

SPEED & PRECISION

Real-Time Problem-Solving in F1



*AT&T
and
Aston Martin Red Bull Racing*

It is hardly surprising that the collaboration between AT&T and Aston Martin Red Bull Racing has been so successful, because they share common values: speed, precision and innovation. → In the arms race that is

Formula One, the world's most technologically advanced sport, Aston Martin Red Bull Racing has dominated. A major factor behind the team's success has been the help from AT&T in providing a vehicle to assist Aston Martin Red Bull Racing with their ever-improving levels of telemetry and analysis. AT&T, the global leader in communications technology, is Aston Martin Red Bull Racing's rapid response unit. → Only 60 of Aston Martin Red Bull Racing's 700-strong team are allowed trackside. By feeding information back to the team's headquarters in Milton Keynes in virtually real-time, using 100 sensors fitted to the car, AT&T empowers Aston Martin Red Bull Racing's engineers and technicians to back up team principal Christian Horner on race day. → Horner says: "We value AT&T's contribution to the team very highly and consider the products and services they provide as mission-critical to our operation at the race track. → The more data we can gather, the more comprehensive our analysis can be, and ultimately the more accurate decisions are in the development of the cars and during the race." → Aston Martin Red Bull Racing dominated Formula One's drivers' and constructors' championships between 2010 and 2013, winning eight world titles. They remain one of the strongest teams in the paddock because AT&T's communications platform, offering 24/7 support, has maximised race performances. → Frank Jules, AT&T's President of Global Business, says: "For Aston Martin





Red Bull Racing to win Formula One races it has to be at the top end of the curve in innovation and it has to do everything in an incredibly fast manner, where one thousandth of a second really matters. → The same applies to our global, multinational customers. Our ability to innovate, to transform their business, helps give them a competitive edge in their industry, so that they can take better care of their customers and grow market share. → So we share a lot of characteristics. I'm proud to say that we are a big part of Aston Martin Red Bull Racing's team. There are a lot of commonalities here". → "Thanks to AT&T, our Team stay connected throughout the race weekend, wherever they are in the World. Back in the UK, the Operations Room team play a critical role in analysing live telemetry from the cars, and have a direct and time-critical impact on our race strategy. The speed of connection, alongside an array of UC capabilities from AT&T, make their jobs possible", says Zoe Chilton, Head of Technical Partnerships, Aston Martin Red Bull Racing. → That's why AT&T and Aston Martin Red Bull Racing are at the front of the grid, with a comprehensive, multi-year sponsorship.

AT&T do four things for Aston Martin Red Bull Racing

1

The Global Network

Wherever the race is, AT&T's advanced network (Global VPN) provides Aston Martin Red Bull Racing with virtually real-time data and connects the team to its base in Milton Keynes, its engine supplier in France and its wind tunnel in Bedford.

2

Security

Enhanced security services provided by AT&T helps keep Aston Martin Red Bull Racing's information and assets safer, help to reduce risk, helps increase reaction and response times to security issues, and help the team to mitigate threats and deflect unwanted activity in its network.

3

Unified Communications

AT&T provides Aston Martin Red Bull Racing with a unified communication and collaboration solution to encourage a closer working relationship between the race team and the factory. This features instant messaging, IP-based phone services, telepresence, and video conferencing.

4

Mobility

Aston Martin Red Bull Racing's mobile devices are managed with an EMM (Enterprise Mobility Management) solution provided by AT&T. This enables engineers to exchange highly secure crucial race information directly with the factory using their smartphones or tablets.

*CASE STUDY:
Hungarian Grand Prix
July 26, 2015*



The Start...

Daniel Ricciardo (**DR**) in 4th
Daniil Kvyat (**DK**) in 7th



Lap 64 of 69

DR makes a move to overtake
Nico Rosberg (**NR**)

DR ran slightly wide after the
overtake

NR regained position

Both cars collided and
sustained damage:

DR – *Front Wing*

NR – *Left Rear Puncture*

NR had to return to pit for new
tyres (driving a full lap slowly
with the puncture)



The AT&T Story....

DR immediately radioed to his Race Engineer that he had sustained damage

Race Engineer instructs DR to remain on track

Telemetry from the car is shared with the trackside engineers and the AT&T Operations Room at the Red Bull Racing factory in the UK:

The Action Plan...

DR to return to the Pits immediately to change tyres and nose/front wing assembly.

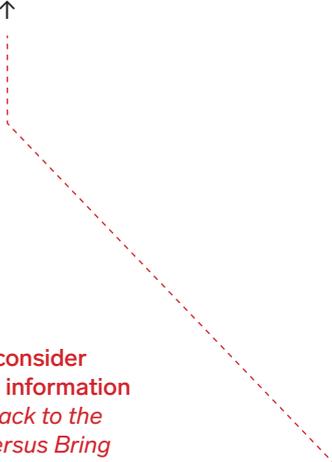
The Result...

This activity was performed within the space of **one lap**

DR was able to pit and return to the track in front of NR, and Lewis Hamilton.

DR secured 3rd place
DK finished 2nd

Placing both Red Bull Racing drivers together on the podium for the first time



3. Race Strategy consider options using this information
Keep the car on track to the end of the race, versus Bring the car in for an un-scheduled pitstop to repair damage

2. Car Performance is analysed
How has the damage impacted other systems such as tyre life, handling, speed, etc?

1. Car Health is analysed, primarily for safety
Should the car be retired?

4. Car Control Systems make the necessary plans
Plans communicated to the driver to help manage the on-board systems during the pitstop

5. Data and footage of the incident is reviewed
How do we defend a stewards' enquiry into the incident, if required?

6. Action Plan is put together and communicated to the Pit Wall
This is communicated to DR and the Pit Crew

“In Formula One speed is important—not just on the track but in business operations. We have over 700 employees, specialists in many areas, updating and improving the car. All that needs to come together and operate and act as a team on race weekend. What AT&T has done is give us a platform of products which helps us communicate and work together as a team.”

Matt Cadieux, *CIO Aston Martin Red Bull Racing*

