



How **COVID-19** impacts airport operations planning  
– Physical distancing, volatile schedules, and limited budgets

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# Executive Summary



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## EXECUTIVE SUMMARY

COVID-19 brought the worst crisis in the history of aviation. However, we argue that this might be the best opportunity ever for airports, airlines, and all other stakeholders, to rethink business models and adjust operational concepts to improve efficiency and passenger satisfaction.

Taking the focus on the role of airport operations planners, we tackle the six major challenges faced by the industry and elaborate on both foreseeable impacts and recommended solutions.

The document comprises six chapters, one per challenge, originally published as six articles in our newsletter. Each chapter can be read individually and in no specific order to best satisfy your area of interest. Below we provide an action-oriented summary of the key take-aways of each chapter:

# 1.

## High variance in flight schedules and load factors

### Reading time: 10 minutes

A high degree of variance in both flight schedules and load factors is expected as traffic ramps up, driven by a constantly evolving travel restrictions, a changing competitive landscape (particularly among airlines), and new health and safety regulations. To navigate these turbulent times, we advise planners to introduce adaptive and self-correcting forecasting methodologies, to increase data intelligence (e.g. on passenger behavior), and to build resilience into plans through scenario analysis.

# 2.

## Lower annual passenger numbers but unchanged or higher peak levels compared to pre-COVID-19

### Reading time: 10 minutes

Total and daily peak-time air traffic numbers are lower than before COVID-19. We expect the recovery to come in phases, with peak-time traffic returning to “normality” relatively faster than shoulder-time traffic. On this journey, airports will face challenges of varying intensity: for example, whereas physical distancing poses limited issues while traffic is very low, it will increasingly complicate operations as more passengers crowd the terminals. An early identification of the challenges to come, and of the relevant remedies, provides guidance on how to focus, prioritize and time airport interventions so that the right resources are spent at the right time in the right area.

## 3.

### Physical distancing

#### Reading time: 10 minutes

Physical distancing has proven effective in limiting the spread of COVID-19. Implementing this successful measure in airports primarily means lower utilization of infrastructure, and increased need for communication and guidance to passengers. To maximize efficiency in infrastructure and staff despite a measure that inevitably brings inefficiency, airports are recommended to develop their understanding and prediction of passenger flows (adapting those to the new measures), to introduce technology, and adapt their communication processes. The key is to not let physical distancing dictate airport operations, but to plan operations with physical distancing.

## 4.

### Cleaning and personal protective equipment (PPE)

#### Reading time: 10 minutes

Traditionally cleaning in airports is a “hygiene factor”. Today cleaning is pivotal in fighting the spread of COVID-19. The implementation of enhanced cleaning measures and personal protective equipment can challenge general operational efficiency and staff “productivity”. To cope, airports should, on one hand, optimize cleaning plans and process through data and technology (e.g. through devices that count traffic in highly exposed areas such as toilets); on the other hand, minimize the need for cleaning (e.g. by changing passenger flows or shutting down parts of the infrastructure). Finally, we argue that highly sanitized airports can lead the way to regaining passenger trust and traffic recovery.

Going forward we expect hygiene to hold a much higher up place in the relevance hierarchy of operations planning. For airport operations, this means an increase in focus and efforts spent on planning and maintenance of such hygiene measures – so it is highly recommended to start now.

## 5. COVID-19 measures

### Reading time: 10 minutes

As lockdown restrictions are being lifted, airports face requirements to implement measures to identify and isolate passengers with COVID-19 throughout the airport journey. These measures can be grouped in health documentation, thermal screening, on-site testing, and vary in terms of requirements (staff, space, tools/technology) and suitability across operational areas. Airports need to assess measures across these dimensions to decide on their implementation. At the same time, we emphasize the importance of reflecting the operational impact of these measures in the planning methodologies and of coordinating with stakeholders such as airlines and health authorities.

## 6. Financial impact

### Reading time: 10 minutes

Regardless of how timely and effective the actions taken, airports, as any other player in the aviation industry, will face financial challenges. With a potentially long-lasting state of spending review, we argue the criticality of the role of operational planners, who should support key management decisions. In this context, we encourage a transition to Zero-Based Planning: a from-scratch bottom-up approach to plan operations based on “true” demands.

Once again, data is key in assessing what can and cannot be sacrificed. As we advise for a revolution in airport operations under the principles of Zero-Based Planning, demand-driven planning and sustainable spending, data will lead the analytical approach, as quantitative as possible, to evaluate and decide the steps to take in getting airports through COVID-19 resumption.

Across challenges, from managing volatile schedules to spending money more wisely than ever, we highlight a common denominator: data. All articles share a rationally argued emphasis on data-driven operations and planning. An approach that needs to start with structured data gathering and continue through predictive analytics and advanced planning.

# ABOUT Copenhagen Optimization

Copenhagen Optimization is a combined consultancy and software company specializing in analyzing and planning any operation on a strategic, tactical, and operational level. We improve your airport operation through data-driven analytics and strategic consultancy in combination with our Better Airport® software suite to support you all the way. Working with more than 50 airports globally, we offer our unique services and technology to support airports of all sizes.

**If you would like to learn how we can help your airport navigate through the COVID-19 aftermath, reach out to us for a personal talk via:**

**contact@copopt.com,**

**use [www.copenhagenoptimization.com](http://www.copenhagenoptimization.com)**

**or call us at +45 3091 4679**





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contact@copopt.com,  
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+45 3091 4679