

# Floating Fortresses Could Haul Heavy Loads

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The blimps manufactured by **Worldwide Aeros Corp.** have been seen by thousands of people across the world advertising beer, cameras and other consumer products.

But if the tiny Tarzana company has its way, a new-generation blimp, which the company calls an ultralight hybrid aircraft, will serve the far more serious purpose of transporting tanks and other heavy cargo for the military.

One of only two manufacturers of commercial blimps in the United States, Worldwide was awarded a \$3.3 million contract from the Defense Advanced Research Projects Agency to develop plans for the military's next generation air cargo vehicle to replace **Boeing Co.**'s venerable C-17.

That puts it in direct competition with **Lockheed Martin Corp.**, which also received a \$3 million DARPA contract for a craft called **The Walrus**.

Aeros is relying on its blimp expertise to build a rigid-shelled craft that is a cross between a dirigible and a plane. Using helium for buoyancy, as well as lift from wings and engines, the craft would have 10 to 20 times the C-17's payload. But it will be a tough sell.

"When you buy a car, you buy from GM, when you buy an airplane, you buy from Lockheed," said Igor Pasternak, chief executive and lead engineer at Aeros. "The Aeros craft is a new technology, but it's derived from a blimp. We're the experts in this."

The Walrus may seem far-fetched, but according to a recent report from the Congressional Budget Office, the craft would be able to carry 1 million to 2 million pounds of cargo for up to 12,000 miles without refueling. The



**Airships:** Next-generation blimps could carry 10 to 20 times more than a C-17.

report pegged the cost of 15 Walrus ships, including 30 years of operations, at about \$11 billion. No such projections are yet available for the Lockheed Martin proposal.

Another advantage for Aeros: it's a small, specialized engineering company with a single technology. Some military analysts say that could be preferable to large contractors who have been stretched too thin and often end up billions of dollars over budget on big ticket contracts.

Pasternak started Aeros in Ukraine 20 years ago and transplanted it to Los Angeles in 1993. Since then, it has sold about a dozen of the kind of blimps that hover over sports stadiums displaying jumbo ads. The blimps cost \$1 million to \$2 million depending on their exact specifications and size.

Meanwhile, there are potential commercial applications for the Walrus. With a cruising speed of 200 miles per hour, it would be slower than a Boeing 747 cargo jet, but it could launch and land vertically without a runway, port or other infrastructure. That would allow it to deliver its mammoth payload directly

from the manufacturer to the buyer while bypassing congested freeways, ports, and rail yards.

"You could pick up strawberries directly from a field in Fresno where they're grown, and deliver them directly to the end-user at a store in Japan," Pasternak said.

Pasternak wants to have a working model of his version of the Walrus in about two years. A civilian version would take an additional few years to become available because it would need Federal Aviation Administration approval.

While DARPA has funded research that led to the Internet, global positioning systems, unmanned aerial vehicles and stealth jets, it's also backed a host of farfetched ideas.

"There's always the chance that it will result in deployable hardware. In terms of encouraging innovative thinking and keeping engineers employed, it's great," said Richard Aboulafia, a senior aerospace analyst at Teal Group Corp. "But this path is well worn. DARPA funds a lot of interesting ideas that get stuck in file cabinets for decades."