CISCO

Creating the best airport experience in Europe—and beyond

Fraport AG · Size: 23,000+ employees · Industry: Transportation · Location: Frankfurt, Germany

As one of the leading players in the global airport business, Fraport AG's portfolio of companies spans four continents with activities at 30 airports worldwide, including its Frankfurt Airport (FRA) home base. In 2018, Fraport welcomed more than 69.5 million passengers and handled about 2.21 million metric tons of cargo. Frankfurt Airport supports 94 passenger airlines flying to 306 destinations in 98 countries worldwide, underscoring its role as a leading hub in the global air transportation system. In Europe, Frankfurt Airport ranks first in terms of cargo tonnage and is the fourth busiest for passenger traffic. For more information, visit fraport.com.

Challenges

· Increase understanding of passenger preferences

· Improve the efficiency and agility of IT operations

· Modernize and extend service delivery

Solutions

· Cisco® Application Centric Infrastructure (Cisco ACI™)

· Cisco Nexus® switches

· FlexPod converged infrastructure, featuring:

 – Intel® Xeon® processor-based Cisco Unified Computing System™ (Cisco UCS)

 – NetApp storage

Results

· Reduced server deployment timelines from weeks to minutes

· Created a software-defined, cloud-ready data center

· Established a centralized policy model that can be extended worldwide

For more information

· Cisco ACI

· Cisco Nexus switches

· FlexPod

Challenge: Competing for global passengers

The competition for air travelers has historically been between airlines. But in today's consumer–centric, globally connected market, airports must also compete.

"The passenger has always been the customer of the airline, and the airline has always been the customer of the airport—but that's changing," says Ralf Schneider, senior manager of IT network architecture at Fraport. "Today's passengers are choosing airports in addition to airlines."

They're gravitating to the most efficient and most modern hubs, he explains. They're seeking the latest retail, food, and even entertainment options that will make their journeys more enjoyable. And they're selecting their flight routes and spending their money accordingly.

"To compete for passengers, we need to understand and serve them better," says Schneider. "We need to create services that are personalized and dynamic, and provide compelling reasons to come back to our airports."
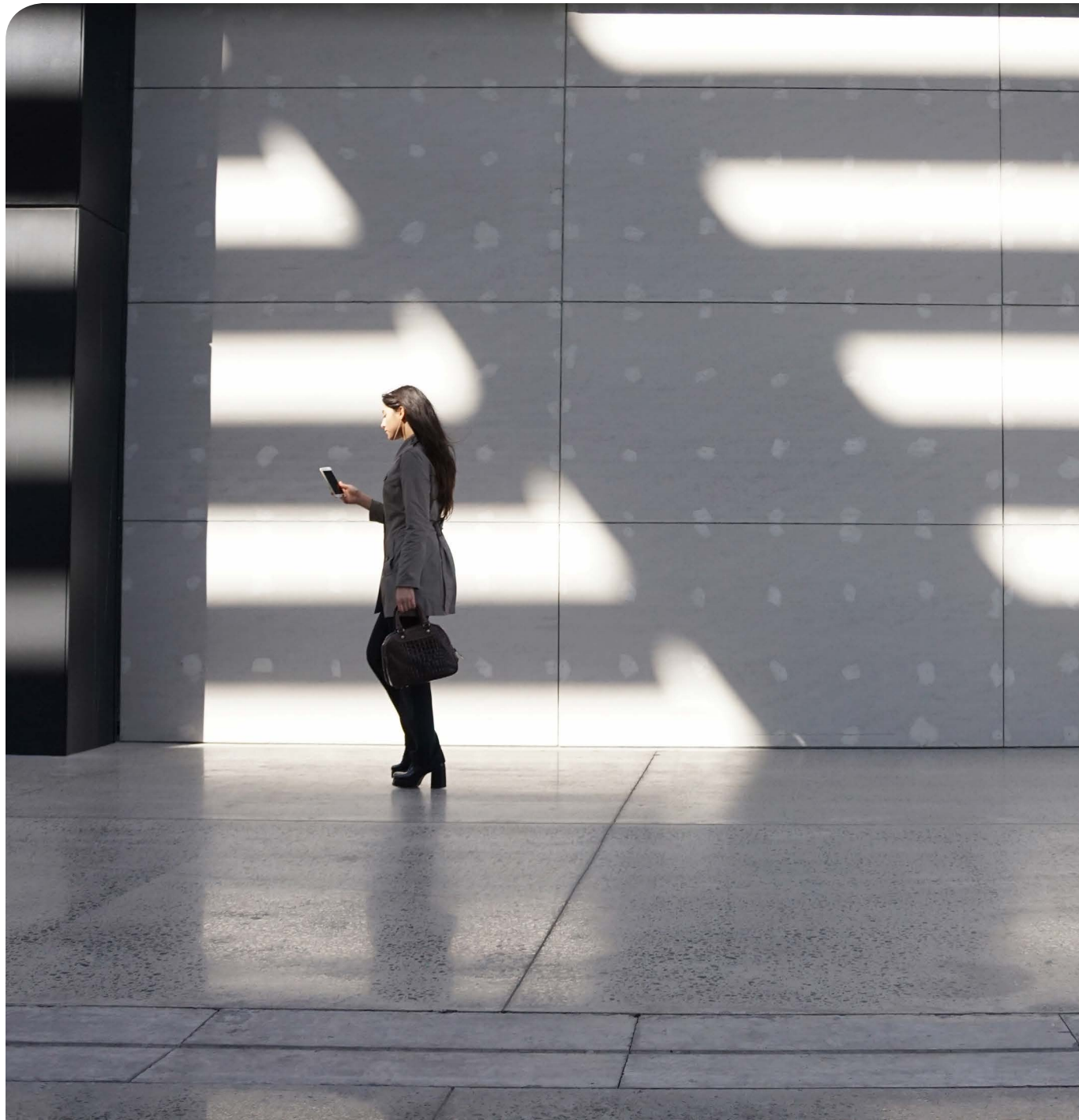
Increasing insight, speed, and agility

With airlines holding the vast majority of customer information, understanding passengers and personalizing their travel experiences have been major hurdles for airports. But industry leaders like Fraport are digitizing their operations and leveraging emerging technologies to gain new levels of insight, speed, and agility.

"Until recently, we haven't had any knowledge of the customer until they go through security screening," Schneider laments. "That's why we've embarked on a huge digital transformation strategy and plan to take advantage of things like Big Data and AI."

Fraport implemented Cisco ACI and FlexPod as the foundation of its digital transformation strategy, bringing together the industry's leading software-defined networking solution and the best-in-class converged infrastructure platform. The automation and centralized policy control of Cisco ACI were key factors in the decision, allowing Fraport to integrate its two primary data centers and create consistent application and security policies that can be extended to the cloud.

"We think ACI is the future," says Schneider. "From a technology standpoint, it gives us more power and scalability. From an operational standpoint, it gives us more visibility and automation. And from a business standpoint, it gives us the ability to lead the industry in passenger services."

"With Cisco ACI and FlexPod, we have the technical foundation to be the best airport in Europe and a model for the rest of the world."

Ralf Schneider
Senior Manager of IT Network Architecture, Fraport AG

Developing new services

Fraport leaders want to develop new services that help passengers quickly find parking spots, avoid long lines, and take the most efficient path to their gate. They want to provide helpful travel information on dynamic signage and personalized offers through the airport's mobile app. And they want to create new shopping and entertainment options that will shape passenger preferences and sway travel decisions.

All of the services will be delivered from Fraport's new FlexPod infrastructure, which includes a network of four spines, 24 leaves, 3500 routers and switches, and 1600 wireless access points. Known as the "Fraport Cloud," it supports more than 40,000 users and 8,000 devices.

Fraport is in the process of transferring roughly 100 mission-critical applications—including SAP HANA—to the new infrastructure, and will eventually move its full complement of nearly 1,000 applications to the environment. Stefan Vey, network architect at Fraport, says the software-defined automation of Cisco ACI makes it easier to manage applications as well as underlying infrastructure resources.

"We needed to be faster and more flexible, just like the cloud, so we created our own," Vey explains. "With ACI, we can define a policy once and push it everywhere instead of configuring everything switch by switch. It used to take us weeks to set up and deploy a server, now it takes minutes."

The operational efficiency gains—speeding up everything from system and service deployments to routine maintenance tasks to business reporting—will free up more time to analyze operational data, gain new passenger insights, and develop new airport services.

Extending services globally

As it modernizes its technology infrastructure and passenger services, Fraport is looking well beyond Germany. After moving its applications to the "Fraport Cloud," it plans to push several of them—and their associated policy contracts—to the public cloud where they can be accessed by Fraport-affiliated airports around the world.

"The cloud features of ACI are very important to us," says Vey. "They allow us to integrate and automate everywhere, without sacrificing centralized governance or policy control."

The infrastructure can also be integrated with a number of third-party solutions. Fraport plans to integrate Cisco ACI with VMware to automate virtual server deployments, and will explore additional integrations with ServiceNow, Splunk, and F5.

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