Here seems to be a disconnect between the relative popularity of the WheelTug electric nose-wheel drive system – in crude sales terms at least – and the lack of support offered for it by either of the big two airframers.

So far, the Gibraltar-headquartered engineering company has racked up nearly 800 preliminary orders for its system from 14 airlines operating both Airbus A320s and Boeing 737s. Yet it is aiming to certificate both variants of the WheelTug equipment without the backing of either manufacturer.

This, of course, means that WheelTug’s development schedule is hard to pin down.

Chief executive Isaiah Cox says it will take between 18 months and two years to complete the development and gain approval. This will, however, depend on gaining access to Airbus and Boeing’s engineering data for their respective A320 and 737 families – although Cox points out that “Boeing and Airbus do not support the programme”.

In fact, Airbus goes so far as to reject the concept. “Airbus and our landing gear [suppliers] do not support the design of putting an electric motor on the nose gear,” it says, while declining to elaborate. Instead, it has given its backing to the main-gear electric taxi system being jointly developed by Honeywell and Safran.

WheelTug is now pursuing an alternative strategy that will require no support from Airbus and Boeing, says Cox. Given its backlog, it seems likely that the necessary engineering data will be sourced instead from its airline partners. The final pre-serial production phase should begin in the “next couple of months”, with certification due to follow in late 2015 or early 2016, says Cox.

WheelTug had initially aimed to certificate the system by end-2013. However, Cox says its certification deadline “has always been rolling”, and is dependent on access to engineering data.

In addition to the certification hurdles posed by a lack of airframer backing, WheelTug is also upfront that it is not designing a system that will work in every situation, but instead one that functions in the vast majority of scenarios.

“There will be situations where WheelTug will not move the aircraft. But those situations are rare and predictable,” says Cox. In addition, the company hopes the relative simplicity – for which read cost-effectiveness – of the system will be major selling point against the rival Safran-Honeywell Electric Green Taxiing System (EGTS).

BRAKE COOLING
Cox also suggests that the rival main-gear system could hinder brake cooling, prolonging time at the gate. However, Honeywell and Safran reject any concern that their equipment could have an adverse effect on brake temperature. “There will be no impact of the system on brake cooling. In fact, turnaround times will actually be reduced as ground crews will be able to access the aircraft earlier and aircraft will be able to manoeuvre to and from the gate faster,” says Brian Wenig, Honeywell’s vice-president for the EGTS. Airbus – which supports the EGTS programme – also insists the electric motor and transmission system will have no operational effect on the brakes.

Airlines will always be interested in a system that promises both efficiency gains and lower costs, and although it will have operational limits, the simplicity and alleged cost advantages of the WheelTug system appear to be in its favour.

As a further incentive for airlines to sign up, the company also plans to rent rather than sell the equipment to operators through what it describes as a “living lease” agreement, that will include repair and overhaul support. “We only get paid when the customer saves money. For the airline, this is a zero-risk option,” says Cox.

In addition, carriers looking to reduce their reliance on the OEMs may also see a benefit from WheelTug’s independence. The fact that WheelTug deals directly with 737 and A320 operators is, suggests Cox, “very awkward” for Airbus and Boeing.

Although tests have so far focused on systems for the 737, it is unclear whether the initial production model will be for the Boeing narrowbody or its European rival, says Cox. No trials of equipment have yet been undertaken on an A320, however.