
Raise passenger experience to the next level

The key to airport operations that are optimized for
passenger satisfaction lies in integrated, demand-driven planning

Foreword

Imagine every single one of your passengers efficiently served at your airport from beginning to end.

With sufficient number of counters and lanes open, your passengers can clear every check point quickly. Queues are short. Passengers are relaxed and have time to explore retail and dining outlets. Flights take off on time. Taking a connecting flight is a stress-free experience and retrieving baggage is swift.

These are airport operations that are optimized for the satisfaction of your passengers, even as air travel volume continues to climb. Your success goes beyond profit margins — it is only complete when you deliver excellent, memorable passenger experience. The kind that makes passengers choose you over the rest, again and again.

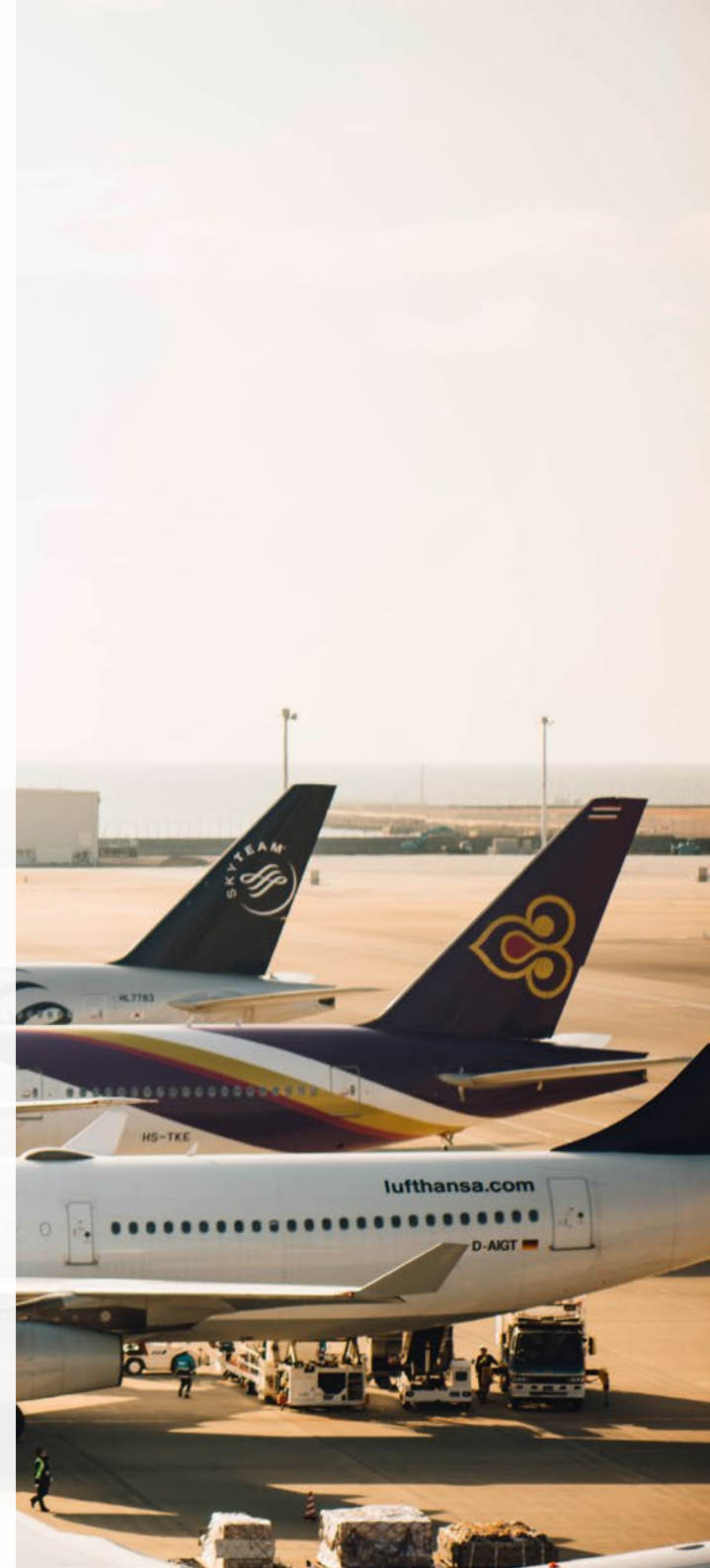
What do your passengers remember most about their time at the airport? What will they be telling their friends and family?

Bring to life the airport that every passenger will love. It's all about smart management of a highly interdependent set of resources and the ability to respond quickly in the event of unexpected circumstances and disruptions.

And this is all only possible with an integrated, demand-driven planning approach. We've put together this eBook with hopes that the following pages will guide you towards winning — and maintaining — passenger loyalty in the face of challenging times in the industry.



Henri Beringer
Director of Transportation, Quintiq





01

Don't let high volume get in the way of high passenger satisfaction

5 Great end-to-end passenger experience

02

Ensure happy passengers by delivering on these 4 promises

- 6 Promise 1: Shorter check-in queues
 - 8 Promise 2: Quick clearance at all points
 - 10 Promise 3: Fast, easy and successful connections
 - 11 Promise 4: On-schedule flight departures, in spite of disruptions
-

03

How do leading organizations take passenger experience to the next level?

- 12 Brussels Airport
 - 13 Virgin Atlantic Airways
 - 15 Dubai Airports
-

04

A solution that puts you at the top of passengers' list today and beyond

16 Get the Quintiq advantage

01

Don't let high volume get in the way of high passenger satisfaction



Air travel volume is on the rise. It reflects a time when millennials are entering their peak spending years and developing nations are seeing stronger economies. The future of the aviation industry promises to be exciting, with the number of passengers expected to double by 2034.^[1]

On the one hand, the news spells opportunities for higher revenue and overall growth for aviation industry players. But on the other hand, realizing these opportunities is far from easy. It all boils down to one question: is your organization equipped to handle the massive increase in traffic without sacrificing passenger experience?

When great passenger experience is the most powerful differentiator that separates you from competitors, you can't afford to answer 'no'.

For those looking to deliver first-class passenger experience while capitalizing on the upward trend of air travel, preparation is a must.

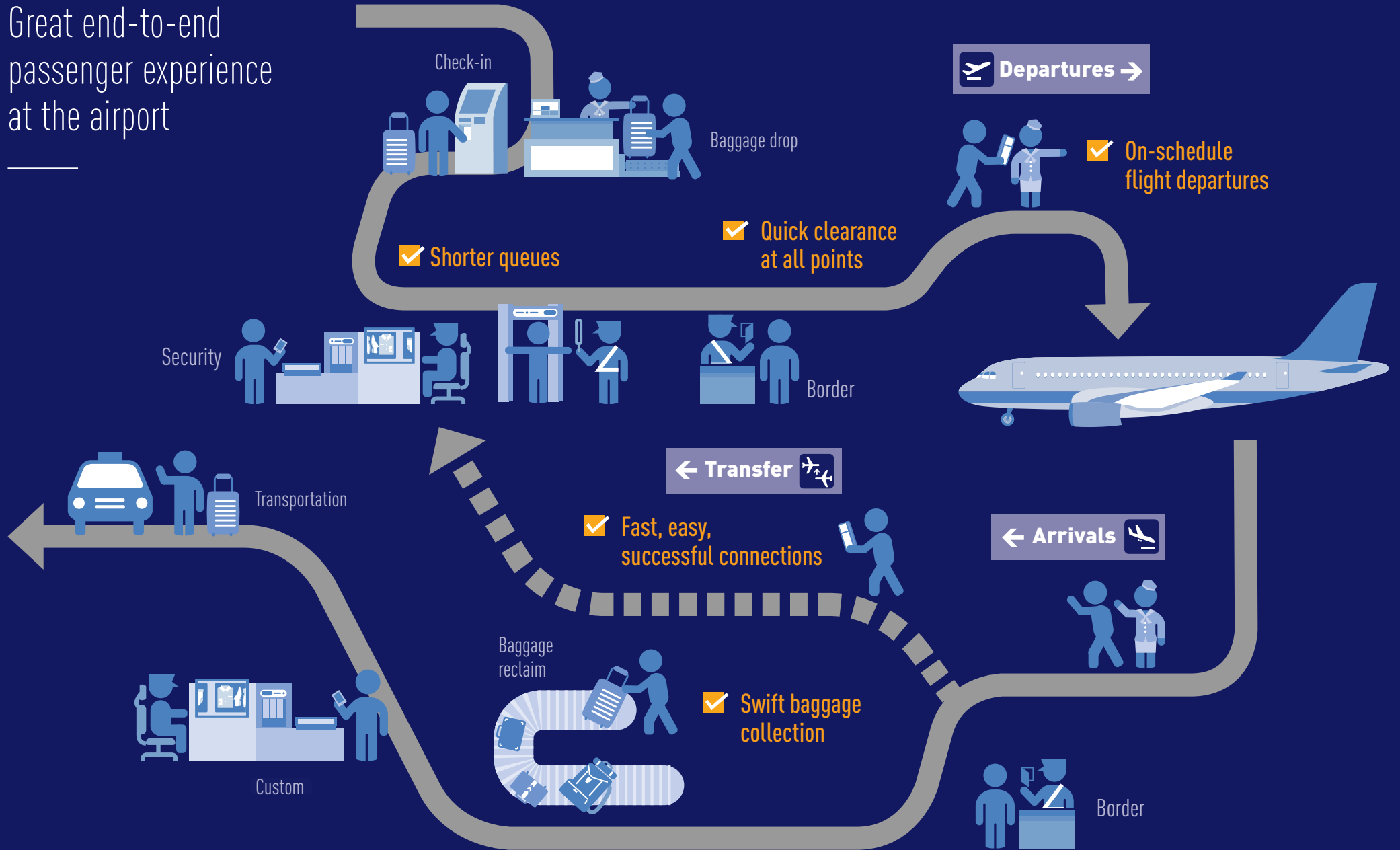
Leading airports and airlines have already turned to technology investments to improve passenger experience. However, much of this effort simply focuses on automating parts of a complex, interconnected system. This will reap some gains but will not improve performance as a whole or prepare you for future demand.

An innovative planning approach is the answer. When you rely on optimization instead of automation and align your resource usage with actual demand, you're able to ensure an all-round high-performance airport that ticks all the boxes for passengers.

With this end goal in mind, get your organization started by asking: what are your passengers looking for and how close are you to meeting their expectations?

[1] IATA annual review 2016 [IATA, 2016]

Great end-to-end passenger experience at the airport



02

Ensure happy passengers by delivering on these 4 promises

Promise 1: Shorter check-in queues

A well-run airport is one that ensures passengers don't spend too much time waiting.

Optimized planning for staff and check-in counters will help ensure shorter queues. This means having enough check-in desks to serve passengers promptly and clear queues quickly, yet being careful not to roster too many employees as having them idle would push costs up.

However, most airports and airlines struggle to match the allocation of check-in desks with actual demand. The result? Lengthy wait times for passengers and the risk of missing their flight.

Here's an example: for a flight of 200 passengers, service standards dictate that four check-in desks should be open three hours before departure.

The problem with such a strategy is that it does not take into account when the majority of passengers will turn up.

You'll most likely end up with overcapacity of desks in the earlier hours and just before closing — and long queues during the peak hour.

The solution is a planning system that can recognize and anticipate peaks in demand. And through integration with other systems in place, it allows planners to pull crucial information and take the lead from flight schedules and passenger count. The system therefore suggests opening additional desks only when they are needed. This not only enables you to provide better service for happier passengers, but it also helps keep costs at bay.

☞ What if you could anticipate the number of passengers at check-in? You could then plan your staff and counters accordingly. With demand-driven planning, you can make well-informed decisions about how many check-in desks to open, at what time and for how long ☞



Conny van der Heijden
Ground Operations Business Consultant,
Quintiq



Promise 2: Quick clearance at all points and swift baggage collection

Smooth and swift movement through all necessary checkpoints — not just at check-in desks — is a major contributor to passenger satisfaction. Long waiting times at check-in will impact passenger arrival times at security and border controls. If processing at these two checkpoints takes too long as well, passengers will be in a rush to get to the boarding gate.

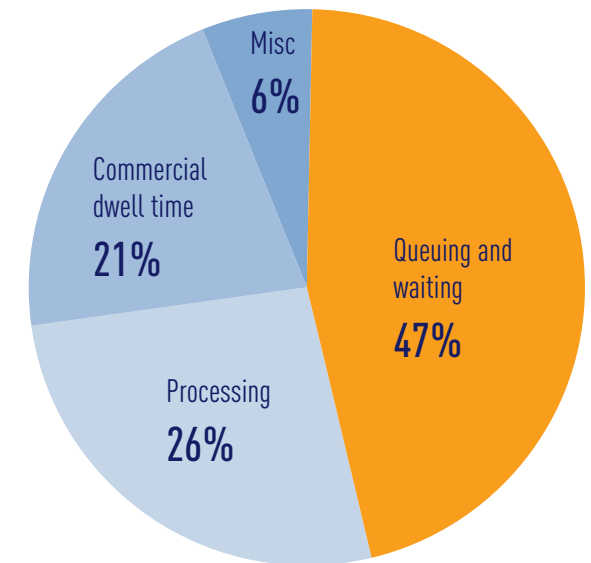
Apart from affecting flight on-time performance, slow processing can result in a huge dent to airport revenue. According to experts, missed opportunities in airport shopping and dining could result in up to \$35 billion worth of lost sales a year.^[2]

The same experts also found that the average airport dwell time is 137 minutes and that passengers spend 65 minutes of that time in queue or waiting — that's 47% of dwell time that could've been spent on shopping or dining while heading towards the boarding gate.^[2] The chart on the right shows the full breakdown.

Maximizing revenue opportunities from airport shopping and dining calls for efficient end-to-end processing. It enables planners to slash queuing and waiting time by 30% without incurring additional costs. Passengers can then get through check-in, security, border and baggage reclaim quickly. With ample time to spend before departure and after arrival, passengers are relaxed and more inclined to explore stores at the airport.

Efficient processing is achieved through smart allocation of counters, lanes, gates, baggage belts and ground staff. With full visibility of operations and planning technology that's geared towards meeting actual demand, planners are equipped to manage allocations in a way that optimizes passenger flow, thus providing convenience and shorter waiting time for passengers.

Breakdown of passengers' airport time:



Source: Nigel Dolby Consulting Ltd

[2] Airport Shopping & Dining [Nigel Dolby Consulting Ltd]

☞ Planning in silos only results in costly inefficiencies. Rely instead on a system that allows you to plan all resources at every checkpoint on a single platform. Integrated planning enables you to stay aligned with KPIs easily, especially in prioritizing great passenger experience ☞



Dirk Jekkers

Ground Operations Presales Consultant, Quintiq



Promise 3: Fast, easy and successful connections

You know that the quickest way for passengers to get to and from their aircraft is by an airbridge, which provides a short and direct route between the airplane and the terminal.

But the reality is that there are times when passengers need to board and disembark at remote stands, and be transported to the terminal. Remote stands are also used by regular carriers during peak periods, when demand outweighs availability and planes are forced to park at a distance.

If your stand allocations are not planned according to predicted demand, your connecting passengers will suffer — a stand that is too far from the gate will mean that passengers need to rush to the next boarding gate and may even miss the connecting flight.

So how can your planners keep passengers happy by delivering fast, easy and successful connections?

Setting up more stands isn't a viable option as it requires a hefty investment. What you can do instead is to maximize the use of existing resources. This requires addressing constraints such as aircraft compatibility, airline SLAs and the capacity of interdependent resources such as tow trucks and buses.

Planners need an integrated planning system that provides insight into resource usage and demand. With all relevant information at their fingertips to make the right decisions, planners can influence passenger experience — for example, by reducing walking time for connecting passengers to their next flight or by minimizing overcrowded waiting areas at the gates.

“Enabling passengers to comfortably catch a connecting flight is a challenge. Because planners work with complex interdependencies, they need a clear overview of operations at all times. It's not possible unless they rely on integrated planning”



Taner Chakar

Ground Operations Presales Consultant,
Quintiq

Promise 4: On-schedule flight departures, in spite of disruptions

Different passengers have different demands but a common expectation is to arrive on time at the destination. Planners can influence this by improving on-time departures.

Quicker processing times and higher rates of successful connections will help. Equally important is swift disruption management on the day of operations. The airport is no stranger to last-minute disruptions — flight plans change continuously based on a variety of reasons that include weather, congestion at the departing airport and technical issues. If disruptions are handled poorly, their effects can quickly ripple through to other areas.

As such, the perfect schedule isn't one that is planned down to the minute. The best plan is one that's planned according to accurately forecasted demand. It is derived from up-to-date information as well as advanced analytics that looks at historical data patterns and connects the dots between schedules and business outcomes.

Going one major step further, the plan can be re-optimized on the fly to accommodate changes easily. This is particularly advantageous with disruptions that cannot be predicted beforehand. Planners can be better prepared by running what-if scenarios and formulating contingency plans.

Take a plane that arrives late due to bad weather. Planners need to respond immediately to allocate a different gate and reassign staff. Such a disruption calls for rapid response that takes into account the knock-on effects on other flights while still taking into account the need to meet demand. For this, nothing less than full visibility and solid decision support will suffice.

Ideally, planners should also have access to real-time information from other systems such as the airport operational database (AODB) and be able to view all possible options before adjusting the plan in a way that best aligns with business goals.

“ A lot of work goes into creating a plan. But many things can go wrong at the last minute at the airport. Apart from a great plan, quick re-planning is vital to ensure a smooth experience for your passengers ”



Diederik de Ree

Ground Operations Business Consultant,
Quintiq

03

How do leading organizations take passenger experience to the next level?

Brussels Airport

Air traffic is on the rise and Brussels Airport needed to optimize the usage of its resources. With Quintiq, the airport is able to plan its 162 check-in desks and 54 gates with greater efficiency and flexibility.

Through its built-in intelligence, the Quintiq solution takes into account many variables, including special requirements of airlines and available check-ins and gates. Quintiq interfaces with the central airport operational database (AODB), so it's able to automatically update plans with new information from various partners.

Quintiq helps the airport's planners cope effectively with gate changes by enabling them to forecast, analyze and prepare for possible change scenarios. Planners can create flexible plans two days in advance as well as receive immediate alerts of last-minute changes and quickly calculate best responses to minimize delays.

Brussels Airport can now deliver a much higher level of customer service for both airlines and passengers. Since implementation, the airport has seen better planning efficiency and resource utilization.



“ The aviation industry is very dynamic and competitive. Customer satisfaction and cost efficiency need to balance. We can meet these challenges with the Quintiq solution and offer airlines the best possible service and support during check-in and arrival procedures ”

Arnaud Feist

CEO, Brussels Airport Company

Virgin Atlantic Airways

Virgin Atlantic Airways uses Quintiq to optimize planning of its ground staff at London Heathrow Airport Terminal 3. Using a demand-driven approach to staff planning that takes its lead from the flight schedule, the airline's planners can combine a future flight schedule with the predicted number of passengers to identify tasks that need to be covered.

The queuing of passengers at check-in is now better managed, as the system suggests the number of check-in desks to be opened based on predicted demand. This visibility of demand also allows planners to evaluate the headcount requirements of future schedules. In addition, planners are equipped to make informed decisions on the day of operations to make sure that scheduled staff coverage meets the demand derived from the flight schedule.

This results in optimal coverage in the terminal at all times — for example, ensuring that enough check-in desks are opened so that passengers are served promptly, but not too many that employees are idle and costs rise.

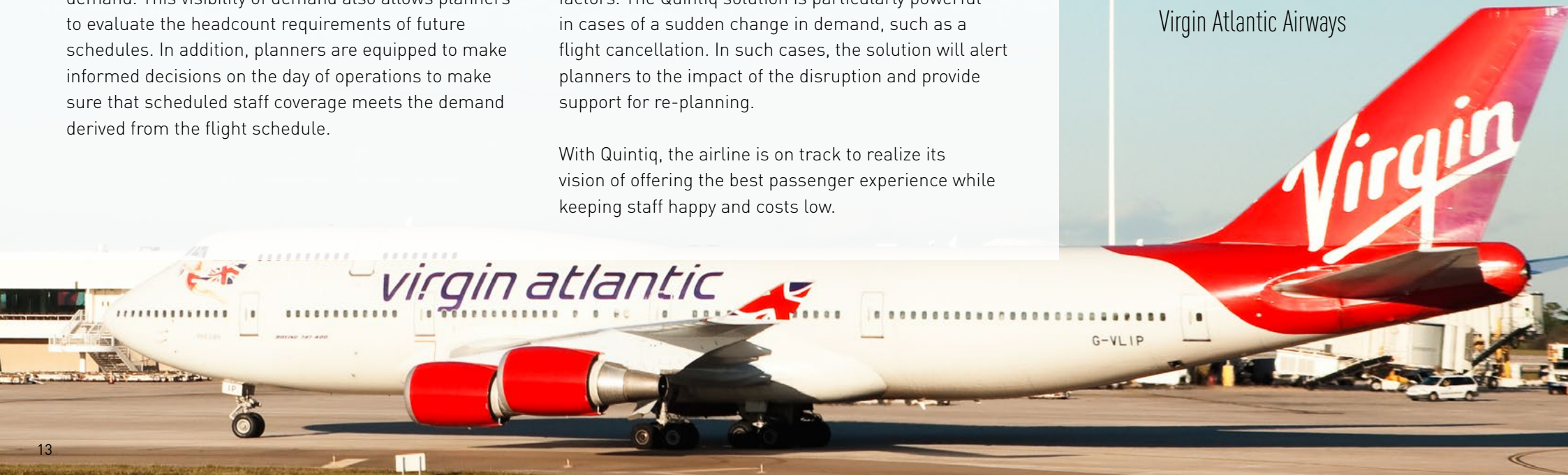
Whatever the planning horizon — from a year ahead to day of operations — the airline relies on the same demand-driven planning functionality that allows it to develop new recruitment plans, optimize shift lengths and handle unexpected changes in schedules and load factors. The Quintiq solution is particularly powerful in cases of a sudden change in demand, such as a flight cancellation. In such cases, the solution will alert planners to the impact of the disruption and provide support for re-planning.

With Quintiq, the airline is on track to realize its vision of offering the best passenger experience while keeping staff happy and costs low.

“With Quintiq supporting us to improve operational efficiencies, deliver cost savings and keep our staff happy, we'll be able to focus on innovating and creating new opportunities to serve our passengers even better”

John Bell

General Manager UK Airports,
Virgin Atlantic Airways



Dubai Airports

Quintiq delivered an optimized solution that helps Dubai Airports plan and schedule its fixed resources at Dubai International and Dubai World Central. The Quintiq solution automates the planning process for airport stands, gates, baggage belts and check-in counters to increase overall efficiency, reliability and passenger satisfaction.

The Quintiq solution is able to handle 40 flight updates per second and take advantage of information from multiple sources to improve its automation process. These capabilities are crucial as Dubai International and Dubai World Central are seeing continuously increasing traffic.

From 260 airport stands to 143 gates, 561 check-in counters to 28 baggage belts, the airport's planners will have full visibility of resource allocation. They adapt this allocation to fit specific airline preferences and further streamline passenger flow.

Improved passenger flow means that Dubai Airports can now handle increasing traffic without sacrificing passenger experience. A positive experience ensures that passengers and airlines continue to choose both airports for their needs within the region, resulting in increased revenue for the company.



 We aim to deliver a world-class experience to the airlines that use our airports and the passengers that they carry. Quintiq will enable us to maximize utilization of our current fixed resources and prepare for future expansions 

Frank McCrorie

SVP Operations, Dubai Airports

A solution that puts you at the top of passengers' list today and beyond

There's no shortcut. Delivering a great passenger experience despite high traffic requires having a complete overview of demand and the relationships between different aspects of airport operations.

The Quintiq solution empowers your planners to make decisions that optimize usage of important resources and enhance overall passenger experience. It is an integrated solution that provides constant and real-time information on the level of resources used versus service levels.

Planners can monitor passenger flow in real time, from check-in to boarding and from deplaning to arrival. The solution gives planners a complete picture of its impact on the passenger experience as well as individual KPIs such as average waiting time, employee overtime hours, rule violations and employee preferences.

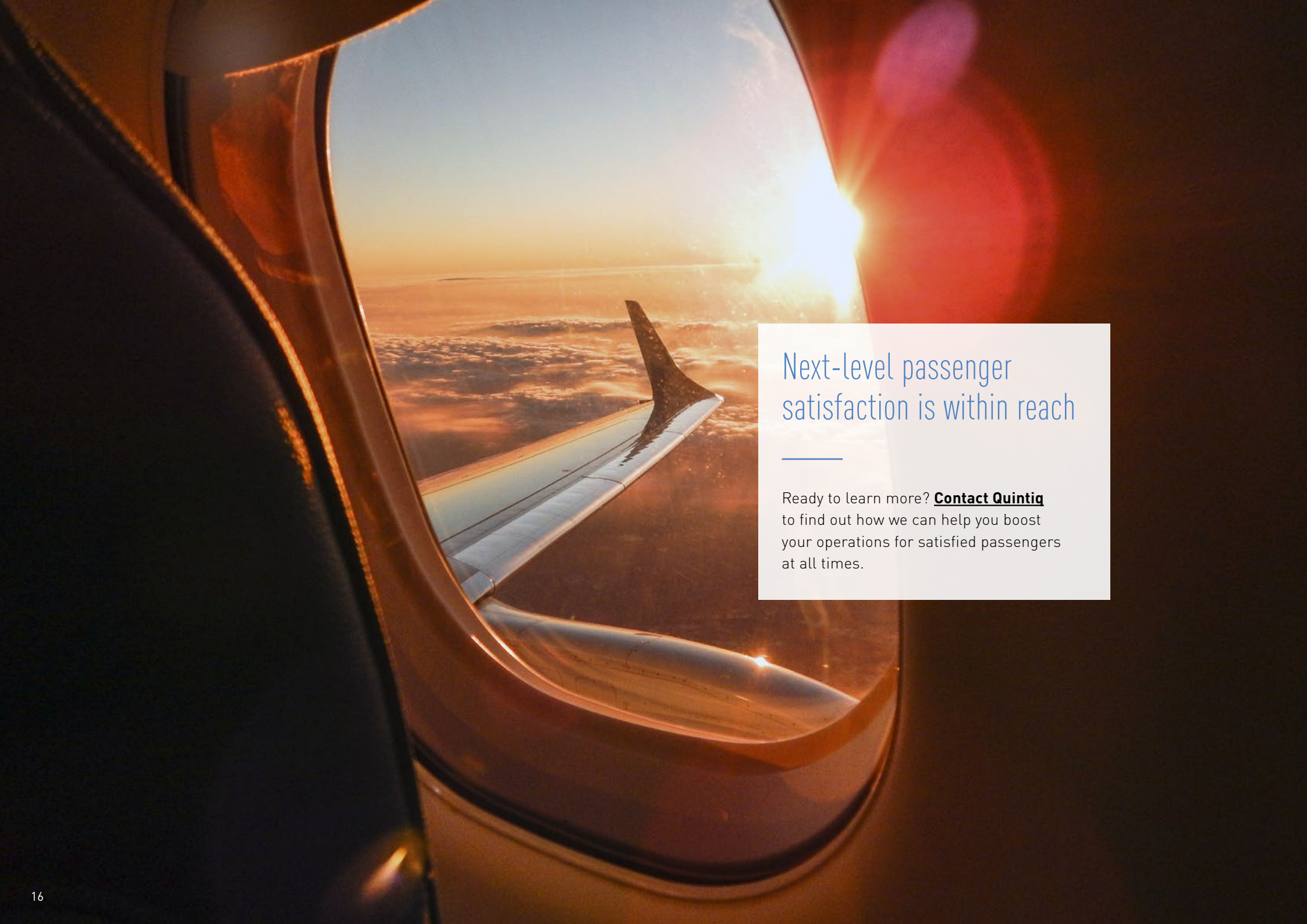
The result? Efficient, seamless airport operations that keep passengers coming back.

☞ Your organization's growth should not be constrained by your planning system. Choose a system that adapts to your changing needs, business rules, regulations and KPIs ☞



Kyra Schuit

Product Manager, Quintiq



Next-level passenger satisfaction is within reach

Ready to learn more? **Contact Quintig** to find out how we can help you boost your operations for satisfied passengers at all times.



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