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BEYOND PRODUCTION INCREASES: A LOOK INTO THE FUTURE OF COMMERCIAL AVIATION

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We are proud to be in the final stages of Soaring Above the Clouds: A Supply Chain Game, our publication on the commercial aerospace industry and the effects of its production levels. In this publication, one paramount finding is the significant price pressure placed on suppliers in the commercial aerospace industry. As competition between Boeing and Airbus (and possibly Bombardier) continues to intensify, suppliers are being asked to provide higher-quality products at lower prices, leading organizations to implement efficiency improvement measures through investments in lean manufacturing, six sigma, just-in-time, Kanban, etc. Although these process improvements will help counter competition in the near term, suppliers also must consider making investments in future innovations to ensure sustainable growth.

Just as George Orwell fast forwarded society thirty-five years in his novel 1984, Airbus has invited its followers on a futuristic journey to determine the state of aviation in 2050. And just as depicted in Airstrip One, the future looks quite different. Through a variety of videos, pictures and narrative, the Future by Airbus website (<http://www.airbus.com/innovation/future-by-airbus/>) illustrates how commercial aviation could evolve over the next thirty-five years.

At first glance, it is clear Airbus practices open innovation. According to Henry Chesbrough, one facet of open innovation is “where external ideas and technologies are brought into the [company’s] own innovation process.” The Airbus website describes the company’s use of open innovation as it details the methods used for innovating via biomimicry, which is “the study and imitation of nature’s best ideas to help solve human challenges.” Airbus is studying owls, eagles, sharks and butterflies to discover design improvements that will help the company manufacture aircraft that are quieter and more fuel efficient.

To keep pace with Airbus, suppliers also must consider open innovation. Rather than just making internal product improvements or waiting for direction from Airbus, suppliers can work concurrently with Airbus to examine nature and other external sources that can help form the extent of future innovations.

Though it gets much of the attention today, energy efficiency is not the only area driving innovation for aircraft manufacturers and suppliers. Nor may it even be the most important. Rather, this distinction belongs to customer experience. Predominately a focus of airlines in the past, customer experience increasingly is powering competition among aircraft OEMs, as illustrated by innovations like Airbus’s Airspace cabin and Boeing’s bathroom ultraviolet lights.

The Future by Airbus takes customer experience one step further, by detailing such innovations as special seating with a panoramic view of the sky—pop-up pods that offer private spaces ranging from areas to hold business meetings to virtual gaming and self-cleansing surfaces. It also hints at flying

casinos and jetliner cruise ships. These extreme changes to the physical appearance of an aircraft clearly necessitate significant changes in design, manufacturing and production. Supplier readiness to participate in such changes will be imperative for sustaining future growth.

The innovations discussed above seem straight out of an episode of The Jetsons, but will become modern technology sooner than we think. To support making them a reality, it would benefit suppliers to practice open innovation continuously, thereby creating dynamic ideas, and then turning them into reality by familiarizing themselves with new-age manufacturing and design similar to 3D printing/ additive manufacturing, composite/ morphing/ self-reliant materials, holographic technology and other next-generation techniques. Focusing on current opportunities and risks is important. But we must supplement this current focus by recognizing that the future may be different, and we need to compete on both fronts to remain successful indefinitely.

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