F1.06 has its first outing.
February 2006	Planning application for the extension of the Hinwil facility.
12th March 2006	The BMW Sauber F1 Team contests its first grand prix in Bahrain.
19th March 2006	The team secures its first world championship points in the second race: Villeneuve comes seventh in Malaysia.
2nd April 2006	The third GP sees both drivers finishing in the points: in Australia, Heidfeld comes fourth and Villeneuve sixth.
6th May 2006	Dell becomes an official partner of the team.
May 2006	Work begins on the design of the BMW Sauber F1.07.
6th August 2006	Kubica runs his first Formula One race in Budapest. In the team's 13th world championship race, Heidfeld secures its first podium place.
7th August 2006	The BMW Sauber F1 Team and Villeneuve part company.
25th August 2006	In Istanbul, Sebastian Vettel takes on the task of the team's "Friday driver" for the first time.
September 2006	Start of the construction phase for the Sauber F1.07.

10th September 2006	Kubica comes third in Monza to pick up the second trophy.
October 2006	The wind tunnel in Hinwil is now running three shifts. A year previously it had been on a single daily shift.
19th October 2006	The 2007 drivers are announced: Heidfeld and Kubica as team racing drivers, Vettel as test and reserve driver.
22nd October 2006	The BMW Sauber F1 Team concludes its debut year in fifth place in the Constructors' Championship. In the meantime, 100 new employees have been taken on at Hinwil, with a further 50 scheduled to follow.
28th November 2006	Start of winter testing in Barcelona.
30th November 2006	Timo Glock takes his first test for the team.
16th January 2007	Presentation of the BMW Sauber F1.07 and the BMW Sauber F1 Team in Valencia.
1st March 2007	Deadline for submitting the final specifications of the homologation engine for the 2007, 2008, 2009 and 2010 World Championships to the FIA.
18th March 2007	First grand prix of the 2007 season in Melbourne.

Who's who.

BMW Motorsport Director	Prof. Dr.-Ing. Mario Theissen
Technical Director	Willy Rampf
Head of Powertrain	Markus Duesmann
Project Manager	Walter Riedl
Chief Designer	Jörg Zander
Head of Aerodynamics	Willem Toet
Team Manager	Beat Zehnder
Chief Race Engineer	Mike Krack
Race Engineer Heidfeld	Giampaolo Dall'Ara
Race Engineer Kubica	Mehdi Ahmadi
Chief Engine Engineer	Tomas Andor
Chief Mechanic Race Team	Urs Kuratle
Chief Engineer Test Team	Ossi Oikarinen
Head of Sponsoring and Business Relations	Guido Stalmann
Head of BMW Motorsport Communication	Jörg Kottmeier
Driver number 9	Nick Heidfeld
Driver number 10	Robert Kubica
Test and Reserve Driver	Sebastian Vettel

Pit stop in Munich.

Ensconced in the production facilities and offices of BMW AG and in the vicinity of the BMW Research and Innovation Centre in Munich, almost 300 staff spanning a wide range of departments are busy working on BMW's Formula One involvement.

The headquarters of BMW Motorsport is at Anton-Ditt-Bogen in the north of Munich. Here the Formula One engines are developed, built and tested. The move to the new complex, which features state-of-the-art test benches and laboratories for powertrain development, took place at the end of 2005.

BMW's Formula One electronics are developed and manufactured under the same roof, and right next-door is the Formula One component manfuacturing facility with its in-house quality control department.

The new building has enabled not just F1 activities, but all of BMW's other motor sport projects to be assembled in one location. All the offices are here as well, including that of BMW Motorsport Director Mario Theissen. The "Sponsoring and Business Relations" division is at home here, and it is also the logistical command centre.

The materials warehouse takes up a substantial area in the basement of the headquarters. Among other things, it contains the clothes store for the team gear along with numerous exhibits.

In all, the Formula One departments are spread across six buildings accommodating workshops, laboratories and offices. Access is protected and nobody can get inside without an appointment or an electronic employee ID. The ambience is dominated by the colour white, with the other BMW Motorsport colours of blue and red adding highlights. The interior reflects the essence of BMW Motorport – modern and technically sophisticated.

Just a few hundred metres away, in Munich's Knorrstrasse, is BMW's Research and Innovation Centre (BMW Forschungs- und Innovationszentrum, or FIZ for short). This is the crucible for all BMW production models. Its resources and engineering staff are also at the disposal of the Formula One engineers. Conversely, the FIZ specialists benefit from their proximity to the fast-track Formula One research project. Nowhere else does theory have to be turned into practice at such a rapid rate.

A 45-minute drive northeast of Munich, in the town of Landshut, is where the Formula One foundry is located. It was annexed to the production foundry which already existed here to ensure the shortest possible routes for technology transfer.

BMW has been manufacturing high-performance engines since 1917. Today the BMW Group embraces the BMW, MINI and Rolls-Royce brands. The group is pursuing a product and marketing offensive with an unprecedented number of new models. By 2010, sales are set to rise to 1.6 million cars. With 1.33 million car deliveries in 2005, the BMW Group is the world's most successful manufacturer of premium automobiles. The workforce now exceeds 100,000 in some 50 countries.

As Director of Development and Purchasing since 1st November 2006, Dr Klaus Draeger is also responsible for the group's motor sport projects. His predecessor, Professor Burkhard Göschel, retired from the Board of Management on grounds of age but remains with BMW in an advisory capacity.

BMW's Formula One history goes back to the year 1952. Its greatest success to date was in 1983 when Nelson Piquet won the World Championship in a Brabham BMW. Ahead of the 2007 season, BMW has a tally of 217 starts, 19 grand prix wins and 32 pole positions. In 2006, the debut season of the BMW Sauber F1 Team, it claimed two podium finishes.

Pit stop in Hinwil.

The BMW Sauber F1 Team is on a growth path, and the best place to witness that is in Hinwil. Between the wind tunnel and the factory built in 1992, an extension is fast taking shape. The existing factory (without the wind tunnel) covers a footprint of 6,900 square metres, and the new complex will add a further 8,700 to that.

The aim is, on the one hand, to significantly extend the infrastructure with additional machinery and test rigs, and on the other hand to create space for new staff uptake. From an original workforce of 275 in June 2005, numbers rose to just under 400 by the end of 2006, with another 30 scheduled to be added in the course of 2007.

Planning work for the extension began in October 2005 and by early February 2006 the permit plans had been submitted. At the end of June the authorities granted planning permission and excavation work began in July 2006. Completion is scheduled for autumn 2007.

The concept for the extension, which is as impressive in appearance as it is in size, had to follow a strict practical brief: it is designed to guarantee short routes and optimal work processes. Efficiency is paramount, which is why, for example, the design office and the wind tunnel are connected by an enclosed bridge.

The biggest space on the ground floor will be taken up by the truck hall and the large production equipment, which includes portal milling machines and autoclaves. The first floor accommodates smaller machinery.

The second floor boasts an interesting visual design. It houses the carbon-fibre department and at its centre the Formula One race cars are assembled and serviced. This central area is designed as an atrium, allowing the cars to be seen from the third floor too, where the administrative and design offices as well as the vehicle electronics department are situated.

The wind tunnel: full power ahead.
The state-of-the-art wind tunnel at Hinwil has been on stream since spring 2004. Measuring 65 metres long, 50 metres wide and 17 metres high, this building is particularly striking for its glass-clad façade. It also houses the offices of all the specialists working in this field. Besides the aerodynamicists and model designers and builders, CFD (computational fluid dynamics) engineers and other employees of the aerodynamics department are also based here. It is also the division that has seen the strongest growth. Since October 2006 the BMW Sauber F1 Team, like the top teams, has been running a three-shift operation, i.e. working around the clock.

The technology here is state-of-the-art. In terms of factors such as wind speed, size of the test section and models, the dimensions of its rolling road, the model motion system and data collection capability, the facility is at the highest technical level.

The wind tunnel has a closed-circuit design, measures 141 metres in length and has a maximum tube diameter of 9.4 metres. The total weight of the steel elements, including the fan housing, is 480 tonnes. The single-stage axial fan with carbon rotor blades weighs 66 tonnes including the motor and housing. When operating under full load, the fan uses 3,000 kW of power, enabling wind speeds of up to 300 km/h. To prevent the transmission of vibrations to the building, the axial fan is mounted on vibration dampers fixed to a solid concrete base.

The core element of any wind tunnel is the test section, where the models are exposed to air flow. The generous cross-section and length of the rolling road create optimum conditions for achieving precise results. The tests are largely carried out with 60-percent models, but the aerodynamicists also have the possibility of taking measurements from 1:1 race cars.

The entire measuring platform can be rotated in order to simulate not just frontal but also side-slip conditions at an angle of up to ten degrees. The platform has a rotating steel belt that simulates the relative motion between the vehicle and the road and runs in synch with the air flow. Underneath the moving belt are load cells that measure wheel load.

Beyond the technology, the concept behind the wind tunnel also set great store by its visual impact. The building is impressive not only for its size, but its glazed façades also underscore its unique amalgamation of industrial facility and event venue.

From the outside the building may appear to be a homogeneous hall, but in fact it consists of two clearly detached elements: the actual wind tunnel and a spacious four-storey wing with working spaces and an event platform where partners and sponsors can conduct marketing and customer relations events or seminars in a unique ambience. The first-floor gallery accommodates 150 people.

To achieve a strong visual impact, the central axis of the wind tunnel tube is positioned more than eight metres above ground. With the exception of the test section, which is embedded in a concrete construction, the steel elements comprising the circuit create the impression of floating in the hall.

The two areas are separated by a glass wall to preserve the visual connection while at the same time creating an effective barrier against the noise emanating from the wind tunnel.

"Albert^{2}" has been installed on the ground floor. The team's new 21-tonne supercomputer was unveiled on 14th December 2006. Designed for CFD calculations, it is the most powerful of its kind in Formula One. In parallel with the measurements taken in the wind tunnel, the flow characteristics of the car are simulated on the computer. In other words, measurements are backed up by computational analysis.

2. The season.

Grand prix information.

As at December 2006.

GP 2006	Date	Circuit length	Race distance	Winner 2006	Pole 2006	Fastest race lap 2006
1 Australia	18.03.	5.303 km	307.574 km 58 laps	F. Alonso Renault 1 hr 34:27.870	J. Button Honda 1:25.229 min	K. Räikkönen McLaren-Mercedes 1:26.045 min
2 Malaysia	08.04.	5.543 km	310.408 km 56 laps	G. Fisichella Renault 1 hr 30:40.529	G. Fisichella Renault 1:33.840 min	F. Alonso Renault 1:34.803 min
3 Bahrain	15.04.	5.412 km	308.238 km 57 laps	F. Alonso Renault 1 hr 29:46.205	M. Schumacher Ferrari 1:31.431 min	N. Rosberg Williams 1:32.408 min
4 Spain	13.05.	4.627 km	305.256 km 66 laps	F. Alonso Renault 1 hr 26:21.759	F. Alonso Renault 1:14.648 min	F. Massa Ferrari 1:16.648 min
5 Monaco	27.05.	3.340 km	260.520 km 78 laps	F. Alonso Renault 1 hr 43:43.116	F. Alonso Renault 1:13.962 min	M. Schumacher Ferrari 1:15.143 min
6 Canada	10.06.	4.361 km	305.270 km 70 laps	F. Alonso Renault 1 hr 34:37.308	F. Alonso Renault 1:14.942 min	K. Räikkönen McLaren-Mercedes 1:15.841 min
7 USA	17.06.	4.192 km	306.016 km 73 laps	M. Schumacher Ferrari 1 hr 34:35.199	M. Schumacher Ferrari 1:10.832 min	M. Schumacher Ferrari 1:12.719 min
8 France	01.07.	4.411 km	308.586 km 70 laps	M. Schumacher Ferrari 1 hr 32:07.803	M. Schumacher Ferrari 1:17.111 min	M. Schumacher Ferrari 1:15.493 min
9 Great Britain	08.07.	5.141 km	308.355 km 60 laps	F. Alonso Renault 1 hr 25:51.927	F. Alonso Renault 1:20.253 min	F. Alonso Renault 1:21.599 min

GP 2006	Date	Circuit length	Race distance	Winner 2006	Pole 2006	Fastets race lap 2006
10 Germany	22.07.	5.148 km	308.863 km 60 laps	M. Schumacher Ferrari 1 hr 35:58.765	F. Alonso Renault 1:29.819 min	M. Schumacher Ferrari 1:32.099 min
11 Hungary	05.08.	4.381 km	306.663 km 70 laps	J. Button Honda 1 hr 52:20.941	K. Räikkönen McLaren-Mercedes 1:19.599 min	F. Massa Ferrari 1:23.516 min
12 Turkey	26.08.	5.338 km	309.356 km 58 laps	F. Massa Ferrari 1 hr 28:51.082	F. Massa Ferrari 1:26.907 min	M. Schumacher Ferrari 1:28.005 min
13 Italy	09.09.	5.793 km	306.720 km 53 laps	M. Schumacher Ferrari 1 hr 14:51.975	K. Räikkönen McLaren-Mercedes 1:21.484 min	K. Räikkönen McLaren-Mercedes 1:22.559 min
14 Belgium	16.09.	6.976 km	306.944 km 44 laps	–	–	–
15 Japan	30.09.	–	tba	–	–	–
16 China	07.10.	5.451 km	305.066 km 56 laps	M. Schumacher Ferrari 1 hr 37:32.747	F. Alonso Renault 1:44.360 min	F. Alonso Renault 1:37.586 min
17 Brazil	21.10.	4.309 km	305.909 km 71 laps	F. Massa Ferrari 1 hr 31:53.751	F. Massa Ferrari 1:10.680 min	M. Schumacher Ferrari 1:12.162 min

GP	Full-throttle ratio Ø race	Top speed race	Longest flat-out section	No. of right-/left-hand turns	Tyre wear	Brake wear	Downforce level	Grip level	Gearshifts per lap
AUS	68 %	303	10 sec 720 m	10/6	medium	high	high	low	53
MYS	68 %	303	13 sec 860 m	10/5	medium/high	low	medium/high	high	48
BHR	70 %	302	15 sec 1050 m	9/6	medium	medium/high	medium/high	medium	50
ESP	64 %	312	13 sec 1010 m	8/6	medium/high	medium	high	medium	39
MCO	45 %	281	8 sec 500 m	12/7	low	low/medium	high	high	48
CAN	61 %	324	16 sec 1120 m	9/6	medium/low	low	medium	high	28
USA	61 %	332	23 sec 1860 m	9/4	medium	low	medium	high	28
FRA	64 %	301	13 sec 940 m	9/8	medium/low	medium	high	medium	37
GBR	64 %	301	12 sec 870 m	10/7	high	low	high	medium	34
GER	58 %	302	12 sec 800 m	9/6	medium	medium	high	high	40
HUN	66 %	295	11 sec 770 m	8/6	medium/low	medium	high	high	52
TUR	63 %	305	17 sec 1200 m	6/8	medium	low	medium/high	medium	38
ITA	76 %	350	16 sec 1360 m	7/4	medium	high	low	low	42
CHN	61 %	312	19 sec 1360 m	9/7	medium	low	high	medium	50
BRA	64 %	306	17 sec 1210 m	5/10	medium	low	medium/high	medium	36

Looking ahead.

GP	Mario Theissen	Willy Rampf	Drivers
1 AUS	"We're delighted that the 2007 season's curtain-raiser is once again the Melbourne GP. The date has been brought forward two weeks from last year, so it will now take place in the late Australian summer rather than the autumn. This time the city will be hungrier for the grand prix, because it won't just have hosted the Commonwealth Games. Last season we performed very well at Albert Park, so we're looking forward to having something to celebrate again on the Sunday evening in 2007."	"In the run-up to the first race of the season there's naturally always a certain amount of tension because we're all keen to see how we match up against the competition. Melbourne is the sort of stop-start course that puts a heavy load on the brakes. That's why it's so important to get braking stability spot on in the car set-up. Another traditional feature of Albert Park is that the circuit is always really dirty for the Friday sessions, with grip only improving after several laps."	Robert Kubica: "Albert Park is one of my favourite circuits because it's partly raced on roads. There are also a number of run-off areas, which make things a bit easier. There isn't much grip and there are lots of bumps, although conditions improve a lot over the course of the weekend. You have to be able make changes to the car and understand how it will react. I like the course a lot – it's a real challenge, with tight corners alternating with full-throttle sections."
2 MAL	"In 2006 we saw for ourselves the charismatic presence of our premium partner Petronas in Malaysia. It was a fantastic experience to witness the euphoria with which our team was received in this country. The events at the foot of the Petronas Twin Towers made a truly magnetic impression. The BMW Group has stepped up its involvement in Malaysia in recent years as part of its Asia strategy. Kuala Lumpur is an important grand prix for both companies – and the race is sure to provide a keenly fought contest."	"Sepang has a really interesting mix of different corners – and these ask a variety of questions. The slower sections require good grip for accelerating out of the turn, whereas high stability is essential particularly in the combination just before the back straight. In addition, the course calls for good aero-dynamic efficiency. Tyres come in for a lot of punishment because the asphalt is quite abrasive and trackside temperatures are often very high."	Nick Heidfeld: "Heat and high humidity make this a particularly tough grand prix. So far I've never really had a problem with the conditions, though. I don't object to the odd tropical downpour – I actually enjoy driving on wet circuits. I'm also looking forward to being in the country again. We used to do a lot with Petronas here in the past, and I've also spent time on holiday in Malaysia. So I feel I now know a bit about the place."

GP	Mario Theissen	Willy Rampf	Drivers
3 BHR	"Along with the Nürburgring and Valencia, Bahrain is one of three circuits where BMW can feel more or less on home soil. The kingdom's state-of-the-art facility houses the BMW Performance Center with its BMW Driver Training programme and Formula BMW Racing School. As a manufacturer of premium cars BMW has much to gain from the region. Our aim in Bahrain is to end the season's first block of overseas races on a positive note."	"The sand in Bahrain means we can expect a high level of tyre wear. The circuit's numerous slow corners demand maximum downforce, and good traction is particularly important in the turn leading out of the start/finish straight. The extra width of the track encourages drivers to overtake, so it's important to take maximum speed into consideration when carrying out aerodynamic tuning. More finely-meshed air filters are used to keep out the desert sand."	Robert Kubica: "The Bahrain race in 2006 was my first outing during a GP weekend. It was a really great feeling. There was little grip on the circuit, especially because of the sand blown in on the desert wind. But the circuit is certainly easier with the V8 engines than it used to be with the V10s. Now you can take two or three of the corners flat out. With new tyres and reduced grip, however, the 2007 race promises to bring new challenges. Overall Bahrain is a really nice circuit."
4 ESP	"The first European race is almost like a second curtain-raiser. It's the occasion for Formula One to put all its wares on show for the first time. The trucks and hospitality facilities not only make for an impressive display, they also make life a lot easier for everyone. The Circuit de Catalunya is demanding in lots of ways and in recent years has often been considered a barometer showing each team's overall potential."	"Barcelona is one of the most popular test venues, which might lead you to suppose that set-up should automatically be perfect. But in fact the circuit reacts strongly to temperature fluctuations, and wind can also sometimes be a major factor. So the circuit always throws up new challenges. The numerous fast and medium-fast bends call for considerable downforce."	Nick Heidfeld: "Every driver knows the Barcelona circuit like the back of his hand. It's fast and has great corners. And it has become a much more glamorous event since becoming the home grand prix for the world champion. Extra grandstands were built for the 2006 GP and they were absolutely packed too. Lining up on the grid against a backdrop like that is an amazing experience for any driver, not just Fernando."

GP	Mario Theissen	Willy Rampf	Drivers
5 MCO	"Monaco is Formula One in close-up. Nowhere can spectators get as close to the action as on the streets of the principality. No grand prix is more famous, none more glamorous. The yachts and parties may be a matter of taste, but they are an important part of the Formula One image. In sporting terms what counts here is extremely precise vehicle response, an aerodynamic package that delivers high downforce and good engine drivability even at low revs."	"Monaco has the lowest average speed of any circuit, so you have to drive with maximum downforce. Downforce is more important than aerodynamic efficiency. In Monaco you see wing variants you just don't see on any other circuit. It's particularly important to have good traction coming out of the many slow turns. And it's crucial that the car responds with absolute precision and predictability, since the smallest error can lead to contact with a crash barrier and an inevitable early retirement."	Nick Heidfeld: "The sensation of racing flat out around the city's narrow streets with hardly an inch to spare on either side is absolutely unique. The rush you get is unbelievable. The soundtrack is phenomenal and the spectators lining the circuit get a real impression of the speed and noise of the event. The whole city seems to vibrate – even into the night, when the drivers are tucked up in bed. I lived in Monaco for a few years and always enjoy coming back."
6 CAN	"The Montreal circuit places considerable physical and technical demands on the chassis, aerodynamics and engine. The long straights take a lot out of the engines. The special atmosphere also makes this grand prix a highlight of the F1 calendar. Its unique island location in the St Lawrence River – a site that has also hosted an Expo and the Olympic Games – gives the event a special allure. The people there are true Formula One enthusiasts and there is traditionally a good crowd of BMW fans. Canada is an important market for the BMW Group."	"The combination of long straights and chicanes makes Montreal what we call a 'medium downforce' circuit. There are good overtaking opportunities, particularly on the long straight leading into the last chicane if your top speed allows. Montreal is harder on the brakes than any other circuit on the F1 calendar, so maximum brake cooling and high-performance specifications for discs and pads are essential. The circuit punishes even the smallest driver error."	Robert Kubica: "Montreal is the sort of road circuit that doesn't allow even the slightest margin for error. And that's what I like about it! As in Melbourne, the circuit offers little grip at the start of the weekend and it's a pretty bumpy ride. There are some nice difficult corners, a few stop/start passages and some bouncing around chicanes with a wall waiting to catch you on exit. Last season we were really competitive at the Canadian GP. So I'm really looking forward to this year's race."

GP	Mario Theissen	Willy Rampf	Drivers
7 USA	"We've still got a score to settle with Indianapolis. Mainly on account of crashes here we have not yet achieved the results we would like. The oval section puts the engines under maximum mechanical load, with the drivers running at full throttle for a full 20 seconds. Assessed by sales volume, the USA is the most important market for the BMW Group, and the company's largest production facilities outside Germany are also to be found here."	"Indy is the only F1 circuit to have a high-banked corner. The course calls for medium downforce as in Montreal, but the two circuits are very different in nature. On the one hand there is the very long full-throttle section where you would want to use flat wings for minimum drag; on the other hand the infield features numerous tight turns that call for maximum downforce. It's all about finding a happy medium. Good mechanical set-up is vital, however, to provide traction through the slow corners."	Nick Heidfeld: "I drove one of my best races at Indy in 2001. Despite losing first, second and seventh gears, I somehow still managed to finish sixth. In 2006 my race was over after just a few metres. I was involved in a collision that turned the car over and over. For all of us in F1 it's a special experience to drive the banked corner, even though basically it's pretty simple – you just put your foot down."
8 FRA	"The rural idyll of Magny-Cours provides a welcome contrast after the grand prix double whammy of big North American cities. The focus returns to the racing and to the demands of the circuit. It was here in 2001 that we secured our first pole position on our return to Formula One. And after France it's straight off to England. Back-to-back GPs impose a great strain and many members of the team don't even manage to get home. Time pressure is enormous to put up or dismantle the team camp, and then there are the preparations for the race itself."	"Magny-Cours is an interesting mix of slow and fast corners. The track surface presents a special challenge as it is particularly sensitive to fluctuations in temperature. A set-up optimised for the morning need not necessarily be right for the afternoon – a factor you always have to take into consideration when making adjustments to the car. The rear tyres in particular come under heavy load – indeed tyre wear plays an important role in deciding the best race strategy."	Robert Kubica: "I have a fairly ambivalent attitude towards Magny-Cours. It's not one of my favourite circuits, although I wouldn't say I dislike it. I've nothing against it. Magny-Cours is much more fun in an F1 car than in the smaller cars I used to drive in other categories. In particular the chicanes really show off the potential of an F1 car. I think that many drivers are pretty neutral about Magny-Cours unless they have had a win or a particularly good experience there."

GP	Mario Theissen	Willy Rampf	Drivers
9 GBR	"Silverstone is a classic. The fans there are really special – true motor racing enthusiasts on the whole, who are less obsessed with the celebrities and more interested in the sport itself. Britain is the only market for the BMW Group which has production facilities for all three of the Group's brands. The MINI is built in Oxford, Rolls-Royce cars in Goodwood and BMW car engines in Hams Hall. Great Britain is the third-largest market for the BMW Group after the USA and Germany."	"Silverstone is renowned for its many medium and fast corners, where drivers have to carry as much speed as possible into the straights. Maggots-Becketts-Chapel is perhaps one of the finest combinations in the entire F1 calendar. To score a fast lap time here you need a car with excellent aerodynamic balance. The track surface is pretty rough, which means that tyres come in for a good deal of punishment. Accordingly teams tend to opt for a harder compound."	Robert Kubica: "What's striking about Silverstone is the width of the track and the long corners that invite a variety of lines. Finding the best is not always easy. The first section is very fast, I take turns 1 to 3 almost flat out. Silverstone is a fast and demanding circuit. Last year the track was very slippery, but we did pretty well. As always in England the weather can be a major factor."
10 GER	"The Nürburgring is once again the venue for the German GP – and the only F1 race to be held in Germany in 2007. It is a race weekend we're looking forward to immensely. But we can't afford to lose our focus. You don't get extra points just because you're racing at home. We have a very close association with the Ring. BMW has celebrated some glorious touring car victories here in the past, and we also have here the BMW Performance Center, a branch of the BMW Driver Training programme, the Ring Taxi on the Nordschleife and our brand's only permanent racing car exhibition, housed in the Nürburgring's *Erlebnis-Welt*."	"Circuit characteristics at the Nürburgring are such that cars tend to suffer from understeer, so that's the main thing we have to bear in mind with the car set-up. This understeer can be evened out through aerodynamic balancing in combination with mechanical modifications to the set-up. The track offers good levels of grip and rubber wear is not too extreme, which allows us to run a relatively soft compound."	Nick Heidfeld: "I always look forward to the Nürburgring. I learned to ride a bike there as a three-year-old and even went sledging on the Nordschleife. I was eight when I drove a kart there for the first time. These are really happy memories. I've raced in Formula Ford, Formula 3, Formula 3000 and Formula One there and have celebrated several wins. In 2005 I secured my first pole position in Formula One at the Ring, finishing second in the race itself. It's also the venue that attracts more of my fans than any other circuit. The support I get here is just fantastic."

GP	Mario Theissen	Willy Rampf	Drivers
11 HUN	"We will never forget the excitement of the 2006 race, when Nick brought home the first podium finish for our new team. At the same time, Robert also made an impressive GP debut. The Hungarian GP has traditionally been a hot-weather event, last year's cool and wet conditions being something of an exception. With its numerous twists and turns, the Hungaroring comes some way down the list in terms of full-throttle percentage. Instead, it is the heat which pushes the engines to their limits in Budapest. The natural bowl of the circuit traps the heat and the absence of long straights can cause a problem with cooling air."	"After Monaco, the Hungaroring has the lowest average speed of any circuit. The corners come quickly one after the other and even the start/finish straight is relatively short. As a result you need maximum downforce. And no sooner is the sand cleared from the track one day than it is back again the next. Grip is consequently in short supply, with understeer never far away. As far as the car set-up is concerned, particular attention must be paid to the middle section with its variety of turn combinations."	Nick Heidfeld: "I've got very fond memories of the Hungaroring. The 2006 GP was fantastic, there was so much going on. I got a rear shunt from Michael Schumacher after I went past him and ended the race with a damaged car. But I still managed a podium finish. I also won my Formula 3000 title in Budapest back in 1999. The many corners make it a very physical circuit and overtaking is difficult. I'm also looking forward to being in Budapest again – it's a city with a lot of charm."
12 TUR	"The Turkish GP is a welcome addition to the F1 calendar. They have built an outstanding facility with highly successful track design on the Asian side of Istanbul. The city itself offers excellent event opportunities, in particular for team partners. And the race itself is rather unique in logistical terms: with the teams still travelling in trucks and motorhomes, it is the GP set furthest away from Central Europe. The situation is eased somewhat by a break in the schedule prior to the Turkish event."	"Istanbul Park has all the ingredients necessary for an interesting circuit. There are slow sections where good traction is required. And then there is the infamous Turn 8, made up of four distinct sections and yet driven in a single line at about 250 km/h. Drag must not be too high on account of the long – often uphill – straights. Good aerodynamic efficiency is therefore the key to a good lap time."	Robert Kubica: "An amazing new circuit – Turn 8 has already staked its claim to fame. Most drivers find this section quite a challenge. It is very long and in fact consists of four different bends. It's great fun as soon as you've got your line sorted out. The circuit can also be pretty vicious, because occasionally you bottom out, lose traction and the car becomes unstable. We weren't particularly fast there in 2006. I hope things will look better in 2007."

GP	Mario Theissen	Willy Rampf	Drivers
13 ITA	"Monza is the classic engine circuit. With the switch to V8 engines, the full-throttle percentage per lap has gone up from 67 percent to 76 percent. Top speed during last year's race reached 350 km/h – a clear record for the season. Unlike in previous years the Italian GP will not be the last race of the European season. Monza was pretty good to us in 2006. Nick qualified with a place on the second line of the grid and Robert managed a podium finish."	"Monza is the last remaining high-speed circuit on the F1 calendar. And specially for this one event we develop a dedicated 'low downforce' aerodynamic package with flat wings. We got it pretty much right last year. The second critical factor is the mechanical set-up, which needs to guarantee not only good brake stability, but also comparatively smooth handling over the kerbs."	Robert Kubica: "The Italian GP is very special to me because I spent a few years not far from Monza during my karting days and racing in junior series. Until there's a Polish GP I'll always think of Monza as my home circuit. Low downforce, hard braking, extremely high speeds – the cars here have a completely different aero package and special set-up. I finished third here in 2006 driving in my third GP."
14 BEL	"We are delighted that this natural race track with its unique demands is back again on the F1 calendar. At Spa the course follows the contours of the landscape rather than vice versa. And highly unpredictable weather conditions in the Ardennes have regularly given rise to extremely tense racing. The inclines place particular demands on the performance of the engines."	"Especially with the disappearance of Suzuka from the race calendar, Spa has become a favourite with many drivers – and with good reason. The Eau Rouge is perhaps one of the most spectacular turns in all of Formula One, even if it can now be driven flat out with the V8 engines. The circuit calls for a medium level of downforce, comparable to Indy and Montreal. The big unknown at Spa is always the weather – it can change completely in a matter of minutes."	Nick Heidfeld: "For me Spa is one of the great race circuits. Eau Rouge is really unique, and I would recommend people to go and see it for themselves. Although the compression is not a problem in physical terms, it's really unlike anything else. After all, we're quite used to g-forces from lateral acceleration and braking. I haven't driven Spa that often. Races weren't held there during my time in Formula Ford and Formula 3, and I was forced to miss the last GP held there in 2005."

GP	Mario Theissen	Willy Rampf	Drivers
15 JPN	"After a gap of 30 years Formula One is finally returning to Fuji. Having to prepare for a circuit when you have no individual data or test results makes for a very interesting challenge. The situation calls for thorough research and ingenious simulation methods. One statistic is already common knowledge, however – the course will boast the longest straight of any grand prix circuit."	"Fuji is unknown territory for all of us. That means we have to rely pretty much on simulation alone. At 1.5 kilometres the Fuji straight is extremely long, so overtaking should not pose a problem. At the same time, it's clear that drivers will definitely be needing adequate downforce in some of the faster corners."	Robert Kubica: "It's always exciting to come to a new race circuit. None of the Formula One drivers will really know it well. I usually get to find my way around new circuits pretty quickly. Like most drivers I was very fond of Suzuka and very much look forward to driving there again one day."
16 CHN	"The dimensions of the Shanghai circuit complex are second to none and the track itself poses quite a challenge. The Chinese Grand Prix is of huge commercial interest to BMW as an automotive manufacturer and indeed to all our partners. The market has enormous growth potential, with the company registering a 40-percent increase in business in 2006 over the previous year. BMW has its own production facilities in China which produce 3 Series and 5 Series models."	"Shanghai is one of those circuits that demand high aerodynamic efficiency and good downforce in the corners. But thanks to the long straights and generous track width it also offers good overtaking opportunities. The first corner in particular calls for excellent balance. The drivers enter the corner at full throttle and have to brake gradually right through the turn. Tyre graining has posed problems here at previous events, but this should not now be as serious an issue as it has been in the past."	Nick Heidfeld: "Even though the course is so new, it doesn't come across as being in the least synthetic. It certainly has character. The first turn is very unusual. You arrive at it flat out and maintain speed even as you initiate the first part of the bend. But then the corner closes tighter and tighter, forcing you to change right down to second gear. As a city experiencing extraordinary growth, Shanghai is a fascinating place, but one of stark contrasts – with amazing ultramodern architecture standing side-by-side with abject poverty."

GP	Mario Theissen	Willy Rampf	Drivers
17 BRA	"Interlagos was the venue at which the 2006 championship was decided. I hope that in 2007 the title remains open right up to the season's finale and that the public will enjoy a similar thriller. The circuit is unpredictable – as is the weather. The engines come in for some serious punishment on the start/finish straight, which is not only long but also uphill. The incline also makes for an exciting start. A characteristic feature of the São Paulo circuit is its altitude. The thinner air reduces engine output by about eight percent compared with sea level."	"The crucial part of the Interlagos circuit is without doubt the middle section, where the turns come thick and fast. This calls for good downforce, good traction and balance. Top speed is paramount in the first and third sections, and the uphill straights in particular call for sizeable engine output. One factor always to take into account at Interlagos is the track surface, for despite the many improvements over recent years it remains something of a mogul field. It is vital therefore to ensure the car's mechanics are tweaked to provide the optimum set-up."	Robert Kubica: "With its infamous bumps, Interlagos reminds me of some road circuits. The track surface is the worst of any on the F1 calendar. You need to find the right balance for the car and get adequate downforce in the slow corners. But there is also the long, uphill straight where it's important to reach a good top speed. I have fond memories of Interlagos – I won my first race there in a Formula Renault 2000."

Rule changes.

One for all.
The most important change in the regulations for the 2007 season concerns the tyres, with Bridgestone now supplying all the teams on the grid.
The Friday of the race weekend will also have a rather different look, while testing is subjected to severe restrictions.

- From 2007 Formula One will be served by a single tyre supplier: Bridgestone. The Japanese company will supply two specifications of its Bridgestone Potenza tyre at each grand prix, from which the teams can make a choice. Each driver will have 14 sets of dry-weather tyres (seven sets per specification) at his disposal. A driver may use a maximum of four sets on the first practice day and the remaining ten on the Saturday and Sunday. In dry conditions, both specifications must be used during the race. In the wet, the driver has a total of seven sets of wet-weather tyres available to him (four sets of wet-weather tyres and three sets of extreme-weather tyres).

- There is one free practice session of 90 minutes on the Friday morning and one in the afternoon. The teams can send out a maximum of two cars for each session. The cars may be driven by either the two race drivers or by a nominated test driver. The identity of the drivers must be announced before 16.00 hrs on the day before the first practice session.

- The engines must once again cover two race weekends, although this only applies to the Saturday and Sunday in 2007. The Friday is no longer subject to this regulation, which means that engines may be changed ahead of Saturday practice. These modifications promise to give the fans more action to enjoy on the Friday.

- Tight restrictions have been imposed on the further development of the engines. The teams have to submit a homologated engine – based on an engine that completed two races in the 2006 season – to the FIA by 1st March 2007. This power unit will serve as a technical basis from 2007 to 2010. Modifications are only permitted in peripheral areas, e.g. on the velocity stacks or exhaust piping. The entire crank mechanism and valve train must remained unchanged and in line with the homologated engine. Engine speed is capped at 19,000 rpm.

- An important change to the regulations affects periods spent under the safety car. As soon as the safety car moves onto the track the pit lane is closed. It is only opened again once all the cars have lined up behind the safety car. In addition, lapped drivers then have to overtake any drivers ahead of them who are on the lead lap. They also overtake the safety car, drive an additional lap and rejoin the field at the back. This rule does not apply to drivers who are already at the back of the field with no leading cars ahead of them; they simply remain in their position. The safety car stays out at least until this process is fully completed.

- The crash tests have been made even more stringent.

- The amount of testing permitted has been significantly reduced. Each team may complete no more than 30,000 kilometres per year in testing, for which they are given a maximum of 300 sets of tyres. However, this rule does not apply to the free practice sessions on the race weekends. There are five pre-defined tests scheduled before the start of the season, each with a duration of three days. Any number of cars may be used during these tests. In addition, every team has the right to an exclusive three-day test, e.g. for the rollout presentation or film shoots. During the course of the season, testing is limited to eight three-day events at stipulated circuits and with only one car. The teams may, though, name two home circuits where they can carry out tests at the same time as the official tests. A maximum of twelve “straightline” (aerodynamics) tests and twelve “shakedowns”, each covering no more than 50 kilometres per team, are also permitted.

3. The Technology.

Chassis.

BMW Sauber F1.07 – a cast of experts.
Time was of the essence in the development of the F1.06, the first car developed by the BMW Sauber F1 Team. Indeed, BMW only took the decision to purchase a majority stake in the Sauber team in June 2005. The components already in the midst of a lengthy development period (the chassis, engine and transmission) were moulded into an overall package – and with notable success, as the results over the course of the season just gone can testify. However, the shortage of time available meant that compromise was unavoidable in certain areas.

The BMW Sauber F1.07 started out from a very different basis. Work on the concept began in April 2006 and took shape as part of a close cooperation between the chassis experts in Hinwil and their colleagues in Munich responsible for the powertrain, i.e. the engine and transmission, and the electronics. Priorities were set out from day one and all the aspects of the project brought together to create a harmonious overall package.

“We have channelled our experience with the F1.06 into the new car, but at the same time focused on the new challenges presented by the 2007 regulations”, explained Willy Rampf, Technical Director of the BMW Sauber F1 Team.

To this end, the most significant change is the switch to a single tyre supplier in Bridgestone. In accordance with the stipulations of the FIA, the Japanese company has produced tyres which offer less grip as a means of lowering cornering speeds.

“It’s clear that the cars are going to slide around more. It was therefore important for us to build a car that is easy to drive and that our drivers can trust sufficiently to go on the attack”, added Rampf, giving an insight into the team’s development strategy. “We should also expect the cars to run with rather greater downforce as a rule, in order to make up for the loss of grip.”

The nose has it.
Aerodynamics has been a key area in Formula One for a long time now, but the advent of the single tyre supplier format in 2007 will raise its importance even further. “If you look at all the components which affect the performance of a Formula One car, aerodynamics represent – by a distance – the single most important factor”, emphasises Rampf.

All of which explains why the BMW Sauber F1 Team top brass gave the expansion of the aerodynamics department top priority. The team’s use of the wind tunnel in Hinwil was gradually increased, with a move initially from one to two shifts, and from there to a round-the-clock three-shift system in late October 2006. This has given the team parity in this area with its rivals – who have long had comparable systems in place – and fulfilled a central requirement in achieving its ambitious aims.

As always, the key is to enhance aerodynamic efficiency. However, almost as important this year is the need to develop a package that functions as well as possible through corners.

Here, the front wing has an influential role to play, largely dictating the flow of air around the front tyres. It has been completely newly developed and forms a harmonious unit with the likewise totally new nose section, which is shorter and sits higher than its predecessor. This results in a reduction in its weight, but also places extra demands on the engineers when it comes to passing the FIA crash tests. The most important aspect of this development, though, is that the wing channels a large amount of air under the car, allowing the underbody and diffusor to work to their full potential.

New cooling concept.
The cooling intakes are somewhat larger than those on the 2006 car and represent part of a new cooling concept which is more effectively integrated into the overall package and designed to ensure greater air throughput. The air is diverted upwards to maximum effect, improving aerodynamic efficiency compared to last year’s car, especially in high outside air temperatures. As Rampf explains: “We took a lot of time in the conceptual phase to find the best possible solution in this area. This is an important point, as the air temperature at the first races of the season, in particular, are traditionally very high. The cooling concept of the F1.07 promises to deliver impressive efficiency in all conditions.”

Slimmed-down rear.
The designers built on the knowledge gained with the F1.06 in the development of the rear, giving the tail an even slimmer and lower profile in order to further optimise the air flow around the rear wing. The basis for these modifications is provided by the compact quick shift gearbox and cleverly positioned hydraulic elements. Also integrated into the design are the exhaust pipes, whose form was defined to maximise performance and fit harmoniously into the overall package.

The section underneath the rear wing is a totally new development. More stringent regulations governing rear-end collisions have meant that the rear crash element is now more voluminous overall and also has a modified form. The lower positioning of this element has required a totally revised design for the centre section of the diffusor.

The engineers were also instructed to reduce the car's weight, while maintaining its rigidity. The affects the monocoque, which is made up of up to 60 layers of carbon fibre in places, as well as individual components. "It's always good if you can use a lot of ballast, but in the situation we have now it's particularly important, as it ensures outstanding flexibility in terms of weight distribution. And that plays a critical role in the optimum use of tyre potential", explains Rampf.

New suspension elements.
The construction of the suspension elements is totally new and, at the front axle, dictated primarily by aerodynamics. The raised nose section mean that the wishbones slant downwards at a striking angle. The kinematics have been modified in response to the introduction of the standard Bridgestone tyres.

"We were also very keen to give the steering a high level of feedback", says Rampf. "This area has gained even further in importance as a result of the cars' reduced grip levels. The harder tyres will, by definition, cause the cars to slide around more, which means the drivers will have to do a lot more correcting as a result. And that makes good steering feedback indispensable." The rear axle was also modified to further improve traction.

Greater comfort.
Comfort and Formula One make uneasy bedfellows. And yet, one of the focal points in the development of the F1.07 was an increase in comfort. This is expressed specifically in the seating position of the drivers, especially that of Robert Kubica. The Pole's 184-cm frame was a far from comfortable fit in the 2006 car, whose cockpit area was particularly tight. As Rampf points out: "We only have restricted room for manoeuvre in this area, but we've done what we can to give Robert a pleasant seating position in the new car."

There has also been progress in the area of electronics, which combine the workings of the chassis and powertrain in the interests of integration. The electronics for the chassis, engine and transmission have now been brought together into a single control unit, whose space-saving design allows it to be accommodated in the cockpit without taking up too much room.

"We created a solid basis for this year's car in our first season on the grid. The cooperation between the team members in Munich and Hinwil is now working well, and the additional resources give us extra potential. Our aim is now to further reduce the gap between ourselves and the top teams", said Rampf, looking forward optimistically to the new season.

BMW Sauber F1.07 – technical data.

Chassis:	carbon-fibre monocoque	
Suspension:	upper and lower wishbones (front and rear), inboard springs and dampers, actuated by pushrods (Sachs Race Engineering)	
Brakes:	six-piston callipers (Brembo), carbon pads and discs (Brembo, Carbone Industrie)	
Transmission:	7-speed quick shift gearbox, longitudinally mounted, carbon-fibre clutch (AP)	
Chassis electronics:	BMW	
Steering wheel:	BMW Sauber F1 Team	
Tyres:	Bridgestone Potenza	
Wheels:	OZ	
Dimensions:	length	4,580 mm
	width	1,800 mm
	height	1,000 mm
	track width, front	1,470 mm
	track width, rear	1,410 mm
	wheelbase	3,110 mm
Weight:	605 kg (incl. driver, ready to drive, tank empty)	

Engine.

V8 reloaded.
Following the fundamental conceptual shift from V10 to V8 engines ahead of the 2006 season, the focus is now on the development of clever details for the Formula One powerplants of the future. In 2006 the decision was taken to freeze large areas of engine development until after the 2010 season. The homologation of the 2.4-litre V8 units requires technical monitoring and has been conducted in several stages.

The Formula One teams' engines started to appear at the FIA office in Chessington, England towards the end of the 2006 season. All the manufacturers were required to submit an engine which had come through two GP weekends. To be on the safe side, BMW decided to put aside the first P86 engine as early as Monza, with further development work continuing apace at the same time. Having met its obligations, the team had earned itself extra room for manoeuvre when it came to making improvements. The engines in Nick Heidfeld and Robert Kubica's cars completed the final races of the season in Japan and Brazil without a problem, and Kubica's unit was handed over to the FIA. The deadline for engines was 22nd October, but that didn't mean the engineers could go into hibernation for the winter.

The teams were able to submit a list to the FIA – by 15th December 2006 at the latest – containing modifications to the engine (except the pre-specified core) which they were intending to carry out by 1st March 2007 in order to adapt it to the rev limit of 19,000 rpm. In simple terms, while the block and crankshaft had to remain untouched, further tweaks were allowed to the cylinder head and peripheral components. Additional enhancements were permitted to details of the intake and exhaust piping, lubricant and fuel supply, pistons, valves and mounts. Alterations required to install the engines in the new cars were also given the green light.

A new central control unit for the engine, transmission and chassis replaces the previous engine electronics. The new development has been christened RCC, standing for Race Car Controller.

The designation of the BMW power unit reflects the fact that the engine concept must remain unchanged: it will be known as the BMW P86/7, rather than the P87.

Fixed parameters for all.
The introduction of the V8 engines in time for the 2006 season was underpinned by a series of central parameters governing their construction. Displacement of 2,400 cc and a bank angle of 90 degrees were stipulated for the V8 engines. The powerplants had to tip the scales at no less than 95 kilograms. This included the intake system up to and including the air filter, fuel rail and injectors, ignition coils, sensors and wiring, alternator, coolant pumps and oil pumps. It did not include liquids, exhaust manifolds, heat protection shields, oil tanks, accumulators, heat exchangers and the hydraulic pump.

The new regulations stipulate that the engine's centre of gravity must be at least 165 millimetres above the lower edge of the oil sump. The longitudinal and lateral position of the V8's centre of gravity has to be in the geometric centre of the engine (+/– 50 millimetres).

The cylinder bore is limited to a maximum 98 millimetres. The gap between the cylinders is also set out in the rulebook – at 106.5 millimetres (+/– 0.2 mm). The central axis of the crankshaft must not lie any less than 58 millimetres above the reference plane.

Variable intake systems designed to optimise torque have also been banned since 2006.

The power supply to the engine electrics and electronics is limited to a maximum 17 volts and the fuel pump has to be mechanically operated. Only an actuator may be used to activate the throttle valve system. With the exception of the electric auxiliary pumps in the petrol tank, all subcomponents must now be driven mechanically and directly via the engine.

In addition, a long list of exotic materials have been excluded and the team limits itself to working with the conventional titanium and aluminium alloys stipulated in the regulations.

Another restriction which will come into force for 2007 and the following years is a cap placed on engine speed at 19,000 rpm.

V8 development from November 2004 to February 2007.
Development work on the BMW V8 engine began in late November 2004. The champagne was flowing at BMW's Formula One engine factory at Anton-Ditt-Bogen in Munich in May 2005 after the first-specification V8 successfully completed its opening examination on the test rig. An updated specification made its track debut in Jerez on 13th July 2005. A further developed version was then introduced in time for winter testing, which began in Barcelona on 28th November 2005. The next stage of development was ready for the first rollout of the new car on 17th January 2006, and this was followed by another update for the first race of the season and a series of new specifications as the year went on. The later versions were developed with one eye on the homologation process to come.

As Theissen explains: "A Formula One engine is never the finished article. It's like a painting that may already look finished to the onlooker but which the artist, knowing precisely where he can improve his work, will still touch up here and there. A single stroke of the brush can change the whole effect. Far from reducing development work to a standstill, the increased number of regulations has merely shifted the emphasis. It's important that Formula One remains at the cutting edge of technology, and that's what it will do."

Power for longer.
The mileage a Formula One engine is required to cover has changed dramatically in the recent past. 2002 was the last season where a new engine could be fitted ahead of every race. Back then, qualifying saw the use of highly tuned engines which the teams would never have dared risk over a full race distance.

In 2003 the rules changed to force the teams to use the same engine for qualifying and the race itself, and that was followed by the introduction of the whole-weekend stipulation in 2004, doubling the mileage the engine had to cover. Since 2005 the engines – then still 3-litre V10 units – have had to hold it together for two full GP weekends. An unwanted side effect of this rule saw the GP drivers preserving their engines during Friday practice and staying in the garage as much as possible. In order to offer the fans more in the way of action, the Friday sessions have now been granted exemption from the engine regulations for the 2007 season. This will encourage the drivers to spend more time out on the track during what are now two 90-minute sessions. Only from Saturday will the teams be obliged to fit the engines in their cars which must then last two GPs – under the watchful eye of the FIA.

Longer at full throttle.
The lower output of the V8 compared to the V10 engines means the cars spend longer under full throttle. BMW's figures show that the average proportion of the race spent at full throttle in 2005 was 56.67 percent, with that figure rising to 63.53 percent in 2006.

Practice behind closed doors.
Before a new specification reaches race readiness, it has to successfully complete an extended session on the dynamic test rigs. BMW first introduced the new-generation testing facilities, which stretch out over several floors and fill entire halls, in autumn 2005. The exacting challenge for the powerplant remains unchanged: 1,500 kilometres on a pre-programmed circuit profile based on Monza. No other GP venue can match the full-throttle percentage of the Italian track. Engines earmarked for transportation to the race venue complete a rather more gentle functioning check on the test rigs. This is followed by quality checks, with the oil undergoing spectrometer analysis to identify any metallic residue. Then it's time for action on the track.

Shifting faster.
One section of the new testing facility at Anton-Ditt-Bogen is used by the transmission development and testing department now based in Munich. A Formula One race transmission needs to display maximum rigidity, yet at the same time be lightweight, have a low centre of gravity, be compact and boast extremely short shift times. The BMW Sauber F1.07 is fitted with a 7-speed gearbox. The main and auxiliary drive shafts are arranged longitudinally to the direction of travel. The driver can shift up a gear without breaking off tractive power to the rear axle. In a conventional Formula One transmission, engaging the clutch results in the flow of tractive power being interrupted for approximately 50 milliseconds during the shift process. In other words, during this time the car is deprived of propulsion and just rolls – in particular at high speeds against high wind resistance. In practical terms, the car is braked by around 1g during this suspension of tractive power. In a road car, this would come across as powerful braking.

This interruption of tractive power every time the driver shifts up a gear – which he will do some 2,000 times over the race distance of the Monaco Grand Prix – adds up to a significant loss of time or a deficit of several hundred metres by the end of the race. The new quick shift gearbox (QSG) fitted in the BMW Sauber F1.07, however, totally eliminates this break in tractive power. The ingenious interplay of electronic and mechanical components is the key.

Both the development and production of the QSG takes place in Munich. The transmission's extremely durable toothed gears – partly manufactured at BMW's Dingolfing plant – are made of high-strength steel, while the transmission housing consists of cast titanium.

Converting torque and engine revs is just one of the transmission's jobs. It also has to pass on the forces generated in the suspension to the chassis via the engine.

Made for the track, benefits for the road.
One of the aims stated by BMW for its return to GP racing in 2000 was the creation of synergies between F1 and series production. The development of the Formula One powertrain and electronics has been integrated with impressive effectiveness at the Munich plant. The BMW Research and Innovation Centre (FIZ), a type of automotive think tank, plays a key role in this process. The F1 factory was built less than a kilometre away from the centre and the two facilities are interconnected.

"The FIZ represents the future of BMW, with elite engineers working in state-of-the-art research and development facilities", says Theissen. "The FIZ is given vast resources, from which we benefit directly. At the same time, due to the extreme technical challenges and pace of development demanded by grand prix racing, the company's involvement in F1 represents a unique proving ground for our engineers."

BMW has made the vision of a seamless process chain a reality, following the development from concept to construction, casting, component production, assembly and testing all the way to race action on the track – and all under its own roof. Transportation of parts – and the quality problems this can cause – is no longer an issue, and the expertise acquired remains within the company, where it benefits the development of production cars.

Casting technology for Formula One and series production.
The casting quality of the engine block, cylinder head and gearbox plays a crucial role in determining their performance and durability. Advanced casting techniques, coupled with high-precision process management, enable lightweight components with impressive rigidity. To ensure that production models benefit from these developments, BMW has its own foundry in Landshut. In 2001, this was joined by a dedicated F1 casting facility.

The two departments are jointly managed and that ensures a constant exchange of information and expertise. The same sand-casting procedure as is used for the production of the Formula One V8 engine is also applied to oil sumps for the M models, the intake manifold for the eight-cylinder diesel engine and prototypes for future generations of engines.

Virtually at the same time as the F1 foundry went on stream, an F1 parts manufacturing facility based on the same template joined the series production facility. This is where the team make components such as the camshafts and crankshafts for the F1 engine.

Electronics for race day and every day.
With the backing of the electronics experts at the FIZ, BMW also had the confidence to develop its own F1 engine management system for its GP comeback. Turning to established motor sport specialists might have been the easier option, but such a move would have done little to augment the knowledge base in Munich. Engineers normally devoted to developing the electronics for the M models also created the engine management system for the F1 engines. The expertise they gained in the process filters back into series production. Top-of-the-range BMW cars, such as the 7 Series and M models, have long featured two types of microprocessor which BMW has used and tested in Formula One. Added to which, data storage technology which had first proved itself in F1 was used to hone internet access and the navigation system for the BMW 7 Series. F1 technology is also used in monitoring systems for a variety of vehicle functions – another area which is gaining in importance in road car development. Early warning systems and automated electronic intervention technology can play an important role in enhancing safety and guarding against damage in production cars as well as racing machines.

The demands on the engine management system of a high-revving Formula One engine, which also has to run smoothly at low engine speeds, are immense. The ignition timing and fuel supply have to be perfectly coordinated millisecond by millisecond in order to achieve optimum efficiency – maximum output combined with low fuel consumption. Optimising fuel economy can enable both better lap times and greater flexibility in race strategy.

One of the electronics and transmission innovations from Formula One to have proved its mettle in the BMW M3, M5 and M6 is the "Sequential M Gearbox – SMG with DRIVELOGIC". The SMG drive concept delivers F1 transmission technology for everyday use. The driver changes gear electrically via paddles behind the steering wheel. As in Formula One, an electrohydraulic system replaces the mechanical clutch and shift process, and SMG users can similarly keep their foot on the accelerator while changing gear.

Material research for the future.
Despite the introduction of even more stringent regulations into GP racing, the materials used in today's F1 cars still have to be "as lightweight as possible and as durable as necessary". The materials research section at the FIZ provides crucial input for the development of BMW's F1 engines and transmissions, with aviation and aerospace technology frequently serving as a basis. Some highly promising developments, which as yet remain too expensive for use in production models, have already found their way into BMW's F1 project. This opportunity to introduce fresh technological blood helps the engineers to continue developing innovations for series production

Rapid prototyping – models in double-quick time.
From the new idea and the conception phase to the construction process, production of the necessary tools, manufacture of new parts and testing, new components are expensive and time-consuming to make. In Formula One, moving forward and addressing problems demands fast reaction times, while the number of design modifications made during a single season has been as high as for the entire BMW range of series-produced engines. The team is therefore constantly on the lookout for ways of shortening its processes. Here the BMW Formula One engineers can turn to the Rapid Prototyping/Tooling Technology department of the FIZ. Once the necessary parts have been designed – using a CAD system – computer-controlled machines use laser beams or three-dimensional pressure technology to create scale models made out of resin, plastic powder, acrylic, wax or metal. That enables installation and interactions to be simulated without delay, allowing any necessary modifications to be carried out before the final manufacturing process gets underway.

BMW P86/7 – technical data.

Type:	normally aspirated V8
Bank angle:	90 degrees
Displacement:	2,400 cc
Valves:	four per cylinder
Valve train:	pneumatic
Engine block:	aluminium
Cylinder head:	aluminium
Crankshaft:	steel
Oil system:	dry sump lubrication
Engine management:	BMW
Spark plugs:	NGK
Pistons:	aluminium
Connecting rods:	titanium
Dimensions:	length: 518 mm width: 555 mm height: 595 mm (overall)
Weight:	95 kg

Stats and facts.

- The 2007 Formula One calendar has 17 grands prix lined up. The last time the same number of races were staged was in 2002. The record is held by the 2005 season with 19 GPs.

- For the first time since 1975, there is no country hosting two GPs.

- On a grand prix weekend the entire crew, including the logistics, marketing, press and catering staff, is around 80-strong.

- When the takeover was announced in summer 2005, the workforce in Hinwil numbered 275. By the end of 2006 this had risen to 400 and is scheduled to reach 430 at the end of 2007. Staff numbers in Munich remain unchanged at just under 300.

- For flyaway grands prix, the team transports around 32 tonnes of air freight. This includes four chassis (three plus one spare), six engines, three to five sets of spare parts, wheel rims, tools, computers, radio sets, headphones and pit garage equipment. Everything is packed onto three ten-foot pallets and four vast packing containers known as “igloos”.

- The transport fleet for the European grands prix comprises five trucks from Hinwil and one engine truck from Munich.

- Seven trucks transport the team’s hospitality facilities, four of them constituting an integral part of the smart construction.

- The hospitality has 37 plasma screens. 20 kilometres of cables are laid for the power and network supply. It takes twelve men 36 hours to erect the hospitality.

- Average food consumption per GP weekend in 2006 amounted to 120 kilos of meat, 70 kilos of fish, 60 kilos of pasta and 1,600 bread rolls – among other items.

- On a GP weekend, a team consumes up to 1,200 litres of fuel, 60 to 80 litres of engine oil and up to 30 litres of transmission oil.

- On average, a Formula One driver sheds two kilograms in weight per grand prix.

- The cockpit temperature averages 50 °C.

- The steering wheel is a computer and a control centre. Drivers can monitor at least 15 functions on the display, including basic information such as selected gear, engine speed, fuel supply and temperatures. Behind the steering wheel is the shift paddle. The steering wheel also has buttons for the pit radio, the drinking bottle and the program selection for the engine management and differential settings, among other functions.

- A modern Formula One helmet is made of carbon and, in keeping with the regulations, may not weigh more than 1,800 grams.

- To make a Formula One seat, first a foam shape is created using PU pellets in which the driver sits. The impression is scanned before a seat shell is shaped out of carbon and finally covered. The production process takes an average of 20 working hours and the seat weighs approximately 3,000 grams.

- The F1.06 accelerated from 0 to 100 km/h in approx. 2.6 seconds and from 0 to 200 km/h in approx. 5.5 seconds.

- It took the BMW Sauber F1.06 a distance of 55 metres to brake from 200 km/h to standstill.

- In extreme braking manoeuvres and high-speed cornering, drivers are subjected to forces of up to 5g.

- Parts of the protective monocoque consist of 60 layers of carbon fibre. A single carbon fibre is around six micrometres thick. The baking process in the autoclave is repeated three to four times for the monocoque.

- Carbon brake discs and pads require a minimum operating temperature of 550–650 °C. During braking they reach temperatures over 1,000 °C.

- Formula One tyres may heat up to 130 °C. Beyond this threshold there is a risk of blistering.

- After a race, it takes the team at least eight working hours to dismantle a car, test and replace individual components and reassemble the car.

- Assembling the BMW engine takes around 120 working hours.

- Almost 200 units of the BMW Formula One engine are built for rig testing, test drives and races.

- The BMW P86/7 engine consists of approx. 1,100 different parts and some 5,000 in total.

- The P86/7 was configured on the basis of the homologated P86 engine within the scope of the permitted modifications and with a rev limit of 19,000 rpm, as stipulated by the regulations.

- Maximum piston acceleration in the BMW P86/7 is 10,000 times the speed of the earth's rotation. Peak piston speed is 40 metres per second, or from zero to 100 km/h in 0.3 milliseconds. This exerts a force of almost three tonnes on the conrod. Average piston speed is approx. 26 metres per second.

- The exhaust reaches a temperature of up to 950 °C, while the air temperature in the pneumatic system rises to 250 °C.

- Over an average race distance of 300 kilometres, the BMW V8 engine undergoes around 6.5 million ignitions per grand prix.

- When the car returns to the pits during practice or qualifying, oil samples are taken for spectrometer analysis in the pit garage. Metal traces in the oil provide important indicators as to the state of the engine.

- In 2006, the BMW Sauber F1 Team covered 22,281 race kilometres.

- 43,659 test kilometres were clocked up between January and the close of the season.

- In the team's maiden season, a race car made it into the points 15 times, two podium places were claimed (Heidfeld finished third in Budapest, Kubica was third in Monza).

- A BMW Sauber F1 Team driver made it into the top ten qualifying 19 times.

4. The drivers.

Nick Heidfeld.

The devil wears Prada.
When Nick Heidfeld hits the dance floor, people rub their eyes in amazement. The internet download sequence runs for around 20 seconds: an excerpt from a television broadcast showing him in rave mode. This dance devil doesn't care two hoots about the running camera, he simply dances his thing, just as he lives his thing. Convention is not his thing. He goes for off-the-wall outfits, and the only place he doesn't wear them is in the paddock. The only giveaway accessory that isn't part of the simple blue and white team gear is generally an outsize pair of Prada shades, which he is obliged to take off when he gives TV interviews. That's fine with the man from Mönchengladbach.

He is no showman. Yes, he has been cohabiting with his longstanding girlfriend Patricia. Yes, their daughter Juni has an unusual name. Yes, he enjoys his Formula One trips and uses them to buy unusual artworks and seek out the best eateries. Yes, he'll have foie gras on the evening before a race because he simply cannot resist it, and on the Sunday after clocking off from work there'll be a night on the tiles with his boss and colleagues. All that is his prerogative. But when it comes to the BMW Sauber F1 Team, this driver is an out and out professional. He keeps himself in top form, he is punctual, he is assertive, he does not shy from dishing out uncomfortable criticism until he is absolutely satisfied, and he will mull over matters with the engineers until the small hours, leaving no stone unturned.

Starting from scratch.
On 10th May 2007, the racing driver with the physique of a jockey will turn 30. He was not quite five years old when he began competing with his brothers Sven and Tim in Motocross. His parents, Angelika and Wolfgang, lived a fast, fun life with their young sons. "I had a wonderful childhood," says "Quick Nick", who still loves bringing his parents and brothers along to the race track today. Even his grandmother makes the occasional appearance. At 1.65 metres, Nick is the smallest in the Heidfeld clan. "If I had designed myself, I would have made myself a bit bigger", he confesses, "but in motor racing it was always an advantage to be small." Almost always. There was that long haul before he reached the minimum height to be allowed to ride hire karts. "They had these

bars at the kart tracks. If you could walk under them you weren't allowed to drive." When he finally made it, he managed to leave his father trailing on the Nürburgring kart track. He was given his first kart at the age of eight and followed this up with club championships in Kerpen-Manheim, races at national level and participation in European and World Championship events.

Heidfeld's entry into Formula racing was swiftly crowned with success. Aged 17, he won the German Formula Ford 1600 Championship after taking eight wins from nine races. A year later he snapped up the title in Formula Ford 1800. In 1996, at the age of 19, he was the youngest competitor on the grid of German Formula 3. It was a strong debut with three wins and third place overall. He also claimed a pole position and a race win in the Formula 3 World Final on the tricky Macau city circuit, as well as third place in Formula 3's showdown at Zandvoort.

Pressure points.
In 1997, Heidfeld had his first taste of the pressures of being in the public eye. His first Formula One test drive with Mercedes aroused the interest of the media, and even before the season got underway he was being heralded as the up-and-coming Formula 3 champion. Heidfeld single-mindedly took five wins to claim the title. Winning the Formula 3 Grand Prix in Monaco was another masterstroke. In 1998 and 1999 he continued to pursue his path in International Formula 3000. After taking three wins and finishing as championship runner-up in the first year, he dominated the second year and claimed four wins to secure the title. In parallel with this he was testing for F1.

When Kubica and Vettel brought some young blood into the BMW Sauber F1 Team in 2006 and the mantra-like question was put to Heidfeld as to whether he now felt under pressure, he would give an astonished reply: "How come now all of a sudden? There's always been pressure. After all, I had to hold my own against team-mates like Kimi Räikkönen – and I beat them." That was back in 2001 during his first year with Sauber. His debut season in 2000, by contrast, had proved disappointing. He had been given a place in the new but unpromising team founded by Alain Prost, which won not a single championship point and suffered numerous retirements.

2001 saw Heidfeld claim his first podium place for Sauber in Brazil. He drove for the then all-Swiss team for three years. "It was a great time", he recalls. "I felt very good with the team." It was during this period that he exchanged his home in Monaco for a house in the Swiss town of Stäfa. "Built in the mid-19th century and restored using traditional craftsmanship", he likes to point out.

But to imagine a pair of stag's antlers hanging above the fireplace would be a grave mistake. Paintings by Patricia, other works of art and a modern interior makes for striking aesthetic contrasts. There is also a gym in the house, which is also ideally located for outdoor sports, be it cycling, water sports on Lake Zurich, tennis or golf. Heidfeld is a fan of variety and does not subscribe to a single sporting discipline. And when the mist descends over the lake in autumn and winter, he's glad that it's a mere 15-minute drive to the big-city lights of Zurich.

Since 2005, he has at least been able to spend his winters there knowing exactly what awaited him the following year on the professional front. That wasn't always the case. When his contract with Sauber was not renewed at the end of 2003, he just managed to slip into the Jordan team at a late stage. One winter on, he had to earn his place in the BMW WilliamsF1 Team in a month-long competitive testing bout with Antonio Pizzonia. Team Principal Frank Williams waited until the January presentation before informing Heidfeld that he had got the place.

In 2005 Heidfeld made his mark with strong performances, bold overtaking manoeuvres, a pole position, three podium places and incisive analytical work with the engineers. An accident during testing in Monza in August, caused by a broken wheel suspension, and a subsequent cycling accident brought an early end to the season for him, but for Mario Theissen he was already the driver of choice for the new BMW Sauber F1 Team. "I'm in this project body and soul", says Heidfeld. "In 2006, our first season, we made progress from race to race, even though the development work on expanding the team was running in parallel. We have to continue working at this pace. There's still a lot of room for improvement." His goals today remain the same as in Formula Ford ten years ago: he wants to earn wins and the title. Only his sunglasses will soon be ditched for a trendier pair.

Interview.

Questions to Nick Heidfeld:

How important are your fans for you?
Very! I think we have one of the best fan clubs of all. There's a good atmosphere. But I'm not at the centre of things to the extent one might imagine. Of course it's about me, but it's also about having fun together. The atmosphere is relaxed. We go karting and partying together. At the race track I naturally meet most of my fans at races in Germany. I really enjoy that and it's a great support. From that point of view I'm disappointed that we will only be having one grand prix in Germany from now on. But you also have to see it from the point of view that it was great to have two GPs for such a long time.
Fans abroad are always an interesting reflection of the mentality and culture of the country. Asians, for example, are shy as long as they are alone. But once you get a group of them – and that can be two or three people – they start to mob you. Things quickly descend into chaos, and it can be very amusing.

Your girlfriend Patricia didn't attend so many races in 2006. Do you miss her company?
Definitely. I always like to have my family, and especially Patricia, around me at races. During the day there's no time for them of course, but there is in the evenings, and that takes your mind off things. You can talk about other matters, which is important. Since we've had little Juni – who will be two in July – her needs have taken priority. You can't keep travelling around the world with a baby in tow, and she would be totally out of place in the paddock. When Patricia and Juni accompany me, Grandma usually comes along as well and looks after Juni in the hotel.

Do you ring up and report home after each practice session?
No. Only if I have an accident do I get in touch straightaway to put their minds at rest. But I don't bore Patricia telling her which rear wing setting was better in which turn. We phone a lot but then we talk about other things and about Juni. Videophoning is fantastic. That way I was able to witness live how my daughter took her first steps, even though I wasn't at home.

Formula One has changed since you made your debut in 2000. Have you changed as well – your driving style, your approach?
Technical modifications or changes to the rules influence your driving style. With the less powerful V8 engines, for example, you have to take the corners slightly differently than you used to with the V10 engines. Because the engines have to last longer, it means you sometimes cut down on engine speed. Essentially my driving style has been refined over the years. In a go-kart I was still known as a metal-basher, but already by my Formula Ford days I was treating the material and the tyres with care. That is still the case today. My general approach to Formula One has certainly become a bit cooler, and the initial respect has given way to routine. What has also changed over the years is that I don't stay in the paddock as long in the evenings. I'm still one of the last drivers to leave, but in the past I often stayed till midnight, poring over data. Eventually you can't see the wood for the trees any more, and your sleep suffers.

What does security mean for you?
Privately security means having a healthy family and enough money to let you sleep in peace. In private and in motor sport, there's no such thing as absolute security. The cars and the race tracks have got significantly safer over the years, but there's still an element of risk. If wheels touch or visibility is bad in a wet race, things get dangerous. Everyone has to decide for himself whether to take these risks or not. For me the answer is a clear affirmative.

Biography.

Nick Heidfeld.

Born:	10th May 1977/Mönchengladbach (GER)
Nationality:	German
Residence:	Stäfa, Switzerland
Website:	www.nickheidfeld.de
Marital status:	Partner Patricia, daughter Juni
Height:	1.65 m
Weight:	59 kg
Hobbies:	Sport, eating
Favourite food:	Foie gras
Favourite drink:	Fresh orange juice, virgin pina colada, testarossa
Favourite tracks:	Suzuka and Macau
First race:	1986, Kerpen-Manheim karting track
First win:	1987, Kerpen-Manheim karting track

Career highlights.

1988–1993	Karting successes, first at a national level, then qualified for European and World Championship
1994	Winner of the German Formula Ford 1600 Championship, eight wins out of nine races
1995	Winner of the International German Formula Ford 1800 Championship, four wins
1996	3rd place German Formula 3 Championship, three wins; pole position and race win at the Formula 3 World Final in Macau; 3rd place Formula 3 Masters in Zandvoort
1997	Winner of the German Formula 3 Championship, five wins; winner of the F3 Grand Prix Monaco; Formula One test (McLaren-Mercedes)
1998	2nd place European Formula 3000 Championship, three wins; Formula One test driver (McLaren-Mercedes).

1999	Winner of the European Formula 3000 Championship, four wins; Formula One test driver (McLaren-Mercedes)
2000	Formula One World Championship (Prost Peugeot), no points
2001	8th place Formula One World Championship (Sauber Petronas)
2002	10th place Formula One World Championship (Sauber Petronas)
2003	14th place Formula One World Championship (Sauber Petronas)
2004	18th place Formula One World Championship (Jordan Ford)
2005	11th place Formula One World Championship (BMW WilliamsF1 Team)
2006	9th place Formula One World Championship (BMW Sauber F1 Team)

Formula One statistics pre-2007.

First grand prix	Australian GP, Melbourne, 2000
GP starts	117
Disqualifications	1 (European GP 2000)
Pole positions	1 European GP 2005
Wins	–
Podium places	5 3rd place Brazilian GP 2001 3rd place Malaysian GP 2005 2nd place Monaco GP 2005 2nd place European GP 2005 3rd place Hungarian GP 2006
World Championship points	79 2001: 12 2002: 7 2003: 6 2004: 3 2005: 28 2006: 23
Fastest laps	–

Robert Kubica.

Self-made man.

Robert Kubica may be just 22 years old, yet he can already look back on 18 years of motor racing experience. The Pole was just four when he spotted a small off-road buggy in the display window of a department store in his home town of Krakow. The youngster begged and pestered until his mother Anna finally gave in. Her son has since become well known for his persistence.

Robert's father Artur used plastic bottles to mark out a small circuit in a car park, where Kubica jnr. could give his new wheels a run-out. However, as only one of the rear wheels had any drive, the four-horsepower buggy handled differently through right and left-hand corners. His father couldn't help but notice how quickly his young son was able to adapt to this idiosyncrasy. Day after day, Robert drove round and round the makeshift circuit, but soon his skill at the wheel became too much for the 4 hp vehicle.

His father duly traded it in for a small rear-wheel-drive model Porsche, which could reach speeds of up to 80 km/h. Not bad for a kid still in short trousers, but this was child's play to this particular five-year-old. Indeed, Robert soon had the car drifting sideways – and costing his father a small fortune in rear tyres in the process. Eventually, Artur Kubica sold the Porsche and replaced it with a kart. The minimum age for competing in official kart races in Poland was ten years old, but father and son still travelled to the nearest kart track once or even twice a week, even though that was 150 kilometres away. Robert was eventually cleared to race in the Polish Kart Championship once he had turned ten, and he went on to collect six titles in two different categories over the next three years.

All or nothing.

The Kubicas had reached a crossroads. Robert had won everything there was to win in Poland and now was left with nowhere to go. Artur decided to throw caution to the wind, taking out the bank loan which allowed his son to line up in the intensely competitive Italian Kart Championship.

While the other drivers in the series were turning up at the circuits in fully kitted-out trucks, the Kubicas had to be content with simply lashing their kart onto the roof of their BMW, Artur's pride and joy. With just a few spare parts stashed away in the boot, father and son set off on the 1,500-kilometre journey to Robert's first race. The family team enjoyed overwhelming early success, but the money ran out after just a few races. Fortunately, Robert had

done enough to earn a contract with kart manufacturer CRG. In 1998, at the age of 13, he moved to Italy, living in a room in his employer's house. His whole life now revolved around lap times and he learnt to speak Italian. The same year, Kubica became the first foreign driver to win the Italian Kart Championship, and also secured second place in the European Championship. Next up was victory in the prestigious Monaco Kart Cup. A year later he repeated this success in the Italian Kart Championship and Monaco Kart Cup, but this time added the German title, the Elf Masters and the highly respected Margutti Trophy to his trophy haul.

After another year in kart racing, he was snapped up by manager Daniele Morelli, who organised a test for him in a Formula Renault 2000 car. Morelli also negotiated deals with sponsors to cover a season in Italian Formula Renault. Kubica claimed a pole position in his first year and earned a place on the Renault driver development programme.

Well armed.

In 2003 it was time for the Pole to take the next step in his career. That winter he tested a Formula 3 car, but his rapid progress was to suffer an abrupt setback. Shortly before the first race of the season, he was a passenger in a car accident and sustained complicated fractures in his right arm. His doctors forecast a recovery time of up to six months. "The worst thing was not knowing whether the injury would have negative consequences for my career", recalls Kubica of his fears at the time.

However, just five weeks after the crash Robert was back in a racing car for a Formula 3 Euro Series race at the Norisring in Germany. Kubica stormed to victory, his right hand shielded by a plastic cuff and his arm held together by 18 titanium screws. It was a quite extraordinary debut. The highlight of the rest of the season was at the tradition-steeped race in Macau in which he claimed pole position, set the fastest race lap and finished in second place.

Kubica left a lasting impression with the Epsilon Euskadi team during winter testing and was awarded a contract for the World Series by Renault in 2005. There he won four races and was confirmed as champion three races before the end of the season. It was an important triumph, especially as the reward for the winner was a test in a Renault Formula One car in Jerez at the start of December 2005. Three hours at the wheel was enough to post a succession of impressive lap times. Three weeks later, BMW Motorsport Director Mario Theissen, who had personally watched Robert's successful drive at the prestigious 2005 Macau Grand Prix in November, signed him up as the

BMW Sauber F1 Team's test and reserve driver – without so much as seeing him turn a wheel in the team's F1 car. It was a gamble, no doubt about that, but one that had paid off before January was out. Kubica was setting some fine lap times, demonstrating admirable consistency and providing astonishingly good technical feedback. Still only 21, the Pole was going about his work with the unaffected ease of a man born to drive a racing car.

Into the car and flat out.

In his first outing as a Friday driver at the Formula One season-opener in Bahrain, a circuit he had never driven before, Kubica soon had his name at the top of the time lists. "I look at the pictures from the on-board cameras and walk the track to find out where the bumps are, but that's about it", he said, downplaying his skill at the wheel. While Robert was taking his accession to F1 very much in his stride, his success had sparked an outbreak of "Kubica-mania" back in his native Poland. Afforded superstar status more or less overnight, he became the darling of the press. Kubica's inexorable rise then hit even greater heights at the Hungarian GP, where he lined up on the grid for the race proper.

He could not have picked a more difficult race in which to celebrate his F1 debut, yet Robert made light of the chaotic weather conditions to storm home in seventh place. A technicality ultimately cost him his first World Championship points, but he didn't have to wait long to redress the balance, finishing on the podium at Monza – just two grands prix later. This was also the day, of course, that Michael Schumacher announced his retirement from the sport. As a result, all the cameras were focused on the seven-times world champion, but that didn't bother Kubica: "That just means I was not so much the centre of attention. The most important thing is what happens on the track, not any fuss about me personally." And that is typical of the man.

Kubica is equally adept at keeping his feet on the ground as he is his car. His formative years in Italy and the setbacks he's experienced through his career so far have had a profound effect. He has a fine instinct for what is and what isn't important, and he's never forgotten the people who have helped him get where he is today. He has very little time to himself between races, testing and dates with sponsors, but that's not something he minds: "I'm doing the thing I enjoy the most. If you look at it like that, every day is a holiday."

Interview.

Questions to Robert Kubica:

Who gave you the most help at the start of your career?
That would be my parents, no question. I'm extremely proud of them and really grateful for everything they've done for me. When you're so young, it's difficult to make a lot of decisions and you're really dependent on your parents. My mum and dad have always accepted and supported what I've wanted to do. Between the ages of eight and ten I practised very hard. There were no kart tracks in Krakow and we had to travel 150 kilometres every time to go racing. And that took up a lot of my father's time and money.

How did it feel moving to Italy as a 13-year-old?
I'd run out of competition in Poland, and at the time the Italian championship was the toughest kart series out there. We wanted to find out if I could hold my own against the best drivers in Europe. A few other Polish drivers had tried to do the same thing in previous years, but never made it into the final race for the top 20. That was our aim. But then I took pole position and finished second in two races first time out. For both me and my father, that provided important confirmation that we had done the right thing. Things were going well, but there were also very bad times – when my dad ran out of money. Although we were reasonably well off by Polish standards in 1998, that didn't mean a great deal outside the country. Today, average earnings in Germany and Italy are still six or seven times higher than in Poland. We'd got to the point where we only had enough money for one more race in the European Championship, then I got lucky with the contract from CRG. To start with I lived with the owner's family, but then moved into a place of my own when I was 16. My parents couldn't afford to come over very often and in a situation like that you have to learn a lot about life very quickly. You grow up fast.

What's the worst experience you've endured in your career so far?
That would definitely be when I got injured as a passenger in that car accident. My arm was so badly damaged that everybody thought I'd be out for six months. That was later reduced to three months, and in the end it was only a month and ten days later that I was driving – and winning – my first Formula 3 race. I just wanted to get back into a car as quickly as possible. The crash happened in Poland, but I was taken to Italy for treatment. I'm very grateful to the doctors there, they looked after me amazingly well.

And what has been the best moment?
That was probably that Formula 3 race at the Norisring after the accident. I only had about 70 percent use of the injured arm and needed the other one to change gear with. There aren't any fast corners at the Norisring, which helped of course. But that win in the Euro Series was just fantastic for me.

Was it your aim to make it into Formula One?
Formula One was certainly a dream, but I hadn't really identified it as a goal. My aims were rather more realistic. You need a certain amount of luck to get into F1, especially if you don't have any money. And I was given my big break when Mario Theissen called and offered me the job as test driver in December 2005.

You are 1.84 metres tall – does that cause problems in the car?
The cockpit of the F1.06 was designed for smaller drivers and that didn't make things easy for me. I would like to have been a few centimetres shorter. Before I could sign the contract, Mario Theissen and Peter Sauber asked me to get into the car so that they could see if it would work. Of course, I did everything I could to squeeze myself in and told them it was a great fit – you just don't throw away a chance like that. Shortly before the end of the 2006 season I was given a new chassis with a somewhat larger cockpit.

Where would you say your main strengths lie?
In my head. I'm pretty tough mentally. I've learnt that at least 50 percent of success is achieved in your head and through your mental preparation.

Biography.

Robert Kubica (pronounced “KOO-beet-sah”)

Born:	7th December 1984/Krakow (POL)
Nationality:	Polish
Residence:	Krakow
Website:	www.kubica.pl
Marital status:	Single
Height:	1.84 m
Weight:	73 kg
Hobbies:	Bowling, computer games, indoor karting
Favourite food:	Pasta
Favourite drink:	Orange juice
Favourite circuit:	Macau
First race:	Polish Kart Championship in Poznan, 1995
First win:	First race

Career highlights.

1995–1997	Six-times Polish Kart Champion (Juniors)
1998	1st place Italian Kart Championship (Juniors; 2nd place European Kart Championship (Juniors; 1st place Monaco Kart Cup
1999	1st place Italian Kart Championship (Juniors; 1st place German Kart Championship (Juniors; 1st place Monaco Kart Cup; winner of the Margutti Trophy
2000	4th place European Kart Championship (Formula A); 4th place World Kart Championship (Formula A)
2001	First races in Italian Formula Renault 2000
2002	2nd place Italian Formula Renault 2000, four wins
2003	First races in the Formula 3 Euro Series, one win; 1st place Formula 3 Masters in Sardinia

2004	7th place Formula 3 Euro Series; 2nd place Formula 3 Grand Prix Macau
2005	1st place World Series by Renault, four wins; 2nd place Formula 3 Grand Prix Macau
2006	16th place Formula One World Championship (BMW Sauber F1 Team – 12 outings as Friday test driver, 6 race involvements)

Formula One statistics pre-2007.

First grand prix	GP Hungary, Budapest, 2006
GP starts	6
Disqualifications	1 (GP Hungary 2006)
Pole positions	–
Wins	–
Podium places	1 3rd place GP Italy 2006
Championship points	6 2006: 6
Fastest laps	–

Sebastian Vettel.

Angel in disguise.

At first glance Sebastian Vettel looks more like a choirboy than a ruthless racing driver. He has a fresh-faced, angelic look that makes him appear younger than his 19 years, but looks are certainly deceptive when it comes to this fast, determined racing driver who was welcomed as a breath of fresh air when he joined the F1 circus in 2006. He made history by being the youngest driver to take part in a grand prix weekend when on 25th August – just a few weeks after his 19th birthday – he became a Friday driver for the BMW Sauber F1 Team at the Turkish Grand Prix. That weekend saw another record claimed: no driver had picked up an F1 speeding fine as quickly as the young man from Heppenheim. In just nine seconds, he was clocked for exceeding the speed limit in the pit lane.

While he took the Formula One world by storm by being quickest overall on that Friday, anyone who had followed the career of this young German was not surprised at his meteoric rise to stardom. However, the youngster was always very honest about just what his lap time meant: “It is natural to think the quickest driver may be the best, but an important part of this Friday programme is to be on low fuel and new tyres. My job is to give the best feedback to the team for use over the rest of the weekend. If I started to believe that because I was quickest I was the best driver out there, I would be deluding myself. It was very seldom that anyone but a Friday driver was quickest on the first day, so that should speak for itself.”

Early wins.

Vettel had been a winner since he first donned overalls and helmet. In 1995 he claimed his first kart victory in the Bambini class in Wittgenborn. In 2001 he was European and German Junior Kart Champion, as well as winning prestigious kart races in Monaco and Paris-Bercy, and when he moved to Formula racing in 2003 he was again in the winners’ circle from the start. He was just 15 years old when he embarked on his first season of the Formula BMW ADAC Championship. By the end of the year he was 16, Rookie Champion and runner-up in the series.

In 2004, his second year in BMW’s entry-level series, he took the title and set a record that will take a long time to beat: 18 wins from 20 races, 15 pole positions, 16 fastest race laps, 387 out of 400 points on offer. BMW recognised his potential and gave him a joint contract with Red Bull. For 2005 a move up to the Formula 3 Euro Series was on the agenda for Vettel.

He was able to add another Rookie Championship to his CV and came fifth overall in the championship. He was on the podium six times – on the Norisring, the Nürburgring, Zandvoort, EuroSpeedway Lausitz and Hockenheim. On 27th September 2005, BMW gave him his first test in a Formula One car in Jerez. At the end of the season he went on to demonstrate his talent in the toughest F3 race of all, and came third in Macau.

It was in 2006 that he claimed his first wins in Formula 3. Vettel triumphed in Hockenheim, on the Nürburgring and in Barcelona. But this was not an entirely trouble-free year. He also contested a few races in the World Series by Renault. He won a race in Misano, but suffered a big accident in Spa at the end of July. Flying debris almost sliced off part of his index finger. It was predicted that he would be out of racing several weeks, but a week later Vettel was back behind the wheel in the Formula 3 Masters in Zandvoort, where he astonished his own team boss by finishing sixth.

It was shortly after this that the big break came for Vettel when the BMW Sauber F1 Team was looking for a Friday driver replacement for Robert Kubica, who had been promoted to a race team driver from the Hungarian Grand Prix onwards. Vettel had been given a second test chance in Jerez on 5th July and managed to persuade BMW Motorsport Director Mario Theissen that he need look no further for his Friday driver. In the remaining five races of the season, the youngster handled his task so well that the team announced him as the official test and reserve driver for 2007 just before the season final in Brazil.

Sense of humour.

While Vettel was well known in Germany, international Formula One journalists knew very little about him. That was soon to change. From his very first appearance as a Friday driver, the young lad fresh from high school was the talk of the paddock. His sense of humour particularly struck a chord with the British media when he declared himself a fan of the popular UK TV series *Little Britain*, stated his favourite group was the Beatles and his favourite film Monty Python's *Life of Brian.* His self-assured manner and ability to answer even the most searching questions from seasoned journalists earned him respect, while his easygoing manner ensured his popularity.

Interview.

Questions to Sebastian Vettel:

When did you first start thinking about racing?
When I was three and a half years old and I was driving in our back yard. When I was five I was able to drive on a proper karting track. In March 1995 I was able to enter the mini class as, according to the rules, you were allowed to participate in this series in the year you turned eight.

Have other members of your family raced?
My sister Stephanie, who is four years older than me, was also karting back in 1993 and '94, while the other sister was more interested in horses. Then Stephanie stopped because I was driving so much and I always wanted to drive and didn't want her to drive! But she still likes racing and comes to watch me when I race in Europe. Obviously my father is also very keen and spent a lot of years driving me to my races.

When did you first start thinking about a fitness regime?
That was when I was 12 and moved from the mini to the junior class in karting. Physically it was a big step as these karts had much more power and better tyres, and it meant I started to think about fitness for myself. I started by running about 15 minutes a day, but it is different now. Fitness was part of the programme when I was in the Formula BMW ADAC Championship, and when I joined Red Bull I was offered a good programme. I know how important it is to be fit.

What did your schoolfriends think about you being a racing driver, and have they changed their attitude to you now you're in F1?
When I was racing in Formula BMW they didn't know much about it. Thanks to Michael Schumacher, Formula One is well known in Germany of course, so they know exactly what is happening and ask me how things are going. But they don't treat me differently. I didn't talk much about my racing when I was at school. If I was asked, I would tell them what I was doing, but preferred to keep quiet about it and never volunteered the information.

Did your move to Formula One in 2006 cost you the Formula 3 Euro Series title?
Absolutely not. I just made some mistakes and that was it. I was pushing hard to catch up with Paul di Resta, and when you're driving at 120 per cent such things happen. For me the mistake I made in Le Mans was crucial as I didn't want to go to Hockenheim a long way behind in the points.

You are only 19 and you are in Formula One, so has your dream come true and did you ever have a plan of what your ideal career would be?
Yes, I always had this dream since my childhood. However, I never had any idea how it would all turn out or if it really could happen. I still have a long way to go to realise this dream, and that is my goal now.

Biography.

Sebastian Vettel.

Date/place of birth:	3rd July 1987/Heppenheim (GER)
Nationality:	German
Residence:	Heppenheim
Website:	www.sebastianvettel.de
Marital status:	Single
Height:	1.76 m
Weight:	62 kg
Hobbiess:	Running, cycling, swimming, music, football
Favourite food:	Pasta
Favourite drink:	Apple juice spritzer
Favourite circuit:	Macau
First race:	1995 Kart race (Bambini class) in Walldorf
First win:	1995 Kart race (Bambini class) in Wittgenborn

Career highlights.

from 1995	Karting
2001	Winner European Junior Kart Championship; winner German Junior Kart Championship; winner Monaco Junior Kart Cup; winner Kart Paris-Bercy
2002	6th place European Championship ICA Senior
2003	2nd place Formula BMW ADAC Championship, rookie champion
2004	Winner Formula BMW ADAC Championship, 18 wins from 20 races, 15 pole positions, 16 fastest race laps
2005	5th place Formula 3 Euro Series, rookie champion, 6 podium places; first Formula One test with BMW in Jerez
2006	2nd place Formula 3 Euro Series, three wins; second Formula One test with BMW in Jerez; Friday test and reserve driver for the BMW Sauber F1 Team as of the Turkish Formula One GP

Formula One statistics pre-2007.

First grand prix	–
GP starts	–
Pole positions	–
Wins	–
Podium places	–
Championship points	–
Fastest laps	–

Timo Glock.

Scaffolder climbs the career ladder.

Like many young racing drivers, Timo Glock also has a motor sport-mad dad. His mother did not share this enthusiasm, least of all when the youngster managed to break his tibia and fibula while riding motocross in 1989, a sport he had taken up at the age of four. Following this accident, his mother insisted he put a stop to his sporting pursuits. Timo trained as a scaffolder in his father's business, and it was only after he qualified that he returned to the fast track. Aged 18 he won the BMW ADAC Formula Junior Cup of the time, gaining promotion to the next series up. He then went on to win the Formula BMW ADAC Championship. This was followed by two years in Formula 3.

By 2004 he had made the leap into Formula One: in a matter of just four years he had progressed from go-karter to F1 test driver. "Compared to others I was a late starter," he points out, but he was lucky enough to make it into the cockpit of one of Jordan's team drivers. He contested his first grand prix in Canada - and took home two championship points. Admittedly he benefited from the disqualification of other drivers, but nobody could take away his seventh-place finish. He ran four GPs for Jordan as a team-mate of Nick Heidfeld, and indeed knows all the drivers in the BMW Sauber F1 Team quite well - Heidfeld from Formula One, Robert Kubica from Formula 3 and Sebastian Vettel as a near-neighbour. "All that separates Heppenheim, where Sebastian comes from, and Wersau is a small hill. We could actually arrange to meet at the top on our mountain bikes. But we also used to bump into each other a lot at the kart track." Letting off steam on the karting track with friends is Glock's number-one way of relaxing.

In 2005 he left his home in Hesse and headed for the United States, where he drove in the Champ Car World Series for Rocketsports Racing run by team and series owner Paul Gentilozzi. It is the leading formula class of the USA and extends to races in Canada, Mexico and Australia. Glock lost no time in claiming the Rookie of the Year title.

"But after that I was keen to regain a foothold back in Europe and get closer to Formula One again," says the man from the Odenwald region in central Germany. It marked the beginning of a crucial year for him in the GP2 Series, which pits 600 bhp four-litre V8 machines against each other and is regarded as the waiting room for Formula One. It was all the more disappointing for him to find that things weren't working out so well with the team with whom he had contested the first half of the season.

Before the GP2 race at Silverstone, Glock was given the chance to join top British team iSport international as a driver. He didn't wait to be asked twice, and quickly vindicated the decision by coming second in Silverstone. At the next race in Magny-Cours he celebrated the first of two wins of the season. Despite a middling first half of the season, he was on course for third place in the championship when an accident on the weekend of the final in Monza scuppered his hopes. In the first of the two races he sustained a hand injury that relegated him to the sidelines for the second race and saw him end the season in fourth place.

Timo Glock has a full diary for 2007. In his second GP2 season for iSport, he aims to make it right to the top. And he's also back in Formula One: on 21st December 2006, the BMW Sauber F1 Team signed him on as their second test driver.

"We've know Timo for a long time," says BMW Motorsport Director Mario Theissen. "After all, he began his Formula racing career a good six years ago in Formula BMW, where he took away two titles. He has gleaned success and experience in various Formula categories - Formula 3, Formula One, the American Champ Car Series - and demonstrated his racing prowess in the exciting GP2 Series in 2006. Timo will be supporting us in our testing work, though there are no plans to involve him on the pre-race Fridays."

Glock says: "I want to do a one hundred percent job of every test and be able to say every time I get out of the car: I didn't make a mistake and I was able to help the team progress. Even if you don't run any races in Formula One, it's a great incentive to drive every lap and every turn at the limit in a car like this. Formula One has always been my goal."

Biography.

Timo Glock.

Date/Place of birth:	18th March 1982/Lindenfels (GER)
Nationality:	German
Residence:	Brensbach-Wersau (GER)
Website:	www.timoglock.de
Marital status:	single
Height:	1.69 m
Weight:	64 kg
Hobbies:	karting, fitness training
Favourite food:	pasta
Favourite drink:	water
Favourite circuit:	Hockenheim and Nürburgring
First race:	1997, Schafheim Club championship
First win:	1998, Belleben, state championship race

Career highlights.

1997-1999	karting
2000	winner BMW ADAC Formula Junior Cup
2001	winner Formula BMW ADAC Championship
2002	3rd place German Formula 3 Championship
2003	5th place Formula 3 Euro Series
2004	19th place Formula One World Championship, debut in Montreal, 4 starts as racing and test driver for Jordan Ford
2005	8th place Champ Car World Series, Rookie of the Year
2006	4th place GP2 Series

Formula One statistics pre-2007.

First grand prix	2004, Montreal
GP starts	4
Pole positions	–
Wins	–
Podium places	–
Championship points	2
Fastest laps	–

5. The management.

Mario Theissen – BMW Motorsport Director.

Creating the right conditions.
If a car has to retire due to a technical fault, Mario Theissen doesn't put it down to bad luck. He refers to it as a "non-controlled process". This is a man who carries through what politicians are always promising: a full investigation and corrective action. Mario Theissen is an engineer body and soul. In his book, the limits of what is technically feasible are flexible. "With each innovation these boundaries are pushed out further."

His technical interest in engine designe and his professional and private enthusiasm for motor sport accompanied him through his studies in mechanical engineering and ultimately led him straight to BMW. He has been working for the company since 1977, taking up his first position in the engine calculation department. Later he was entrusted with managerial tasks.

In 1999, the cocktail of his various passions for sports, technology and complex managerial tasks brought him his dream career: since April of that year he has been BMW Motorsport Director. Initially he ran the company's motor racing involvement jointly with Gerhard Berger. One of his unforgettable memories will remain BMW's triumph in the 1999 Le Mans 24 Hours. Since October 2003, Mario Theissen has been BMW's sole Motorsport Director.

With a doctorate in mechanical engineering and an honorary professorship, Theissen is responsible for all of BMW's motor sport projects. Apart from the Formula BMW series, this also embraces the group's involvement in the FIA World Touring Car Championship, 24-hour races – and the first BMW-run Formula One team in company history.

He got this project underway without any illusions, but with a clear structure and a two-year development plan. Theissen is convinced that the success of a Formula One team is down to centralised and consistent project management. Two locations are no obstacle to this. The BMW Group runs production facilities and think tanks all over the world.

Theissen's talent for location management is reflected not only in his everyday profession – he has an office in Munich and one in Hinwil. He has enabled his children to spend part of their education abroad, and with his wife Ulrike he enjoys what Munich has to offer. In between he is drawn to his former home out in the country. Mario Theissen grew up in Monschau in the Eifel. "The people there are as rough as the climate, but they are warmhearted, reliable and straight as a die", he says. Monschau is not only a very picturesque location but also lies halfway between the Nürburgring and Spa. Both of these long-established circuits were favoured destinations for the young Theissen.

He bought his first car at the age of 13: a Fiat 500 for 100 marks. It primarily served testing purposes before being replaced by a legally registered road car when he came of age. These days he has no time for tinkering with cars – his leisure time is at a premium. It used to be sufficient to let him train for a marathon, and today he still takes out time for a long morning run or to go to the fitness centre built for the BMW Motorsport staff on his initiative.

Biography.

Prof. Dr.-Ing. Mario Theissen.

Born:	17th August 1952, Monschau/Eifel (GER)
Nationality:	German
Marital status:	Married to Ulrike, one son and two daughters
Residence:	Munich (GER)
Hobbies:	Sport, especially running, cycling and skiing
1971–1977	Engineering degree at the Aachen University of Technology, diploma in engineering
June 1977	First BMW job in the engine calculation department
1989	Doctorate at the Ruhr University in Bochum
1991	Director of Product Concepts at BMW AG
1992	Director Advance Drivetrain Development at BMW
1994	Managing Director of BMW Technik GmbH
1998	Head of Technik GmbH and responsible for setting up the BMW Technology Office in Palo Alto, California (USA)
1st April 1999	Appointed BMW Motorsport Director alongside his colleague Gerhard Berger
From October 2003	Sole BMW Motorsport Director after Berger's departure
July 2005	Honorary Professorship for Innovative Vehicle Development in the Mechanical Engineering/Process Engineering faculty of the University of Applied Sciences in Dresden
1st January 2006	As BMW Motorsport Director now also responsible for the BMW Sauber F1 Team

Willy Rampf – Technical Director.

Like father, like daughter.
He was always drawn to racing competitions. In 1987, Willy Rampf took five weeks' holiday to attend the Paris–Dakar Rally as a mechanic to the BMW Motorrad team. He also competed in Enduro racing himself, with moderate success, as he puts it.

Born in Bavaria, Rampf studied vehicle engineering at Munich's University of Applied Sciences and joined BMW in 1979 as a development engineer in the chassis department.

From 1989 to 1993 he worked for BMW in South Africa, which is where he encountered Formula One for the first time. "Peter Sauber and his team were making their Formula One debut in Kyalami in 1993, and he invited me to the race", recalls Rampf.

Fascinated by the technology and perfection of the Formula One vehicles, he applied as a race engineer six months later and was taken on by Sauber.

In the following three years, Rampf worked as race engineer for Heinz-Harald Frentzen and then in 1997 for Nicola Larini, Norberto Fontana and Gianni Morbidelli. After four race seasons he returned to BMW. "I needed a new challenge", says Rampf looking back.

In Munich he managed BMW's motorcycle involvement in the Paris–Dakar Rally – with success. BMW rider Richard Sainct took a supreme victory in the legendary desert rally.

At the end of 1999, Rampf embarked on his second career at Sauber with the clear aim of becoming Technical Director. On 1st April 2000 he achieved that goal and has since been responsible for defining the vehicle concept, for design, development and vehicle deployment at the race track.

In his limited free time, motorcycles take up a key role. If he isn't tinkering around with them, he can be seen out and about on them, with his wife Maria riding pillion. In 2006 he clocked up some 5,000 kilometres on two wheels.

One of his biggest fans is his 17-year-old daughter Katharina, who has just started an apprenticeship as an aircraft electrician. "It's the exact same apprenticeship I did 36 years ago", says Rampf, not without a trace of pride in his daughter.

Biography.

Willy Rampf.

Born:	20th June 1953 in Maria Thalheim (GER)
Nationality:	German
Marital status:	Married to Maria, children Peter (23), Andrea (20) and Katharina (17)
Residence:	Pfäffikon, Switzerland (CH)
Hobbies:	Motorcycling, cooking
1975–1979	Studied vehicle engineering at Munich's University of Applied Sciences, diploma in vehicle technology
1979–1989	First job at BMW in Munich as a development engineer
1989–1993	Test engineer at BMW in South Africa
1994–1996	Race engineer for Heinz-Harald Frentzen at Sauber in Hinwil
1997	Race engineer for Nicola Larini, Norberto Fontana and Gianni Morbidelli at Sauber
1998–1999	Ran the motorcycle involvement in the Paris–Dakar Rally at BMW in Munich
End of 1999	Head of the racing and test team at Sauber
1st April 2000	Technical Director at Sauber
1st January 2006	Technical Director Chassis BMW Sauber F1 Team
From July 2006	Technical Director BMW Sauber F1 Team

6. The History.

BMW Motorsport.

Sports is the agenda.
BMW has scored racing successes around the globe with its motorcycles, touring and sports cars, at rallies, in Formula 2 and in Formula One. Yet never has the company lost sight of the importance of promoting young racing talent. Innovative technology for sporting competitions and record-breaking attempts has been an integral aspect of the BMW identity since the company's fledgling years. It has defined BMW production cars – and made motor sport history.

The beginnings – BMW's aircraft propeller touches down.
The stylised propeller in the BMW logo recalls the world records achieved with aircraft engines early on in the company's history. Following numerous championship titles won on motorcycles, BMW also began to make a name for itself in car racing. In 1940 it claimed a one-two victory with the BMW 328 in Italy's legendary Mille Miglia road race. The post-war years in Germany initially saw touring car racing take a back seat while motorcycle racer and record-breaker Schorsch Meier rose to folk hero status on BMW Boxer bikes. It was with its Boxer engines, too, that BMW collected 19 World Championship titles in sidecar racing between 1953 and 1973.

Touring cars – a key pillar of BMW motor sport.
In the 1960s, touring car racing became the central pillar of BMW's motor sport activities. Hans Stuck Senior, at the wheel of a BMW 700, took the German Championship title in 1960. In 1964, Hubert Hahne drove the BMW 1800Ti to victory in the German Circuit Championship. Following the launch of the BMW 2000Ti, Josef Schnitzer carried off the German Touring Car Championship two years later. The BMW 2002 in which Dieter Quester claimed the European Touring Car Championship in 1968 and 1969 marked the first use of a turbocharger, and between 1973 and 1979, another six European Touring Car Championship titles were taken with the BMW 3.0 CSL. Formula One greats such as Chris Amon, Ronnie Peterson and Niki Lauda drove BMW touring cars. At the wheel of the BMW 320 fielded by the Schnitzer Team, Harald Ertl won the German Motor Racing Championship in 1978.

In the mid-1980s, the impressive BMW 635 CSi Coupé was the force to be reckoned with in the European Touring Car Championship. Following individual race wins in 1985, Italian driver Roberto Ravaglia secured the European Championship in 1986. 1987 saw the slim-line, earthy successor to the 6 Series Coupé lining up on the grid: the BMW M3 was a driving machine with a 2.5-litre power unit that packed 355 bhp. In its first year on the race track, BMW managed to take the World Championship title (Ravaglia), the European Championship (Winni Vogt) and nine further titles.
The M3 became legendary, whether competing in the Asia-Pacific Championship, the European Hill-Climb Championship or in rally events.
By the end of 1992, BMW M3 drivers had secured more than 1,500 individual wins and over 50 international titles.

Super touring cars – stars of the 1990s.
For the introduction of a new category of near-production touring cars – initially known as Class 2 or the two-litre class, later Super Touring Cars or STC for short – BMW set about building another superlative touring car: the BMW 320i. From 1993 through to 1998, this 320i (E36) won BMW 29 championship titles around the world, including three in Germany.

Revival of the European Touring Car Championship.
After a gap of 13 years, the FIA once again gave its sanction to the European Championship in 2001. BMW followed developments with great interest and made its mark on the series. Peter Kox (NLD) immediately took the 21st European Touring Car Championship title in 2001, driving a BMW 320i fielded by Ravaglia Motorsport. From 2002 onwards, the European Touring Car Championship (ETCC) was a firm fixture of BMW's motor racing agenda, though not as a traditional factory involvement: the competitors were backed by various national subsidiaries, which put up to five country teams on the grid. In 2002, BMW Team Deutschland (Schnitzer-Motorsport) fared best of all with BMW works drivers Jörg Müller and Dirk Müller finishing second and fourth in the European Championship, while BMW came runner-up in the manufacturers' standings.

In 2003, BMW managed to secure the Manufacturers' title in the penultimate race. In the battle for the Drivers' title, Jörg Müller had to concede defeat just one point short of the winner's score. BMW again took the Manufacturers' title before the close of the 2004 season. This time the Driver's Championship also went to BMW courtesy of British entrant Andy Priaulx, bringing BMW's total of European titles in touring car racing to 24.

BMW wins World Touring Car Championship again in 2005 and 2006.
2005 saw the staging of another world championship in touring car racing for the first time since 1987. The FIA World Touring Car Championship (WTCC) was launched to replace the ETCC. In 1987 the winner was Roberto Ravaglia in a BMW. In 2005 and 2006, Andy Priaulx (GBR) of BMW Team UK/RBM took the World Championship title, driving a BMW 320i in 2005 and the new BMW 320si WTCC in 2006. Thanks to the strong performance of the other national teams, BMW also secured the Manufacturers' World Championship in both years.

Marathon men – Nürburgring, Spa and Le Mans.
BMW is by far the most successful marque in the 24 Hour Race on the North Loop of the Nürburgring. In 1970, when the event was first launched, Hans-Joachim Stuck was part of the winning team, as he was in 1998 when BMW became the first manufacturer to win a marathon of this kind with a diesel-powered car. In 2004 too, Stuck was on board the M3 GTR with which BMW claimed its 17th overall victory in the "Green Hell". In 2005 the BMW M3 GTRs scored an 18th overall victory with a second consecutive one-two finish. In the Spa-Francorchamps 24 Hours, meanwhile, BMW touring cars managed to collect 21 wins by the end of the 1998 season.

On 13th June 1999, BMW took its first overall victory in the Le Mans 24 Hours, beating one of the strongest fields of starters in the history of this classic marathon. After the closed-top McLaren F1 GTR sports car driven by the BMW V12-cylinder had won the event back in 1995, 1999 saw the celebration of the first victory in an open-topped car with a later evolution of the engine. The winners, Joachim Winkelhock (GER), Pierluigi Martini (ITA) and Yannick Dalmas (FRA), had completed 366 laps of 13.6 kilometres each in the BMW V12 LMR. Back in the BMW pit garage it was celebrations all round, along with a good deal of commiseration: after 18 hours in the lead, the second BMW V12 LMR with Tom Kristensen (DNK), JJ Lehto (FIN) and Jörg Müller (GER) was forced to abandon the race with just four hours to go following an accident.

Sports cars in Europe and overseas.
What had begun in the mid-1990s with the McLaren F1 GTR and its BMW twelve-cylinder engine was to continue in 1999 with the BMW V12 LMR. If the FIA GT Championship was the arena for the successful factory deployment of the closed racer (runner-up in the 1997 championship), it was

the American Le Mans Series (ALMS) that became the stomping ground of the BMW V12 LMR. With its uprated 580 bhp six-cylinder V12, it scored six wins in the ALMS in 1999 and 2000.

In 2001, BMW switched from the Prototype to the GT Class of the ALMS. Under the management of Charly Lamm, as before, the muscly BMW M3 GTR swept the board in all disciplines. BMW works driver Jörg Müller won the Drivers' title, BMW Motorsport came top of the team classification and BMW took the Manufacturers' Championship in the company's most important export market.

Early talent promotion in and around Formula racing.
In the period from 1973 to 1982, the BMW four-cylinder engine was the benchmark for the Formula 2 junior league. Jean-Pierre Jarier became champion in 1973, Patrick Depailler in '74, Jacques Laffite in '75, Bruno Giacomelli in '78, Marc Surer in '79 and Corrado Fabi in '82. All of them later made the leap into Formula One, where Formula 2 was usually held as part of the support programme.

BMW implemented a new concept in 1979 and 1980 which was similarly tied to the grand prix events: the Procar Series. In this high-class, one-make series featuring the fast BMW M1 road-going sports car, talented juniors regularly pitted their skills against the top five qualifiers from Formula One. The BMW Junior Team (Eddie Cheever, Marc Surer and Manfred Winkelhock) made a name for themselves in the late 1970s as the "Wilde Reiter GmbH" (Wild Riders Ltd).

Formula BMW – today's benchmark for junior talent promotion.
1991 saw the launch of a joint talent promotion scheme in Formula racing run by BMW and the ADAC. It was here that Formula One drivers such as Ralf Schumacher, Timo Glock and Christian Klien learnt the fundamentals of Formula racing. From 1998 to 2001, the series comprised two racing categories.

In 2002, radical changes were implemented and the new Formula BMW vehicle made its debut. A small Formula racing car with an ultramodern carbon-fibre monocoque, it matches Formula One standards in several respects, is propelled by a 140 bhp BMW motorcycle engine and sets standards in terms of safety. This junior class provides an opening for talented young kart racers, some as young as 15, who are taken through a comprehensive training course.

The coaching programme includes driving technique and strategy, vehicle dynamics and chassis set-up, fitness training and nutrition, media and PR, as well as sponsoring and sports management.

The most promising young drivers, along with the best rookie of the previous year, are each granted a scholarship. In Germany's Formula BMW ADAC Championship alone this is worth 50,000 euros per scholarship driver. Since then, the Formula BMW concept has gone global. 2003 saw the introduction of Formula BMW Asia, to which was added the Formula BMW UK Championship and Formula BMW USA in 2004. All of the series also run races as part of the F1 grand prix support programme. In 2005, Marco Holzer won the first World Final for all four series in Bahrain. 2006 saw the DELL Formula BMW World Final staged in Valencia, with Christian Vietoris emerging as the winner. Both drivers will be granted a test in a Formula One race car.

Formula One with sheer power.
On 24th April 1980, BMW announced the company's first foray into Formula One as an engine supplier. Paul Rosche took a four-cylinder production engine block and rebuilt it to create a 16-valve unit reduced in size to 1.5 litres. Running on a special fuel mixture, and with the help of an exhaust gas turbocharger, the unit started with an output 650 bhp. Later this was increased to reach 1,400 bhp.

On 23rd January 1982, Nelson Piquet and Riccardo Patrese entered the season's first race at Kyalami in a Brabham BMW from the front row of the grid. However, both has to retire early due to an accident and loss of oil respectively.

On 9th May 1982, in the fifth race for the new engine, Piquet picked up the first World Championship points when he finished fifth in the Belgian GP. The Brazilian claimed his first win on 13th June of the same year in Montreal and his first pole position on 15th August in Zeltweg, Austria.

For the 1983 World Championship, Brabham's designer Gordon Murray had managed to respond with remarkable speed to new technical regulations. BMW's turbo power, moreover, had been given a further boost, and Piquet won the season's curtain raiser in São Paulo. Apart from Piquet and Patrese, this was the first time a third BMW turbo driver appeared in the race: Manfred Winkelhock in an ATS BMW.

World Championship after 630 days.
The 1983 season proved to be a nailbiter. It took twelve races and exactly half a year before Piquet carried off another win. But in the meantime he managed to hold his nerve and was busy scoring points. The team perfected Murray's idea of the "planned pit stop" – the designer with the hippyish looks knew how to clock improved lap times on a reduced fuel load. Piquet managed to pick up wins in Monza and Brands Hatch, and at the final in Kyalami a third-placed finish was enough to secure the World Championship title. It was exactly 630 days since the BMW engine had premiered on the race track.

In 1984, Piquet ended the World Championship in fifth place. Also competing for Brabham during that season were Manfred Winkelhock and the Fabi brothers, Teo and Corrado. Gerhard Berger made his Formula One debut in an ATS BMW. 1985 saw Berger driving an Arrows BMW alongside Thierry Boutsen. The best-placed BMW driver was again Piquet in a Brabham BMW, who finished eighth in the World Championship. In 1986, Berger was to replace him as the best-placed BMW-powered competitor: the Austrian driver came seventh in the World Championship. In Mexico he took the final win for the BMW four-cylinder in a Benetton. At the end of 1987, construction of these BMW F1 engines was halted – the turbo era of Formula One was over.

Gearing up for a Formula One comeback.
On 8th September 1997, BMW announced at the Frankfurt Motor Show (IAA) that, following a twelve-year absence, it would be returning to Formula One in 2000 in partnership with WilliamsF1.

Paul Rosche designed the first BMW Formula One V10-cylinder unit of the new era and oversaw the building of the new engine factory in Munich, which was erected close to BMW's Research and Innovation Centre (FIZ).

On 1st October 1998, Gerhard Berger took up his post as BMW Motorsport Director. In April 1999, engineering expert Dr Mario Theissen joined him as the second BMW Motorsport Director. In December 1998, BMW signed up Jörg Müller as a Formula One test driver.

By the summer of 1999, the team had swelled to almost 200. Rosche, who had built BMW racing engines for 42 years, retired at the end of 1999.

Starting at 9.26 hrs on 27th April 1999, BMW began its first track test of the Formula One engine, initially at the company's own test site in Miramas, France. A 1998 chassis from WilliamsF1 served as a test bed, and Müller was behind the wheel. The start of the official FIA test drives on 1st December 1999 in Jerez marked the beginning of the BMW WilliamsF1 Team story.

Accelerating out of the blocks.
The joint venture of BMW and WilliamsF1 kicked off with a sensation: on 12th March 2000 in Australia, Ralf Schumacher ended the first grand prix of the German-British partnership in third place, making it the most successful Formula One debut of an engine manufacturer since 1967.

Extreme reliability and unstinting development work were the hallmarks of the season. Schumacher and the young British driver Jenson Button made it into the points 14 times. Schumacher climbed onto the podium three times, and the BMW WilliamsF1 Team claimed 36 points in their debut season to finish third in the Constructors' Championship.

A winning team by season 2001.
In 2001 the team exceeded its own expectations. Nobody had reckoned on four superior wins. Ralf Schumacher and his Colombian team-mate Juan Pablo Montoya were now up among the front-runners, claiming nine podium finishes between them. With a tally of 80 points, the BMW WilliamsF1 Team made its mark by claiming third place among the leading teams.

World Championship runner-up in year three.
In the third year of the partnership, the team achieved the next stage of its goal: second place in the Constructors' World Championship. McLaren-Mercedes had been outflanked, but Ferrari's superiority was almost overwhelming. By season's end the Italian World Champions had 221 points – as many as all the other teams put together.

Schumacher and Montoya celebrated their first one-two win in Malaysia, followed by a further eleven podium places. In the 16th of 17 GPs, the team secured an early second place in the World Championship. Montoya's seven pole positions also commanded respect in 2002. During qualifying at Monza, the Colombian smashed a 17-year record when he clocked the fastest average lap speed ever achieved in an F1 racing car. The BMW WilliamsF1 Team, moreover, claimed top honours in the reliability league by completing more race laps than any other team.

2003 title chances up to the final.
The FW25 was an innovative new development. A shortened wheelbase was the main reason why the team had to abandon all its previous data. Despite disappointing tests, faith in the new concept remained unbroken. A concerted effort under the pressure of the ongoing season shaped the FW25 into a winning car. In Monaco the racer powered by the BMW P83 engine proved invincible: Schumacher took pole while Montoya won the prestigious grand prix event. Canada saw both drivers up on the podium, while on the Nürburgring and in Magny-Cours they carried off one-two wins, and in Hockenheim Montoya won with more than 65 seconds to spare.

With a four-point lead in the Constructors' Championship, the team headed off for the two final GPs in the USA and Japan. Although the BMW P83 engine reached a speed of 19,200 rpm, a penalty and a heavy downpour in Indianapolis put paid to Montoya's chances of winning the title. In Japan, the second retirement of the season due to a technical fault put him out of the race from the lead and also buried all hopes of winning the Constructors' title. Even so, with a final score of 144 points this was a clear improvement on the previous year's result. In 2002, 92 World Championship points had sufficed to place the team second in the Constructors' World Championship.

Below par for the first time in 2004.
After the BMW WilliamsF1 Team had consistently exceeded its targets for four years, it fell short of expectations for the first time in 2004. The FW26 with its new aerodynamic concept and striking nose cone had given rise to great hopes during winter testing, but in the first races it soon became clear that the design drawbacks outweighed the benefits identified during simulation tests.

The low point of the season came with the Canadian and US GPs. In Montreal both drivers were disqualified. In Indianapolis, Montoya was disqualified and Schumacher had a serious accident, forcing him to drop out of six GPs while Marc Gené and Antonio Pizzonia took over.

Not until the second half of the season did things start looking up again thanks to a radically modified chassis. The Italian GP also saw the final evolutionary stage of the BMW P84 engine introduced, which made an instant impact by claiming two world records: in prequalifying, Montoya achieved the highest ever average speed in F1 at 262.242 km/h. In the race, Pizzonia recorded a top speed of 369.9 km/h. Montoya's win in the final in Brazil brought a consolatory end to the season.

Finale and new beginning.
2005 turned out to be the second difficult season in succession: the FW27 proved uncompetitive. The BMW WilliamsF1 Team failed to win any races and dropped to fifth place in the Constructors' Championship. The highlights of the season were the races in Monaco and at the Nürburgring. In the Mediterranean principality, German driver Nick Heidfeld and his Australian team-mate Mark Webber stepped onto the podium in second and third places. In the Eifel a week later, Heidfeld took the team's only pole position and again finished second. Prior to that, Heidfeld had claimed a third-placed finish in Malaysia.

The sixth season together, and the longest in F1 history with 19 grands prix, marked the end of the partnership with WilliamsF1. The final tally after the six years from 2000 until 2005: ten wins, three of them one-two finishes, a total of 45 podium places and 17 pole positions in 104 races.

BMW took over the Swiss Sauber Team in mid-2005 and ran its own F1 team in 2006. The new BMW Sauber F1 Team made it into fifth place in its debut season, helped by two podium places – one by Heidfeld, the other by young Polish driver Robert Kubica. A BMW Sauber F1.06 made it into the points a total of 15 times.

The first grand prix involvement of a BMW engine dates back to 1952. For the period prior to 2000, BMW recorded 96 GP races, nine wins and 15 pole positions.

BMW chronology of success.

17.6.1919	BMW's first world record – flying a plane powered by a BMW six-cylinder, Zeno Diemer reaches an altitude of 9,760 metres or 32,013 feet.
1925–1926	The BMW R37 motorcycle claims more than 200 wins and two German championships.
28.11.1937	World motorcycle speed record – riding a BMW, Ernst Jakob Henne reaches a speed of 279.5 km/h (173.29 mph) on an autobahn near Frankfurt.
1936–1953	Schorsch Meier wins seven motorcycle championships on a BMW boxer.
1940	The BMW 328 finishes 1st, 2nd, 4th and 5th in the Mille Miglia road race in Italy.
1954–1973	Winning sidecars: racing boxer motorcycles with fuel injection, BMW wins 19 World Championships in motorcycle sidecar racing.
1960	Hans Stuck senior wins the German Hill-Climb Championship in a BMW 700.
1964	Hubert Hahne wins the German Circuit Championship in a BMW 1800Ti.
1966	Josef Schnitzer wins the German Touring Car Championship at the wheel of a BMW 2000Ti; racing a BMW 2000Ti, Hubert Hahne becomes the first driver to lap the north circuit of the Nürburgring (22.835 km/14.16 miles) in less than ten minutes; his exact time is 9:58.5 min.
1968	The radial four-valve power unit named after BMW designer Karl Apfelbeck makes its debut in Formula 2 and in the BMW Monti. Running on nitromethane, the engine sets up no fewer than eight world records; Dieter Quester driving a BMW 2002 wins the European Touring Car Championship.
1969	Dieter Quester again wins the European Touring Car Championship at the wheel of a BMW 2002 powered for the first time by a turbocharged engine.
1970	Hans-Joachim Stuck wins the 24 Hours of the Nürburgring at the wheel of a BMW 2002Ti; BMW's 1600 cc Formula 2 engine scores its first victory in Salzburg, with Jacky Ickx at the wheel.
1973	Toine Hezemans wins the European Touring Car Championship in a BMW 3.0 CSL; Achim Warmbold/Jean Todt win the Austrian Alpine Race for the World Rally Championship, driving a BMW 2002.

1973–1982	Six drivers win the European Formula 2 Championship with BMW four-cylinder power: Jean-Pierre Jarier (1973), Patrick Depailler (1974), Jacques Laffite (1975), Bruno Giacomelli (1978), Marc Surer (1979), Corrado Fabi (1982).
1974	Hans-Joachim Stuck sets up a new lap record at the Nürburgring with a BMW 3.0 CSL – 8:09.6.
1977	The BMW Junior Team – Eddie Cheever, Marc Surer and Manfred Winkelhock – make their debut in the BMW 320.
1978	Driving for Team Schnitzer, Harald Ertl wins the German Motor Racing Championship at the wheel of a BMW 320 Turbo.
up to 1979	The BMW 3.0 CSL wins a total of six European championships.
1979–1980	Formula One and touring car drivers contest the Procar Series at grand prix events, introducing a top-class brand trophy featuring the BMW M1 sports car.
1980–2004	BMW Team Schnitzer score ten wins in the Macau Touring Car Race: 1980, 1981, 1983, 1987, 1988, 1991, 1992, 1994, 1998, 2004.
1980	Siegfried Müller jun, Team Eggenberger, wins the European Touring Car Championship in a BMW 635 CSi.
1981	Helmut Kelleners/Umberto Grano bring home the European Touring Car Championship in a BMW 635 CSi; Hubert Auriol riding a BMW R80 wins the motorcycle category in the Paris-Dakar Rally; Piquet and Riccardo Patrese at the wheel, score their first Formula One points on 9th May in Zolder at the Belgian Grand Prix (Piquet finishing 5th); first GP wins in Montreal on 13th June in the Canadian GP (fifth race, Piquet); first pole position in Zeltweg on 15th August, in the Austrian GP (Piquet).
1983	Nelson Piquet wins the Drivers' Formula One World Championship at the wheel of a Brabham BMW; first appearance of the BMW Formula One engine with the ATS Team (Manfred Winkelhock); Dieter Quester, Team Schnitzer, wins the European Touring Car Championship in a BMW 635 CSi; Hubert Auriol riding a BMW R80 wins the motorcycle category in the Paris-Dakar Rally.
1984	Volker Strycek, Team Gubin, wins the German Touring Car Championship (DTM) at the wheel of a BMW 635 CSi; Nelson Piquet finishes 5th in the Formula One World Championship in a Brabham BMW; Teo Fabi, Corrado Fabi, and Manfred Winkelhock also drive a Brabham BMW; Gerhard Berger and Manfred Winkelhock drive an ATS BMW; Gaston Rahier wins the motorcycle category of the Paris–Dakar Rally on a BMW R80.

1985	Nelson Piquet finishes 8th in the Formula One World Championship at the wheel of a Brabham BMW; François Hesnault and Marc Surer drive a Brabham BMW, Gerhard Berger and Thierry Boutsen an Arrows BMW; Gaston Rahier wins the motorcycle category of the Paris–Dakar Rally on a BMW R80.
1985–1995	BMW Team Schnitzer wins the 24 Hours of Spa-Francorchamps no fewer than five times: 1985, 1986, 1988, 1990, 1995.
1986	BMW supplies engines to the Brabham (Riccardo Patrese, Elio de Angelis, Derek Warwick), Arrows (Marc Surer, Thierry Boutsen, Christian Danner), and Benetton (Gerhard Berger, Teo Fabi) Formula One teams; Berger brings home the last grand prix win for a BMW 1.5-litre four-cylinder turbo in Mexico and finishes 7th in the World Championship; Roberto Ravaglia, Team Schnitzer, wins the European Touring Car Championship in a BMW 635 CSi.
1987	Roberto Ravaglia, BMW M Team, wins the World Touring Car Championship in a BMW M3; Winni Vogt, BMW M Team, wins the European Touring Car Championship in a BMW M3; Eric van de Poele, BMW Junior Team, wins the German Touring Car Championship (DTM); the BMW M3 wins the FIA Manufacturers' Trophy for Group A cars in the European Hill-Climb Championship; Helmut König wins the Austrian Touring Car Championship in a BMW M3; Per Gunnar Andersson wins the Swedish Touring Car Championship in a BMW M3; Hansueli Ulrich wins the Swiss Touring Car Championship in a BMW M3; Bernard Beguin/Jean-Jacques Lenne, Team ProDrive, win the Corsica race for the World Rally Championship in a BMW M3; Jose Maria Ponce/Jose Carlos Deniz win the Spanish Rally Championship in a BMW M3; Xavier Riera wins the Spanish Touring Car Hill-Climb Championship in a BMW M3; Matthias Moosleitner/Margit Tüchler win the Mitropa Rally Cup in a BMW M3; Brabham (Riccardo Patrese, Andrea de Cesaris, Stefano Modena) still uses BMW engines in the Formula One World Championship; by the end of the turbo era, BMW engines look back at 91 starts, nine wins and15 pole positions.
1988	Roberto Ravaglia, Team Schnitzer, wins the European Touring Car Championship in a BMW M3; Trevor Crowe wins the Asian-Pacific Championship in a BMW M3; Francis Dosierès wins the European Touring Car Hill-Climb Championship in a BMW M3; Jim Richards wins the Australian Touring Car Championship in a BMW M3; Fabien Giroix wins the French Touring Car Championship in a BMW M3;

Mika Arpiainen wins the Finnish Touring Car Championship in a BMW M3;
Arthur van Dedem wins the Dutch Touring Car Championship in a BMW M3;
'Pequepe' wins the Portuguese Touring Car Championship in a BMW M3.

1989 Roberto Ravaglia, Team Schnitzer, wins the German Touring Car Championship (DTM) in a BMW M3;
Johnny Cecotto wins the Italian Touring Car Championship in a BMW M3;
Frank Sytner wins the English Touring Car Championship in a BMW M3;
Harri Toivonen/Heikki Salmenautio win the Finnish Touring Car Championship in a BMW M3;
Jean Pierre Malcher wins the French Touring Car Championship in a BMW M3;
Arthur van Dedem wins the Dutch Touring Car Championship in a BMW M3;
"Pequepe" wins the Portuguese Touring Car Championship in a BMW M3;
Lennart Bohlin wins the Swedish Touring Car Championship in a BMW M3;
Marc Duez/Alain Lopes win the Belgian Rally Championship in a BMW M3;
François Chatriot/Michel Perin win the French Rally Championship in a BMW M3;
Giuseppe Zarpellon wins the Italian Hill-Climb Championship in a BMW M3.

1990 Roberto Ravaglia, Team Schnitzer, wins the Italian Touring Car Championship in a BMW M3;
Jean-Michel Martin wins the Belgian Touring Car Championship in a BMW M3;
Heikki Salmenautio wins the Finnish Touring Car Championship in a BMW M3;
Per Gunnar Andersson wins the Swedish Touring Car Championship in a BMW M3;
Josep Bassas/Antonio Rodrigues win the Spanish Rally Championship in a BMW M3;
Xavier Riera wins the Spanish Touring Car Hill-Climb Championship in a BMW M3.

1991 Will Hoy wins the British Touring Car Championship in a BMW M3;
Tony Longhurst wins the Australian Amscar Series in a BMW M3;
Jean-Pierre Malcher wins the French Touring Car Championship in a BMW M3;
Roberto Ravaglia wins the Italian Touring Car Championship in a BMW M3;
Cor Euser wins the Dutch Touring Car Championship in a BMW M3;
Francis Dosierès wins the French Touring Car Hill-Climb Championship in a BMW M3;
Hansueli Ulrich wins the Swiss Touring Car Championship in a BMW M3;
Peter Zakowski wins the Private Drivers' category in the German Touring Car Championship (DTM) in a BMW M3;
Formula Junior, BMW's and ADAC's joint talent programme, enters its first season.

1992	Johnny Cecotto, Team Fina Motorsport, finishes 4th in the German Touring Car Championship (DTM) in a BMW M3; Team Bigazzi wins the 24 Hours of Spa with a BMW 320i.
1993	Johnny Cecotto, Team Warthofer, wins the ADAC GT Cup in a BMW M3 GTR; Joachim Winkelhock, Team Schnitzer, wins the British Touring Car Championship in a BMW 318i.
1994	Johnny Cecotto, Team Warthofer, wins the ADAC Touring Car Cup in a BMW 320i; Joachim Winkelhock, Team Schnitzer, wins the Asian-Pacific Championship in a BMW 318is; Tony Longhurst wins the Australian Touring Car Championship in a BMW 318i; Thierry Tassin, Team Valier, wins the Belgian Touring Car Championship in a BMW 318is; Shaun van der Linde wins the South African Touring Car Championship in a BMW 318is; Roberto Ravaglia/Alexander Burgstaller/Thierry Tassin, Team Bigazzi, win the 24 Hours of Spa in a BMW 320i.
1995	Joachim Winkelhock, Team Schnitzer, wins the ADAC Super Touring Car Cup in a BMW 320i; Steve Soper, Team Schnitzer, wins the Japanese Touring Car Championship in a BMW 320i; Paul Morris wins the Australian Touring Car Championship in a BMW 318i; Thierry Tassin wins the Belgian Touring Car Championship in a BMW 318is; Yvan Muller, Team Oreca, wins the French Touring Car Championship in a BMW 318is; Per Gunnar Andersson wins the Scandinavian Touring Car Championship in a BMW 318is; JJ Lehto/Yannick Dalmas/Masanori Sekiya win the 24 Hours of Le Mans in a BMW V12-powered McLaren Formula One GTR; Roberto Ravaglia/Alexander Burgstaller/Marc Duez, Team Bigazzi, win the 24 Hours of the Nürburgring in a BMW 320i; Joachim Winkelhock/Steve Soper/Peter Kox, Team Schnitzer, win the 24 Hours of Spa in a BMW 318is.
1996	Eric Cayrolle wins the French Touring Car Championship in a BMW 318is; Alexander Burgstaller/Thierry Tassin/Jörg Müller, Team Fina Bastos, win the 24 Hours of Spa in a BMW 318is.
1997	The BMW 320i wins the FIA Touring Car World Cup; Paul Morris wins the Australian Touring Car Championship in a BMW 320i; Didier de Radiguès wins the Belgian Touring Car Championship in a BMW 320i; Heikki Salmenautio wins the Finnish Touring Car Championship in a BMW 320i; Eric Cayrolle wins the French Touring Car Championship in a BMW 320i; Emanuele Naspetti wins the Italian Touring Car Championship in a BMW 320i;

Duncan Huisman wins the Dutch Touring Car Championship in a BMW 320i;
Craig Baird wins the New Zealand Touring Car Championship in a BMW 320i;
Oscar Larrauri wins the South American Touring Car Championship in a BMW 318is;
Charles Kwan wins the South-East-Asian Touring Car Championship in a BMW 320i;
Bill Auberlen, Tom Milner Racing, wins the Exxon Supreme GT Series Drivers' and Manufacturers' Championship, GT3 Class, in a BMW M3;
Didier de Radiguès/Eric Hélary/Marc Duez, Team Fina Bastos, win the 24 Hours of Spa in a BMW 320is;
Steve Soper, Team Bigazzi, wins the Macau Touring Car Race in a BMW 320i;
Sabine Reck/Johannes Scheid/Peter Zakowski, Team Scheid, win the 24 Hours of the Nürburgring in a BMW M3;
Geoff and David Brabham win the Bathurst 1000 in a BMW 320i;
JJ Lehto/Steve Soper, Team BMW Motorsport, finish 2nd in the FIA GT Championship in a McLaren BMW;
Jean Marc Gounon/Anders Olofsson/Pierre-Henri Raphanel, Gulf Team Davidoff, Peter Kox/Roberto Ravaglia/Eric Hélary, Team BMW Motorsport, finish 2nd and 3rd in the 24 Hours of Le Mans in a McLaren BMW (McLaren Formula One GTR with a BMW V12);
Joachim Winkelhock, BMW Team Bigazzi, finishes 2nd in the ADAC Super Touring Car Cup in a BMW 320i.

1998 Johnny Cecotto, BMW Motorsport Team Schnitzer, wins the German Super Touring Car Championship (STW) in a BMW 320i;
Fredrik Ekblom, BMW Dealer Team, wins the Swedish Touring Car Championship in a BMW 320i;
Charles Kwan, Team EKS Motorsport, wins the South-East-Asian Touring Car Championship in a BMW 320i;
Eric Cayrolle, Team Sda, wins the French Touring Car Championship in a BMW 320i;
Oscar Larrauri, Team Proas, wins the South American Touring Car Championship in a BMW 320i;
Sinisa Kosutic, Team Valier, wins the Croatian Touring Car Championship in a BMW 320i;
Arto Salmenautio, OS Motorsport, wins the Finnish Sport 2000 Touring Car Championship in a BMW 320i;
Brett Riley wins the New Zealand Touring Car Championship in a BMW 320i;
Luca Capellari, Team Duller, wins the International Group N above 3000 cc in a BMW M3;
Cameron McLean wins the Private Drivers' category in the Australian Touring Car Championship in a BMW 320i;
Mark Peters wins the Private Drivers' category in the Bankfin Touring Car Championship South Africa in a BMW 318is;
Thomas Winkelhock, Brinkmann Motorsport, wins the German Touring Car Challenge in a BMW 320i;
Sabine Reck/Johannes Scheid, Team Scheid, win the German Veedol Nürburgring Endurance Trophy in a BMW M3;
Mark Simo, PTG M3 Team, wins the Drivers', Constructors' and Team categories in the US Professional Sports Car Series in a BMW M3 GT3;

Ross Bentley, PTG M3 Team, wins the Drivers', Constructors' and Team categories in the US Road Racing Championship in a BMW M3 GT3;
Tim Sugden/Steve O'Rourke win the English GT Championship in a BMW V12-powered McLaren Formula One GTR;
Hans-Joachim Stuck/Christian Menzel/Marc Duez/Andreas Bovensiepen, Team Warthofer, win the 24 Hours of the Nürburgring in a BMW 320d;
Bill Auberlen/Marc Duez/Boris Said, PTG M3 Team, win the GT3 Class in the 24 Hours of Daytona in a BMW M3;
Alain Cudini/Marc Duez/Eric van de Poele, Team Juma, win the 24 Hours of Spa in a BMW 320i;
Joachim Winkelhock, Team Schnitzer, wins the Macau Touring Car Race in a BMW 320i;
Markus Moufang/Rüdiger Hähner win the German Rally Challenge in a BMW M3;
Otokar Kramski wins the European Touring Car Hill-Climb Championship in a BMW M3;
Eric Pernot wins the French Touring Car Hill-Climb Championship in a BMW M3.

1999

Yannick Dalmas/Pierluigi Martini/Joachim Winkelhock, BMW Motorsport, win the 24 Hours of Le Mans in a BMW V12 LMR;
Tom Kristensen/JJ Lehto/Jörg Müller, Team BMW Motorsport, win the 12 Hours of Sebring in a BMW V12 LMR;
JJ Lehto/Steve Soper, Team BMW Motorsport, win the Sears Point, Laguna Seca and Las Vegas races for the American Le Mans Series in a BMW V12 LMR;
BMW Team PTG wins the GT Class Team Cup in the American Le Mans Series with a BMW M3;
Cor Euser wins the Dutch Touring Car Championship in a BMW 320i DTC;
Vladimir Soukhov wins the Russian Touring Car Championship in a BMW 320i DTC;
Jason Richards wins the New Zealand Touring Car Championship in a BMW 320i DTC;
Paul Morris wins the Australian Touring Car Championship in a BMW 320i;
Charles Kwan wins the South-East-Asian Touring Car Championship in a BMW 320i;
Kim Esbjug wins the Private Drivers' category in the Swedish Touring Car Championship in a BMW 320i;
Otokar Kramski wins the Czech Touring Car Championship in a BMW M3;
Dagmar Suster wins the Slovenian Touring Car Championship in a BMW M3;
Niko Pulic wins the European Touring Car Hill-Climb Championship in a BMW M3;
Georg Plasa wins the German Touring Car Hill-Climb Championship in a BMW 320i;
Slavko Dekleva wins the Slovenian Touring Car Hill-Climb Championship in a BMW M3;
Eric Pernot wins the French Touring Car Hill-Climb Championship in a BMW M3;
Robert Brooks/Robert Wilson win the International Special Car Series in a BMW M3;
Richard Sainct wins the Motorcycle category of the Granada-Dakar Rally on a BMW F 650.

2000	Niko Pulic wins the FIA European Touring Car Hill-Climb Championship, Group A, in a BMW M3; Franz Tschager wins the FIA Sports Car Hill-Climb Championship in an Osella BMW; Franz Engstler wins the German Touring Car Challenge in a BMW 320i E46 DTC; Mikhail Ukhov wins the Russian Touring Car Championship in a BMW 320i E36 DTC; Duncan Huisman wins the Dutch Touring Car Championship in a BMW 320i E46 DTC; Jason Richards wins the New Zealand Touring Car Championship in a BMW 320i DTC; Alessandro Bertei wins the Italian Touring Car Championship, Group N1, in a BMW M3 E36 Group N; Paolo La Neve wins the Italian Touring Car Championship, Group N2, in a BMW 325i E36 Group N; Stefano Valli wins the Italian Touring Car Championship, Group N3, in a BMW 320i Group N; Georg Severich/Luc Pensis win the Touring Car category of the Belgian Championship in a BMW 320i STC; Xavier Riera Vilarrasa wins the Spanish Hill-Climb Championship in a BMW 320i; 1st, 2nd, 3rd and 4th places in the motorcycle category of the Paris–Dakar-Cairo Rally go to Richard Sainct, Oscar Gallardo (both on BMW F 650 RR), Jimmy Lewis (BMW R 900 RR) and Jean Brucy (BMW F 650 RR) respectively; Jimmy Lewis wins the Dubai Rally (BMW R 900 RR).
2001	Manufacturers', Team and Drivers' Championship American Le Mans Series, Jörg Müller, Team BMW Motorsport, BMW M3 GTR; Peter Kox, Ravaglia Motorsport, wins the FIA European Super Production Championship in a BMW 320i E46 SPC; Niko Pulic wins the FIA European Hill-Climb Championship for Touring Cars, Group A, in a BMW M3; Franz Tschager wins the FIA European Hill-Climb Championship for Sports Cars in an Osella BMW; Markus Gedlich wins the German Touring Car Challenge in a BMW 320i E46 DTC; Sandor van Es wins the Dutch Touring Car Championship in a BMW 320i E46 DTC; Stefano Valli, wins the Italian Touring Car Championship, Group N1, in a BMW M3; Alessandro Bernasconi wins the Italian Touring Car Championship, Group N2, in a BMW 320i; Yvan Lebon wins the ST class French Super Touring Car Championship in a BMW 320i STC; 3rd place FIA Formula One Constructors' World Championship, BMW WilliamsF1 Team, Ralf Schumacher and Juan Pablo Montoya (four wins, four pole positions).
2002	2nd place FIA Formula One Constructors' World Championship, BMW WilliamsF1 Team, Juan Pablo Montoya (3r place) and Ralf Schumacher (4th place), one one-two finish (Schumacher ahead of Montoya in Malaysia), seven pole positions (Montoya); 2nd place Drivers' and Manufacturers' rankings of the FIA European Touring Car Championship (ETCC), BMW Team Germany (Schnitzer-Motorsport), Jörg Müller, BMW 320i;

Franz Tschager wins the FIA European Hill-Climb Championship for Sports Cars in an Osella BMW;
Duncan Huisman wins the Dutch Touring Car Championship in a BMW 320i;
Massimo Pigoli wins the Italian Touring Car Championship (Super Production) in a BMW 320i;
Komarov Grigory wins the Russian Touring Car Championship in a BMW 320i;
Alberto Cerrai wins the Campionato Italiano Velocità Turismo in a BMW M3;
Mario Merten wins the Nürburgring Endurance Championship in a BMW 320i;
Herbert Stenger wins the German Hill-Climb Championship in a Stenger BMW;
Duncan Huisman wins the Macau Touring Car Race in a BMW 320i.

2003

2nd place FIA Formula One Constructors' World Championship, BMW WilliamsF1 Team, Juan Pablo Montoya (3rd) and Ralf Schumacher (5th), two one-two finishes (Schumacher ahead of Montoya, European and French GP), two single victories (Montoya, Monaco and Germany), four pole positions (Schumacher three, Montoya one);
Manufacturers' Championship FIA European Touring Car Championship (ETCC) and 2nd place Drivers' Championship, BMW Team Germany (Schnitzer-Motorsport), Jörg Müller, BMW 320i;
Claudia Hürtgen wins the German Touring Car Challenge (DTC) in a BMW 320i DTC;
Mikhail Ukhov wins the Russian Touring Car Championship in a BMW 320i (E46);
Bill Auberlen wins the Speed World Challenge for Touring Cars in the US in a BMW 325i;
Herbert Stenger wins the German Hill-Climb Championship, Group CN sports cars, in a Stenger BMW;
Jörg Weidinger wins the DMSB Mountain Trophy for Touring Cars, Group G, in a BMW 318is;
Duncan Huisman wins the Macau Touring Car Race in a BMW 320i.

2004

Manufacturers' and Drivers' Championship FIA ETCC, BMW Team Great Britain (RBM), Andy Priaulx, BMW 320i;
1st and 2nd place 24 Hours of the Nürburgring, Dirk Müller/ Jörg Müller/Hans-Joachim Stuck, Team BMW Motorsport (Schnitzer Motorsport), BMW M3 GTR;
4th place FIA Formula One Constructors' World Championship, BMW WilliamsF1 Team, Juan Pablo Montoya (5th), Ralf Schumacher (9th), Antonio Pizzonia (15th), one win (Montoya, Brazil), one pole position (Schumacher, Canada);
Robert Senkyr wins the FIA European Hill-Climb Championship in a BMW M3;
Giulio Regosa wins the Category 2 FIA European Hill-Climb Championship in an Osella BMW;
Dirk Müller/Jörg Müller/Hans-Joachim Stuck, Team BMW Motorsport (Schnitzer Motorsport), win the Group 2 24 Hours of Spa in a BMW M3 GTR;
Claudia Hürtgen wins the DMSB Production Car Championship in a BMW 320i;

Richard Göransson wins the Swedish Touring Car Championship in a BMW 320i;
Casper Elgaard wins the Danish Touring Car Championship in a BMW 320i;
Patrick Beliën wins the Belcar Championship in a BMW M3;
Grigory Komarov wins the Russian Touring Car Championship in a BMW 320i;
Bill Auberlen wins the Grand Am Rolex Sports Car Series in a GT Class BMW M3 GTR;
Will Turner wins the Speed World Challenge for Touring Cars USA in a BMW 325i;
Alessandro Bernasconi wins the Campionato Italiano Velocita Turismo in a BMW 320i;
Arnd Meier/René Wolff wins the Endurance Championship Nürburgring in a BMW 318ti compact;
Herbert Stenger wins the German Hill-Climb Championship for Racing Cars in a Stenger BMW;
Carlos Hernandez wins the Spanish Hill-Climb Championship in a BMW 320i;
Jörg Müller wins the Touring Car Race in Macau in a BMW 320i.

2005

Manufacturers' and Drivers' Championship FIA WTCC, BMW Team Great Britain (RBM), Andy Priaulx, BMW 320i;
1st and 2nd place 24 Hours of the Nürburgring, Pedro Lamy/ Duncan Huisman/Andy Priaulx/Boris Said ahead of Dirk Müller/ Jörg Müller/Hans-Joachim Stuck, Team BMW Motorsport (Schnitzer Motorsport), BMW M3 GTR;
5th place FIA Formula One Constructors' World Championship, BMWWilliamsF1 Team, Mark Webber (10th), Nick Heidfeld (11th), Antonio Pizzonia (22nd.), four podium places, one pole position (Heidfeld, European GP);
Jörg Weidinger wins the FIA European Hill-Climb Championship in a BMW M3;
Alessandro Zanardi wins the Italian Touring Car Championship in a BMW 320i;
Franz Engstler wins the Asian Touring Car Championship in a BMW 320i;
Vladimir Nechaev wins the Russian Touring Car Championship in a BMW 320i;
Richard Göransson wins the Swedish Touring Car Championship in a BMW 320i;
Richard Göransson wins the European Touring Car Cup in Vallelunga in a BMW 320i;
Casper Elgaard wins the Danish Touring Car Championship in a BMW 320i;
Claudia Hürtgen wins the Endurance Championship Nürburgring in a BMW 320i;
Herbert Stenger wins the German Hill-Climb Championship for Sports Cars in a Stenger BMW.

2006

Manufacturers' and Drivers' Championship FIA WTCC, BMW Team UK/RBM, Andy Priaulx, BMW 320si;
5th place FIA Formula One Constructors' World Championship, BMW Sauber F1 Team, Nick Heidfeld (9th), Jacques Villeneuve (15th), Robert Kubica (16th), two podium places;
Jörg Weidinger wins the FIA European Hill-Climb Championship in a BMW M3;

Franz Engstler wins the Asian Touring Car Championship in a BMW 320i;
Vladimir Labazov wins the Russian Touring Car Championship in a BMW 320i;
Elgaard Casper wins the Danish Touring Car Championship in a BMW 320i;
Marc Hennerici wins the Junior Endurance Championship Nürburgring in a BMW 120d;
Will Turner wins the GrandAm Cup (USA) in a BMW M3;
Duller Motorsport (Hans-Joachim Stuck, Dieter Quester, Philipp Peter, Toto Wolff) win the 24 Hours of Dubai in a BMW M3;
Duller Motorsport (Dirk Werner, Dieter Quester, Jamie Campbell-Walter) win the 24 Hours of Silverstone in a BMW Z4 M Coupé;
Markus Moufang/Hartmut Walch win the HJS Diesel Masters in a BMW 120d;
Bonk-Motorsport (Wolf Silvester/Mario Merten) win the VLN Endurance Championship Nürburgring in a BMW 318is.

Sauber.

A byword for Swiss motor racing.
It all began in 1970 when electrician Peter Sauber set up his own business and began building open two-seater sports cars. It was during this time that he constructed the Sauber C1 in the cellar at his parents' house. The model designation derived from the first letter of his wife Christiane's name. With the C1, Sauber went on to win the Swiss Championship, but subsequently only put in sporadic race appearances.

By the time Sauber hung up his helmet in 1973, his focus had already turned entirely to the construction side. The "C" was retained as a trademark, and by 2005 Sauber had got as far as the C24. For linguistic reasons there was no C10 (it sounds odd in German), but along the road there appeared a sports car named the C291.

Success with sports cars.
The first major successes began in the late 1980s after Sauber had managed to persuade Mercedes to return to the race track. Highlights of the partnership with the Stuttgart carmaker were a one-two finish in the 1989 Le Mans 24 Hours and two consecutive wins of the Manufacturers' and Drivers' title in the World Sports Car Championship (1989 and 1990).

Among the drivers who earned their racing spurs under Sauber's aegis in 1990 and 1991 were three who went on to become Formula One aces: Michael Schumacher, Heinz-Harald Frentzen and Karl Wendlinger.

Sauber's Formula One venture began almost 15 years ago. When the Mercedes-Benz and PP Sauber AG partnership was debating its racing future in the early 1990s with the demise of the World Sports Car Championship in sight, the subject of Formula One was soon tabled and firmed up as a joint project during the summer of 1991.

Preparations in Stuttgart and Hinwil proceeded apace and there seemed no reason not to embark on the new venture. It thus came as a heavy blow to Peter Sauber when, in November 1991, the Mercedes executive board decided against a Formula One involvement for the time being.

Formula One as a solo venture.
It left Peter Sauber sitting on the brand-new high-tech facility established in Hinwil, the comprehensive racing expertise that had been developed with Formula One in mind and the staff taken on to run the project. In January 1992 he resolved to go it alone – albeit with financial and technical support from Mercedes, but also taking on board the considerable personal risk of joining the sorry ranks of Formula One failures made in Switzerland.

Nonetheless, 14th March 1993 saw two Sauber C12 cars – as planned – lining up in Kyalami for the South African GP. JJ Lehto's fifth-placed finish turned it into a debut worthy of celebration. In the history of Formula One, there had only been four teams previously who had collected points in their maiden race.

Contracts with Red Bull and Petronas from 1995 provided a solid foundation and enabled the Swiss team to establish itself as a firm fixture of Formula One.

Fourth in the 2001 World Championship.
It was some time before the breakthrough came, but in 2001 there were suddenly three highlights in the team's history following hot on each other's heels: a partnership with the major Swiss bank Credit Suisse, confirmation of fourth place in the Constructors' Championship in mid-October, and a few days later the groundbreaking ceremony for the company's own wind tunnel.

When it entered Formula One in 1993, Sauber had a staff of less than 70. In 2005, around 300 experts were working exclusively on Formula One at the 6,800-square-metre Hinwil complex that comprises the development centre and the adjacent wind tunnel. In addition, almost 200 suppliers in the Hinwil region benefit from commissions coming from the racing team. Compared to 1993, the annual budget has grown fourfold within a decade.

From 1993 through to 2005 the Sauber Team contested 216 out of 218 grands prix. The two races they missed out on were the 1994 Monaco GP following Karl Wendlinger's serious accident and the 2000 Brazilian GP, from which the team withdrew for safety reasons after rear wing fractures were discovered during practice.

Balanced against 257 completed races, which earned the team 93 championship points, there were 169 retirements. Eight of these occurred at such a late stage that the affected drivers were nevertheless classified – JJ Lehto even coming fourth at Imola in 1993.

In theory the line-up of 17 Sauber drivers should be able to claim 432 race starts, but they only managed 428 since there were four occasions when only one driver took part in the race. A convalescing Karl Wendlinger missed out on the Spanish GP in 1994, while in 1996 Johnny Herbert was forced to watch the restart in Australia from the trackside after being involved in a pile-up. Gianni Morbidelli passed up the Japanese GP in 1997 due to a hand injury sustained during practice, while 2003 saw Heinz-Harald Frentzen fail to make the restart in Austria due to a clutch failure.

Six podium places.

Six third places are the team's best results. On two occasions victory seemed within grasp. At the Monaco GP in 1996, Frentzen finished fourth after colliding with Eddie Irvine's Ferrari while attempting to pass him and later dropping further back on account of two extra pit stops. In France in 1999, Jean Alesi spun off a wet track and out of the race just before the safety car was sent out.

Statistics (1993 to 2005).

Driver	Grands prix for Sauber	Points for Sauber
JJ Lehto (FIN/1993–1994)	18	5
Karl Wendlinger (AUT/1993–1995)	25	11
Heinz-Harald Frentzen (GER/1994–1996/2002–2003)	64	42
Andrea De Cesaris (ITA/1994)	9	1
Jean-Christophe Boullion (FRA/1995)	11	3
Johnny Herbert (GBR/1996–1998)	48	20
Nicola Larini (ITA/1997)	5	1
Gianni Morbidelli (ITA/1997)	7	0
Norberto Fontana (ARG/1997)	4	0
Jean Alesi (FRA/1998–1999)	32	11
Pedro Diniz (BRA/1999–2000)	32	3
Mika Salo (FIN/2000)	16	6
Nick Heidfeld (DEU/2001–2003)	50	25
Kimi Räikkönen (FIN/2001)	17	9
Felipe Massa (BRA/2002/2004–2005)	53	27
Giancarlo Fisichella (ITA/2004)	18	22
Jacques Villeneuve (CAN/2005)	19	9
Total	**428**	**195**

Championship points and Constructors' Championship placings

Season	Grands prix	Points	Position
1993	16	12	7th
1994	16	12	8th
1995	17	18	7th
1996	16	11	7th
1997	17	16	7th
1998	16	10	6th
1999	16	5	8th
2000	17	6	8th
2001	17	21	4th
2002	17	11	5th
2003	16	19	6th
2004	18	34	6th
2005	19	20	8th
Total	**216 (428 starts)**	**195**	

Placings by year.

Place	93	94	95	96	97	98	99	00	01	02	03	04	05	Total
1st	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2nd	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3rd	0	0	1	1	1	1	0	0	1	0	1	0	0	6
4th	2	2	1	2	2	0	0	0	3	1	0	2	2	17
5th	2	1	3	0	2	2	0	2	1	2	2	2	0	19
6th	2	4	5	1	2	2	5	2	6	4	1	2	2	38
7th	2	3	1	3	3	5	1	3	4	5	0	2	1	33
8th	2	0	3	4	3	2	1	5	1	2	2	6	2	33
9th	2	0	1	3	5	1	2	2	2	4	5	8	3	38
10th	0	1	3	1	1	5	0	4	2	3	3	2	6	31
11th	0	0	1	0	1	0	0	4	1	0	2	2	6	17
12th	0	0	1	0	1	1	0	0	0	1	2	3	3	12
13th	1	0	1	0	0	0	0	0	0	1	2	2	2	9
14th	0	0	0	0	2	0	1	0	0	0	0	0	3	6
15th	0	0	0	0	0	0	0	0	0	0	0	0	1	1
16th	0	0	0	0	0	0	1	0	0	0	0	0	0	1
17th	0	0	0	0	0	0	0	0	0	0	1	0	0	1
	13	**11**	**21**	**15**	**23**	**19**	**11**	**22**	**21**	**23**	**21**	**31**	**31**	**262**

7. Press service.

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Services.

Press releases in English and German are available in various email formats (text only, pdf, html) or by fax.

Requests for changes to the **mailing list** should be sent to Heike Hientzsch: bmw@heikehientzsch.de, fax +49 (0) 2293 – 90 39 95.

Previews are generally sent out on the Friday nine days ahead of a GP.

Practice, qualifying and race reports are sent out daily on GP weekends around 60 minutes after the end of the last session or the end of the race.

Test reports containing the most important data are sent out after each test day.

Online press releases, press kits and photos are available at: www.press.bmwgroup.com. Further information can be found on the team website www.bmw-sauber-f1.com and at www.bmw-motorsport.com.

Transparencies and colour prints as well as **TV footage** can be obtained from the listed contacts.

A new **CD-ROM** will be available at the start of the season. It contains the press kit texts in five languages (English, German, French, Italian and Spanish) along with the latest photos.