

## IoT testbed targets improved farming practices

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It may seem strange that what is likely a unique initiative in agriculture is taking place in the suburbs of Washington, D.C. But that's exactly what is happening in Montgomery County, Maryland. More specifically, the center of attention is the **Thingstitude**: described as the first of its kind living laboratory designed to determine how Internet of Things (IoT) technology can help local agriculture thrive.

Essentially, agriculture is becoming a testbed, with help from the smart, sustainable cities-focused CityNext program from Council Lead Partner **Microsoft**. The testbed is in its early phase, but great things are expected, according to Dan Hoffman, Montgomery County's Chief Innovation Officer and Thingstitude leader.

### Potential benefits

"The idea behind the testbed is to determine what types of services and support we can provide to county farmers using technology. Farmers care what's happening at their farms -- ground temperatures, weather conditions, the more local the better. A lot of farmers also have reporting requirements: a dairy has significant federal and state requirements regarding milk production. We want to explore service that may make it easier and faster to collect the data to be compliant with those regulations," Hoffman explained.

"At the end of the day, we want to make our farmers as profitable as possible by helping them be as smart as possible. We want to better understand how we can use technology to help county farmers."

It turns out Montgomery County is a most appropriate site for the testbed project. Despite being a D.C. suburb, one-third of the county's land area is dedicated to farming and area

being a D.C. suburb, one-third of the county's land area is dedicated to farming and area farmers employ more than 10,000 residents on 540 farms and 350 other horticultural businesses. Four farmers who are voluntarily working with the Thingstitute have agreed to have sensors at their farms.

### **Agriculture is part of a broader IoT initiative**

The testbed for farming is the second project for the Thingstitute, which also is working on a senior living community, and another project is expected to launch later this year. As Hoffman explains, the overall initiative is an effort to concentrate on more than a single industry. "We're putting together a really compelling blended team," he said, adding that the multi-pronged strategy "will allow us to better understand how IoT operates in a real world, integrated setting as opposed to (addressing) one single solution."

As a partner, Microsoft is contributing its IoT experience as well as utilizing its Azure Government cloud platform to support agriculture.

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