OAG®

THE PURSUIT OF PUNCTUALITY
OPERATIONAL SECRETS FROM THOSE LEADING THE INDUSTRY

MAKE SMARTER MOVES

A single measure can never do justice to the complexity of running a punctual operation, but it can provide a handy shorthand for performance, as OAG's Punctuality League proves every year. Journalists pick up the element of competition between airlines and airports, and airlines and airports are keen to justify or explain their ranking and promote it to their passengers.

OPERATIONAL SECRETS FROM THOSE LEADING THE INDUSTRY

The industry always wants more insight on punctuality – more data, analysis, explanation, understanding of the exceptions and appreciation of how hard it is to achieve consistently strong on-time performance (OTP) in an environment where skies are congested, airports need more resources and investment and no single entity can deliver on its own.

OAG delves deeper into the complexity of OTP by highlighting some of the airports and airlines – including airBaltic, AirAsia, London Gatwick Airport, Hong Kong Airlines and Riga Airport – which are leading the way in punctuality by working strenuously and investing in improving OTP. These industry players have made the pursuit of punctuality an obsession.

MAKING RELIABILITY
PART OF THE BRAND

airBaltic ranked second overall in the Punctuality League 2019 and has achieved the best OTP in the world on multiple occasions. It has the highest OTP in Europe, at over 89%, which is well ahead of its nearest rival for the title of the most punctual airline in Europe. airBaltic is clearly prioritizing reliability – and it's paying off. The airline also prides itself on having the lowest cancellation rates in Europe, sending a strong message to its customers by showing how reliability is part of their brand. Although punctuality is about much more than consumer messaging, reliability means efficiency and an efficient operation is one that lays the foundation for success. Fewer delays mean crew times don't run out. It means ground crew are ready for the aircraft when it arrives, avoiding the need for overtime payments, passenger rebooking and compensation payouts.

WATCHING
THE CLOCK

Fundamental to any accurate measure of punctuality is knowing the time period being examined. Does the clock start ticking once the blocks are removed, when the door is closed, or when the parking brake is released? And what if everyone who needs to record time does so using their own personal device? Among the airlines and airports we spoke to, there were multiple time stamps being recorded and then compared in an effort to understand where delays occurred and how punctuality performance could fluctuate depending on the time period being measured.

Riga Airport seems typical, measuring and gathering data on every aspect of delays with the recognition that passengers don't really care whether the delay was due to bad weather or an airport failure. Understanding every cause of delay with a plan for improving performance is vital. AirAsia, too, records time from multiple sources and at various points of the flight stage, but highlighted to us the need to also look for local discrepancies in recording time and personal bias. A watch that is a minute fast or a wall clock running slow can misrecord times, and individuals have a variety of reasons for wanting the recorded times to be better than reality. Analysis of delays by locations, teams and individuals can identify where there are issues with the process of recording time.

Neil Harvey, Head of Airline Performance at London Gatwick, used the term 'rubber watches' meaning time stamps that can become somewhat flexible. He drew attention to the role that personal objectives can play in how delays are recorded. The solution for London Gatwick has been the Stand Entry Guidance System (SEGS) which has every aircraft stand networked and uses laser guidance and atomic clocks to count down arrival at and departure from a stand. He explained that when the airport introduced this system back in 2012, OTP didn't improve, but got worse as the extent of the misrecording of times, deliberate or otherwise, was made apparent.

❝ Good clocks don't improve OTP but at least there is only one version of the truth.

Gatwick

> **Walk into any AirAsia department in any country and everyone is looking at the same data. While the data each department needs may differ, it's not possible to see two versions of the same data anywhere across the system.**

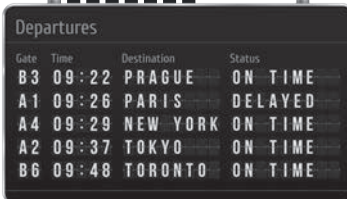*AirAsia*

A SINGLE VERSION OF THE TRUTH

The need for a single version of the truth is important beyond just the recording of time stamps when it comes to punctuality. Andy Brookes-Tormey, Group Head of the AirAsia Network Management Centre (NMC), and Nima Homayounnejad, Group Manager at the NMC, explained the lengths that AirAsia takes to ensure there is only 'one version of the truth' across the eight AirAsia air operator certificates. The NMC acts as a 24-hour control room, bringing consistency to the brand and ensuring that AirAsia's response to disruption is common across the various air operator's certificates (AOC). The result is a situational dashboard which is refreshed every 15 minutes.
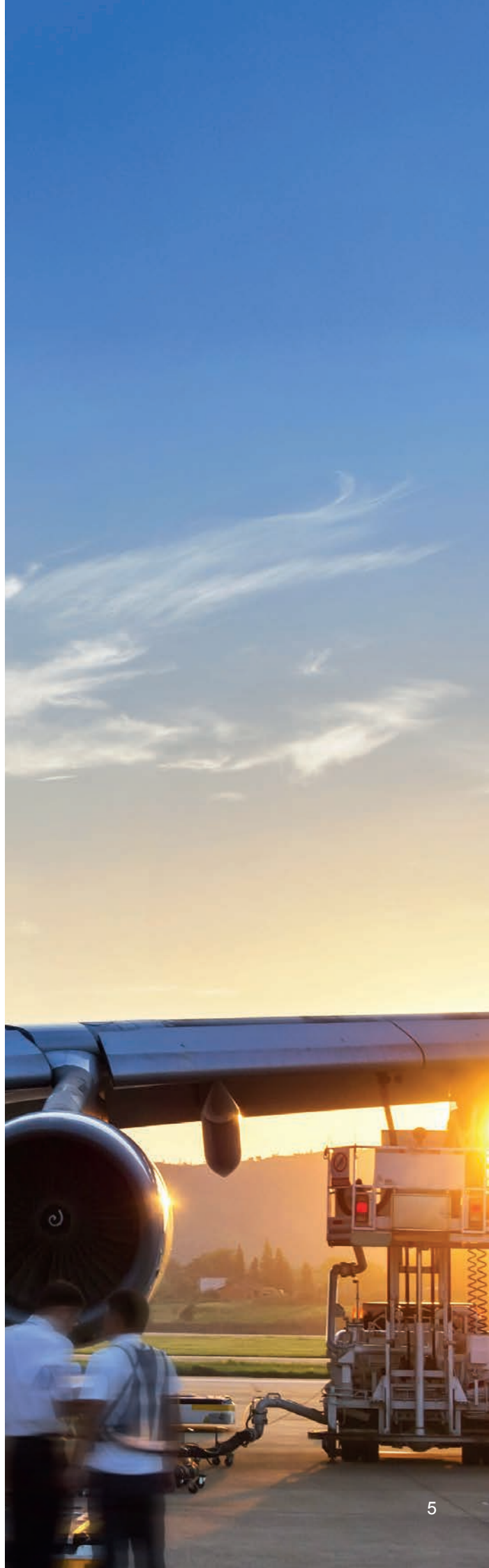
KNOW YOUR
OWN GOAL

After understanding how to measure punctuality and the importance of everyone accepting the same data, what happens next? That depends on the goal. At least one of the organisations we spoke to referred to 'absolute punctuality' or 'zero minutes of delay' being the goal, even if this is only used as an internal target against which performance is measured. Others explained that punctuality always comes at a price and sometimes the investment required to achieve an improvement cannot be justified. For them, the notion of a target of zero delays is simply unrealistic and unnecessary. It's also worth noting that at times, such as when disruption occurs, the art is in knowing when to loosen the punctuality target altogether in order to ensure customer needs are prioritised.

The goal for London Gatwick is very clear. As the world's busiest single runway operation, the runway itself is the critical asset. The airport, working with air navigation services, needs to squeeze as much capacity from the runway as it can. Runway use simply can't be optimised if flights are coming and going at unscheduled times, making punctuality key. Their efforts have been rewarded by the fact that they are now putting 55 movements an hour through the airport for seven hours a day. Back in 2012, there were around 4 days where the airport handled in excess of 900 flights a day; that will happen on 113 days this year!

According to Andrey Panov, Aeroflot's Deputy CEO for Strategy and Marketing, the airline developed a comprehensive OTP improvement roadmap in early 2018 after seeing punctuality slip over a period of time. Improving OTP became a priority for the company, involving numerous departments and senior executives. As a result, the airline has been able to improve its OTP by 15 percentage points in 6 months and by the end of 2018 had become one of the Top 5 most punctual airlines in the world among the largest carriers (*excluding affiliates).

Aeroflot ensured improvement in OTP performance through working on several contributory factors simultaneously. Capacity growth in excess of 50 percent over the last five years had exacerbated airport congestion at the main hub, Moscow's Sheremetyevo Airport, as well as in the skies above. De-icing issues had also been causing delays. Analysis of the airlines' performance during the winter season showed that around 40 percent of non-punctual operations could be attributed to delays before and during taxiing including de-icing procedures. A further 30 percent was caused by having insufficient flight times and air congestion.

Much of the remaining loss was due to weather conditions, maintenance or ground handling. While the airline was able to identify improvements in-house, it also needed the cooperation of the airport and the air traffic control (ATC) authorities, resulting in a number of initiatives implemented by a joint working group. The solutions ranged from selectively investing in block times for flights, compensating with shorter turn times at airports, reviewing maintenance procedures and intervals, introducing zone boarding and 20-minute gate closure times at departure, speeding up refueling processes, introducing tactical OTP recovery initiatives, as well as optimizing aircraft approach routes and ATC processes.

BEYOND TEAMWORK – EMPOWERING EMPLOYEES

Everyone we spoke with discussed the importance of teamwork in achieving excellent on-time performance. This includes collaboration between internal departments such as operations or management and commercial or planning. Most companies mentioned that a specific team takes a lead on punctuality, such as the airline performance team at London Gatwick or the Network Management Central at AirAsia. It's their job to ensure everyone works towards the same goal and bring teams together to investigate punctuality failures and find solutions to persistent issues. There were many similarities in the approaches described.

At Hong Kong Airlines, dedicated OTP coordinators and the OTP monitoring committee, a group which includes both people from operations and from planning, discuss every case of delay. Every single delay is investigated to identify the root cause and solution and they hold weekly meetings to follow up on improvements and ensure action is taken.

Similarly, Riga Airport looks into each case of a loss of punctuality but includes some external teams in the process, such as ground handlers and sometimes even border controllers. With over half of flights operated by base carrier airBaltic, punctuality is clearly influenced by the Latvian airline, but for the airport every delay matters. A delay of 5-10 minutes may not seem like much, but in peak hours it is significant.

One of the challenges for those leading the effort to improve punctuality is the need to move away from a blame culture and work together to solve problems. AirAsia told us that their 'turnaround pit stop team,' which represents different departments, physically gathers together to consider the issues when there are delays. The process of being together helps eliminate the tendency for showmanship and blame. No one wants their department to be seen as the problem.

The decision to spend money rests with those closest to the situation.

AEROFLOT
Russian Airlines

Aeroflot recognizes the role that teams play in bringing about improvements, but also sees that procedures and fixes are only part of the solution. Teams also need to be empowered to make decisions as situations unfold. This means ensuring they have the right information in real time. If an inbound flight is delayed, then ground staff need to be able to decide to bring a second stairway to the aircraft to speed up deboarding, or have a fueling truck(s) available earlier to speed up overall turnaround time and refueling, or bring in extra gate agents to speed the process of getting passengers on the aircraft for the next departure. These decisions cost the airline, so there needs to be funds available, but the decision to spend that money needs to rest with those closest to the situation and those best able to make decisions about what action to take to recover the lost time.

Bringing information about the cost of delays, as well as the costs associated with various options for mitigating delays, closer to the teams charged with making those decisions leads to smarter decisions. It also supports team performance since the rationale for the choices made can be more evidence-based and those making the tough choices are less likely to have those choices questioned. Holding an aircraft on the ground as it waits for connecting passengers, or deciding to let the flight go knowing that passengers who miss connections will need to be reallocated to a later flight, is not always an easy choice.

COLLABORATION IS KEY TO UNLOCKING IMPROVED PERFORMANCE

While creating effective teams inside an organisation can be challenging, the task of bringing together teams from different organisations to provide solutions to punctuality issues can be more so. According to Neil Harvey at London Gatwick, the three attributes needed are leadership, engagement and support.

Aeroflot would probably vouch for this. Their project to improve OTP involved working with both the ATC and airport. While the airport was pushing for its own OTP improvement programme anyway, so their goals were aligned with Aeroflot, the ATC couldn't be seen to favour one airline, or one airport, over another, and so the airline had to find a way to ensure that solving its own OTP issues would also benefit the air traffic control system.

Working closely with the ATC is also important for airBaltic which works with the Latvian ATC as well as Estonian ATC and others. The airline has distinct waves of morning and evening flights and if it can spot a late running flight while it is still over France, for instance, it can ask the pilot to accelerate or work with the ATC to manage the speed of other aircraft to ensure that a slot is available when it arrives.

According to Martin Sedlacky, COO & Executive Board Member at airBaltic, the airline has also been collaborating with Riga Airport to implement a Collaborative Decision Making (CDM) system initiated by the airport along with the ATC. When complete in around September 2020, the system will provide an electronic tool to share status data about an aircraft's readiness, so everyone involved from airline to ATC and airport to ground handlers can ensure the aircraft is not waiting at any point. Rather than working based on timetables, each party can respond to real-time information.

Richard Tan, Director of Ground Operations at Hong Kong Airlines reported similar use of real-time monitoring using CDM, this time using a tool provided by the Airport Authority of Hong Kong (AAHK). Collaboration takes place with AAHK, air traffic controllers and ground handling agents for ramp handling, cleaning and catering, as well as with other airlines to ensure the speedy transfer of connecting passengers.

At London Gatwick, one of the areas they have focussed on has been the role of ground handling. It had become apparent that third-party ground handling contracting as a function had become commoditised, with firms competing on price rather than service levels. Collaboration meant engaging with the airlines to help them rethink the role of the ground handlers, turning what had often been a difficult relationship with airlines into a symbiotic relationship where parties worked together towards a common goal.

Key Performance Indicators (KPI) appear to be shared with some service providers, according to Hong Kong Airlines, or at least discussed with them, with regular review meetings and an agreed-upon annual plan. These meetings provide a focus for continuous improvements of OTP such as the use of dynamic bay allocation and aircraft towing arrangements.

Just as with internal teams, sometimes it helps to provide incentives for cooperation. At Riga Airport, ground handlers are sometimes given bonuses when they've assisted a flight in catching up with its schedule. Similarly, at London Gatwick, dispatchers who work with the airport team to avoid delays may be given a small value voucher for use in the airport as a thank you. This demonstrates the role that individuals have in maintaining good OTP.

Of course, sometimes it's easier just to bring a service that could be provided by an external party in-house. That has been AirAsia's approach with ground handling, using an internal provider to make teamwork more straightforward.

CREATING A CULTURE WHICH PRIORITISES PUNCTUALITY

Many of those we spoke with described how improving punctuality involved a change in culture within their organisation and beyond. Closely linked to teamwork and collaboration, the new culture takes time to create. While the trust needed in this new culture between all parties takes time to build, it can be lost quickly.

Liene Freivalde, Head of Aviation Services and Business Development at Riga Airport, told us that their project to improve OTP has taken 2-3 years to implement.

For London Gatwick, the results of the trust created between various parties can be seen in unexpected ways. Would they have anticipated, before the cultural shift, that one of their ground handlers now involves the airport in dispatcher training and requires all dispatchers to have completed training by the airport? Probably not.

Making punctuality central to the culture has been the routine inclusion of OTP measures in KPIs in both airlines and airports. Everyone we spoke to could explain its role as a KPI in their organisation. It seems that among organisations where punctuality is a priority, the OTP KPI is used for evaluating senior executive performance, but then is replicated in some form throughout the

organisation. It was stressed that it is important to make the connection for staff between their own role and the achievement of the OTP KPI. The use of a common goal is helpful in getting everyone to work together and avoids the conflict that can occur when teams work to their own – but different – KPIs.

This use of OTP as a KPI means that bonuses are often linked to the achievement of the target. At airBaltic, there are only a few KPIs which are linked to remuneration with the aim of keeping the bonus structure simple. Performance is assessed as either above, at or below target and about 20 percent of the bonus for operations managers is linked to punctuality and cancellation rates. The reward system factors in external issues such as weather and strikes that can adversely affect performance, and as a system seems to work well.

FROM FIXING DELAYS TO AVOIDING THEM - THE ROLE OF PREDICTIVE ANALYTICS

While people play a major role in ensuring flights stay on schedule, technology is inevitably behind much of the systems and processes used to manage punctuality, whether Riga Airport's CDM, AirAsia's dashboards or the Station Control App developed by Hong Kong Airlines to provide a mobile real-time monitor. However, some of the companies we spoke with are taking this further and beginning to use artificial intelligence (AI) and predictive analytics to see ahead anticipating disruption before it happens.

A cutting-edge AI approach mentioned by one of the airlines was the software used by KLM and Delta Air Lines, which assigns a coefficient to every passenger on board an aircraft based on class or service, length of the flight, whether they are connecting and so on. Summing these coefficients enables the airline to assign a relative value to every flight which can then be used to prioritise the flight in the event that a choice needs to be made about which aircraft can land first or be allocated a gate.

For the past 18-months, London Gatwick has been using machine learning and predictive analysis to identify flights at risk of delay. Analysing more than two dozen variables, the airport can intervene early if a situation is emerging which looks like it could lead to delays. The solution may be as simple as closely monitoring that the flight reaches each minor milestone as it should. Drawing on an earlier theme, collaboration with and support for dispatchers working for airlines is vital to building an environment where everyone is more interested in the truth of the situation than pointing the finger if delays occur.

While the Gatwick analysis depends to some extent on understanding what has happened in the past, AirAsia explained that its schedule is agile. It is much more dynamic than most airlines' schedules. There is no "winter schedule" and "summer schedule." Routes and timetables are revised on an almost continual basis, so looking to the past has less value in predicting punctuality going forward. Equally, AirAsia believes that technology such as the tools being used by KLM would not work in the same way as its flights are often fairly short in duration and have very limited padding. Prioritising some flights over others needs an eco-system change regionally to enable that level of action to be effective.

TOP LESSONS
FOR IMPROVING OTP

There are several lessons here for others wanting to get to grips with their punctuality. Be clear about what you are measuring and make sure that measurement is accurate and not subject to bias. Ensure the whole organisation works from the same data and is working towards the same goals. Empower employees to make the best decisions, which means giving them information about the impact of those decisions. Make both the financial and time investments required to solve some of the big delay problems along with others in the industry. The future will be about more than fixing problems with delays, but more about avoiding them in the first place.

Across all of these, a few common themes emerge: Truth. Teamwork. Technology. But none of these happen by accident. The airlines and airports leading the way are motivated to the very top of their organisations in their focus on punctuality. Whether a keen eye on punctuality is a proxy for a very efficient operation, or whether the motivation is that punctuality is an essential part of the promise made to the passenger when they buy an airplane ticket, it seems that the route to success is similar.

STREAMLINE
YOUR OPERATIONS

Over the past year, OAG has been working with leading airlines and airports to help solve the operational issues affecting On-time Performance – **to find out how we can help your airline and airport contact us at contactus@oag.com or visit www.oag.com.**

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