SITA worldwide survey of airline passengers on their attitudes and use of IT and mobile digital Technology in air travel

As we emerge from the COVID-19 pandemic, passengers are showing pent-up demand for air travel and enthusiasm to further embrace the mobile and touchless technologies that will make the journey as convenient and seamless as possible.

SITA's 2022 Passenger IT Insights research reveals that passenger use of mobile devices increased for booking, on board the airplane, and for bag collection in Q1 2022 compared to Q1 2020, while automated gates saw increases in adoption for identity control, boarding, and border control.

However, health verification, still largely manual, is a pain point that has slowed end-to-end automation. Our survey finds reduced technology adoption in the early stages of the journey (check-in, bag tag, and bag drop) in favour of manual processing. Uncertainty about health requirements and travel rules has likely led passengers to seek more staff interaction when starting the journey. Even so, it is clear that the more technology there is during travel, the happier passengers are.

The research unveils that two journey stages have seen particularly significant increases in positive emotions since 2016: identity control (up 11%) and bag collection (up 9%). These are also the areas where technology adoption has risen the most, driven by mobile and automated gates, with half of passengers now also receiving real-time information at bag collection on time until delivery.

Asked about comfort levels with biometric identification throughout the journey, passengers scored an average of almost 7.3 out of 10 (with 10 representing most comfortable), most likely reflecting their desire for ease of travel moving forward from the pandemic.

Passengers surveyed intend to fly more from 2023 onwards than they did prior to the pandemic, expecting averages of 2.93 flights per passenger per year for business and 3.90 for leisure. When weighing up whether to fly or not, the main barriers are ticket prices, health risks, and geopolitical risks. But before flying, passengers also consider sustainability. The initiative they would most value seeing from airports and airlines is the use of new IT to support sustainability, such as monitoring airport environmental performance to reduce emissions, and use of technologies to reduce fuel burn. Almost all passengers would pay on average 11% of their ticket price to offset carbon emissions from their flight.

Asked if the air transport industry is doing enough to become more sustainable, more than half of passengers either think not, or don't know. The key takeaway is that there is room for improvement in the communication of industry sustainability initiatives and actions.

Methodology: Fieldwork for the 15th edition of the Passenger IT Insights was conducted globally in Q1 2022. The key findings are based on an online survey of 6448 respondents from 27 countries across the Americas, Asia, Europe, Middle East, and Africa. The number of respondents by country is relative to the amount of passenger traffic for each country, based on data from Airports Council International (ACI). Collectively, the respondents represent over 85% of global passenger traffic. Survey respondents were selected based on having traveled at least once in the previous five months. The main countries included: Australia, Brazil, Canada, China, Egypt, France, Germany, India, Indonesia, Italy, Japan, Kenya, Mexico, Morocco, Nigeria, Republic of Korea, Russia, Saudi Arabia, Singapore, South Africa, Spain, Turkey, UAE, UK, USA, Vietnam.

Herewith presented are the highlights of the analysis of SITA's survey:
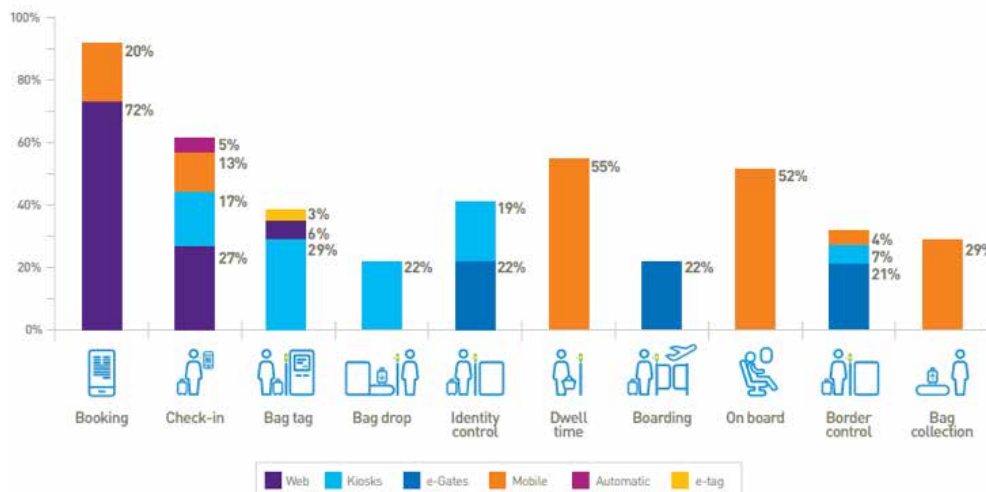
PASSENGER TECHNOLOGY ADOPTION
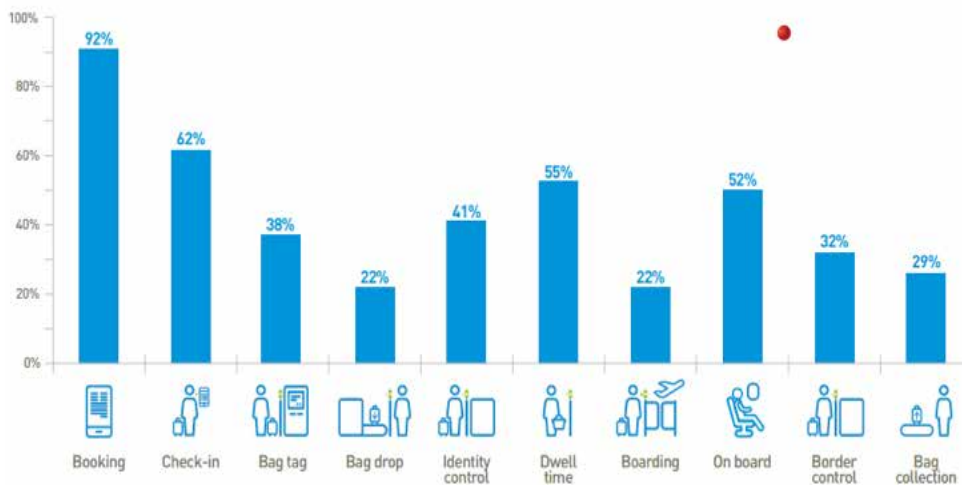
% of passengers using technology (mobile, kiosk, automated gates, web) in 2022

Technology adoption in 2022 reflects the pandemic's effects on the passenger journey: Rates of technology adoption have remained relatively stable at each journey stage since the survey was last conducted in Q1 2020. However, there is a slight trend towards reduced technology usage in favour of manual interaction in the first half of the journey followed by increased technology adoption in the second half. Technology adoption at the check-in stage has decreased by 4% since Q1 2020, while the bag tag and bag drop stages have also seen decreases of 2 to 6%. Meanwhile, identity control, boarding, on board, border control, and bag collection have all seen increases in technology adoption of 3 to 5% from 2020. The overall lack of significant increase may be due to reduced travel during the COVID-19 pandemic, meaning passengers have not had the chance to familiarise themselves with new technologies. At the same time, due to the uncertainty around travel rules imposed by the pandemic, some flyers may have felt the need for more staff interaction at the beginning of the journey to ensure they were doing things correctly, but felt comfortable relying on technology in the second half.
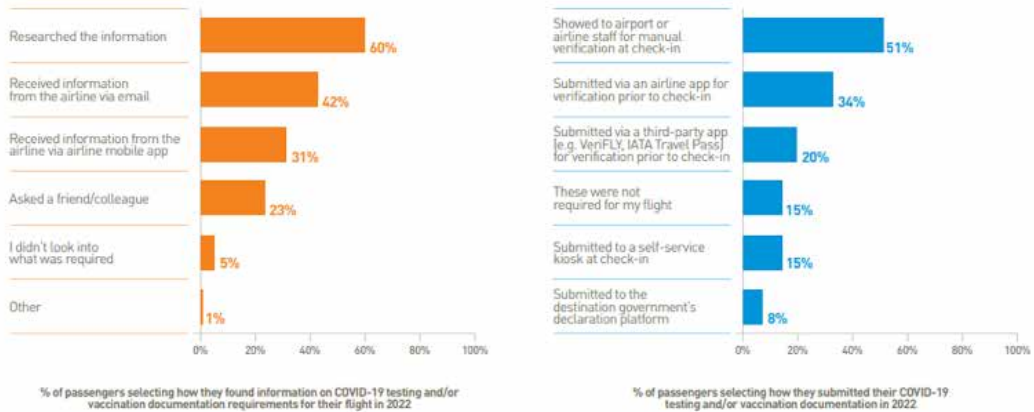
Passenger technology usage preferences along the journey

% of passengers using technology in 2022

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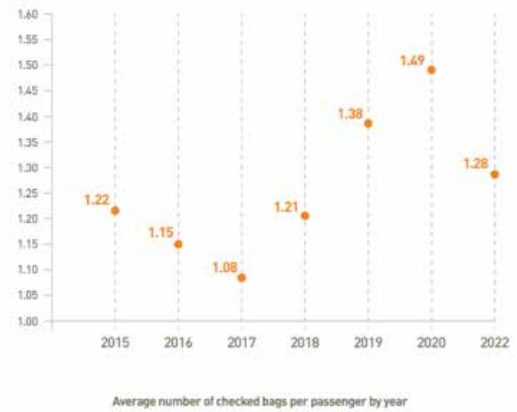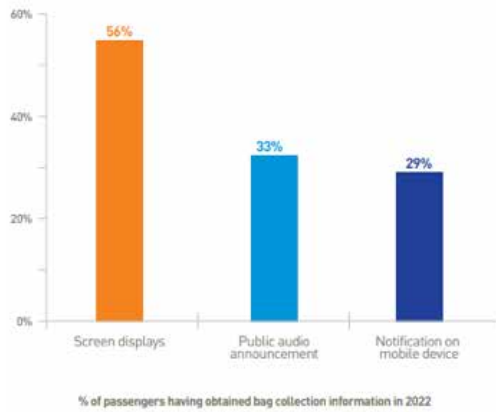Rates of technology adoption have remained relatively stable at each journey stage since the survey was last conducted in Q1 2020. However, there is a slight trend towards reduced technology usage in favour of manual interaction in the first half of the journey followed by increased technology adoption in the second half. Technology adoption at the check-in stage has decreased by 4% since Q1 2020, while the bag tag and bag drop stages have also seen decreases of 2 to 6%. Meanwhile, identity control, boarding, on board, border control, and bag collection have all seen increases in technology adoption of 3 to 5% from 2020. The overall lack of significant increase may be due to reduced travel during the COVID-19 pandemic, meaning passengers have not had the chance to familiarise themselves with new technologies. At the same time, due to the uncertainty around travel rules imposed by the pandemic, some flyers may have felt the need for more staff interaction at the beginning of the journey to ensure they were doing things correctly, but felt comfortable relying on technology in the second half.

Technology adoption for health verification

% of passengers selecting how they found information on COVID-19 testing and/or vaccination documentation requirements for their flight in 2022

Researched the information	60%
Received information from the airline via email	42%
Received information from the airline via airline mobile app	31%
Asked a friend/colleague	23%
I didn't look into what was required	5%
Other	1%

% of passengers selecting how they submitted their COVID-19 testing and/or vaccination documentation in 2022

Showed to airport or airline staff for manual verification at check-in	51%
Submitted via an airline app for verification prior to check-in	34%
Submitted via a third-party app (e.g. VeriFLY, IATA Travel Pass) for verification prior to check-in	20%
These were not required for my flight	15%
Submitted to a self-service kiosk at check-in	15%
Submitted to the destination government's declaration platform	8%

Health verification remains largely manual at the flight preparation stage, to understand COVID-19 verification requirements, most passengers (60%) actively researched the information, consulting sources such as government or airport websites, with nearly one quarter also asking others. At the same time, significant numbers of passengers received information on COVID-19 requirements directly from their airline, with 42% receiving this via email and 31% via the airline's mobile app. At the stage of submitting COVID-19 documentation, just over half of passengers did so by manually showing it to staff. There was still some technology adoption at this stage, with just over one-third of passengers submitting documentation via an airline app and smaller numbers submitting via a third party app or self-service kiosk. The complexity of understanding ever-changing COVID-19 requirements is reflected in the high percentages of passengers who took multiple actions through various channels at each step. Over half of passengers who received COVID-19 information from the airline also did their own research online, and just over a third of those who submitted documentation via an app before check-in also underwent manual verification.

Technology adoption at baggage collection

% of passengers having obtained bag collection information in 2022

Average number of checked bags per passenger by year

Mobile usage and real-time information growing at bag collection: The percentages of passengers who received information at bag collection via screen displays and public audio announcements have stayed the same since Q1 2020; however, a growing proportion of passengers are receiving notifications via their mobile devices (up 5% from 2020). Regarding the types of information passengers received, 57% were told belt numbers, and 50% were told time until delivery – the latter is up 8% from 2020, signaling a shift towards more real-time information being made available to passengers. Looking to the average number of checked bags per passenger, after steadily rising from 2017 to 2020 to reach 1.49, the figure dropped back down to 1.28 in 2022, a 14% decrease from 2020. This may be related to changes in airline pricing models for checked bags, as well as the shift towards greater proportions of domestic over international travel during the recent recovery period. IATA data shows that April 2022 traffic stood at -43.4% of April 2019 international traffic levels, but a significantly higher -25.85% for domestic.

1 1. Source: IATA, "Strong International Traffic Propels Continuing Air Travel Recovery," June 2022

Emotional extremes along the journey

Emotional extremes passengers experienced along the journey in 2022
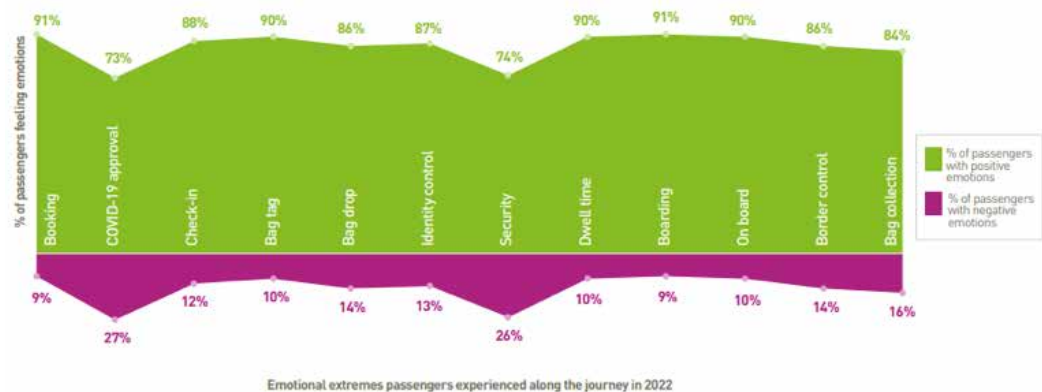
Greater technology adoption correlates with more positive emotions at key travel steps: Passengers appear happier overall throughout the journey in 2022 than in 2016 (the last time this metric was taken into account), with three particular pain points from 2016 seeing significant increases in positive emotions. The following all saw shifts in favour of more positive emotions: identity control (up 11% from 2016), security (up 6%), and bag collection (up 9%). Of these stages, the two where emotions have seen the greatest positive shifts since 2016 are also among the stages that have seen the highest increase in technology adoption over the same period. In fact, in 2016, there was no technology adoption for either identity control or bag collection, whereas in 2022, 41% of passengers are using kiosks and e-gates for identity control and 29% are receiving mobile notifications for bag collection.
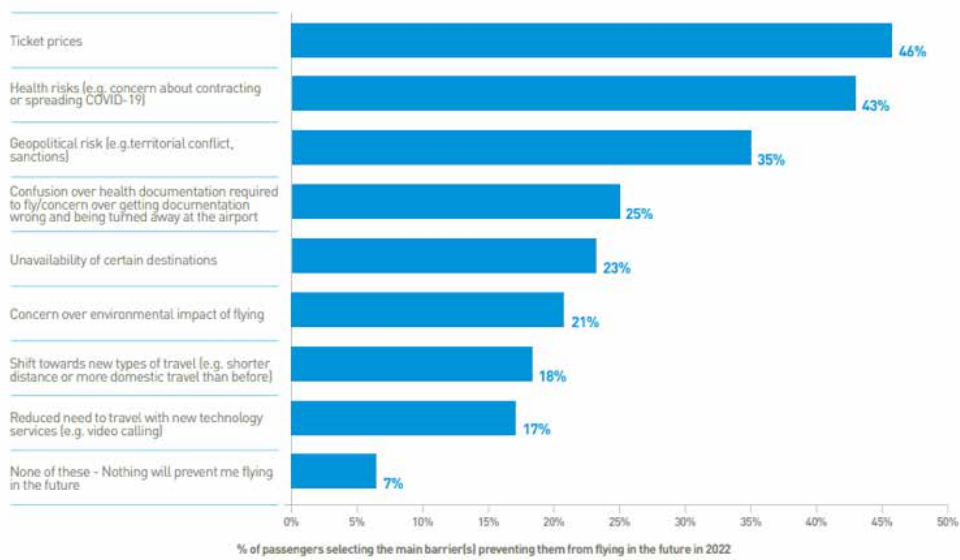
Frequency of flying pre-pandemic vs. post-pandemic

For recent travellers, demand has rebounded to – and even surpassed – pre-pandemic levels: Passengers report intentions to fly slightly more from 2023 onwards than they did prior to the COVID-19 pandemic. This holds true for both leisure and business travel, reflecting pent-up demand for travel following the period of disruption imposed by the pandemic. Passengers expect to take an average of 2.93 flights per year for business purposes from 2023 onwards, compared to the average of 2.73 flights per year taken before the pandemic. They in turn expect to take an average of 3.90 flights per year for leisure from 2023 onwards, up from 3.69 before the pandemic.

Note: the sample for this survey considers only individuals who traveled in Q1 2022, therefore representing the sentiments of those who were willing to travel before the wider lifting of travel restrictions.
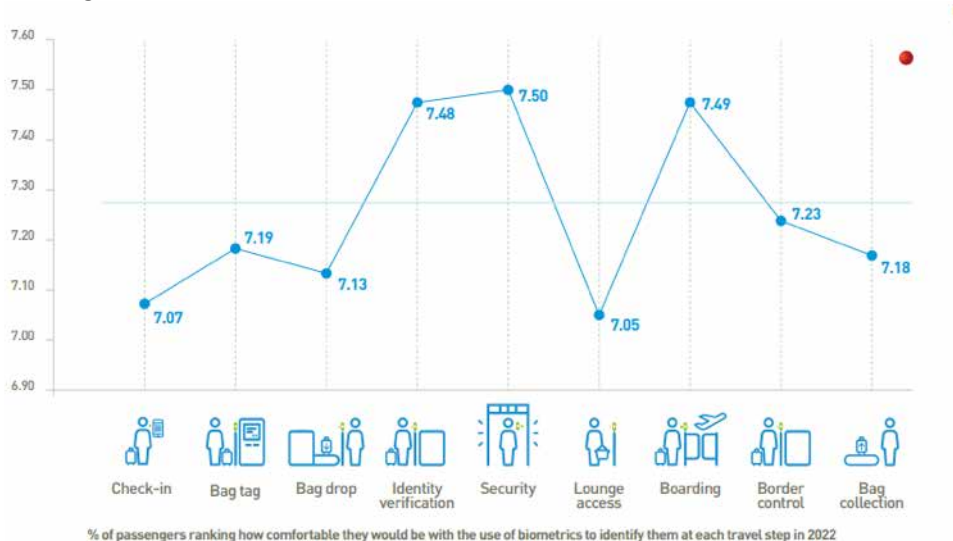
Passengers' main barriers to flying in future

Barrier	%
Ticket prices	46%
Health risks (e.g. concern about contracting or spreading COVID-19)	43%
Geopolitical risk (e.g.territorial conflict, sanctions)	35%
Confusion over health documentation required to fly/concern over getting documentation wrong and being turned away at the airport	25%
Unavailability of certain destinations	23%
Concern over environmental impact of flying	21%
Shift towards new types of travel (e.g. shorter distance or more domestic travel than before)	18%
Reduced need to travel with new technology services (e.g. video calling)	17%
None of these - Nothing will prevent me flying in the future	7%

% of passengers selecting the main barrier(s) preventing them from flying in the future in 2022

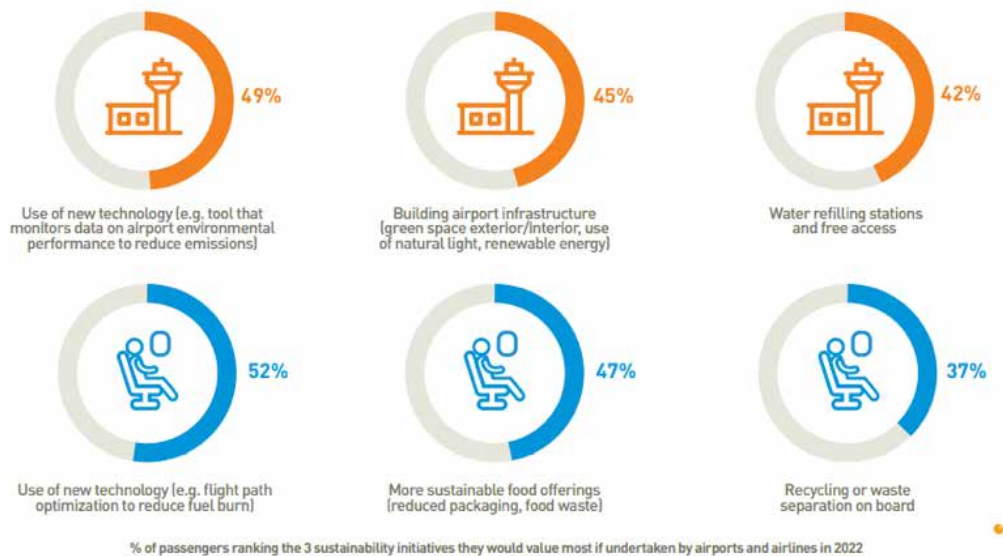**Current geopolitical and economic factors strongly influence anticipated barriers to flying:**

The top three barriers to flying in the future that passengers anticipate in 2022 appear to closely relate to current global geopolitical and economic factors. Ticket prices come out as the number one anticipated barrier, with close to half of passengers citing this as a concern. While ticket prices are always likely to be a barrier, this may be exacerbated by the current inflation and rising costs facing many countries. Concern over health risks, ranked as the second biggest barrier, is clearly linked to COVID-19, suggesting that concerns are likely to continue, even among those who have been willing to fly during the pandemic. Geopolitical risk comes third, with about one-third of passengers listing it as a top concern; this is likely related to current crises such as the one in Ukraine, which may be creating further global uncertainties around the possibility and safety of travel on an ongoing basis. Indeed, the latter is ranked even higher (second, surpassing health risks) in Europe, the region most affected by the Ukraine conflict. On the other hand, health risks outweigh both ticket prices and geopolitical risks for first place in Asia, the Middle East, and Africa, where COVID-19 restrictions remain in fuller force.

Passenger comfort levels with biometric identification

Travel step	Comfort level
Check-in	7.07
Bag tag	7.19
Bag drop	7.13
Identity verification	7.48
Security	7.50
Lounge access	7.05
Boarding	7.49
Border control	7.23
Bag collection	7.18

% of passengers ranking how comfortable they would be with the use of biometrics to identify them at each travel step in 2022

Comfort levels with biometric identification vary along the journey: When scoring out of 10 how comfortable they would be with biometric identity checks at each stage of the journey, passengers appear relatively comfortable with the use of biometrics. Passengers ranked identity control, security, and boarding the highest, possibly because they already expect various checks to occur in these areas. Conversely, check-in, bag drop, and lounge access came out as the lowest ranked, perhaps because passengers do not see the value of biometric identification at these stages.

Top 3 Sustainability initiatives valued most by passengers

| 49% | 45% | 42% |
| Use of new technology (e.g. tool that monitors data on airport environmental performance to reduce emissions) | Building airport infrastructure (green space exterior/interior, use of natural light, renewable energy) | Water refilling stations and free access |

| 52% | 47% | 37% |
| Use of new technology (e.g. flight path optimization to reduce fuel burn) | More sustainable food offerings (reduced packaging, food waste) | Recycling or waste separation on board |

% of passengers ranking the 3 sustainability initiatives they would value most if undertaken by airports and airlines in 2022

Growing interest in IT to support sustainability: Passengers have maintained from Q1 2020 the same top three sustainability initiatives they would value the most if undertaken by airports and airlines, with a strong interest in new IT solutions to support sustainability (valued by around half of passengers). On the airport front, this initiative has overtaken green airport infrastructure for first place (up 4% from 2020), suggesting all eyes are on the promises of technology to support concrete reductions to the environmental impacts of the industry. The continued sensitivity of passengers toward sustainable food options (47%), recycling, and water refilling stations are key areas of attention for the industry.

SITA.

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