

AIRPORTS:

WHERE

RUSH

AND

RELAXATION

TURNAROUND



Workday finished, your suitcase closed and you head off to the airport: According to the International Civil Aviation Organization (ICAO), in 2015 world-wide more than 3.5 billion passengers began their trip at the airport. In comparison to the global passenger traffic just 10 years ago, today the number has nearly doubled. Flying has become the norm. For many of us the arrival at the airport already marks the beginning of long-awaited vacations as we become familiar with the processes after buckling up a few times for takeoff. While passing through the different areas at the airport almost blindfolded, have you ever asked yourself what's going on behind the scenes?

120 minutes – That's the average time a passenger who booked a long-haul flight usually has for check-in, the security check, proceeding to the gate, and boarding the plane. Often, there is even enough time until boarding that can be bridged with a stop at restaurants, cafés or duty-free shops, whereas at the apron the exact opposite is true. A typical turnaround procedure for an aircraft such as Boeing 747, for example, takes around 90 to 120 minutes at the longest. During that time, between 30 to 40 services must be performed on the aircraft in order to meet flight schedules. Relaxation? No sign of it! Rush is a constant companion of all involved parties at the apron where every minute counts and costs.



With more than 50% of delays, the leading reason of all delayed flights can be traced back to circumstances within the airline's control.

Interdependence of turnaround processes

Similar to the stages a passenger passes through one by one, some of the aircraft's turnaround processes have to run one after another, whereas others may run simultaneously. In theory, the aircraft is unloaded, cleaned, reloaded, refueled, supplied with fresh water and food and, where necessary, maintained or deiced before the next set of passengers board. In practice, the processes are not only interdependent and determine each other, they are also affected by external factors such as flight changes or bad weather conditions with the result that things go differently than originally planned.

Delays lead to billions in costs

Flight delays are a serious challenge. Traditionally, external factors like the severe weather conditions mentioned before have been the main cause for aircraft arriving late since the U.S. Bureau of Transportation (BTS) started collecting such data in 2003. However, weather delays has been exceeded with more than 50%¹ of delays, the leading reason of all delayed flights can be traced back to circumstances within the airline's control such as refueling, cleaning, aircraft maintenance, crew scheduling etc. Translated into minutes, that means, that between 2005 and 2015 approximately 28 to 45 million minutes² of delay have been caused by the U.S. air carrier themselves each year, resulting in billions of delay-related costs³.

So, a small setback in one of the turnaround processes, if not identified and rectified, or at least limited early enough, can result in delays that are almost impossible to make up. The knock-on effect can impact other flights operated by the airline, which in turn could be delayed as well, if they cannot arrive at the gate on the allocated time or have to wait for service providers who have been delayed due to previous flights. Unfortunately, most of these delays are only detected after they have occurred, leading to frustration in the departure lounge and significant expenses.

¹ <http://www.transtats.bts.gov/AircraftDelay/mainpage.aspx?fromYr=24188&toYr=24200>

² http://www.transtats.bts.gov/OT_Delay/ot_delaycause1.asp?pn=1&periodfrom=24193%20&periodto=24200

³ <http://airlines.org/data/cost-of-aircraft-delay-to-u-s-passenger-carriers/>

Intelligent and optimized scheduling improves efficiency and transparency, reduces delays and saves airlines considerable cost.

The key to success: Intelligent decision-support software systems

The aviation business is still a fast growing but highly competitive industry. For this very reason it is even more important that airlines work proactively on the improvement of their punctuality, which in turn would not only lead to satisfied passengers, but directly result in cost savings per minute. The key lies in the airline's operational expertise which can be achieved by optimizing the turnaround processes with the help of intelligent decision-support software systems.

An overview of the aircraft's full dwell time at the airport, including all turnaround activities, can provide the transparency required to be able to influence the overall situation. Ideally, not just for a single aircraft but for all activities of all flights at the airport, day after day. Intelligently optimized software for planning and coordinating aircraft turnaround procedures allows processes to be coordinated in a more integrated manner and guarantees perfectly executed aircraft ground turnaround processes. All activities are planned at an early stage and the development of each individual step is made transparent so that experts can identify and intervene before delays occur. The potential of working with real rather than scheduled data not only optimizes execution; it also makes the data collected for future operational planning much more accurate.

Scheduling resources at an early stage and working with real-time data enables a much more precise assessment of resources required. Consequently, intelligent and optimized scheduling improves efficiency and transparency, reduces delays and saves airlines considerable cost. For passengers an airport is the place where rush turns into relaxation as their journey begins. For airlines it is quite the opposite as airports become their scene of competition where future success is written. ■

