

The Future, in sight

Welcome to the revamped Everett facility, where an initiative to update features of the factory is boosting collaboration, efficiency—and employee satisfaction



By Anne Gose / Photos by Gail Hanusa/Boeing

Several decades and 3,000 widebody airplanes after opening, the Commercial Airplanes factory in Everett, Wash., is getting a second life and sporting a new look. Skylights that illuminate the 747, 767 and 777 production lines, lots more conference rooms and meeting spaces, and new floor-to-ceiling windows in office towers that overlook the factory floor all are part of the Future Factory project.

As shown in the photographs over the following pages, Future Factory is transforming the workspace to create an environment that enhances collaboration, improves employee satisfaction and supports production system efficiencies (see Page 28 of the March 2007 *Boeing Frontiers*). More than midway through this multiyear project, approximately 3,000 employees have moved into renovated spaces, adapting to both a change in physical surroundings as well as a cultural shift in how they get their work done.

Five office towers supporting the 747, 767, 777 and 787 production lines are being renovated to streamline individual workspace and create more shared work areas. All employees, including executives, have soft-walled workstations open to the high ceiling.

The Future Factory team chose the open design based on research showing it's the right configuration for organizations that want to be highly interactive and nonbureaucratic. "Our area is quite pleasant, surprisingly quiet and my space offers plenty of room for me to get my work done," said Joe Doran, a 747 Quality engineer. "It gives you a sense of belonging on a team with the main players close to each other. It works."



Successful adaptation to an open office, however, requires a culture change as well as a flexible design that can support various organizational needs.

"The walls that used to literally and figuratively divide us are gone," said Beverly Wyse, vice president and program manager of the 767 Program. "This is a more logical use of space."

Brian Steinmetz, director of the 767 and Everett site Program Management Office, noted the benefits of open space work both ways. "Not only does Beverly have better access to the team, but we have better access to her. It's easier to confer with people on the team because I see them more often, and I find the same is true for our ability to find Beverly more easily and see her more frequently."

CONNECTION TO PRODUCTS

By making better use of existing structural components, the Future Factory project found a way to reconfigure the third and fourth floors of the office towers. Now, large storefront-style windows and exterior walkways overlook the factory floor, providing a sensory connection to the products. "The openness of it all encourages collaboration which, in turn, fosters a sense of one team with one common goal," Wyse said.

"The new windows make me feel part of something bigger and really open up the office towers to the factory floor," said Jo Ann Marshel-Wilbourne, a 767 Quality administrative assistant. "And when you take a break and go through the glass doors onto a walkway, it's invigorating to hear the factory activity."

The renovated towers offer three times the shared space compared with previous office layouts, in large part due to many more conference rooms of various sizes. In addition, two new types of spaces offer more options for small, impromptu meetings: collab-

PHOTOS: Left: Walkways outside Future Factory offices serve as space for employees in the Everett, Wash., factory to work, dine or meet—all with a view of widebody airplane manufacturing.

Right: Four vertical screens along the E aisle climb five stories above the factory floor in Everett, Wash. The screens help diffuse natural light from the skylight and also are part of the enhanced wayfinding system to help people find their way in the factory.

oration areas, which are casual, conference-type rooms without doors, and privacy rooms for private conversations.

According to John Akiyama, Future Factory program manager and a senior manager in Commercial Airplanes, about 150 formal and casual meeting spaces were built into the redesigned areas in 2008. "We work with each airplane program to accommodate its needs and to accomplish Everett site goals, including moving into the factory those people who should be nearer the production line," he said. "While disruptive during construction, these renovations and changes will help boost overall workplace productivity and efficiency."

Two new multipurpose rooms designed for large meetings (75 to 100 people) are on the second floors of two towers for easy access from the production floor. Focus groups of employees representing the 747, 767 and 777 programs told Future Factory planners in 2005 that problem solving needed to occur shipside, closer to the airplane, and with the people who build them.



SKYLIGHTS: AN ILLUMINATING FEATURE

While construction crews cut holes in walls to accommodate windows, other workers are cutting holes in the factory roof for skylights. Of the 35 skylights planned, 26 already illuminate the production bays, each with 24 translucent panels of various shapes and sizes that together measure 25 feet by 27 feet (7.6 by 8.2 meters). Each skylight's peak rises 13 feet (3.9 meters) above the factory roof.

According to workplace research and lessons learned from the Move to the Lake project at the Renton, Wash., site, access to natural light during the workday improves the work environment and thus employee satisfaction. "I see several skylights from my desk," said Marshel-Wilbourne. "On those blue-sky days, I really can see rays of sunshine beaming into the factory. It makes me smile."

"I can't walk through the factory without someone pointing to the skylights and telling me how wonderful they are," said Ross R. Bogue, vice president and general manager of the 747 Program and Everett site.

And, finally, because the Everett factory building is so big—98.3 acres (39.9 hectares) and the largest building in the world by

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—Beverly Wyse, vice president and program manager, 767 Program

PHOTOS: Above and top: The Everett site has 26 skylights completed atop the facility's roof—such as the one above left, with Mount Rainier in the background. The photo at the top, taken from the factory floor, shows how the daylight from the skylight brightens the locale.

volume—Future Factory is improving how employees and partners find their way around. Also known as “wayfinding,” new directional and location signage across the factory floor and tunnel help people get where they’re going more efficiently. Circular blade signs that protrude from structural columns identify column numbers along the aisle; five-story perforated steel screens with column numbers add a vertical element and are identifiable across the bay; “You are here” maps are posted in key locations; and universal symbols help people find restrooms, cafes, stairs and elevators. All these elements create a rainbow of hues: Each factory aisle is painted its own color (purple, red, orange, yellow, green or blue). Gone is the dirty salmon-and-gray color scheme of decades past.

“When construction started on the Everett site more than 40 years ago, the culture and the people created a revolution—the 747,” Akiyama said. “Now, with Future Factory coming on line, we have another winning combination. Our employees and our culture are going to transform the Everett site again—just watch.”

For more information about the Future Factory project, visit <http://futurefactory.web.boeing.com> on the Boeing intranet. ■

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Photos of the remodeled Everett site continue through Page 51.

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—John Akiyama, Future Factory program manager and senior manager in Commercial Airplanes



Newly remodeled office areas in the Everett factory offer several informal gathering places for employee collaboration. Proximity to the factory floor saves time for manufacturing employees who need to work with their office counterparts.



Everett Future Factory project, *by the numbers*

35 *Total skylights planned for the factory; 26 already have been installed*

150 *Number of meeting spaces within the redesigned office towers, three times more than in the old office areas*

3,000 *Number of employees to date who have moved into renovated Future Factory office spaces*

600,000 *Total square footage of factory space that ultimately will be renovated by the Future Factory project (55,741 square meters)*



PHOTOS: The Everett facility features an abundance of conference rooms of various sizes, from privacy rooms (above, left) to larger gathering areas (top, right). While some rooms feature an airplane-related decoration scheme (Page 46, top left), others are decorated with a nature motif (above, left and right, and Page 46, left center).



An evolution, *in motion*

Here's a list of milestones by year in the Everett Future Factory project

2005

– Focus groups with employees across the programs help define Future Factory priorities

2006

- New Employee Service Center opens in heart of factory
- Renovated Everett Delivery Center opens
- Two Tully's Coffee Cafes open in factory
- One renamed and renovated food service cafe opens



PHOTOS: Center: Casual gathering areas outside the Twin Aisle Café in the Everett factory provide diners and others with a view of the 777 production line. Shown are (standing at rear) Craig French, (seated at table, from left) Joe Doran and Allan Sherman, and (standing at front, from left) Ken Tsuru and Annette Mauldin.

Corners: Everett's wayfaring scheme makes it easy to recognize where within the facility you are. Signs feature not only a numerical and letter designation, but a color-coding scheme. These signs appear in both production areas and office spaces.



2007

- Three more Tully's Coffee Cafes open
- Five renamed and renovated food service cafes open
- Employees move into three floors of a renovated office tower
- Second Employee Service Center opens
- One skylight installed

2008

- One more renamed and renovated food service cafe opens
- 25 skylights installed
- Employees move into 14 renovated floors in eight office towers
- Two multipurpose rooms are complete
- Column blade signs, five-story vertical screens, universal symbols and tunnel signs are installed as part of the enhanced wayfinding system





PHOTOS: Top: Soft-walled workstations are part of the open office environment. The accent colors of orange and red are part of the way-finding system. Desks and chairs are ergonomically adjustable. From most workstations, employees can see the factory floor through new large windows.



Above from left: Executives have much smaller spaces and less furniture than in the past—and no doors or hard-walled offices; renovated restrooms have all new fixtures and nature-themed artwork; this second-floor multipurpose room can accommodate up to 100 people and is close to the 747 production line; nature-themed artwork and accent colors brighten the open-office environment.