



DISRUPTED

By Jacquelyn Cheok



Lewis Hamilton, a driver for the Mercedes-AMG Petronas Motorsport team and current defending World Drivers' Champion, stands in front of FlashArrays made by Pure Storage, a US data storage firm and official team partner of Mercedes-AMG Petronas Motorsport.

PHOTO: MERCEDES-AMG PETRONAS MOTORSPORT

## Data-ready, set, go!

F1 is a highly technological sport where teams use tech and data to leapfrog the competition

**F**ORMULA One is like nothing else in the sporting arena – a reality I appreciated better during my tour of Singapore's F1 Pit Building this week. The Singapore Grand Prix, the 15th race as part of the 2018 World Championship, takes place on the Marina Bay Street Circuit this weekend.

On Thursday, I was given a tour of the Mercedes-AMG Petronas Motorsport garage, which I first checked out last year. Only this time, the technical and technological demands of the sport, and the intensity of both the race and inner workings, truly hit me.

I learnt that F1 is a logistical nightmare as much as it is a glamorous high-speed race. With 21 races held over eight months this year, the turnaround from one race to the next can be as short as a week. Once teams arrive at a new city, they have 36 hours to set up (what jet lag?), including building out their garages in which they cram everything from cars to tires to data storage units.

What really struck me this year was that in F1, very little is left to chance. Race strategists don't introduce too many strategies on the fly; they run several different simulations overnight on computers to help them plan their attack in the next race. Even the 60 engineers of each team practise setting up and tearing down mock garages before each season. Planning is so key!

The gruelling programme aside, one other thing that hit me was that teams can't have enough data. Lance Stroll of the Williams Martini Racing team, when asked how technology can further improve the sport, pointed to better cars and engineering equipment but chiefly, data.

"The more data we have, the better the understanding (of our race) and the better we can become," he said. As more proof that data is in-

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creasingly sought after and relied upon in this sport, Matt Harris, head of IT at Mercedes-AMG Petronas Motorsport, said in a separate interview: "Drivers don't believe what engineers tell them, unless it's backed by data."

Since 2014, Mercedes has used US data storage firm Pure Storage for its data architecture, with its entire data storage infrastructure built on Pure's FlashArray and FlashBlade technology. A FlashArray (70 terabytes) sits trackside and collects data from the over 250 sensors on the car, while a FlashBlade (1.2 petabytes) sits at its R&D facility to help with the design of future cars.

What's new this year is that Mercedes has rolled out a new car, the W09, which is the first car designed on Pure's infrastructure. Previously, the Pure platform played more of a supporting role as trackside infrastructure. Today, it's been integrated into the foundation of the W09, a major development according to Pure.

What's also new this year is the upsurge in data generated and additional storage capacity required by the Mercedes F1 team, said Mr Harris.

"What we don't want to do is take more (storage) shelves. What we want to do is to get more capacity in the same space. Obviously, one of the big benefits with Pure is that we're not really using any more power because it's such a low-power requirement for us, and it also means we don't need any extra space or weight."

All of this is attributable to the efficiency of Pure's all-flash data platform, which allows more data to be stored in a smaller space and at lower cost, as well as its evergreen model, which allows upgrades to be made flexibly to the platform without any downtime or performance impact.

When asked how the Mercedes F1 team keeps up with data analytics trends, Mr Harris said it is through talking to Pure, a company that "has been evolving" and become "an extension of the team". He added that constant improvement has always been top of mind for his team.

"In most industries, including sports, if you're jogging along as a business, you generally keep up with the people around you, who every now and then, could speed up for a little while and then get back to jogging.

"In F1, if we jog along, we go backwards, because nobody is ever just jogging along. The speed of change is so much faster than in any other industry."

David Wirt, vice-president for South-east Asia and Greater China at Pure, said as much: "F1 racing has more tech embedded in the cars than any other forms of racing. Hence, Pure loves its partnership with Mercedes because F1 is a technological sport, where we can use tech and data to leapfrog the competition."

When I chronicled my F1 experience for this column last year, I said that data is the new oil and the ultimate externality, and that organisations should think about how to capture the most meaningful data from as many devices as they own. That is as legit now as it is then.

But perhaps what is also worth thinking about is whether organisations today are also actively accessing data of their competitors' – such as through an abandoned, defunct data source – in a bid to one up them. And if so, are they doing it ethically, legitimately, and in a way that still ensures a level-playing field?

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