

Leaner, greener

Suppliers play role in Boeing's environmental efforts, efficiency measures

By Dean Tougas

The measures of environmental performance at Boeing tell a compelling story of progress in process and product design, along with corresponding declines in energy use and waste. But in the view of Mary Armstrong, Boeing vice president, Environment, Health and Safety, that does not tell the whole story.

"We are focused on solutions that go far beyond our own four walls," she said. "It is really a life-cycle approach that looks at the impact of our products and processes through the entire value

ment is integrating activities that involve those suppliers.

Doug Perry, who manages the Site Services procurement group in Shared Services' Supplier Management organization, leads the EHS Supplier Engagement Team. For Perry and his team, the first step is to build on existing relationships in high-priority areas. "We've found many of our suppliers are eager to work with us on environmental projects," Perry said. "Working with those companies is a natural starting place."



Pallets of recycled paper will soon be arriving at Boeing as Dell, the company that provides Boeing with printers and copiers, begins stocking the machines with paper containing 30 percent post-consumer content. JIM ANDERSON/BOEING

"We'll expect our suppliers to have the same level of commitment to this as we do inside Boeing."

– Doug Perry, Supplier Management, Shared Services Group

chain." To Armstrong, that means engaging with suppliers who provide raw materials, parts and supplies to Boeing, as well as with those who buy and operate Boeing products.

A survey of Boeing's supply base shows a diverse range of suppliers (see sidebar on Page 23) that represent many industries, each with important knowledge and capabilities to share. Aerospace parts suppliers partner with Boeing on process and technology breakthroughs to reduce chemical emissions. Electrical equipment suppliers and energy providers work to reduce energy demands. And suppliers in many industries are focusing on reducing packaging. As suppliers take a growing role in Boeing's environmental strategy, a team from Boeing Supplier Manage-

In coming months the team will launch events to bring additional suppliers together on specific, targeted environmental projects, including various Lean+ process improvements. "In Boeing's view," said Perry, "It is very clear that being Lean is also being green."

As an example, Perry cited a pilot project at several Boeing buildings in Renton, Wash., involving OfficeMax, Boeing's office supply provider. A team featuring members of each company is using Lean+ tools to drastically reduce packaging waste and fuel use to benefit Boeing, OfficeMax and the environment.

Boeing Supplier Management, Site Services and OfficeMax experts held a Lean workshop to identify unnecessary ordering,



In Renton, Wash., Boeing joined with OfficeMax to design a Lean-inspired system of office supply ordering. Members of the project team from Boeing include (from left) Jane Gladney, Linda Flegel and Barbara Brown. JIM ANDERSON/BOEING

Supplier landscape surveyed

With thousands of suppliers worldwide, Boeing recognizes that engaging suppliers is not a one-size-fits-all proposition. The Supplier Engagement Team of Boeing's Environment, Health and Safety organization is carefully analyzing the Boeing supply base to understand what suppliers are doing to reduce impact on the environment—and learn about programs and processes they have developed to be good environmental stewards.

Approximately 130 Boeing suppliers agreed to participate in a study conducted by the Carbon Disclosure Project. The CDP is a research organization that's assembled the largest corporate greenhouse gas emissions database in the world. It annually publishes reports that provide detailed analysis of how the world's largest companies are responding to climate change.

"The survey results will help us understand some specifics on their greenhouse gas emissions and emission reduction targets," said Susan Miller, a procurement manager in Shared Services Group who helped coordinate the survey for Boeing. According to Miller, Boeing will use the survey data to help the company shape a set of long-range expectations for its supply base in a way that's practical and adaptable to the diverse array of Boeing suppliers.

"We see many suppliers are already on this journey with us," said Miller. "And we've invited the others to join us. The momentum will only grow as we're joined by every Boeing supplier."

—Dean Tougas

shipping and delivery practices that produce a larger-than-necessary environmental footprint. The team found that random supply orders result in OfficeMax trucks making daily trips to Boeing sites, even when an order is small and not urgent. And, with each order packed in its own cardboard box, the process generates a large amount of packaging that must be recycled.

As a result of the Lean workshop, Boeing and OfficeMax will begin testing a new approach that cuts deliveries and replaces cardboard boxes with reusable containers—all while implementing Lean and efficient methods for managing office supplies.

"We think this idea—or a variation of it—is probably the right thing to do across the enterprise," Perry said.

Similar projects with suppliers are happening at aircraft assembly sites.

A Commercial Airplanes technical team has been working with suppliers for years to redesign shipping crates for aircraft parts. One recent project focused on the packaging of interior panels for the 747-400 freighter conversion. The project slashed the number of crates from 99 per aircraft to 14, reduced handling time by four hours and trimmed storage space by 2,300 square feet (214 square meters).

Meanwhile, a Boeing Lean+ process improvement team from Integrated Defense Systems in Long Beach, Calif., worked with insulation blanket supplier Orcon Mexico to implement lean production and delivery practices. The C-17 Lean Team and the supplier focused primarily on reducing inventory and eliminating unnecessary handling, said Jim Kuwada of Supply Chain Management and the project's sponsor. But Kuwada said the activity created environmental benefits. Among them:

- Paperless order processing
- Delivery in reusable rolling carts (replacing 5,600 cardboard boxes annually)
- Reduced transportation costs and emissions
- 3,000 square feet (279 square meters) of warehouse space freed up

"The project resulted in a process that is much easier on the environment," Kuwada said.

Moving forward, Boeing will involve more suppliers. While the projects will vary according to the supplier's industry and unique capabilities (see sidebar above), each project will provide lessons to be shared with the broader supply base. According to Perry, getting suppliers to collaborate with Boeing and each other will help Boeing achieve its longer-term goal of direct engagement with all suppliers.

"We don't plan to ask suppliers to meet specific carbon-reduction targets in the same way that we are doing ourselves. But we'll expect our suppliers to have the same level of commitment to this as we do inside Boeing." ■

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