Honda choisit la technologie d'IBM Watson IoT pour permettre aux équipes de Formule 1 de prendre des décisions en temps réel durant les courses

PARIS - 18 mars 2016: IBM a annoncé aujourd'hui que le service Recherche et Développement de HONDA surveille et analyse les données de plus de 160 capteurs situés dans les voitures de Formule 1, et ce en utilisant la technologie d'IBM Watson appliquée à l'internet des objets (IoT). Dès aujourd'hui, les pilotes et les équipes de maintenance peuvent utiliser les données et les analyses en temps réel pour optimiser leurs performances comme par exemple réaliser des ajustements de vitesse ou un arrêt au stand de ravitaillement.

Aujourd'hui, le sport évolue vers une logique dominée par la donnée, où le pilote est connecté en permanence. Désormais, les équipes de maintenance peuvent analyser rapidement les flux de données concernant le véhicule et le conducteur afin d'ajuster la stratégie de course en temps réel, y compris les moyens d'économiser du carburant ; tous les facteurs essentiels qui peuvent aider à gagner la course. En 2014, la Fédération Internationale de l'Automobile (FIA), qui régit les courses de Formule 1, a publié un nouveau règlement exigeant que toutes les voitures de Formule 1 utilisent des moteurs hybrides et une consommation de carburant limitée pendant les courses, poussant le sport à se concentrer sur le développement d'énergies automobiles plus économes.

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Honda Selects IBM Watson IoT Technology Enabling Real-Time Racing Decisions for Formula One Drivers

IBM Helps Automakers Build Internet of Things Connected Vehicles

IBM today announced that Honda R&D is monitoring and analyzing data from more than 160 sensors in Formula One (F1) cars using [IBM Watson Internet of Things](#) (IoT) technology. Now, drivers and crews can apply data and analytics in real-time to help streamline performance and improve fuel efficiency, enabling drivers to make real-time racing decisions based on this data, such as speed adjustments and pit stops.

The exciting world of motorsports has brought entertainment to fans worldwide for almost 100 years, and is

known for the split-second reactions by drivers that make or break the race. After a race, engineers would pull data, including timing and fuel flow, from the vehicle to adjust racing strategies for the *next* race.

But today, the sport has evolved to one that is highly data driven with drivers always being connected. Now, racing teams can analyze fast streaming vehicle and driver data to adjust racing strategies in real-time, including ways to conserve fuel -- all critical factors that can help to win the race. And, in 2014, the Fédération Internationale de l'Automobile (FIA), which governs Formula One racing, published new regulations that required all Formula One cars to use hybrid engines and limited fuel consumption during races, driving the sport to focus on developing more energy efficient automotive technologies.

To help mark its return to Formula One racing and reach new milestones in efficiency for both race cars and future consumer models, Honda R&D developed a new system to analyze data from hybrid engines, known as power units, to quickly and efficiently check residual fuel levels and estimate the possibility of mechanical problems. Honda is using the [IBM IoT for Automotive](#)solution, based on IBM Watson IoT technology, to deliver data generated from cars, including temperature, pressure and power levels, directly to the cloud for real-time analysis.

"*Honda R&D is thrilled to work with IBM to mark its return to F1 racing, applying advanced IoT technologies to help ensure our drivers and teams are constantly connected*," said **Satoru Nada, chief engineer and manager**, **Power Unit Development Division, Honda R&D Co., Ltd. HRD Sakura** . "*We are bringing excitement to fans worldwide around the performance of our vehicles and drivers, with the power of data and real-time analytics becoming a critical factor in winning races.*"

Honda's F1 racing vehicles are now also able to recover or save energy to use later during the race for more power. For example, anytime the driver uses the brakes, the heat given off from friction can be captured and saved to the battery, similar to the hybrid vehicles Honda sells to consumers. Or, the system will capture heat from the exhaust and save it as more energy in the battery as well. Then, the system can give the driver more power when he needs it, such as when passing another racer.

As a race is taking place, data is streamed to the cloud and shared with the pit crew teams equipped with tablets and mobile technology. The data is analyzed in real-time by researchers at HRD Sakura, Honda's R&D facility in Japan and the McLaren Honda F1 team in the United Kingdom. Transmitting this analysis using [IBM Streams](#), implemented by [IBM Global Business Services](#), as the race is taking place allows for adjustments to basic metrics such as temperature, pressure and power levels that help improve the vehicle's performance. Additionally, the Honda research team can also now build very complex performance models to measure energy recovery of the power unit to ensure its longevity.

"*With the rapid growth of the Internet of Things, by 2025, every car will be connected in some way exuding vast amounts of streaming data ranging from traffic updates to health of the vehicle, operations and more*," said **Harriet Green, general manager, Watson IoT, Commerce & Education, IBM** . "*We are excited to team with Honda to provide sophisticated cognitive IoT capabilities and analytics to combine data directly from the F1 racing vehicles with other sources, allowing Honda to not only enhance its vehicles that are built for*

speed, but to also be more friendly to our environment."

To learn more about Honda R&D, visit http://world.honda.com/RandD/

To learn more about Watson IoT, visit www.ibm.com/IoT

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