



UNF Public Opinion Research Laboratory

Airport Service Quality Survey

Jacksonville, Florida



Prepared for:
Jacksonville Aviation Authority

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I. Methodology

The Public Opinion Research Laboratory (PORL) at the University of North Florida conducted the following analysis on behalf of the Jacksonville Aviation Authority (JAA). The dataset being analyzed is the Airport Service Quality Survey (ASQ), conducted by DKMA for Airports Council International (ACI). According to ACI, the ASQ “is a comprehensive ACI initiative to help airports in their continuing efforts to improve the quality of service experienced by passengers.” The following analysis includes data from 109 airports worldwide from 2017 through the first two quarters of 2018. When comparing the “JAX” airport to peer airports, the airports included in the “peer” category include “IND”, “TPA”, “SAT”, “SAN”, “AUS”, “FLL”, “CLE”, “DTW”, and “YEG”. The ASQ data was weighted by the “WeightFactor” provided in the dataset, which weights the data based on whether the flight was international or domestic.

The PORL is a full-service survey research facility that provides tailored research to fulfill each client’s individual needs from political, economic, social and cultural projects. The PORL opened in 2001 and is an independent, non-partisan center, a charter member of the American Association for Public Opinion Research Transparency Initiative and a member of the Association of Academic Survey Research Organization. For more information about methodology and analysis, contact Dr. Binder at porl@unf.edu or at (904) 620-2784.

II. Summary of Findings and Further Action

- ❖ Business travelers have lower ratings across all items (and across other airports) compared to leisure+other travelers; however, the relationships between individual items and “Overall Satisfaction” are very consistent and do not vary greatly by quarter.
- ❖ “Ambience of the airport” is the greatest predictor of “Overall Satisfaction” scores for business and leisure+other travelers regardless of airport.
- ❖ “Airport” factors are more highly correlated with “Overall Satisfaction” and “Ambience of the airport” than any other sub-group of factors for business and leisure+other travelers, with the exception of “Parking Facilities” in the “Access” category.
- ❖ Factors that most influence “Ambience of the airport” for business and leisure+other travelers include “Cleanliness of airport terminal”, “Comfort of waiting/gate areas”, and “Cleanliness of washrooms.”
- ❖ Concerning “Overall Satisfaction” and “Ambience of the airport”, the mean scores for JAX vary little for each quarter in 2017 and 2018.
- ❖ JAX has the second highest mean scores for “Overall Satisfaction” and “Ambience of the airport” among business and leisure+other travelers compared to its peer airports.
- ❖ PORL recommends DKMA’s “Definitive Guide to Airport Ambience” for more context on factors contributing to airport ambience (attached in the Appendix).
- ❖ Regarding further action, PORL recommends investigating the usefulness of DKMA’s Ambience Assessment and Survey, which provides in-depth questions that target specific factors contributing to airport ambience.
- ❖ Work to constantly to improve and maintain key areas that most highly correlate with “Overall Satisfaction” and “Ambience of the airport”: “Cleanliness of airport terminal”, “Cleanliness/Availability of washrooms”, “Comfort of waiting/gate areas”, and “Parking facilities”.

III. Data Analysis:

Figure 1. Overall Satisfaction by Traveler Type



In Figure 1, “Overall Satisfaction” is separated out by business and leisure+other travelers for Jacksonville International Airport (JAX) and several other peer airports of similar size and scope. JAX is second compared to all peer airports in “Overall Satisfaction” for both business and leisure+other travelers, with mean scores of 4.45 and 4.52 respectively. Only Indianapolis International Airport (IND) tops JAX, with a business traveler mean score of 4.48 and a leisure+other traveler mean score of 4.59. Considering that a perfect “Overall Satisfaction” score would be a mean of 5, JAX is in a good position compared to most other peer airports, and is

markedly ahead of the worst peer airport, Fort Lauderdale-Hollywood International Airport (FLL), with mean scores of 3.81 and 3.89 for business and leisure+other travelers respectively. Worth noting is that business travelers have a lower mean satisfaction score than leisure+other travelers at every peer airport except Tampa International Airport. Business travelers tend to have lower ratings for all of the items, not just “Overall Satisfaction”. That leaves both opportunity to improve those scores for JAX, but also a challenge to increase satisfaction among a more discerning audience.

Figure 2. Airport Ambience by Traveler Type

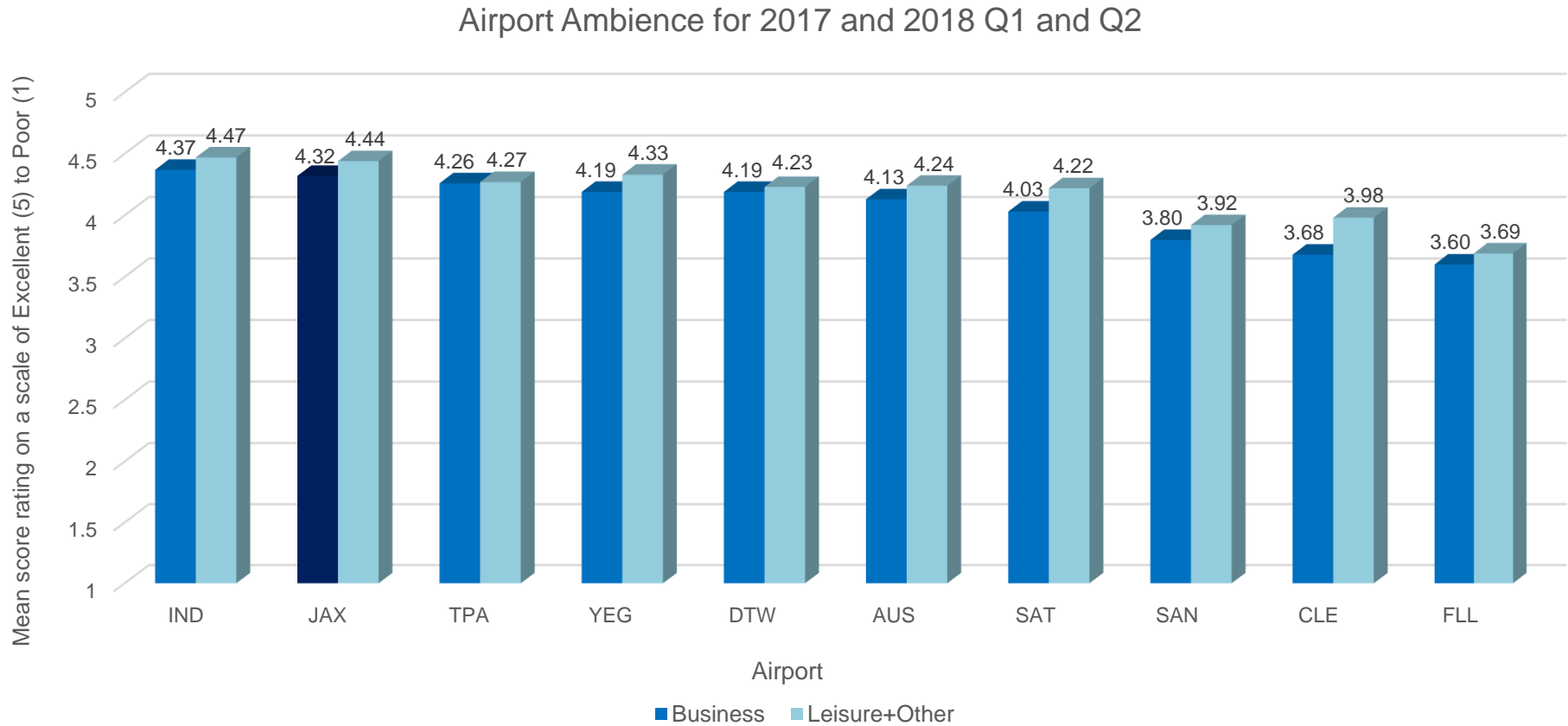


Figure 2 presents the mean scores for “Airport Ambience” by traveler type for JAX and its peer airports. Once again, JAX is second after IND, with a business traveler mean score of 4.32 and a leisure+other traveler mean score of 4.44. Similarly, to “Overall Satisfaction”, business travelers have

lower ratings for “Airport Ambience”, but JAX is doing quite well compared to its peer airports, and markedly better than FLL’s mean scores of 3.60 and 3.69 for business and leisure+other traveler’s respectively.

Figure 3. Overall Satisfaction by Airport

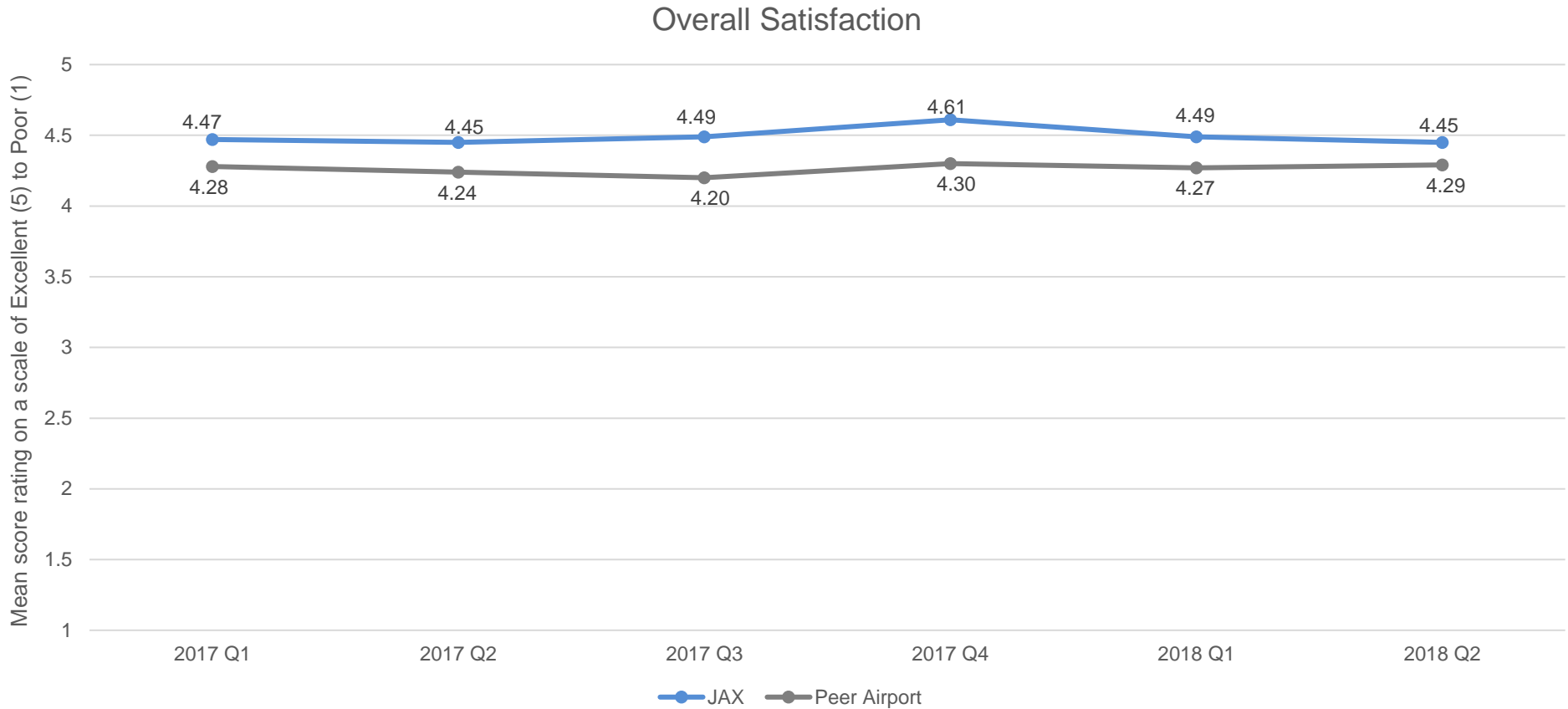


Figure 3, like Figure 1, addresses “Overall Satisfaction” over time for JAX and its peer airports. Given that “Overall Satisfaction” runs on a scale from 1-5, there has been minimal change from the first quarter of 2017 to the second quarter of 2018 for both JAX and the amalgamation of the peer airports. Although the fourth quarter of 2017 saw a slight bump for both JAX

and its peers, neither group moved below the 4.00 benchmark and JAX did not move below the 4.45 rating. Though 2018 Q1 and Q2 are lower than 2017 Q3 and Q4, until the 2018 Q3 and Q4 ratings come in, it is impossible to determine if ratings are trending downward or if Q3 and Q4 will bump back up to their historically higher ratings.

Figure 4. Airport Ambience by Airport

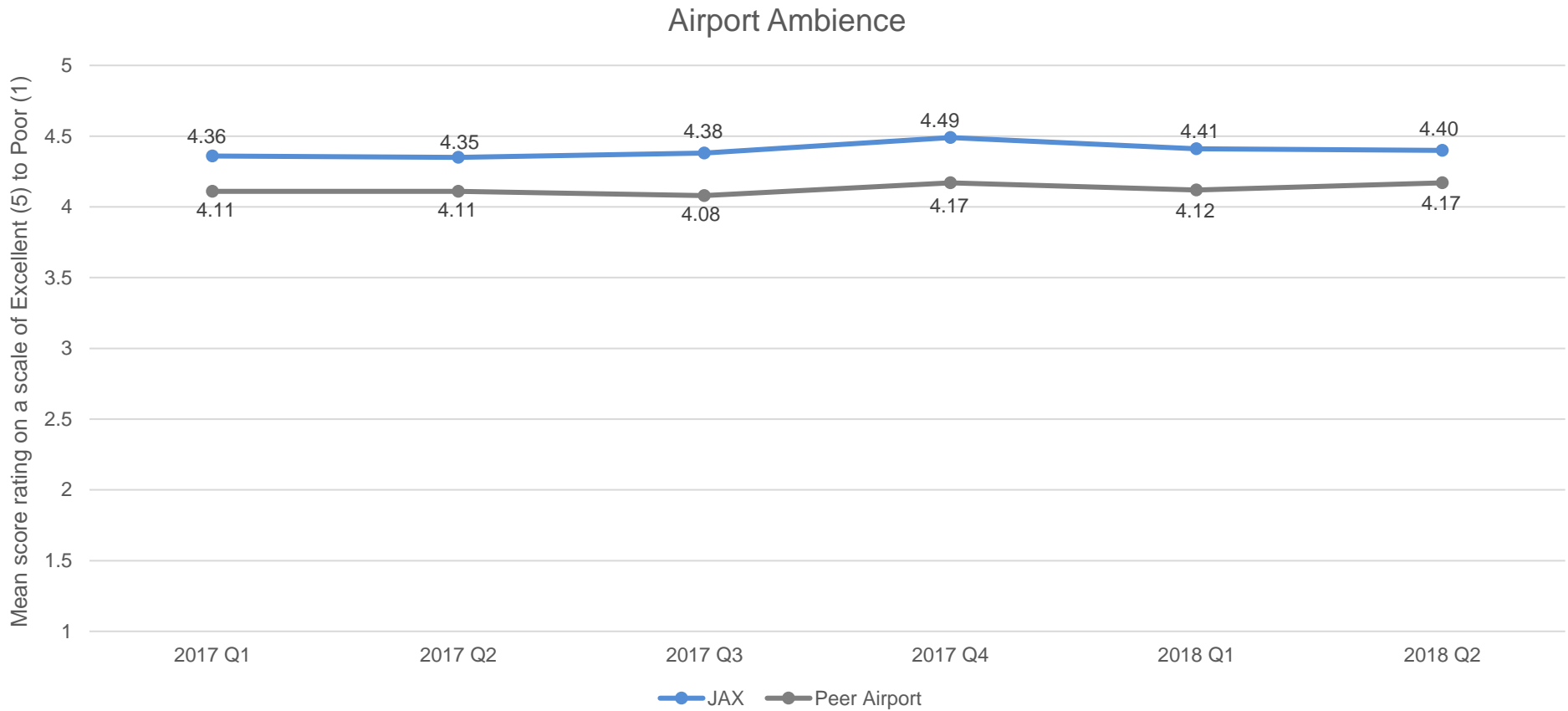


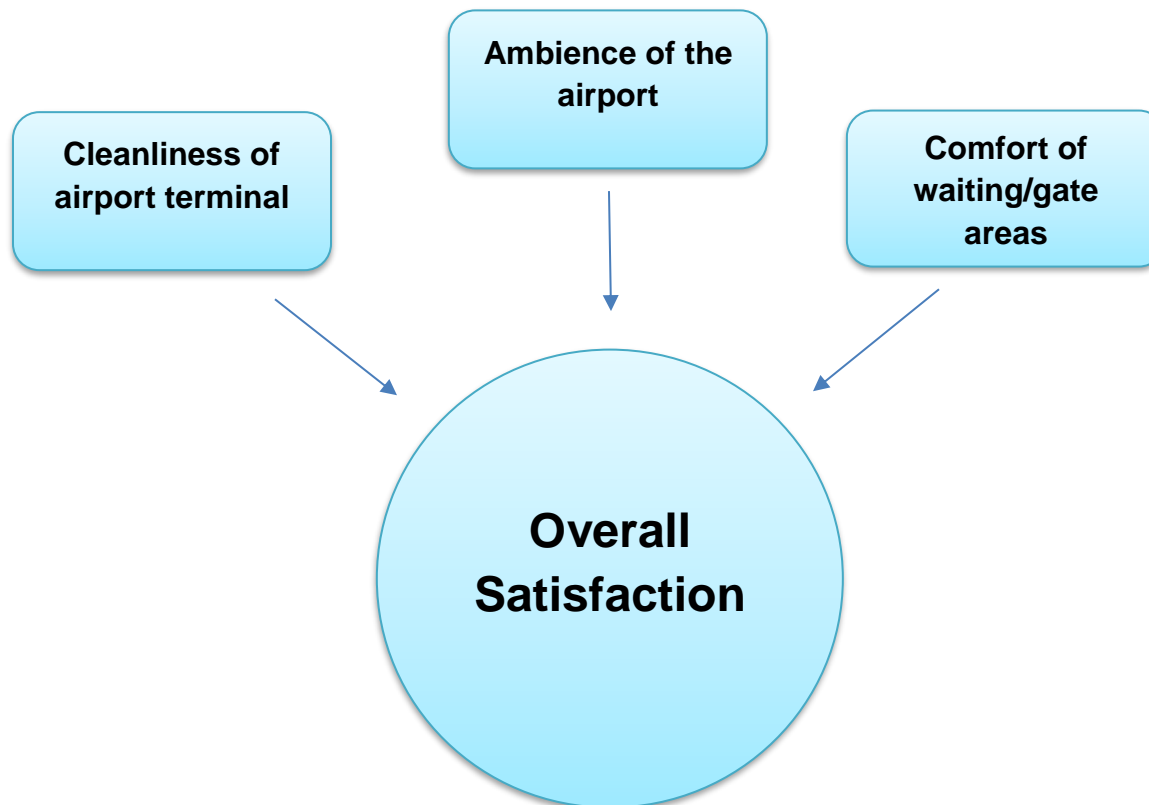
Figure 4 shows the change in mean scores of “Airport Ambience” for JAX and the peer airports from the first quarter of 2017 to the second quarter of 2018. Similar to Figure 3, a slight increase can be seen for both groups in the fourth quarter of 2017, but other than that the mean scores remain fairly consistent over time, with little variation between quarters. These mean

scores are slightly lower than the mean scores for “Overall Satisfaction”, but JAX does not go below a mean score of 4.35, and the peer airports do not drop below the 4.00 benchmark. Though JAX has lower ratings in 2018 Q1 and Q2 than in 2017 Q4, the ratings are higher than they were in 2017 Q1 and Q2.

		Business Travelers		Leisure+Other Travelers	
		JAX	Peer Airports	JAX	Peer Airports
Table 1. Overall Satisfaction 2017-2018					
Airport	Passport/personal ID inspection	-	.591	.534	.615
	Speed of baggage delivery service	.420	.472	.482	.512
	Customs inspection	-	.590	.194	.593
	Cleanliness of washrooms	.609	.601	.615	.628
	Comfort of waiting/gate areas	.634	.660	.642	.684
	Cleanliness of airport terminal	.711	.713	.722	.740
	Ambience of the airport	.729	.743	.758	.768
	Courtesy and helpfulness of airport staff	.618	.600	.584	.628
	Restaurant/eating facilities	.445	.576	.477	.562
	Value of	.409	.502	.446	.469
	Availability of bank	.497	.594	.579	.565
	Shopping facilities	.444	.574	.543	.559
	Value for money of shopping facilities	.381	.496	.451	.474
	Internet access	.515	.466	.464	.445
	Business/Executive lounges	.505	.599	.560	.633
	Availability of washrooms	.648	.617	.605	.624
	Access	Ground transportation to/from airport	.482	.485	.513
Parking facilities		.636	.499	.476	.510
Value for money of parking facilities		.435	.416	.410	.459
Availability of baggage carts/trolleys		.551	.526	.469	.521
Check-in	Waiting time in check-in queue	.438	.482	.457	.514
	Efficiency of check-in staff	.451	.522	.495	.540
	Courtesy and helpfulness of check-in staff	.476	.520	.486	.531
Security	Courtesy and helpfulness of security staff	.488	.546	.551	.558
	Thoroughness of security inspection	.485	.544	.549	.556
	Waiting time at security inspection	.457	.499	.484	.531
	Feeling of being safe	.496	.536	.562	.564
Finding your way	Ease of finding your way through the airport	.533	.522	.549	.537
	Flight information screens	.516	.524	.503	.556
	Walking distance inside terminal	.485	.464	.462	.488
	Ease of making connections with other flights	-	.532	-	.543
ID control	Waiting time at passport/personal ID inspection	-	.489	.408	.516
	Courtesy and helpfulness of inspection staff	-	.511	.409	.531

Table 1 illustrates the strength of the correlation between “Overall Satisfaction” and each of the main variables in their sub-categories for business and leisure+other travelers for JAX and its peer airports. The correlations range from 0.00 to 1.00, in which 1.00 is a perfect correlation and 0.00 is no correlation whatsoever. The closer a correlation is to 1.00, the stronger the relationship between the given variable and “Overall Satisfaction”. Correlations that are bolded are statistically significant, while those that are grayed out are statistically insignificant, meaning we can draw no limited conclusions from those relationships. While almost all of the variables are statistically significant in Table 1, some are more strongly correlated to “Overall Satisfaction” than others. For instance, the variables

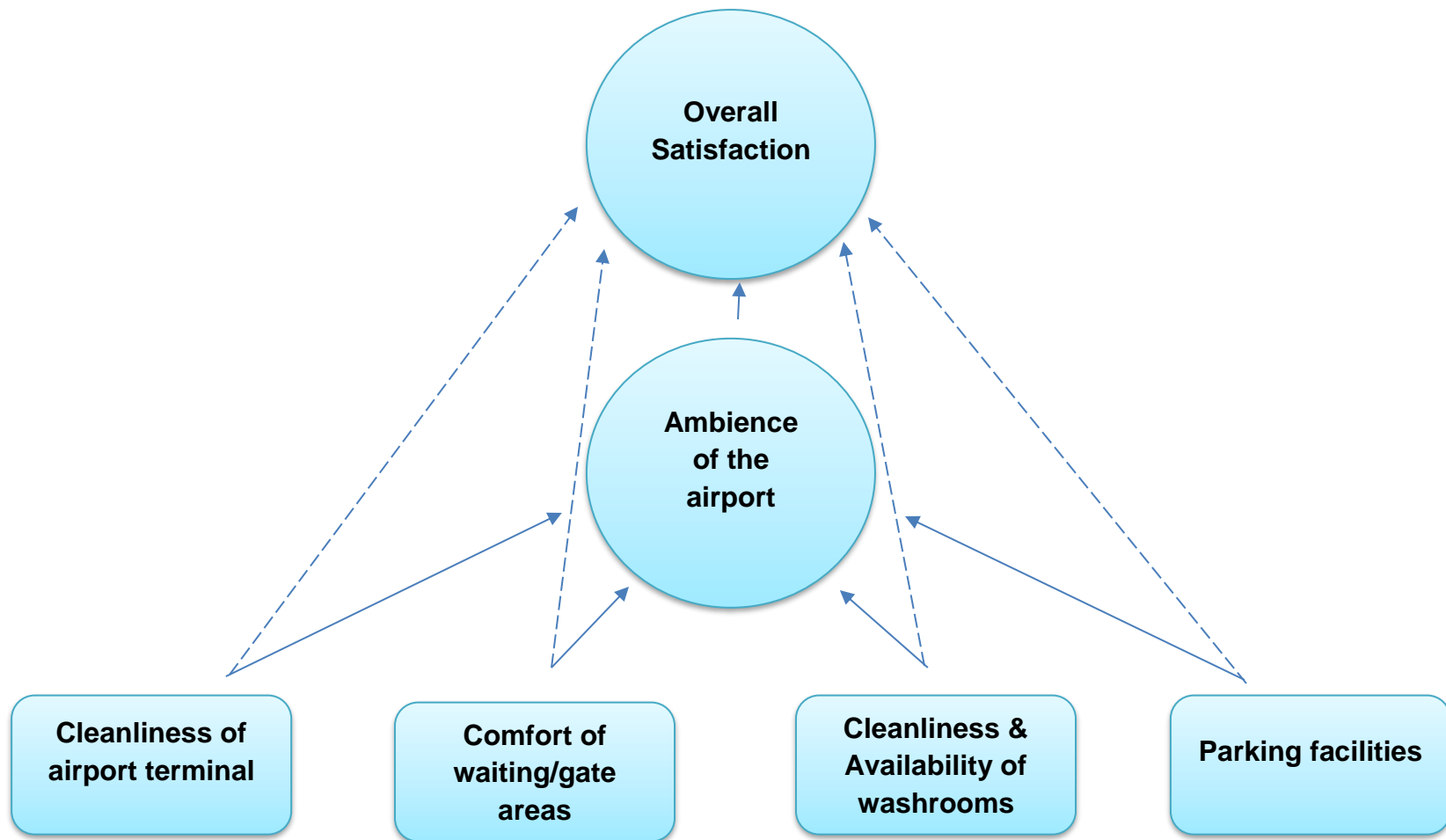
located in the “Airport” sub-group tend to be more strongly correlated than those in the “Access”, “Check-in”, “Security”, “Finding your way”, and “ID Control.” Focusing in on the variables in the “Airport” sub-category, the variable that is most highly correlated across airport type and traveler type is “Ambience of the airport”, correlating from .729 to .768 depending on the column. The other variables that correlate with “Overall Satisfaction” at a level of .600 or higher for JAX are “Cleanliness of airport terminal”, “Comfort of waiting/gate areas”, “Availability of washrooms”, “Cleanliness of washrooms”, “Courtesy and helpfulness of airport staff”, and “Parking Facilities.” If working to increase “Overall Satisfaction” ratings, these are the areas that should get focused on first.



		Business Travelers JAX	Peer Airports	Leisure+Other Travelers JAX	Peer Airports
Table 2. Airport Ambience 2017-2018					
Airport	Passport/personal ID inspection	-	.511	.247	.538
	Speed of baggage delivery service	.364	.425	.438	.482
	Customs inspection	-	.525	.081	.533
	Cleanliness of washrooms	.613	.572	.611	.601
	Comfort of waiting/gate areas	.665	.667	.663	.700
	Cleanliness of airport terminal	.768	.764	.792	.792
	Courtesy and helpfulness of airport staff	.538	.517	.546	.533
	Restaurant/eating facilities	.410	.542	.464	.525
	Value for money of restaurant/eating facilities	.392	.463	.428	.477
	Availability of bank	.412	.552	.535	.546
	Shopping facilities	.444	.555	.518	.549
	Value for money of shopping facilities	.385	.465	.428	.469
	Internet access	.437	.414	.451	.398
	Business/Executive lounges	.503	.568	.509	.634
	Availability of washrooms	.582	.581	.574	.593
Access	Ground transportation to/from airport	.404	.391	.459	.423
	Parking facilities	.573	.409	.484	.441
	Value for money of parking facilities	.343	.318	.436	.404
	Availability of baggage carts/trolleys	.512	.476	.414	.487
Check-in	Waiting time in check-in queue	.354	.341	.400	.411
	Efficiency of check-in staff	.361	.380	.414	.425
	Courtesy and helpfulness of check-in staff	.374	.398	.393	.421
Security	Courtesy and helpfulness of security staff	.377	.428	.464	.450
	Thoroughness of security inspection	.396	.440	.462	.463
	Waiting time at security inspection	.363	.365	.397	.426
	Feeling of being safe	.427	.438	.487	.473
Finding your way	Ease of finding your way through the airport	.417	.429	.514	.459
	Flight information screens	.446	.466	.478	.498
	Walking distance inside terminal	.418	.376	.449	.410
	Ease of making connections with other flights	-	.430	-	.455
ID control	Waiting time at passport/personal ID inspection	-	.363	.235	.403
	Courtesy and helpfulness of inspection staff	-	.399	.097	.428

Due to the consistently high correlation that became evident in Table 1 between “Overall Satisfaction” and “Ambience of the airport”, Table 2 shows the correlations for each variable to “Ambience of the airport”, in an effort to pin down exactly what contributes to an airport’s ambience, and how it could

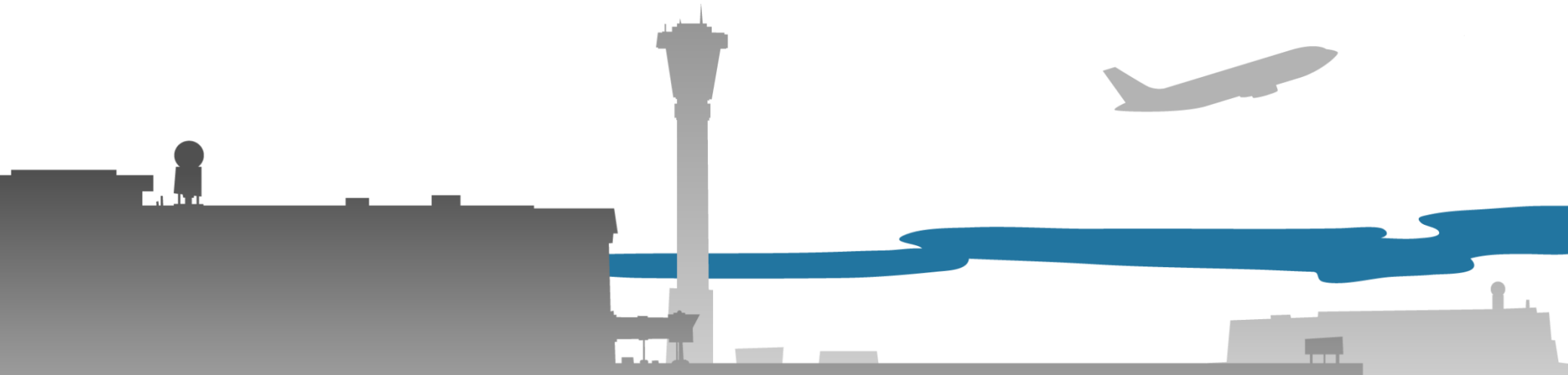
be improved. Table 2 reinforces that “Cleanliness of airport terminal”, “Comfort of waiting/gate areas”, “Cleanliness of washrooms”, “Availability of washrooms”, and “Parking facilities” are strong, significant variables that also influence “Airport Ambience” as well as “Overall Satisfaction.”





Helping airports
Improve the passenger experience

The definitive guide to **Airport Ambience**



CONTENTS.

1. **What is a great passenger experience?**
2. **Why ambience is important?**
3. **Creating the experience**
 - Architecture
 - Passenger processes
 - Interior design
 - Customer service

1 WHAT IS A GREAT PASSENGER EXPERIENCE?

First ask yourself

What defines your passenger experience?



Your processes



Your ambiance

If it's your processes, probably no one cares for the airport!

Airports of all sizes can create a great passenger experience



Uppington

Small is beautiful

Passengers increasingly love small (usually under 2 million pax) airports. They forgive the lack of facilities for a stress free environment, particularly when the ambience is assured.



Seoul Incheon

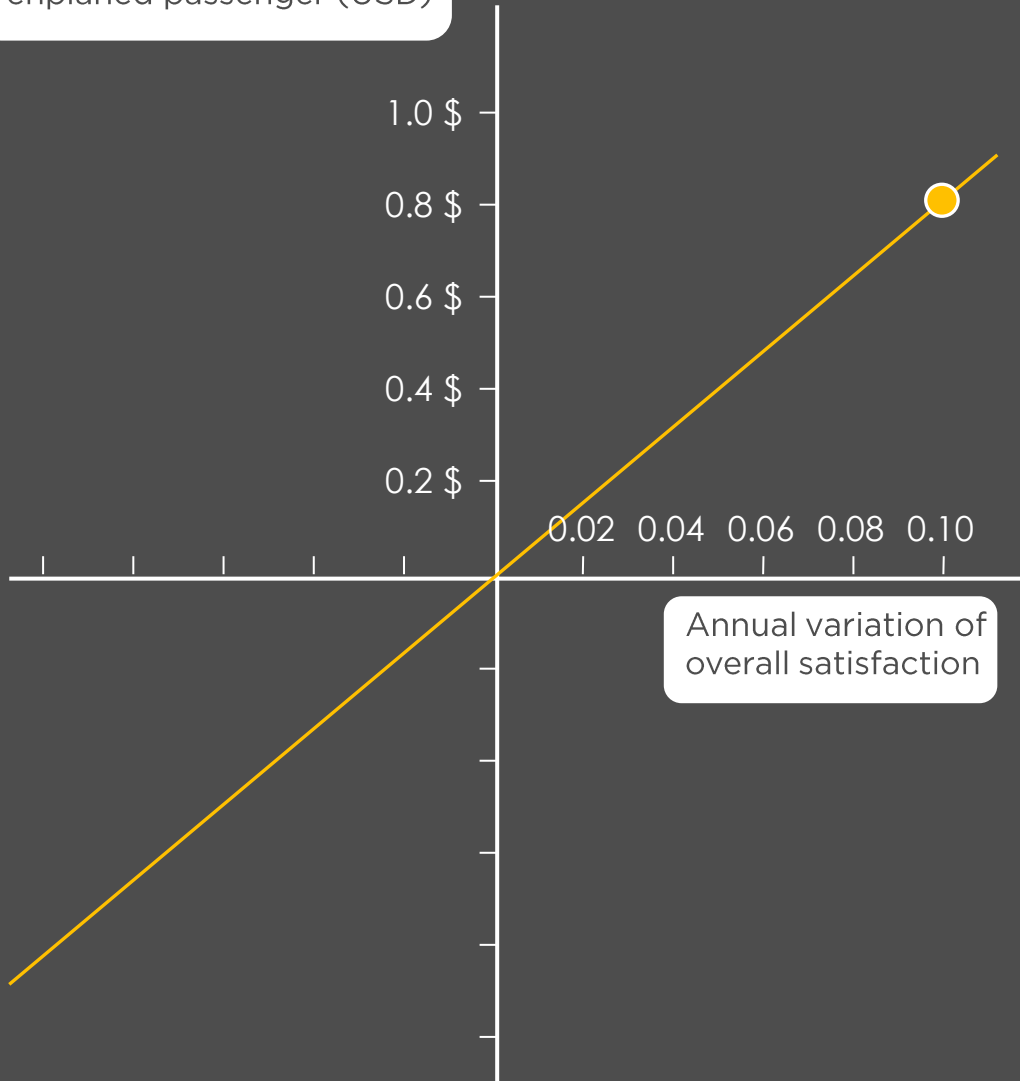
Big is beautiful

When passengers spend significant amounts of time at the airport they appreciate first class facilities and thoughtful ambience. (As long as queuing is manageable)

2 WHY IS AMBIENCE IMPORTANT?

When overall satisfaction
increases **non-aeronautical
revenue grows as well**

Annual variation of non-aeronautical revenue per enplaned passenger (USD)



Annual variation of overall satisfaction

Rule of thumb:

0.1 increase

of overall satisfaction levels compared to the previous year (on a 5 point scale)



0.8 USD growth

of non-aeronautical revenue per enplaned passenger

Source: DKMA commercial research



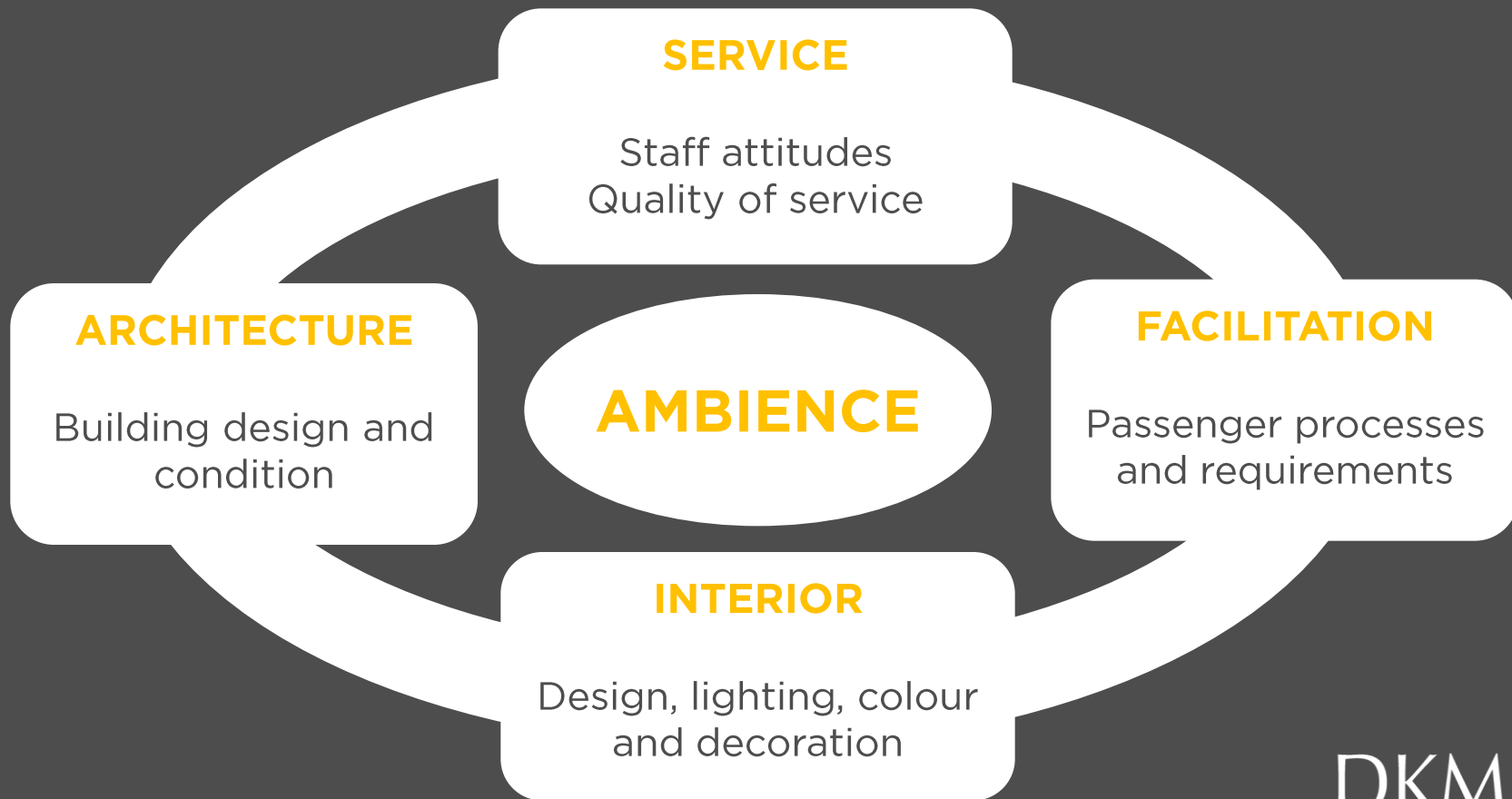
For most airports,
ambience is **the #1 driver
of passenger satisfaction**

The ambience of an airport defines a great experience...

Poor experiences can be caused by many factors

Ambience arises from all aspects of the airport working in harmony

Only one bad factor is needed to destroy the experience, because passengers remember problems





What is **ambience?**

“Ambience is not really something passengers see, but rather something that is felt, something that is experienced.”

What is ambience?

The character and atmosphere of a place.
A feeling or mood associated with that place.
A particular environment or surrounding influence.



Architecture, structure, maintenance
Lighting, decoration, interior design
Staff attitudes, rules, regulations.

“Good ambience can make the whole experience seem better.”

3 CREATING THE AIRPORT EXPERIENCE ARCHITECTURE.

The building's structure itself can create a great experience

By promoting a feeling of:

- Space
- Light
- Cleanliness
- Quality
- Comfort
- Good lines of sight
- Natural passenger flows
- Sense of wonder



Hong Kong

Defining the experience through architecture often requires an **element of surprise** or **uniqueness** or a **sense of wonder**



Beijing



Seoul Incheon

An airport's ambience can change over time – depending on the time of day, weather, season, etc...

By placing the lights in the ceiling, like stars in the sky, Kuala Lumpur creates a magical, night time experience

DAY



Kuala Lumpur

NIGHT



Kuala Lumpur

An airport's ambience can change over time – depending on the time of day, weather, season, etc...



Paris Charles de Gaulle

The glass ceiling at Paris Charles de Gaulle created a light airy ambience during the winter months.

But became a greenhouse in summer raising terminal temperatures to almost intolerable levels.

New facilities often make a huge difference



Singapore Changi

Singapore Terminal 3

Attention to detail is key

Regular maintenance, renovation and innovation creates outstanding facilities



Singapore Changi

Singapore Terminal 2

Cleaning team cleaning the star on the top of their 7m high Christmas tree.

3 CREATING THE AIRPORT EXPERIENCE **PASSENGER PROCESSES.**

Ambience goes unnoticed when the passenger is stressed – **but good processes don't create ambience**



Airport processes tend to have a negative effect on passengers, **distracting** and sometimes **detracting** from the experience

- Don't operate at near or over full capacity if possible
- Make sure queues are short, check-in is welcoming and security is professional
- Good lines of sight draw the passenger forward
- Minimal visual pollution (e.g. excessive adornments, construction or retail)
- Where possible prioritize direct, short walking distances
- Protect easy passenger flow (no pinch points or obstacle courses)
- Create distractions on long straight bland corridors (walk to eternity)

Interior architecture and design should not **disrupt passenger flow** or cause **visual pollution**



Dubai



Dubai

Low ceilings create feeling of oppression and commercial outlets in the corridor disrupt the passenger flow.

Don't make your signage compete

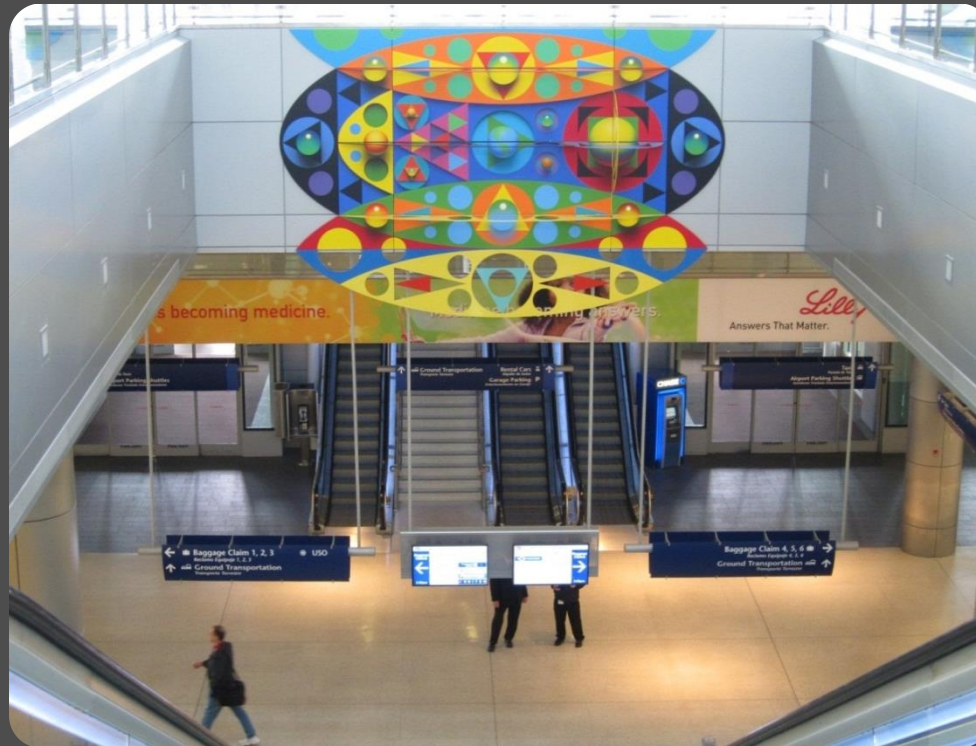
Advertising should not overshadow key wayfinding signs



Indianapolis

Don't make your signage compete

Artwork should not overshadow key wayfinding signs



Indianapolis

Prioritize **clear, visible signage** and **long lines of sight** – minimize visual pollution



Bangkok Suvarnabhumi

Small signage and lack of clear lines of sight make finding the route to airside difficult.



Delhi

One large and very visible sign helps passengers instantly know where to go post check-in.

Prioritize **clear, visible signage** and **long lines of sight** – keep walking distance as short as possible



Two minute walk from Nagoya's access plaza (taxi, bus, train, boat) to security.

Nagoya

The long walk to freedom – if it cannot be avoided, **disguise** it and **distract** passengers



Dubai



Chicago O'Hare

3

CREATING THE AIRPORT EXPERIENCE
INTERIOR DESIGN.

MAP a high quality experience

MAINTENANCE / UPKEEP

- High quality materials (floors, walls, seating etc.)
- Clean, tidy, well maintained facilities
- No litter, graffiti, worn or damaged facilities
- Attention to detail (no visible wires / duct tape)

ATMOSPHERE

- Spacious
- Lots of natural light
- Diffuse / reflected light
- Not too much dark colour
- Sense of uniqueness – local/cultural touches
- Greenery / plants - alive, in good condition and well arranged

PATHWAYS & ROUTES

- Few signs, large signs, clear signs
- Minimal visual pollution
- Tidy, no clutter or obstructions to passenger flow
- Distractions on the walkway to eternity

Great ambience often comes from a certain level of **uniqueness** which **differentiates** the airport and **makes it special**

Consistency and incremental rather than revolutionary change helps promote great ambience



Singapore Changi T2



Singapore Changi T3

Airports can differentiate themselves by interpreting local traditions and culture through new eyes



Delhi



Nagoya

Airports can differentiate themselves by interpreting local traditions and culture through new eyes



San Francisco

Airports can differentiate themselves by interpreting local traditions and culture through new eyes



San Francisco

Airports can differentiate themselves by interpreting local traditions and culture through new eyes



Delhi



Mumbai

Airports can differentiate themselves by interpreting local traditions and culture through new eyes



Las Vegas



Las Vegas

Embrace **modern needs**



Ottawa

Embrace **modern needs**



San Francisco

Embrace **modern needs**



San Francisco

Avoid clutter everywhere – clutter is stressful and looks untidy



Indianapolis

Too many signs actually hides the key signage.

Signs pointing to signs are counterproductive.

Keep signage brief and to the point – signs should be simple to understand



Kuala Lumpur

- Pictograms to the left and right is confusing.
- Too much information makes signage difficult to read.
- Progressive disclosure of information only.
- Minimize number of languages.

Information overload is stressful

too many signs in one location means none will be read



Halifax

Too many signs creates **information overload** which is stressful



Cape Town

Gate concourses should **prioritize gate signs**



Nagoya

Avoid information overload



Chicago O'Hare

3 CREATING THE AIRPORT EXPERIENCE **CUSTOMER SERVICE.**

Staff can **make or break the passenger experience**

1. Strong customer service focus can be habit-forming and leads staff to be more responsive to colleagues and work better and more efficiently together.
2. Great customer service can be a virtuous circle. Staff courtesy makes passengers friendlier which reinforces the courtesy of the staff (and vice-versa).
3. Passengers appreciate and return for great customer service.

Common factors for great customer service

- Exceed expectations for your country and region
- A long queue causes everyone's courtesy to evaporate
- Professional, courteous, friendly, helpful
- English speakers everywhere are usually essential for international airports

Staff attitudes and behaviour send a message about your airport's ambience.

Staff and customer service messages

We want to welcome you!



Beijing

Staff and customer service messages

Our whole community wants to welcome you!



Calgary

Staff and customer service messages

You are in a war zone!



Staff and customer service messages

Do not disturb!



Port Elizabeth

KEY TAKEAWAYS.

Creating the passenger experience

- Exceed expectations / the norm for your country / region
- Clean, tidy airport, well maintained
- Local culture / sense of uniqueness / novel touches
- Sense of wonder in the architecture and interior design

Protecting the passenger experience

- Don't operate terminals near or beyond full capacity
- No long queues
- Professional, courteous staff
- Easy wayfinding

The easiest way to improve your airport ambience



Ambience survey

Learn what sort of ambience
your passengers want

For more information,
please contact:



Ambience assessment

Get an expert review of your
ambience and tips to improve

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ABOUT DKMA

DKMA has offices in Geneva and Montreal. We help over 300 airports worldwide **maximize passenger experience & spending**

Our story

DKMA was formed in 2005 and one of its first projects was to develop and manage the Airport Service Quality initiative with ACI.

Since then, we have become one of the world's leading airport market research consultancies, specializing in helping airports grow their non-aeronautical revenue by delivering an improved passenger experience.

Over the years we've worked with over 300 airports around the world as well as airport management groups, banks, investors and concessionaires.

Our services

- Passenger research
- Service quality advisory
- Service quality management training
- Traffic forecasts

The only 3 surveys your airport needs to truly understand your passengers

AES
Airport Experience Survey
See what they think of your airport
Monitor your performance, find out what drives satisfaction and what is making passengers unhappy

ADS
Airport Demographics Survey
Learn who your passengers are
Get detailed personas & identify your most profitable segments

ACS
Airport Consumer Survey
See how much they spend
Understand consumption habits and identify what drives spending

Some of our clients

GENÈVE
AÉROPORT

DFW

Adelaide
Airport

KEF KEFLAVIK
INTERNATIONAL AIRPORT
ISAVIA

AIRPORTS COMPANY
SOUTH AFRICA

DENVER INTERNATIONAL
AIRPORT
TOGETHER WE SOAR

YYC™ CALGARY
AIRPORT
AUTHORITY

Dubai Airports
Connecting the World

Tampa
International
Airport