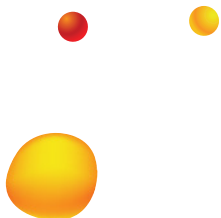
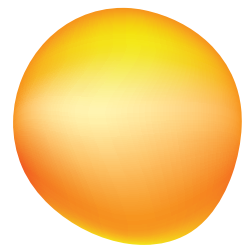




2016

AIR TRANSPORT INDUSTRY INSIGHTS

THE PASSENGER IT TRENDS SURVEY



FOREWORD

The digital travel economy is enabling air travel providers to give choice and convenience to their customers as never before.

That choice and control is widely welcomed by passengers, according to our 11th Passenger IT Trends Survey, co-sponsored by Air Transport World and SITA.

Overall, 85% of passengers surveyed had a positive travel experience for their last flight, up from 80% in last year's survey.

In particular, more passengers have a positive experience in the early steps of the journey, such as booking, check-in and getting their boarding passes.

It is noticeable that in these steps passengers have much more control and choice, whether person-to-person or using technology; off-airport or at the airport.

In contrast, negative emotions were more commonly found at the security screening, passport control and bag collection steps. These are the points of the journey where technology currently plays a limited role and passengers have little control or choice.

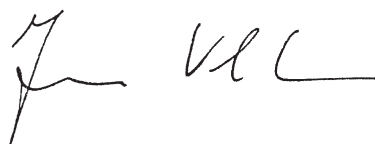
Passengers are very happy to use their own technology and various devices and really appreciate when they can do tasks like check-in before they get to the airport.

With multiple technology options available to passengers at some steps in the journey, we decided this year to take a closer look at the human factors affecting their adoption. We examined this through four different passenger profiles.

In particular, we researched the 'stickiness' of each technology channel to see how likely a passenger is to switch to an alternative option for future flights.

What is clear is that once a passenger starts to use self-service technology, such as kiosks, websites or mobile devices, they have a high propensity to continue using self-service rather than returning to human contact for that step in the journey.

Looking ahead, our survey provides a guide for the design of future technology as passengers indicated that "ease of use" is the key determinant of travel technology adoption, more so than "usefulness".



Francesco Violante
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For more information go to:
www.sita.aero/surveys



ONE SIZE DOES NOT FIT ALL

Last year, for the first time, we took a look at the connection between a passenger's use of technology and their emotions at different stages of the journey.

This year, to gain deeper insight into this connection, we have delved deeper into the human factors. To better understand passengers' satisfaction with different technology we examined their intention to re-use or change those choices the next time they fly.

It is clear that different types of passengers have their own travel style and mindset. New consumer technologies added to traditional channels are allowing the different traveler profiles to customize their journey with a 'pick and mix' of the options available to them. Understanding those individual customers' preferences is essential to delivering personalized services and targeted offerings.

For travel providers, it means a one-size-fits-all approach to passengers risks alienating some types. Conversely those travel providers willing to provide channel choice at the different travel steps are likely to see significantly higher levels of satisfaction among their passengers.

Passenger Profiles



34%

CAREFUL PLANNER

Does not want to experience anything negative on their journey, so they plan ahead to avoid them. Often they double check every stage of preparation and travel. Anxiety and apprehension about the travel experience tends to drive their behaviors.



14%

HYPER-CONNECTED

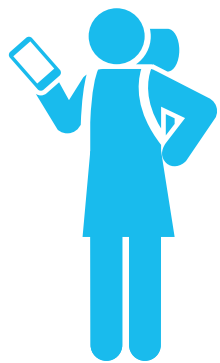
It is very important for them to maintain control and determine their own context. They value efficiency very highly. They tend not to be passionate about travel and commonly experience mild annoyance and impatience.



14%

PAMPERED

Relaxed travelers who can afford a higher standard of service. They make frequent use of status-based services eg, lounges, loyalty programs, etc. They tend to enjoy travel more than others, but regularly experience a blend of mild annoyance with anticipation and joy.



9%

OPEN-MINDED ADVENTURER

Eager to try new things and services. They are looking for memorable experiences, but tend to travel economy class and look for bargains. They are happy and excited about their travel journey, although many also express underlying apprehension.



PASSENGERS PREFER TECH TO PEOPLE

91%

OF PASSENGERS WHO USE SELF-SERVICE TECH TO CHECK-IN WILL DO SO AGAIN AND AGAIN

Our survey indicates that once people are converted from person-to-person interaction to using self-service technology for travel steps, few want to go back.

Even if a passenger is not satisfied with self-service technology they tend to try an alternative one rather than revert to human contact.

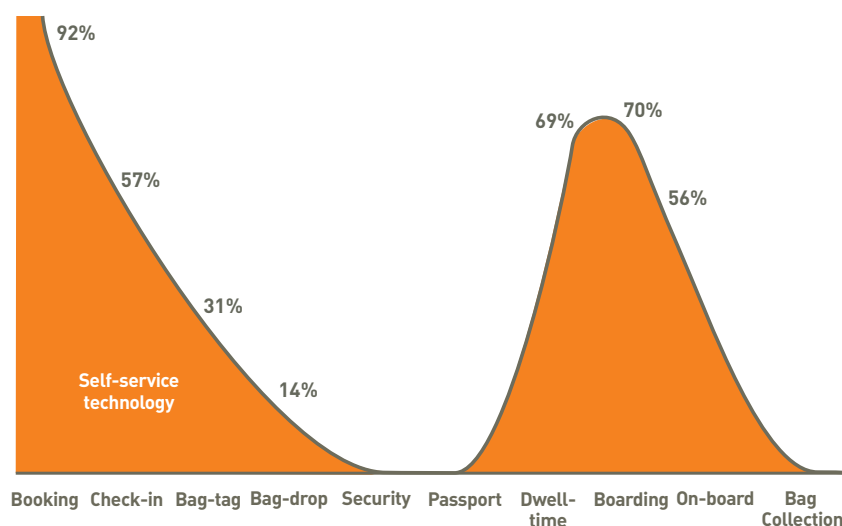
PASSENGERS PREFER TECHNOLOGY

Take booking. Almost every flight today is booked using self-service technology. In fact, only 8% of our survey respondents used human contact, such as a travel agent or call center, to book their last flight.

The overwhelming majority (75%) of people used a website. Of these, only 4% people intend to switch to human contact for booking, compared to 18% who intend to switch to using a mobile app. The remaining majority are happy to continue to use a website.

Passengers' usage of technology during travel

% of passengers using self-service technology in 2016



Similarly, of those using a mobile app to book their last flight, only 4% would want to change to using a person, while 32% say they will switch to a website.

What about those 8% of passengers that did not use self-service technology to book their last flight, instead of choosing face-to-face contact?

Around one-in-three of these people (32%) intend to move to website booking, while 8% will switch to using a mobile app.

CHECK-IN

Technology advocacy also holds true for check-in, with a strong willingness to stick with a certain technology, once tried.

For example, a majority of surveyed passengers (57%) checked in using either a website, kiosk or mobile app for their last flight.

Of those intending to switch from one of these technologies for their next flight, the vast majority would prefer to use one of the other two technologies rather than check-in at an airport desk.

SUBSTITUTION EFFECT

What is clear is that travelers that today use a self-service technology for travel tasks have a high propensity to try different technologies for the same step, creating a substitution effect.

For example, 91% of passengers who currently use self-service check-in would turn to another type of self-service technology, rather than change to face-to-face.

This is particularly true between web and mobile technologies.

Passengers that switch from using a website for a task show a strong preference for moving to a mobile app, and vice-versa.

EASE OF USE MATTERS FOR PASSENGERS

‘Ease of use’ and ‘usefulness’ are key determinants in encouraging people to adopt travel technology. For the first time, we have taken a deeper look at how these variables impact the willingness of passengers to re-use a particular technology and the resulting attitudes that will lead to long-term usage of technology.

For example, our technology adoption research indicates that mobile or kiosk usage at check-in is highly sensitive to ease of use factors. The model results show that the ease of use of a technology can increase kiosk adoption by 86% and mobile check-in by 59%.

WHICH PASSENGER PROFILE IS MOST LIKELY TO CHANGE TECHNOLOGY?

Different types of passengers have varying levels of affinity to the technology choices available to them.

For instance, the **Pampered** set of travelers are more inclined towards face-to-face contact, compared to the much more tech savvy **Hyper-Connected** traveler.

It was also notable that **Careful Planner** passengers were less likely to use mobile apps along the journey than the three other types.

In general, all passenger types had mainly positive emotions when using self-service technology options.

However, there was a discernible difference between some passenger types to change technology when they had a bad experience.

This was particularly evident with **Pampered** and **Adventurer** profiles, where the 60+% who had a negative experience with a technology plan to change to another technology for their next trip. In contrast only 29% of dissatisfied **Careful Planners** planned to change their tech next time.



PASSENGERS PREFER 'AT HOME' TECH

43%

OF PASSENGERS CHECK-IN OFF AIRPORT

As we highlighted last year, passengers are showing a strong preference to use their own technology, where they have the option. This gives them the freedom to complete tasks and prepare for travel at their own pace.

Not surprisingly, our survey indicates the highest levels of satisfaction are attained in the early stages of the journey, such as flight booking and check-in where personal technology usage is most prevalent.

TIPPING POINT FOR CHECK-IN

Heading up the trend has been the strong push towards off-airport check-in.

In fact, we are very close to the majority of people completing check-in prior to arrival at the airport, using either a website or mobile app.

For their last flight, 43% of passengers performed web or mobile check-in, with 57% having the intention to use it next time. This is slightly up on the 2015 survey, which saw 39% perform off-airport check-in

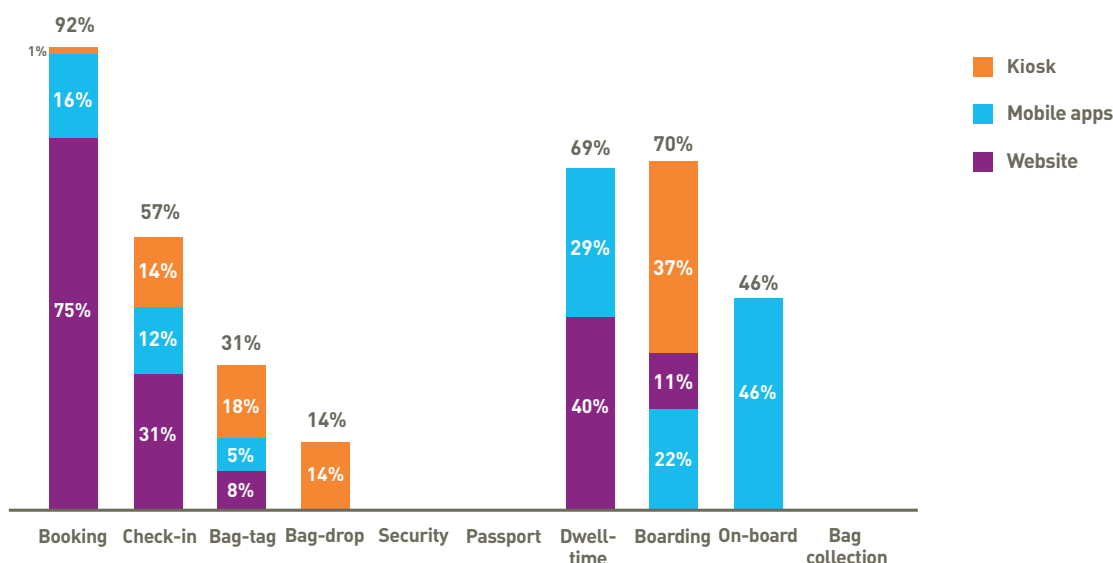
Much of the switch to off airport check-in is from those using an airport counter, which will drop to just 27%, if passenger intentions are followed through.

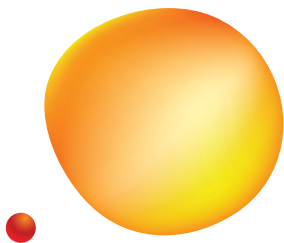
Airport kiosks will pick up some of these passengers, but most intend to move to either web check-in or more likely mobile app check-in.

In fact, usage of mobile apps is the fastest growing check-in channel, based on passenger intentions with 21% planning to use one, up from 12% currently.

Nevertheless web check-in will remain the most popular choice overall.

Passengers usage of technology during travel
% of passengers using technology in 2016





EXPANDING TECHNOLOGY CHOICES

There are indications in the survey that passengers would like to complete more of the mundane processing steps before reaching the airport, so that they are more relaxed when they arrive and have more time to use airport amenities.

It fits very well with the industry goal of giving passengers a hassle-free journey.

Processing steps tend to subtract from the passenger's airport experience and many airlines and airports are focused on introducing technologies, such as bag-drop and passenger flow management. These help get passengers through to the points in the journey where our survey shows their positive emotions are the highest, such as dwell time and onboard the aircraft.

HOME TAGGING

One area where airlines are starting to offer new off-airport options to passengers is bag-tagging.

Today, airport kiosks are the most popular technology option for getting bag-tags, with 17% of passengers using them for their last flight.

However, off-airport options, such as home printing and permanent bag-tags, are starting to grow in popularity, albeit from a low base.

MORE SERVICE AVAILABLE PRE-FLIGHT

The wide usage of web and mobile apps is enabling passengers to book additional airport services, before arriving at the airport.

Just over half of passengers prefer to reserve services, such as lounge access and priority lanes, online. This compared to around one quarter that prefer to wait to use either a manned desk or kiosk at the airport.

WHICH PASSENGER PROFILE IS MOST LIKELY TO ADOPT 'AT HOME' TECH?

Hyper-Connected passengers are most likely to be making use of off-airport options with 94% using either the web or a mobile app for booking and 49% for check-in.

A majority of **Careful Planners** also appreciate the convenience of completing more tasks and booking more airport services prior to arriving at the airport. Not surprisingly it is the **Careful Planners** that recorded the high satisfaction level for the booking and check-in steps, the two most commonly performed off-airport steps.

The least likely to be using off-airport technologies are **Adventurers**, who show greater tendency to leave travel tasks, such as check-in, until they arrive at the airport. This does not mean they don't like using technology though. In fact, 49% used a kiosk at the airport to check-in, higher than any other passenger type.

The latest off-airport trend is around bag-tagging technology. It is still at a very early stage and few airlines offer it yet, so uptake is low. However, it removes another step of airport processing which is good for the industry and offers passengers more choice.

Our survey indicates that the early adopters are likely to come from the **Pampered** type of traveler, with 16% already using either a permanent or home-printed bag-tag. However, this profile of passenger is also more likely to switch to another service option if their first experience is not good.



CONNECTED BAGS – CONNECTED PASSENGERS

88%

**OF PASSENGERS HAPPY TO WAIT 10
MINUTES FOR BAG COLLECTION**

Introducing self-service to the handling of passenger baggage has been one of the more complicated challenges for the industry.

Our survey suggests these efforts are starting to pay off with passengers showing a strong intention to use technology aimed at baggage self-service.

This year 82% of passengers surveyed checked-in at least one bag for their last flight, with the remainder taking hand luggage only.

The global average number of checked bags per passenger in this year's survey was 1.14, which would suggest the industry's baggage systems have to handle around 3.2 billion bags per year, worldwide.

BAG-DROP HEADING FOR CRITICAL MASS

Baggage handling is a carefully managed process usually owned by the airline, so there is little leeway for the passenger to make their own choices. Today, most airlines use the traditional airport counter for bag check-in and this was reflected in our survey with 86% of passengers doing it this way for their last flight.

However, when we look at the intentions expressed by passengers to reuse technology, which reflects more closely their attitude, we see a different picture.

The number of passengers expressing a desire to check-in baggage at the airport counter falls dramatically to less than half of passengers (48%). The remaining 52% would opt to use either assisted or unassisted bag-drop.

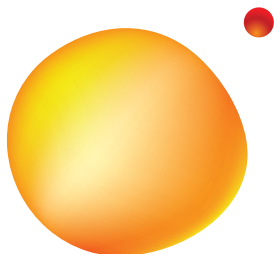
The preference is for assisted bag-drop by a ratio of 2-to-1 indicating that passengers are yet to feel completely comfortable using what is a relatively new process for many.

MOBILE UPDATES

Respondents to the survey showed a strong interest in receiving notifications and managing actions in relation to their check-in baggage.

In fact, baggage was the topic of three of the top six items on a list of mobile services that passengers would use regularly.

Highest ranked of the three was bag update notifications, which 79% of passengers would definitely use. Second, was the ability to report mishandled baggage by mobile (67%) and third, receiving baggage collection information (65%), such as belt number and wait time.





BAG COLLECTION STILL A SOURCE OF FRUSTRATION

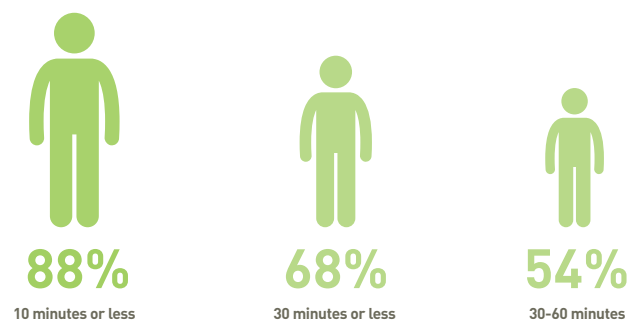
As we saw in last year's survey, there is a noticeable drop off in the number of passengers having a positive emotion at bag collection. In fact, out of all the steps in the journey controlled by the air transport industry this one had the fewest passengers with positive emotions.

For their last flight, only 75% of passengers had a positive bag collection experience compared to a general average across the whole journey of 85%.

Results from the survey indicate that 88% of passengers have positive emotions if they have to wait 10 minutes or less to collect their baggage, but this falls to 54% if the wait is 30 minutes or more.

Passengers' emotions at bag collection

% of passengers' with positive emotions by waiting time



WHICH PASSENGER PROFILE IS MOST SATISFIED USING SELF-SERVICE BAGGAGE?

The 14% of passengers who consider themselves as fitting the **Pampered** profile generally are the happiest passenger type, significantly more satisfied than the other types.

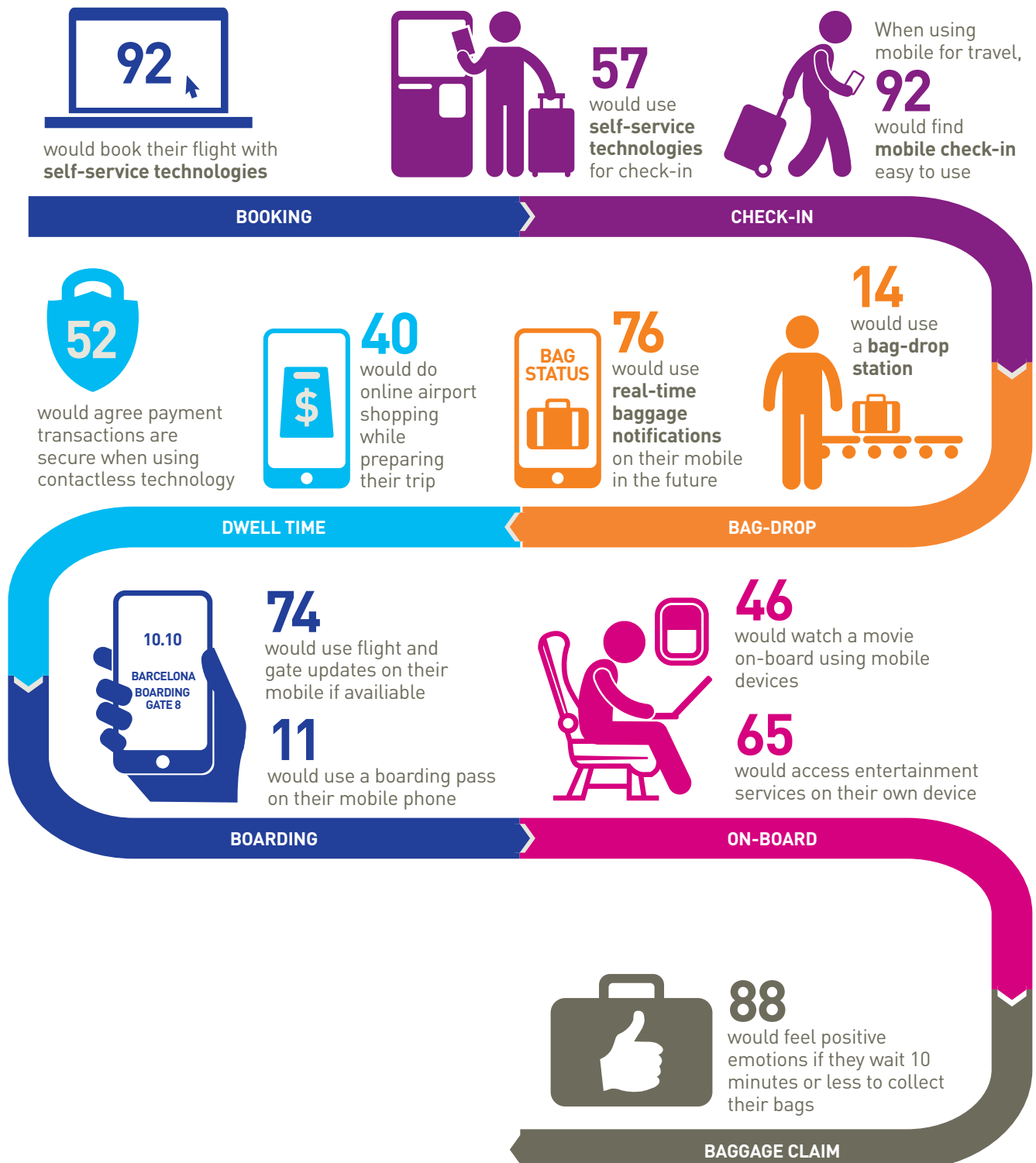
This may be due to the fact that this persona travels more frequently on average and thus has more experience, reducing stress and lifting their positive emotions.

Nevertheless, they too exhibit lower levels of satisfaction around the baggage steps of the journey, particularly bag collection. For example, 19% of **Pampered** travelers showed negative emotions at bag collection compared to levels around 6% for the early steps in the journey.

This is still above the other three passenger profiles. At bag-drop, for instance, **Pampered** are the profile most likely to use self-service technology, along with the **Hyper-Connected**, and when they do, 88% indicate they are satisfied – the highest proportion for any passenger type.

On the other hand, the **Careful Planner** is the least likely to be satisfied, not just at bag-drop, but at any baggage related step in the journey.

IF THE WORLD HAD 100 TRAVELERS...



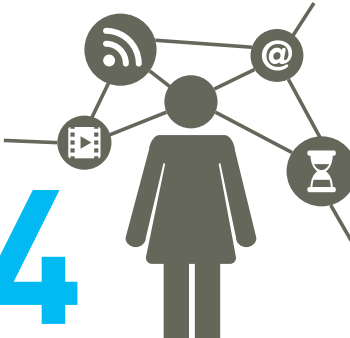
34
would be
'Careful Planners'



14
would be
'Pampered'



14
would be
'Hyper-Connected'

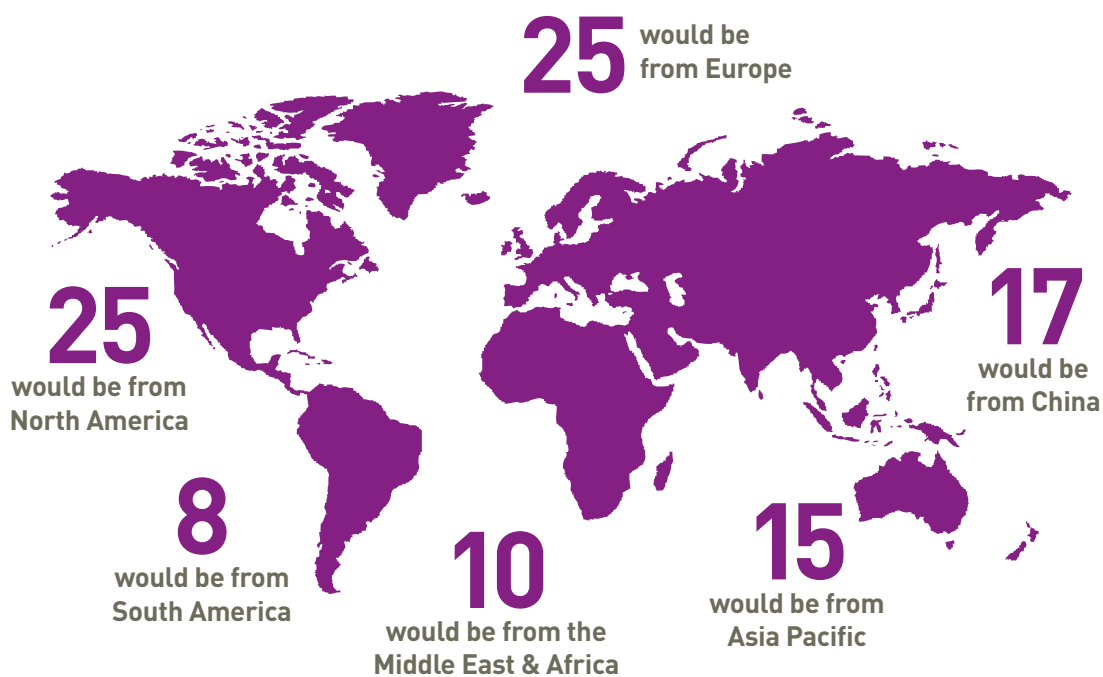


9
would be
'Adventurers'



85 
would feel positive emotions
during the journey

 **54**
would switch self-service technology
if they had a negative experience



METHODOLOGY

BACKGROUND

The 11th edition of the Passenger IT Trends Survey was conducted globally in Q1 2016.

The key findings are based on an online survey of 9,216 respondents from 19 countries across the Americas, Asia, Europe and the 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 almost three-quarters of global passenger traffic.

PASSENGER PROFILES

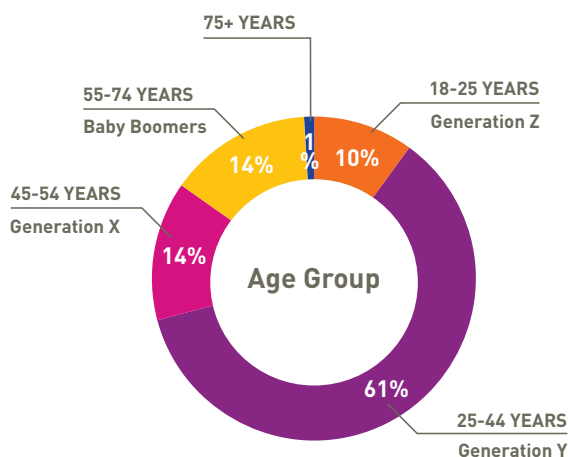
The online survey was complemented with qualitative research conducted by independent consultants using the Design Thinking method based on observation at airports and in-depth interviews. Observations were conducted in-situ at airports to assess passenger emotions and technology usage, as well as setting the context for the interviews.

EMOTIONS

Participants were asked to review each stage of their journey and identify their range of emotions with an emotion scale tool. An Emotional Scale Tool (adapted from Plutchik to the needs of this project) was used to assess the range and degree of emotions passengers felt along different stages of their journey.

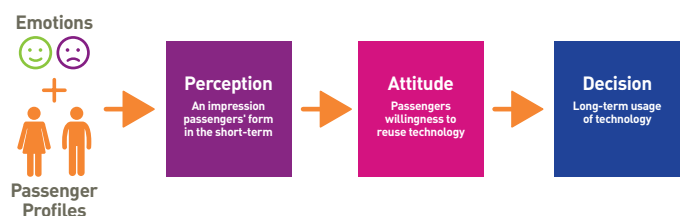


Coverage across regions and demographics Split by age group



TECHNOLOGY ADOPTION MODEL (TAM)

The TAM (Davis 1989) proposes that user acceptance of new technology is a function of two factors: perceived usefulness and perceived ease of use. Perception will influence Attitude which in turn will predict Adoption.





SITA AT A GLANCE

**SITA transforms air travel through technology -
for airlines, at airports and on aircraft.**

- Our vision is to be the chosen technology partner of the industry, a position we will attain through flawless customer service and a unique portfolio of IT and communications solutions that covers the industry's every need 24/7.
- We are the innovators of the industry. Our experts and developers keep it fuelled with a constant stream of ground-breaking products and solutions. We are the ones who see the potential in the latest technology and put it to work.
- Our customers include airlines, airports, GDSs and governments. We work with about 400 air transport industry members and 2,800 customers in over 200 countries and territories.
- We are open, energetic and committed. We work in collaboration with our partners and customers to ensure we are always delivering the most effective, most efficient solutions.
- We own and operate the world's most extensive communications network. It's the vital asset that keeps the global air transport industry connected.
- We are 100% owned by the air transport industry – a unique status that enables us to understand and respond to its needs better than anyone.
- Our annual IT surveys for airlines, airports and passenger self-service are industry-renowned and the only ones of their kind.
- In 2014, we had consolidated revenues of US\$1.7 billion.

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