



YellowScan

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## SUCCESS STORY

# Civil Engineering

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*With a traditional survey you might get a data point every 50 feet. With our YellowScan Surveyor we were able to deliver between 40 to 45 points per square meter—incredibly accurate data for our client.*

Brian Soliday, Chief Revenue Officer at Juniper



UAV USED  
DJI M600



SOLUTION  
Surveyor

## Business need.

Juniper's client was an Engineering Procurement Construction (EPC) contractor with a subcontract to create the Diamond Vista Wind Farm at an estimated cost of U.S. \$400 million. The EPC expected to set up 92 wind turbine pad sites across 345 km of access roads over a 62 sq km area.

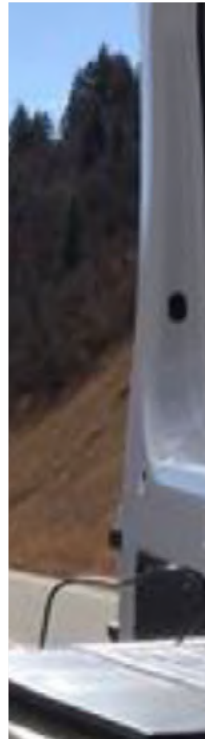
However, initial land surveys proved inaccurate, construction could not continue using existing DTM data. Traditional surveys would have incurred extremely expensive delays with heavy machinery sitting idle and possible late delivery penalties. The windfarm being funded by Enel Group, as part of the investment defined in its current strategic plan, is expected to commence operations in 2019 and will generate approximately 1,300GWh a year, once operational.

## Solution.

The Surveyor was able to remap over 8,800 hectares in just three days of collection, as opposed to traditional surveying methods that would have cost delays of up to six weeks. Because of the quality of the resulting digital terrain surface captured by the YellowScan Surveyor, the client saved an estimated one million dollars in additional earth-moving costs.



Company: Juniper Unmanned  
Website: [www.juniperunmanned.com](http://www.juniperunmanned.com)  
Country: USA, Texas



## SUCCESS STORY

# Results

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### Acquisition.

3 days operating on-site across a 62 km<sup>2</sup> geographic area with pre-programmed drone missions capturing a 76 m swath of LiDAR.

Accurate data acquired in winds under 32 kph, overcoming challenging site access logistics.

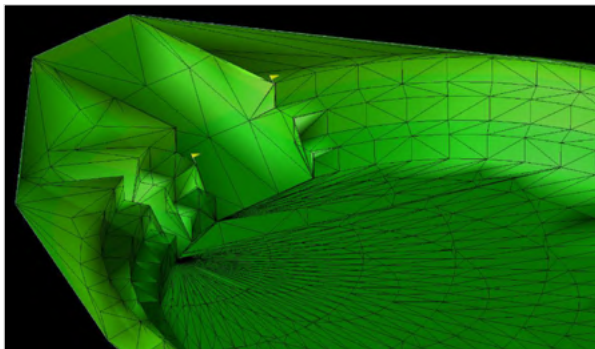
### Results.

3 days of data processing delivered all survey data with 40-45 points/m<sup>2</sup> and value-added products:

Digital Terrain Models (DTMs) in .XML format, 1 foot Contours, Cut-and-Fill Reports for each pad/road and GPS Machine Control Files.

### Benefits.

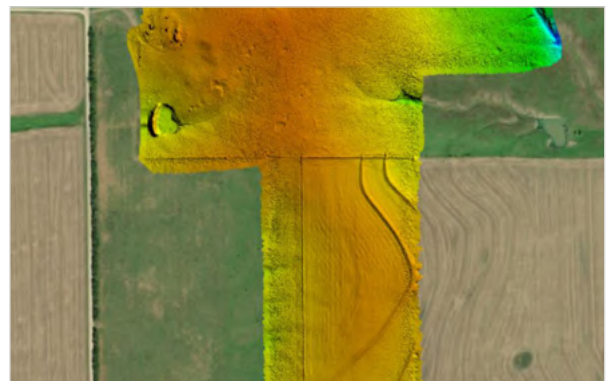
- High density data
- Fast data turnaround
- Rapid deployment
- Access to difficult areas
- Maximum efficiency



*Machine Control Model*

### Mission parameters.

- Number of flights: confidential
- Area surveyed: 8800 hectares in 3 days
- Swath: 76 m
- Flight speed: confidential
- Flight altitude: 50 m



*Bare earth Digital Terrain Model (DTM)*

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