

## The New York Times

### ITINERARIES

# *You're Right. You're Spending More Time Sitting on That Plane.*

By Amy Zipkin

Sept. 16, 2019

One thing about flying from Washington to Los Angeles hasn't changed: It takes essentially the same amount of time to go from Ronald Reagan National to Los Angeles International now as it did several decades ago. So why have schedules for the flights gotten noticeably longer?

The answer is that as the number of travelers has increased and airlines have added flights to accommodate them, airports have become more congested. As a result, planes spend more time waiting to take off and then, when they land, more time waiting for an open gate at the terminal.

That means passengers are spending more time confined in the cabin.

"Airlines pad their schedules as a defensive move to protect their overall reliability," said Henry Hartevelde, founder of Atmosphere Research Group, a travel analysis firm in San Francisco.

Airlines for America, the industry trade association based in Washington, recently analyzed data compiled by the Department of Transportation. It found that from 1990 to 2018, taxi time increased 19 percent at the nation's 30 largest hubs and 24 percent at 31 medium-size airports. At Reagan National, taxi time increased by six minutes, to 27 minutes, in that time. At Seattle-Tacoma International Airport, the taxi time rose by nine minutes, to 26.

"Airports are constrained by capacity," said William Rankin, associate professor of airport management at the College of Aeronautics at the Florida Institute of Technology.

Airports in major metropolitan areas have to balance how many gates they want with how many they can build because of space and financial constraints. Even airports in less dense areas face limitations.

Besides airport space, carriers have a lot of factors to consider when scheduling flights. Schedules vary depending on a flight's destination, time of day, season and weather. Pilot and flight attendant duty time, mandated by the Federal Aviation Administration, also matters.

Since September 1987, the airlines have been required to report their on-time arrivals and the causes of flight delays. A flight is considered "on time" if it gets to the gate within 15 minutes after its scheduled arrival time. Financial penalties are levied by the Department of Transportation for tarmac delays of three hours or more for a domestic flight and four hours for an international one.

"Airlines set schedules based on assumed flight times, while actual flight times are highly variable," Mark Hansen, professor of transportation engineering and co-director of the National Center of Excellence in Aviation Operations Research at the University of California at Berkeley, wrote in an email. "They could assume higher flight times, but this also has costs, including lower aircraft utilization, higher crew pay and more early flights.

"A particular challenge is that capacity varies depending on weather conditions," Professor Hansen wrote, "and airlines tend to schedule assuming good conditions, so when conditions are not good (e.g. low visibility or thunderstorms), delays result."

Professor Hansen was the lead researcher nearly a decade ago on a study commissioned by the F.A.A. that found delays cost the economy more than \$32 billion, with passengers shouldering about half that expense (based on time lost and food and accommodations). Of the \$8.3 billion cost of delays to airlines for crew, fuel and maintenance expenses, about half was attributable to padded flight schedules, the study found.

In a recent study, researchers at Northwestern University and Washington University quantified on-time performance from 1997 to 2017. They found that published flight times, the flight duration consumers see when they shop for plane tickets, increased 8.1 percent over those 20 years, which, they said, translated to an additional 341 million passenger hours.

The industry is mindful of expenses. The more time a plane spends in taxiing and in flight — what's known in the industry as block time — the more revenue is lost because of fewer scheduled flights, fewer viable connections and higher operating costs, Carter Yang, a spokesman for Airlines for America, wrote in an email.

Now, new tools are arriving that help passengers anticipate delays and guide them in making connections. LUMO, a start-up in Boston that is partially funded by JetBlue Airlines, has one. It uses an algorithm that combines several aviation data sources, including weather data from the National Oceanic and Atmospheric Administration and transportation statistics from the Department of Transportation. It markets results to corporate travel managers and others including CWT, formerly Carlson WagonLit Travel, a business travel management company in Minneapolis.

“Flight delays have an emotional cost for the traveler as well as measurable costs for clients in terms of lost productivity,” Utpal Kaul, head of new product incubation at CWT, wrote in an email. Now, he said, predictions of delays and cancellations in advance of the travel date and time allow travelers the option of choosing a flight less likely to be disrupted.



Los Angeles International Airport. Wait times can be influenced by many factors.  
Lucy Nicholson/Reuters

United Airlines recently started using an internal software program, called ConnectionSaver, to coordinate connecting flights. It automates the decision to hold a connection for late arrivals by calculating gate availability, baggage transfer time and whether crew members will exceed the flight time they are legally eligible to work,

among other factors.

The software for airline employee use is available at seven hub airports, including Newark Liberty International, Dulles International and Denver International. The program is expected to be available systemwide by the end of October.

ConnectionSaver can also send text messages to a customer who has the United Airlines app or opted to receive messages from the airline with directions to a connecting gate and an estimated walk time.

Connections don't always work. Eric Stoen, a frequent traveler on United Airlines and creator of the family travel site Travel Babbo, said his family's flight in early August from Santa Barbara, Calif., to Denver was late taking off.

When they finally landed, the United Airlines app showed that their flight to Winnipeg, Canada, would depart in several minutes. They arrived at the gate to see the plane pulling away.

"It's not like Winnipeg is a connecting city. They could have been 10 minutes late into Winnipeg and it wouldn't affect anyone's plans," Mr. Stoen wrote in an email. Their rebooked flight departed over six hours later.

Asked about the incident, Maddie King, an airline spokeswoman, said in an email: "The flight to Winnipeg was held for 10 minutes, which was the longest we could delay the flight without breaking one of the factors that ConnectionSaver looks at."

Ross Feinstein, an American Airlines spokesman, said in an email that while it may seem fine to hold a flight five to 10 minutes, "we need to look at the flight after the flight we are holding to see what the impact would be for those customers, too." American Airlines considers each connection individually, he added.

Miscalculations by the airlines can be costly. If a plane is sufficiently delayed, "it has to be ferried back overnight without passengers," said Robert Mann, an industry analyst and consultant. That way it can leave on time from the designated departure city the next morning.

But padding flight schedules can mean that more planes will arrive early at their destinations and that more will have to wait for an open gate. "It's not always first come, first served who gets the gate," Mr. Harteveltdt said. Gate usage calculations include arrival time, whether a plane has technical problems and the size of the ground staff, which is typically kept lean to reduce costs. Wide-body jets and narrow-body jets typically can't use the same gate. International flights require access to customs and immigration officials.

Gates may be designated for airlines' common, preferential or exclusive use. "If the gates are common use, an airport can build fewer of them and keep costs low that way," Mr. Harteveltdt said. An airline doesn't pay for the exclusive use of gates it might use only a few times a day.

"Preferential use of gates varies from airport to airport," said Bruce Goetz, director of operations at Denver International Airport.

Weather also influences arrival at the gate. Clear skies, favorable winds and smooth flying can mean a plane arrives early. A passenger may look out the window and say, "I can see the terminal, I can practically walk," Mr. Harteveltdt said. But passengers must remain in the cabin until a gate attendant officially greets the aircraft.

A version of this article appears in print on Sept. 16, 2019, Section B, Page 6 of the New York edition with the headline: The Distance Hasn't Grown. Why the Wait?