Honeywell

Take a flight with IntuVue

1

TAXI
IntuVue begins scanning and filling the 3D buffer during taxi to build a picture of the weather around the airport.

2

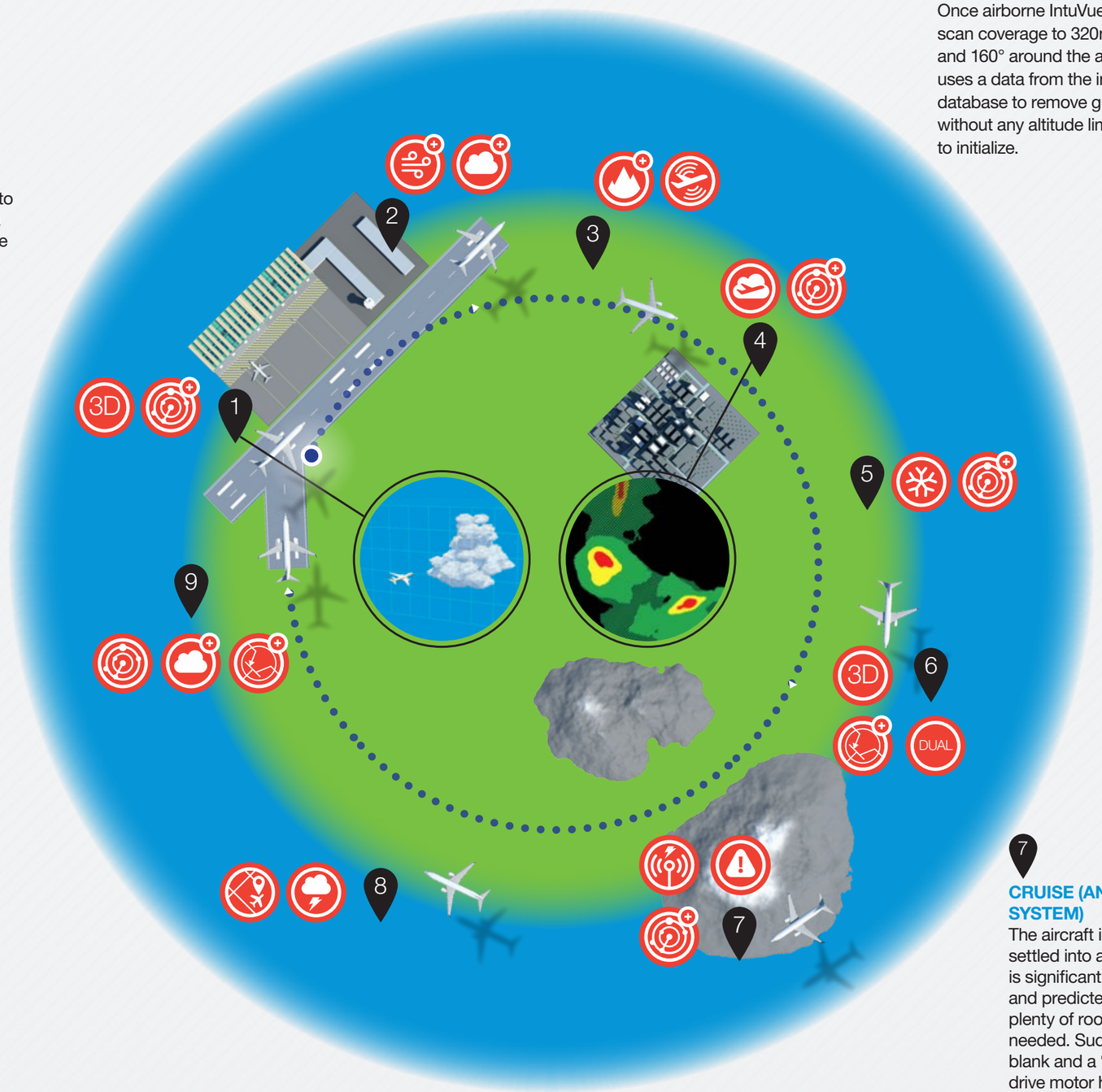
TAKE-OFF
IntuVue is the only weather radar to scan +/-80 degrees and display a full +/-90 degrees of weather while Predictive Windshear is active.

9

APPROACH (SECONDARY WEATHER – VERTICAL PROFILE)
The pilot prepares to start the descent. A significant area of secondary weather is seen on the flight path to the airport so the pilot evaluates whether this can be overflow or if a deviation is needed. A quick visual check of the elevation/ manual mode shows that the intended flight plan will descend through this weather system which contains a red core at 10,000ft, so the pilot requests a small deviation around it for the approach. This is all managed efficiently before the top of descent.

8

CRUISE (TROPICAL OCEANIC WEATHER)
The aircraft continues on its oceanic crossing and is just entering the topics. There is no need for data base driven changes to the tilt angle based on Latitude because IntuVue is always scanning multiple tilt angles to ensure that low growth cells are not over scanned and that high building cells can be fully measured to find storm tops. One cells shows a hail icon indicating an even larger threat and the need to divert even further on the downwind side.



3

DEPARTURE
Once airborne IntuVue expands its scan coverage to 320nm, 0-60,000ft and 160° around the aircraft. IntuVue uses a data from the internal terrain database to remove ground clutter without any altitude limitations or time to initialize.

4

CRUISE (CONVECTIVE WEATHER DISCRIMINATION)
The aircraft is at cruise and flying over a thick layer of stratus weather at 20,000ft with some embedded convective cells. IntuVue is able to detect convective weather and separate it from the stratus, showing the convective cells as on path (solid color) and the stratus as off path (hashed).

5

CRUISE (FROZEN AND MIXED STATE)
Detection of reflectivity at 35,000ft is possible because all weather returns above 20,000ft are compensated as rain transitions to mixed state and then to frozen ice crystals at higher altitudes.

6

CRUISE (DUAL MODE OPERATION)
During the flight, IntuVue has identified an area of potentially dangerous weather below the flight path – this is indicated by a hashed color display. The First Officer changes into manual mode to evaluate while the pilot remains in auto mode for complete situational awareness. This is possible because IntuVue allows any independent combination of modes between the pilot and first officers without any impact to the other.

7

CRUISE (ANTENNA DRIVE FAILURE – DUAL SYSTEM)
The aircraft is now 3 hours into flight and settled into an oceanic crossing route. There is significant convective weather in the area and predicted for the rest of the crossing, but plenty of room to maneuver around cells if needed. Suddenly, the weather display goes blank and a “WXR FAIL” is shown. The antenna drive motor has failed! The pilot switches to system number two, and recovers the weather function due to redundant antenna motors.