

Building value

Employees make great progress with Lean+, but there's much more value still to capture *By Eric Fetters-Walp*



If you don't know what Lean+ is, or you don't think it applies to what you do, talk to Jeff Farnsworth.

A technical designer in Payloads and Product Development for Commercial Airplanes, Farnsworth was skeptical how Lean+ applied to him until he attended his first training session years ago on the subject.

He's now persuaded of its value.

"Lean+ is important to the future of engineering," Farnsworth said. "We're evolving toward that at Boeing."

Boeing employees across the company and around the globe are putting Lean+ into action every day, often without consciously thinking about it. But over the next year, Lean+ leaders want to spread the word about how much additional productivity and growth can be realized by focusing on quality. The concept is referred to as Capturing the Value of Quality.

"We've made great progress with Lean+," said Bill Schnettgoecke, Enterprise Lean+ initiative leader and vice president of Operations and Supplier Management for Boeing Defense, Space & Security. "But even with all the great things we've done over time with continuous improvement, we still have a lot of value yet to capture. There still is a tremendous amount of untapped value we are leaving on the table."

You don't have to be steeped in all the terms of Lean+ and related programs to understand the central concept.

In simplest terms, Lean+ is focused on using continuous

improvement to increase productivity and growth. As the company's overarching approach to this idea, it provides a "One Boeing" framework with tools, principles and training aimed at moving toward flawless execution.

Examples of how it's being used around Boeing are numerous:

- Supplier Management employees are improving the process they use to manage negotiations over contracts.
- The F/A-18 Flight Simulation group is using Lean+ to address recurring issues and a backlog of problem reports.
- Finance teams are identifying ways to streamline their budgeting processes.

"The results are real," said Rigo Perez, senior manager of the F/A-18 Fatigue and Tracking team in St. Louis. "The time saved lets our engineers focus on solving difficult problems for our customers."

The focus on capturing value is simple at its heart, Schnettgoecke said, explaining that it challenges Boeing employees to think about how much could be saved by making products and going through processes correctly the first time.

"It's about first-time quality and preventing waste, rather than eliminating it later," said Dayde McLaughlin, Lean+ deputy director. "Just think how much better your workday would be if you didn't have to rework problems. Lean+ provides the tools and techniques to help us prevent and eliminate waste—and move toward flawless execution."

The restaging of Lean+ over the next year will include

"Lean+ provides the tools and techniques to help us prevent and eliminate waste—and move toward flawless execution."

— Dayde McLaughlin, Lean+ deputy director

several actions to emphasize its importance to Boeing.

Among other things, new Lean+ tools will be rolled out across the company, Schnettgoecke said.

By helping create better, more effective and efficient products and processes, employing Lean+ across the company affects all employees, Schnettgoecke added, citing the benefit to employees' retirement accounts, bonuses and job security when Boeing's competitiveness improves. It is also critical to sustained long-term growth, he said.

Farnsworth said there is even greater incentive to focus on continuous improvement as Boeing faces more competition in the future.

Boeing recently made a winning bid to supply its 767-based tanker to the U.S. Air Force, in large part because of significant and continuous improvements in production efficiency. Winning those kinds of contracts keeps his colleagues employed, Farnsworth noted.

Jon Shaw, Lean+ Design Build Roadmap leader, added he's

looking forward to the next phase, focused on capturing value.

"It represents the next step in our continuous improvement evolution," Shaw said, "and a bringing together of the tools, approaches, methodologies and people to make us even more competitive, more capable and more engaged in the work that each of us does every day." ■

eric.c.fetters-walp@boeing.com

Employees can learn more about Lean+ and Capturing the Value of Quality online at <http://leanplus.web.boeing.com/index.cfm>.

PHOTO: Scott Griffith, left, of DRS Technologies, a supplier to Boeing on the KC-46A Tanker, and Danon Drake, a Commercial Airplanes technical designer, construct a tanker console mock-up during a Lean+ Design Build Roadmap session in Everett, Wash.

GAIL HANUSA/BOEING



How a Lean+ concept is improving jet-making

Bringing engineers and manufacturing employees together to work closely on better airplane designs seems like a natural process.

But that's not how it always was done.

During the 1990s, three different groups from around the company thought it was critical to include everyone involved in the design improvement process. What started as a grass-roots effort to team employees from different areas to tackle specific design challenges is now known as Lean+ Design Build Roadmap, one of the 12 Lean+ Continuous Improvement elements.

"I didn't know what to expect coming into it, but now seeing it, it's a great concept," said Brian Stearns, a manufacturing planner with Commercial Airplanes who recently took part in his first design-build workshop.

By bringing together employees to focus on specific issues, much progress can be made, said Jon Shaw, the Lean+ Design Build Roadmap enterprise leader.

During a recent design-build session in Everett, Wash., teams focused on designing a quicker, easier way to install and remove the refueling control console for the new KC-46A tanker. At the end of the first week, three teams created mock-ups of the best ideas they generated that met certain criteria, including varying levels of potential risk and reward.

Stephen Wilhelm, a Commercial Airplanes mechanical and structural engineer, said the team members initially generated

more than 200 ideas and then narrowed down to the three best solutions within just five days.

Normally, that process could take weeks or even months.

Robert Jones, a Boeing Defense, Security & Space flight mechanic at the Wichita, Kan., site, said he valued the opportunity to work with employees from different sites and disciplines. "There's camaraderie between the different groups here, and you get so many different ways of finding a solution."

Gayle Hughes, an industrial engineer on the 767 program, said the process allows for ideas that might not otherwise emerge. Some ideas being incorporated on the new tanker's refueling boom, she added, came out of a similar Lean+ session.

After being used primarily with engineering and manufacturing programs, the Lean+ Design Build Roadmap concept is being expanded across the enterprise.

"Every week I get a new team comprising engineers of every sort, mechanics, suppliers, finance, project managers, just about anyone and everyone, and I see them do some amazing things in a very short period of time," Shaw said. "They're always thrilled about what they accomplish."

— Eric Fettaers-Walp

PHOTO: (Below) In this artist's concept, a KC-46A Tanker refuels a C-17. Improvements in cost and quality produced by Lean+ could help Boeing as it competes for future contracts. BOEING

Employees use Lean+ to reduce Boeing's environmental footprint

It's hard to beat what Environment, Health and Safety employees have done when it comes to the Lean+ concept of preventing and eliminating waste.

"What we do is really a natural ally of Lean+," said Jerry Lancour, Lean+ Integration leader for Environment, Health and Safety, and a member of the Boeing Lean+ Leadership Team.

Boeing has worked hard to reduce the amount of waste going to landfills and reduce workplace injuries.

This spring, Boeing Mobility headquarters in Ridley Township, near Philadelphia, became the company's first final assembly facility to achieve "zero waste to landfill" status. Since then, Boeing South Carolina joined the ranks of the zero-waste sites that also include Boeing facilities in Salt Lake City and Huntsville, Ala. The Philadelphia milestone supports the companywide effort to reduce Boeing's environmental footprint, Lancour said.

Additionally, Environment, Health and Safety is working together with Shared Services' Site Services to help coordinate the use of recyclable materials in cafeterias at Boeing sites and, in some cases, the composting of food waste.

Not so visible is the coordination taking place with engineers to help design products that are more environmentally sensitive and

take into consideration ergonomic and safety risk factors as well.

Other organizations within Boeing also are utilizing Lean+ to reduce the company's environmental footprint. For example, energy audits by Shared Services Group Site Services apply Lean+ tools to help Boeing identify and then improve water and energy usage.

The Lean Energy Assessment Team, part of the Utilities Services Group, examines building infrastructure systems to look for efficiency opportunities; it also engages employees and encourages them to reduce energy waste through simple steps such as turning off equipment and lights when possible, explained John Norris of Support Services Group's Corporate Utilities Services.

The group's annual Conservation Awards Program now includes a category called Lean+ and Employee Engagement to recognize activities that reduce energy or water consumption or reduce discarded waste.

— Eric Fettaers-Walp

PHOTO: (Above) Dee Baird, a Facilities Plant Maintenance specialist, installs new high-efficiency lamps at the Commercial Airplanes Fabrication facility in Salt Lake City. BOB FERGUSON/BOEING

