

Use Case Library

[Improving the Aerospace Parts Market](#)

Executive Summary written by GBBC

In 2011 the Aerospace Industries Association wrote a [report](#) that in part detailed why aerospace parts are especially vulnerable to counterfeiting. The report notes that airplanes are generally designed for long life cycles; for example, the B-52 began flying in 1955 and is expected to continue until 2040. This means that across an average airplane's lifetime, the computers used to support it will change nine times, manufacturing processes will change two times, and the system and subsystem will change nine times. This changing technology necessitates sourcing parts from secondhand dealers, rather than original component manufacturers (OCM). In 2016, the Federal Aviation Authority (FAA) [found](#) that "Chinese suppliers to U.S. flight control systems maker Moog (MOGaN) sold it poorly made parts, faked paperwork and outsourced work to a factory not approved by the company." In all, they identified "273 affected parts [that] were installed in an unspecified number of Boeing 777 wing spoilers, which help slow a plane when coming in to land." Perhaps most concerningly, these parts were only identified because a whistleblower tipped off the FAA.

In light of the inefficient and opaque aerospace parts market, Honeywell created [GoDirectTrade](#), a Hyperledger Fabric-based "marketplace where premium sellers can only list parts that have product images, quality documents and price." In March 2020 it was [announced](#) that Boeing added over \$1 billion worth of excess parts to the platform after being approved to set up a digital storefront. Instead of relying on traditional paper-based records, on this platform "each listing is tied to images of the part and corresponding documents for the exact part being offered for sale, helping not only ensure the part is there, but that the documents it's associated with aren't forged."

According to Honeywell, less than 3 percent of the transactions in the \$4 billion annual market for secondhand airplane parts is conducted online. Aerospace giants like Boeing adopting the platform is an encouraging sign that online marketplaces secured and tracked by blockchain could become the new normal, eliminating traditional paperwork and ensuring that parts are safe and legitimate. Blockchain platforms like GoDirectTrade become more useful and trustworthy the more they are used, as the distributed ledger becomes more robust; it is clear that the aerospace parts industry is due for a transformation, and this could be the key to that transformation.