>> Since 2007, Alaska Airlines has made a significant commitment to lean.

00:29>> The company has built a culture of continuous improvement

00:32>> into every element of its operations.

00:35>> Kaizen, or ongoing improvement, plays a critical role in this achievement.

00:40>> Ben Minicucci, Executive Vice President and Chief Operating Officer,

00:44>> recalls it wasn't always this way.

00:48>> >> I remember going up into the ramp tower, which is at the airport.

00:51>> It's where they look at the whole ramp operations, every other airline that operates,

00:56>> and it was shocking to me when I looked at our operation from a bird's eye view,

01:04>> and realized how poorly we were at executing basic functions, and I realized we needed help.

01:11>> We needed to take what we were trying to do and really lean it out, because there was a lot

01:17>> of non-value added, steps that we were doing, that just didn't make sense.

01:22>> I would look at one side of the airport to the other and say,

01:24>> "Those airlines are not doing what we're doing.

01:26>> Why?"

01:27>> >> Through a journey of bringing lean processes to the airline and its partners,

01:32>> ramp operations now employ 5S techniques for equipment at the gates.

01:37>> Areas for equipment all have been painted and labeled, so items such as fuel, tugs,

01:42>> and baggage carts can be quickly located when needed.

01:46>> This contribute to a faster turnaround of planes at the gate.

01:49>> In the past, the airline had trouble keeping track of its baggage carts

01:54>> and regularly found itself short, impacting the ability to deliver bags

01:58>> to baggage claim in a timely manner.

02:01>> With 5S, that issue no longer exists.

02:05>> Captain John Ladner, Managing Director, Seattle Operations, knows its standardized,

02:10>> efficient processes like this that make a difference,

02:13>> especially when the impact the ability to get planes back in the air.

02:17>> >> Airplanes really only make money when they're flying.

02:19>> So we want to shorten that length of time that they're on the ground.

02:22>> Through lean processes, we time out everybody's interaction with the airplane when it's

02:27>> on the ground, and with each other.

02:29>> So that everybody that's touching the airplane can efficiently do their jobs,

02:34>> get that airplane turned around, get it back in the air and make money for the airline.

02:37>> >> Making a process more efficient doesn't have to mean overhauling everything at once.

02:42>> It can start with something as simple as opening the aircraft doors sooner upon arrival.

02:47>> >> We used average 4-1/2 minutes to open up a door back in 2006 or '07, and we said,

02:54>> "You know, we've got to do that in a minute."

02:56>> We worked on process.

02:57>> We said, "You know, if we have the jet way position this way

03:00>> and if the wheels are positioned that way.

03:02>> If it's so far away from the airplane.

03:03>> If the airplane always parks in this position,

03:06>> can you pop the door open and bring down the canopy?"

03:08>> And we do it today.

03:10>> So when you take three minutes and multiply it by 500 flights a day, that's 1500 minutes.

03:15>> That's more than one airplane of utilization that comes back

03:20>> that puts $30 million back into the operation.

03:24>> >> In lean training classes, employees are taken on a gamba walk, referred internally

03:29>> as a waste walk, around the airport to sensitize work teams to areas

03:33>> that could benefit from process improvement.

03:36>> Ideas regularly come from the simple activity.

03:40>> >> One of my first projects was to work on process improvement for our Tier Match Program.

03:45>> Tier Match is where an elite flyer from another airline can come

03:51>> over to our mileage plan department

03:53>> and will match their same status level with our equivalent.

03:57>> >> So one of my first projects was focusing on productivity for getting our aircraft turned.

04:03>> >> So the problem was for this was the processing time

04:06>> for those requests took up to 20 minutes.

04:09>> Due to the demand, it actually took 5 to 6 weeks to get back to customer.

04:13>> >> You only have 30 minutes to turn an aircraft.

04:16>> So typically, there would be staff there for four or five people.

04:21>> >> We were able to look at the areas of waste and cut the steps from 70 to 37,

04:26>> and we actually got our processing time.

04:28>> Currently, it's at two minutes, and it is four-day turnaround to the customer.

04:37>> >> We got it down to two people.

04:39>> So that helped with our productivity.

04:41>> Everybody knew what their role was, what their responsibility was,

04:44>> and it proved to be more efficient.

04:47>> >> Another recent project focused on improvement in customer service,

04:50>> centered on passenger boarding and deplaning.

04:53>> A typical aircraft boarding process means passengers enter in a linear fashion

04:58>> through the main door at the front of the cabin.

05:01>> Delays often occur, making it difficult to turn the plane quickly.

05:06>> Allison Fletcher and Joe Bowers analyzed the process.

05:10>> >> The problem with single-door deplaning has been just how long it takes passengers

05:15>> to get off the plane.

05:16>> >> If you've ever sat on the plane and been in the very back row, it feels like forever

05:22>> for people to get off, even though it's about eight minutes.

05:24>> >> Imagine a really long flight from Seattle to Orlando.

05:28>> You've been trapped on the back of the plane for five-plus hours, and passengers just

05:33>> so desperately want off the plane.

05:35>> >> With over 180 passengers on the largest of the 737 fleet,

05:40>> the team wondered if there was an opportunity to employ fundamental lean operations processes

05:45>> to improve passenger throughput for faster boarding and deplaning,

05:49>> so on time departures could be readily achieved, even on the largest aircraft in the fleet.

05:55>> Alaska Airlines began experimenting with dual-door boarding and deplaning.

06:01>> By collecting passenger boarding and deplaning time data through the use of Go-Pro cameras

06:06>> in the cabin and staff with stopwatches on the ground,

06:09>> they discovered dual-door deplaning helped get passengers off the plane 2-1/2 minutes

06:15>> faster overall.

06:17>> For passages in the back, they're off the plane eight minutes faster.

06:22>> Seems like an obvious solution, but consider some less obvious costs.

06:27>> Real estate in an airport is among the most expensive per square foot.

06:31>> Dual-door deplaning requires taking up such space with a bulky mobile ramp.

06:37>> Additionally, there are concerns over staffing and potential aircraft damage.

06:42>> >> You have to staff a dual-door operation, and a sense that every ramp has to be pushed

06:47>> up to the aircraft and then has to be marshaled in for the last two inches,

06:50>> and what marshaling is, is making sure on those last little bit of approach,

06:56>> that the ramp doesn't actually push in and dent the skin of the aircraft and damage it.

07:01>> >> By allowing our passengers to deplane the aircraft faster,

07:04>> this actually gives us our vendors access to the aircraft faster,

07:08>> and allows us to start boarding more quickly.

07:11>> So that gives us more time for the boarding process and ensures

07:14>> that we have an on-time departure for all of our flights using dual-door deplaning.

07:18>> >> Dual-door deplaning has been really great for our customers.

07:21>> They've been able to get on and off the airplane in a more convenient manner

07:25>> and get on to their destinations.

07:27>> >> With a strong, lean culture, Alaska Airlines has made continuous improvement habitual.

07:34>> The sky's the limit on what processes will be improved next.

07:39>> >> Hello, I'm Professor Barry Render, co-author of your operations management textbook.

07:44>> Lean management focuses on identifying what the customer wants and delivering it.

07:49>> Here Alaska Airlines has shown us that with its quality processes and its empowerment of people,

07:55>> it is driving out waste and variability to delivery

07:59>> that superior, customer-focused product.

08:01>> It's not easy, but Alaska Airlines is doing it .