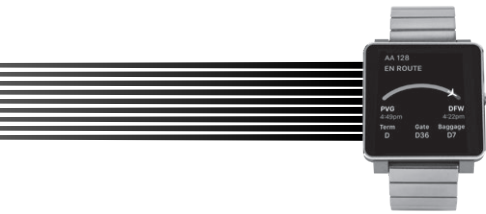# DEFINING LATE

IS FIFTEEN MINUTES THE RIGHT MEASURE?

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MAKE SMARTER MOVES

DEFINING LATE –
IS 15 MINUTES
THE RIGHT MEASURE?

When is an aircraft late? Who determines what late is? Can 'late' be different for passengers and airlines, airports and support services? Does it matter?

At OAG we've been defining 'on-time' – the opposite of late - in the same way since a time before most of us can remember. For the industry an aircraft is on-time when it arrives within 15 minutes of the scheduled arrival time or departs within 15 minutes of the scheduled departure time. So, exactly 15 minutes after the scheduled time is late. Anything up to that is on-time. This sort of use of a defining time is used in many transport sectors and is commonly used by bus companies and the train industry as a way of monitoring and reporting on punctuality. Aviation is treading a well-worn path.

The use of 15 minutes to define what is late has been around for a long time. When OAG first published its Punctuality League in 2014 the technical definition of 15 minutes was that anything up to 15 minutes and 59 seconds was considered to be on-time. Flights that were cancelled were not included in the calculation. The following year, this definition was altered slightly to be anything up to 14 minutes and 59 seconds was on-time and cancelled flights were counted among the flights which were not on-time. While the use of 15 minutes is standard, contrary to popular belief, it's not a formal industry standard. It hasn't been determined by a committee at ICAO, IAA or ACI but for many of us it feels about right. But is it? Is it time to consider whether the industry does, indeed, need a formalised definition of what constitutes 'late' and, if so, should it be 15 minutes?

As the profile of on-time performance (OTP) has risen in recent years with the pubic and within airports and airlines, punctuality has moved a long way from the days when it was simply an operational measure used by ground staff to keep an eye on performance. Today, it warrants its own mention in many of the annual reports of the world's biggest and best airlines. It's a Key Performance Indicator (KPI) for staff from the Chief Executives of airlines to the aircraft dispatchers at airports. It's used as a benchmark in the relationships between airports, airlines, ground handlers and other service providers. Increased focus on punctuality has motivated governments to protect passengers from the consequences of poor punctuality through mandated compensation schemes, as we've seen in Europe and India. It's also a means of airports ensuring best use of their congested facilities. And the media love OTP because stories about winners and losers are always sure to catch attention.

It's not so much that there is any specific dissatisfaction with the use of 15 minutes as a definition of late, but is it the right measure? Could we do better, what are the alternatives?

IF NOT
15 MINUTES,
THEN WHAT?

Most airlines and airports gather as many time-stamps for their processes as they can and look at punctuality in a myriad of ways. Data is gathered at every stage of a flight but then aggregated in such a way as to compare it with others for the purpose of benchmarking performance. For some, the use of 15 minutes to define what is late is helpful, easily understood and enables benchmarking. But there are others for whom a delay is a delay no matter how long. For them, zero minutes delay is the benchmark, at least internally within their organisations.

Knowing that there may be different definitions used in an organisation internally to those considered suitable for public-facing statistics suggests that defining a suitable measure of what is late maybe be more complicated than agreeing a number. What might work for benchmarking may not be ambitious enough as an internal target which may need to deliver high levels of performance while also allowing for a buffer against external measures

Although widely used and accepted for benchmarking, the standard doesn't have to be 15 minutes. It could be 20 minutes, or 25 minutes, or even 30 minutes which is the standard used by some reports of OTP in Chinese aviation.

Some airlines and airports focus on OTP for arrivals only, deeming that to be the measure that matters to their customers, the passengers. Others focus on departing OTP only, as that – at least for airports - reflects the factors that are within their control. Would it be better to focus solely on departures, or only on arrivals? Alternatively, would a measure based on the difference between on-time arrival and on-time departure be a more fitting indicator of how efficiently aircraft are turned around?

There are also arguments circulating that different types of flights or different business models might deserve a different approach to defining what is late, but do the benefits of a more sophisticated approach outweigh the benefits of the simple approach adopted to date?

ONLY AS GOOD AS THE SCHEDULE

More fundamental, perhaps, is the fact that any measure of OTP based on airline schedules is limited by the intrinsic use of an airline schedule as a reference point. Two airlines may operate with different elapsed times for the same flight and as a consequence one may be classed as late and the other as on-time even if they took off and landed simultaneously. Of course, **there are good reasons why some airlines allow more time for a flight** – congestion at airports, a brand which is closely associated with good OTP, or even a desire to meet known corporate travel thresholds which incentivise consumers to choose flights which are long enough to enable them to fly in business class. Why else would a carrier be scheduling a flight from Paris to Boston as 08:02 hours when its competitors have schedules of 07:50 hours and 07:40 hours? Equally, other airlines are strongly incentivised to maximise aircraft utilisation which may lead to more challenging schedules. For them, punctuality is always more of a challenge and the targets are demanding.

WHAT DOES INSTINCT TELL US?

For those of us living and breathing aviation – and often flying a fair bit too – a move to a longer standard for OTP – perhaps 30 minutes – may feel appropriate, at least with the emotional part of our brain. 15 minutes, 20 minutes, 30 minutes. Many of us have been delayed that long and it wasn't so bad. We could tell ourselves that maybe 30 minutes makes more sense and is certainly more realistic in an operating environment where so many factors which contribute to delays lie outside the control of an airline. We know what it takes to deliver great punctuality, the hard work it takes, what is within our control and what is not, and it would be easy to convince ourselves that 30 minutes might be a better standard. But is 30 minutes delay ever acceptable on an hour-long flight, or even a flight lasting an hour and a half? Is there a need for more research as to what passengers consider acceptable or will tolerate? Perhaps a better understanding is needed about how passengers perceive delays.

There is another problem with extending the standard for on-time. Connecting flights.

PUNCTUALITY CRITICAL FOR CONNECTIONS

While arriving late at a destination is an inconvenience, when it comes to connecting passengers being late is more than just a nuisance. Missed connections, and bags which miss connections, cause genuine frustration and stress for passengers as well as costs for airlines. At large airports, the proportion of passengers passing through is high: At London Heathrow, for instance, 27% of passengers were connecting in July 2019. In some markets, the proportion of passengers travelling indirectly is even higher; 30% of passengers flying from the US to the UK were travelling via an airport which was neither their origin nor destination. If the standard for OTP moved from, say, 15 minutes to 30 minutes, what might that do for airlines aiming to connect passengers within 45 minutes or 60 minutes? Would it send the wrong message to those monitoring punctuality and result in a greater number of missed connections? Would airports and airlines around the world need to review the entirety of their Minimum Connect Times to ensure that scheduled connections would still work? These are the unintended consequences of messing with a system that seems to work for now.

COULD STAGE LENGTH BE AN ALTERNATIVE APPROACH TO MEASURING PUNCTUALITY?

Long haul flights that depart late have much more ability to catch up on lost time than short haul flights.

Some have suggested that it may be more appropriate to have different OTP measures depending on the stage length of a flight. Essentially, should OTP be the same for short-haul and long-haul flights?

The argument goes that long-haul flights that depart late have much more ability to catch up on lost time than short-haul flights. We know that air traffic control can do much to help get flights back on schedule, speeding up some aircraft and slowing down others. Achieving arrival within 15 minutes of a scheduled arrival time maybe considered perfectly manageable, especially when there is already a bit of leeway on schedules which is often the case and especially so when long-haul flights are operating to and from congested airports.

Conversely, recovery from a delayed departure while in flight on a short-haul flight is much harder. Can a 30-minute delay on departure be recouped by flying faster when the flight is only 1,500km? Scope for this may be limited. This situation is exacerbated for low-cost airlines, many of which have entire networks consisting of short-haul routes. For them, turning aircraft around quickly is a core aspect of the business model and so a single delayed arrival can have a knock-on effect on the subsequent departures of that aircraft that day. The impact can be significant.

So, we could look at using different measures of on-time for long and short-haul flights with a more relaxed standard used for the short-haul flights. Alternatively, it could be argued that passenger expectations for a minimum of delays are higher on short flights, and lower on long-haul flights which would make it preferable to impose the more stringent performance standards on the short-haul flights. A 30-minute delay to a seven-hour sector doesn't feel the same as a 30-minute delay on a 55-minute sector. This could also be an argument to differentiate OTP benchmarks according to airline business model – legacy or low-cost, although long-haul low-cost air services would blur the lines. Certainly, in Europe, the insurance sector and government compensation schemes such as EU Regulation 261/2004 recognise both sector length and the length of delay relative to the flight time. EU 261/2004 requires airlines to compensate passengers delayed over 3 hours on flights up to 1,500km by €250, and by €600 for flights over 3,500km which are delayed at least 4 hours.

A proxy for stage length could be using elapsed time for a flight as the criteria by which to measure punctuality performance. However, at a practical level, we know that elapsed times for some flights – think London to New York – differ by an hour or more in each direction as a result of headwinds and tailwinds. They also differ by aircraft type. The A340 is a slow aircraft compared to a 787. Inevitably, having a different OTP measure based on flight time would mean that there would be some routes where one direction would be evaluated against one measure while the other direction would be evaluated against a different measure.

SHOULD WE ONLY CARE ABOUT THE FIRST MORNING WAVE OF DEPARTURES?

So, a relatively simple change to how we assess OTP could be to vary the standard performance measure for long-haul or short-haul flights, or for legacy and low-cost airlines. But there are more sophisticated alternatives that could be considered. One such approach would be to impose different standards on the first wave of aircraft departures in the morning. After all, if an airline or airport can't get the first wave of aircraft, those that have been parked overnight, off on-time then they will be playing schedule catch-up for the rest of the day. If this is the most important set of flights to depart on-time each day, and the costliest if they are delayed due to the subsequent impact on later flights, then should the punctuality target for these flights be higher. Would it make sense to target zero minutes of delays for that vital first wave of departures?

ROLE OF REGULATORS

It's not just airlines and airports which are interested in punctuality. Regulators routinely use OTP as a performance measure. In the United States the regulator requires airlines to provide data about delays so that the public have clear information about the nature and source of airline delays and cancellations. In China, airports have been 'punished' for poor on-time performance by having constraints on new air services imposed until punctuality improves, while in Europe and India, governments have instituted compensation mechanisms for delays so that passengers have some redress. Therefore, insurance companies are also now involved as they are called upon to pay out against delays. While the rules defining what constitutes a delay are straightforward it is also simple for the insurer to validate the claim.

For both regulators and insurers there is value in the simplicity of the current system. Flights are either late or they are not. The industry has a simple way to define late and they can apply equally simple formulae.

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TRAVELLER PERCEPTIONS

It would be remiss not to note that ideas of punctuality vary widely around the world, between different people and depending on the type of journey being made. There is a spectrum of perspectives about time-keeping and scheduling. For some, time is linear, tasks are approached in a sequential fashion, and there is a focus on deadlines and sticking to a schedule. For others, time is more flexible: Project steps are approached in a fluid manner, interruptions are accepted, and the order of tasks changed at whim. This works in an environment where things are always changing, and adaptability is highly valued. However, it makes for a more challenging environment for airlines and airports trying to maintain a schedule.

The implications are not only a matter of scheduling but of **how passengers perceive and value** punctuality. If being late for a meeting in one country is a sign of disrespect, does that negative perception carry over in to the perceptions of an airline that delivers passengers late to their destination? Equally, in a country where being late requires no apology and five minutes late may as well be an hour, or a passenger taking their outbound trip for a vacation but feel much more relaxed about the journey than a business traveller keen to make it home on time, is there more passenger leniency for the airline that operates late?

Measuring punctuality in different ways to cater for the different profile of the consumer market may be appealing but could it work in practice? Airlines are part of an interconnecting and international network of flights and for this system to work there needs to be commitment to schedule keeping and agreement about time-keeping.

TIME TO RETHINK WHAT 'LATE' MEANS?

While the status quo is comfortable for many, and the use of 15 minutes to classify a flight as 'late' is widely accepted and used for benchmarking, is it time to review this? Would 20 minutes be a preferred measure?

A single measure is simple but is there any merit in thinking about a more sophisticated approach to punctuality, or would that be too difficult, and confuse the customer?
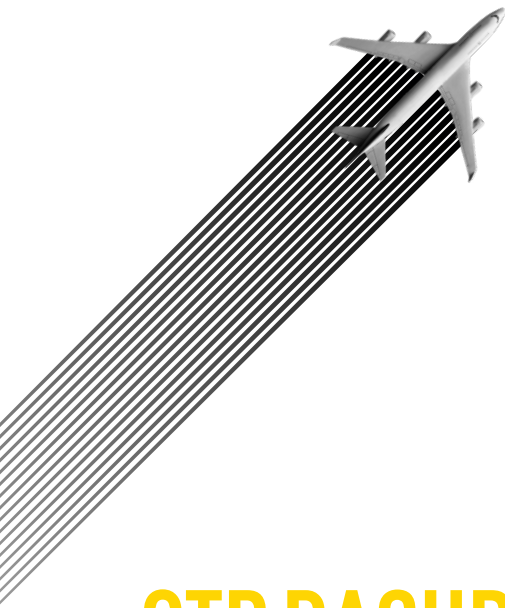
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