

SKYPORTZ RELEASES NEW DOWNWASH/OUTWASH AMELIORATION MODELLING

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Skyportz, has [released an animation](#) that demonstrates the significant impacts its vertipad patent will have on the roll out of Advanced Air Mobility networks globally. The modular vertipad patent addresses one of the standout issues for Advanced Air Mobility in urban locations – amelioration of downwash and outwash. This issue has been highlighted by the FAA in January in their [Engineering Brief 105A](#) where the American air regulator indicated that vertipads will need to have a wind safety zone beyond the landing surface. Almost every other air safety regulator in the world has similarly highlighted this issue.

The animation compares the windspeed of an eVTOL landing on a tarmac with landing on the patented surface, which deflects and breaks up the powerful vortices that are dangerous in urban settings. The vertipad also entrains the air to recirculate, reducing the power of the outwash.

Skyportz CEO, Clem Newton-Brown commented: “The Skyportz vertipad patent has some very real applications as cities move to establishing vertiport networks outside of existing airports and helipads. Our technology reduces the outwash speed two and a half times faster than landing on a tarmac. It means that with our vertipad you can safely use less land or fit more pads onto smaller sites. The vertiport infrastructure is the missing piece of the puzzle for this industry. Without a multitude of new vertipad landing sites in places people want to go, the aircraft will never fulfil their

potential. The Skyportz vertipad patent provides the solution.”

International air regulators and future air taxi and vertiport operators have expressed an interest in the Skyportz vertipad patent, which will eventually be made available in emerging global markets under licence. Skyportz says it aims to break the nexus between aviation and airports and enable commercial and industrial property developers to host vertiports. Skyportz released their innovative vertipad patent at the Avalon International Airshow in Australia in March, taking home the “Blue Sky” innovation award.

Professor Leontini from the Swinburne University of Technology AirHub in Australia has been engaged to do the CFD modelling and trial further iterations of the Skyportz vertipad. He stated:“Our next step will involve adding different surface treatments and mechanical devices detailed in the patent under and around the vertipad, which we expect will induce a Magnus effect and dissipate energy at an even higher rate while directing flows to desired zones away from waiting passengers.”

Professor Leontini has over 20 years experience in applying fundamental flow physics to the modelling and simulation of fluid and aerodynamics, including fluid-structure interaction, the development and transition of flows to turbulence and the simulation and analysis of flow systems.

The first iteration of the modelling conducted by Swinburne University has experimented with different landing surface treatments described in the patent. The Skyportz vertipad is protected by the global Patent Cooperation Treaty protection and the national phase of the patent has commenced already in Australia, USA and China.

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