

Winds of change? Company looks at weather's effect on ball

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This July 5, 2020, file photo shows Chicago Cubs players during baseball practice at Wrigley Field in Chicago. The wind blowing out at Wrigley Field. The tricky breeze in San Francisco. The heat in Los Angeles. The weather is important business in baseball. (AP Photo/Kamil Krzaczynski, File)

The wind blowing out at Wrigley Field. The tricky breeze in San

Francisco. The heat in Los Angeles.

The [weather](#) is important business in baseball. But what kind of business is still being decided.

Weather Applied Metrics has a contract with Marquee Sports Network to develop graphics that show the effect of the weather on the flight of balls for [home games](#) for the Chicago Cubs this summer—assuming there is a season amid the coronavirus pandemic. It is planning to install [weather stations](#) at Wrigley Field by the end of next week.

It had a pilot program for Red Sox broadcasts last year. But it's also heading into the third season of a deal with another major league team it declined to identify that decided to keep the information internal.

"The biggest thing that they're doing with it is they're positioning their outfielders," said John Farley, the [chief technology officer](#) for Weather Applied Metrics. "Their thing to us was if you can get us 20 extra outs a year this is well worth whatever it costs because they can factor in that they can win x number of games because of that.

"But we think we're getting them many more than 20 outs a year."

One of the biggest keys to Weather Applied Metrics' modeling is [computational fluid dynamics](#), which uses software to help analyze the flow of gas or liquids, or how flowing gas or liquids affects objects.

Think of computational fluid dynamics as "having a [wind tunnel](#) on a computer," said Jani Macari Pallis, an associate professor of mechanical engineering at the University of Bridgeport in Connecticut.

Wind tunnels are "somewhat time consuming and you have to build lots of models," Pallis said. "So now what we can do with computational

fluids is we can make these models on a computer. We can try lots of things out, and then the models that look the best on the computer, those are the ones that we put in a wind tunnel."

Computational fluid dynamics has played a role in several innovations in sports, beginning with early adopters like motor sports and yachting in the mid-1990s and then extending to Olympic and ball sports. It could take on a more prominent role in the coming years.

"I see more and more CFD being used to simulate real world scenarios in races/games before they happen, that is in training scenarios so that CFD becomes a training tool for elite sports people—when coupled with modern virtual reality simulators," Keith Hanna, an executive with MSC Software, wrote in an email.

"Indeed video games and sports have merged in many sports for elite and normal sports people. In addition, we are all different as human beings and the need to produce customized equipment and sporting experiences is an area where CFD is being applied to more and more."

[Weather Applied Metrics](#) has a connection to baseball in former Cubs and Arizona Diamondbacks outfielder Brett Jackson, who is the director of operations. Jackson's father, Pete, helped come up with the idea for the company.

Farley, who also works as the chief meteorologist for the ABC affiliate in Columbia, South Carolina, said it has had conversations with Major League Baseball about the competitive advantage aspect of its work.

"In our meetings with Major League Baseball, they seem to be directing us toward the broadcast (side) at first and then it'll go from there," Farley said. "But they do know about this one team that is using it and doesn't want it on their broadcast, and we just, you know, we're a company

selling stuff and we're happy to sell to people who buy."

Asked about Weather Applied Metrics and its work, a spokesman for Major League Baseball declined comment.

Farley said they think there will be a market for the company's broadcast product and private data for team analysis.

"Depending on the weather situation, there are certain times that we can predict this thing five days in advance," he said.

"There are a lot of opportunities that we see," he continued. "You might even decide whether to send a guy from third because we can tell you that weather near the ground is going to impact the throw by this much and the fielder might not be aware of it. So there's a lot of things that we think can be done with this."

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