

## CONVENIENT AIRPORTS: POINT OF VIEW OF THE PASSENGERS

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### ABSTRACT

The competition among airlines or among airports aiming at to increase the demand for its services has been more and more incited. Knowledge the perception of the users for the offered services means to meet the customer's needs and expectations in order either to keep the customer, and therefore keep a significative advantage over competitors.

The passenger of the air transportation wants rapidity, security and convenience. Convenience can be translated by comfort that the passenger wants for the price that he can pay. In this paper had been identified, as a result of a survey achieved in six Brazilian airports during 2002, the best indicators in the passenger's perception. These indicators among any others were listed in the handbook of Airports Council International (ACI). Distinctive perceptions were observed among passengers with different travel motivations.

This survey had been carried through in the airports of Brasilia, Porto Alegre, Salvador, Fortaleza, Curitiba and Belém. Considering this survey we can identified the most attractive airport among them.

This work is a way to help improve quality of service, in particular, in these six airports of the Brazilian network. The results should be published and made available to all the parties concerned (airport authority, airlines and service providers) and should lead to corrective action when the passenger is not satisfied with the service.

### Keywords

Terminal, passenger, quality, service, installations, methodology, measurement

### INTRODUCTION

In the last decades, the airports had passed not to be simple terminals for the exchange in transport ways. New functions had been inserted, receiving multiple services and becoming true centers of purchase, making possible the access of new users the offered services.

Today, the quality, more than a modism became essential for the valuation of the services, in any industry, any market. The perception of quality of the airport terminals depends on some factors. One of them if relates to the proper characteristics of the passengers. Others can be linked to the architectural concept used in the conception of the terminal and its installations.

In Brazil, the air transportation and the airports are in process of transition with the modernization of the airports and the entrance in the market of airlines with different plans of work and levels of service.

The airports managed for the INFRAERO concentrate 97% of the movement of the regular air transportation in Brazil, representing, in 2001, 2.1 million landings and takes-off of national and foreign aircraft, carrying 73,9 million passengers and 1,25 million of tons of load. In 2001, the invoicing was of R\$1,47 billion. For 2002, the company had the

perspective of superior growth 8% in the movement of passengers and foresees investments of the order of R\$ 900 million in projects and services in the airport sector.

Currently the airports are dealing with customers who demand different installations and services. All this situation is generating discussion about the quality and level of offered service.

Based in the indicators of quality raised by the Airports Council International (ACI, 2000), this work evaluates 6 Brazilian airports terminals for the indicators identified for the ACI and develops a methodology of evaluation of the quality in airports terminals, based in the perception of the passengers. With this, planners and operators of airports, that intend to create or to extend, start to make use of a methodology to identify to the characteristics or the aspects that more contribute for the perception of quality of services at airports for users, making possible to the professionals to undertake solutions who contribute for a large perception of quality, making possible after all the biggest satisfaction of the customers (passengers) inside of airport terminals.

### **QUALITY INDICATORS**

Currently, the airports are endowed with diverse operational areas with systems and processes that are linked. With this, the users can try and evaluate the quality offered for the installations of the airport. Each process can consist in a quality indicator and all in set can produce a quality global that can be identified in relation to the offered service.

Thus, one searches to identify to the indicators of quality in each operation of the airport and its installations, where each stage of processing can be considered as a link of a chain of services.

The IATA (1991), (International Air Transport Association), it developed ADRM (Airport Development Reference Manual), establishing indicators of quality for the development of airport terminals under the optics of the passengers.

They are indicators established by the IATA:

- easiness of access to the airport through highway or train;
- lesser distances of the curb to check-in and check-in to the gate of embarkment without changes of levels;
- lesser distances of the aircraft the area of restitution of luggage and customs and of customs to the curb or the station of train;
- attractive and surrounding architecture that provides a relaxation atmosphere;
- lesser lines in the security and control of passports;
- agility in the departure of the aircraft;
- fast restitution of luggage with ample mats;
- clear and concise visual communication;
- variety of store;
- rest area, conveniently leased close to the embarkment gate;
- good restaurants and the moderate prices.

It is verified that diverse observed factors as indicating of quality of service exist. These indicators can be most important at the moment of the accomplishment of the survey, being able to vary as: time of the survey applications (seasons), type of passenger and trip, local culture and application of the survey (with the passengers or the operators of the airport). In this work it was adopted as main reference to the survey carried through for the ACI (2000), Quality of Service at Airports: Standarts and Measurements, that if classified from a world-wide survey the indicators of quality in the current airports.

#### **ACI indicators**

For the development of the survey had been adopted the indicators that had received the largest concept in the survey from the ACI (2000).

The passage carried through for the passenger in the embarkment processing was considered in the proposal. This passage is represented by three areas of measurement, that contains the quality indicators that they will be evaluated and appraised for the passengers.

The measurement areas are:

- processing time;
- available areas (services/facilities);
- level of comfort and quality of attendance.

One considered in the embarkment flow the following sectors:

- access to the airport;
- hall of passengers;
- check-in;
- security check;
- embarkment room.

To follow, the quality indicators that will be evaluated and appraised for the passengers:

The indicators that will be evaluated in the access to the airport/terminal are:

- general signalling;
- vacant number;
- variety of transports.

The indicators that will be evaluated in the hall of passengers are:

- available areas;
- distance between instalations/components;
- availability of elevators/escalators;
- availability of stands of luggage;
- thermal comfort;
- acoustic comfort;
- visual sensation (esthetic);
- availability/confort of seats;
- availability of the signaling;

- availability/cleanness of the sanitary;
- general security;
- general cleanness;
- general satisfaction for the given services/quality of the service.

The indicators that will be evaluated in essential commercial services are:

- practised prices;
- available areas;
- quality of the attendance;
- variety of installations.

The indicators that will be evaluated in the information services are:

- availability of the service;
- quality of the attendance.

The indicators that will be evaluated in the FIDS (flight information display system) are:

- FIDS availability.

The indicators that will be evaluated in check-in are:

- processing time;
- available area;
- cordialidade of the attendance.

The indicators that will be evaluated in security check are:

- processing time;
- available area;
- attendance.

The indicators that will be evaluated in the departure lounge are:

- available services;
- confort/availability of seats;
- available area;
- cleanness;
- thermal comfort;
- acoustic comfort;
- visual sensation (esthetic).

#### **Application of the indicators (location survey)**

From the preliminary definition of these 36 above described indicators of quality, was developed a survey to catch the relevance attributed for the passengers amongst the indicators of quality established by the ACI, and other survey with sights to a local appreciation, searching to soon get an evaluation of the terminal of passengers after the installment of the service.

## **METHODOLOGY AND APPLICATION**

To select the airports for the accomplishment of the location survey, had been observed several considerations amongst which: airports of net INFRAERO of different geographic localizations, two of them in the South Region, one in the Center-West, one in North and two in the Northeast.

For the accomplishment of a more including research it was necessary beyond the support of the FAPESP (Foundation of Support the Research of the State of São Paulo), the support of the DAC (Department of Civil Aviation), with the supply of the air transportation and the support to a researcher auxiliary and support of the INFRAERO, that allowed our presence in its rooms of embarkment during the periods of accomplishment of the survey.

The airports chosen for the accomplishment of the survey had been:

- Salgado Filho International Airport – Porto Alegre-RS (POA);
- Afonso Pena International Airport – Curitiba-PR (CWB);
- Presidente Juscelino Kubitschek International Airport – Brasília-DF (BSB);
- Val de Cans International Airport – Belém-PA (BEL);
- Pinto Martins International Airport – Fortaleza-CE (FOR);
- Luiz Eduardo Magalhães International Airport – Salvador-BA (SSA).

### **Strategy and application**

For the development of the survey strategy, it was considered necessity of if covering, of representative form, all the moments of operation of the terminal. The possible period for application was the month of July of 2002. Positive aspect: it is a period of high movement in the majority of the searched airports. Negative aspect: in some cases it can not represent a period of typical operation and with adjusted perceptions most of its universe of users. They had been adopted, at the very least, 3 days of survey in each airport and carried through collections in the 3 turns: morning, afternoon and night.

The location surveys was initiated in day 07 of July and was finished in 04 of August of 2002, counting on 2 researchers, being carried through in the embarkment room, therefore in this place the passengers already had observed or used the installations and felt the quality of services in the airport installations. This strategy of accomplishment in the embarkment room makes possible that the passengers answer the survey with more tranquillity, therefore already had carried through check-in and is only waiting for the call of entrance in the aircraft. The periods had been selected in accordance with the frequency of the flights in the airports.

Each researcher applied a type of survey, leaving clearly for interviewed the objectives of the same one, being the form filled for the proper interviewer so that it did not have variety in the interpretation of the questions.

### **Survey instruments**

The survey instruments had been developed with the purpose of if identifying the main indicators of quality of the airports and with the purpose of if analyzing and appraising the

installations and services of the airport in question. In survey 1 - General (identification of the main indicators), 22 indicators had been selected to be appraised with: Essential, Desirable and Indifferent. In survey 2 - Local (analysis of the indicators of quality of the airport), 36 indicators had been selected to be appraised in a scale that varied: Very good, Good, Regular, Bad and Very bad. The concepts above attributed had been based on the publication of the ACI.

### Results of survey 1 - General

Analyzing the results of survey 1 – General, it is verified that amongst the indicators of the access/parking, the general signalling and the vacant number they had been considered very important being that the variety of transports less important, concluding that the existence of one has carried efficient can be more important that several not efficient.

In the terminal, it is observed that availability of elevators, baggage trolleys, seats and signalling are very important and the distance between installations and esthetic are less important, being able to infer, for these results, that in the terminal the operational areas, have more relevance, probably for dealing with the processing of the passenger involving time, easiness, localization and comfort.

In the essential commercial works, it is observed that all indicators are between the excellent ones, being that the practised prices and quality of the attendance and had make look like more importance that the variety of installations, indicating that the passengers and users look in first place the quality and the prices that the variety of installations.

The information services: availability and attendance, FIDS (Flight Information Display System), the time of processing the cordialidade in check-in and security, had been considered very important, revealing the importance that if must take with these indicators in all the stages of processing.

Finally, in the embarkment room, the availability of seats and services they had been considered essential followed for the esthetic, passing the impression that the passengers search in first place the comfort that properly services and esthetic place.

Table 1, shows the frequency of indication of the concepts in global terms.

Table 1 - frequency of indication of the concepts

concept	% indicators
1 - indifferent	7,07
2 - desirable	35,45
3 - essential	57,48

The results had indicated that none of the indicators can be considered indifferent by the user. But four, amongst the considered ones, had been considered desirable:

**In the airport/terminal**

- Distance between instalations/components;
- Visual sensation (esthetic).

**In the essential commercial services**

- variety of installations/services.

**In the departure lounge**

- Visual sensation (esthetic).

The indicator that was considered by the passengers who travel the businesses as being desirable, but not essential beyond the listed ones above was:

**In the essential commercial services**

- Practised prices.

Therefore, the quality indicators had been established that are essential and desirable in the airports, according to vision of the passengers.

**Results of survey 2 – Local****Index of quality of the airports**

An index of the perceived quality of the services and the installations of the airports was gotten calculating it applied weighed mean to the indicators of the airports. With this calculation the weighed mean of the indicators in relation to the concepts of 1 at 5, where 1 corresponds to poor, 2 to the bad, 3 when average, 4 to the good, 5 to the very good.

Table 2, indicates the percentage of the intentions of the trips in the period of survey application.

Table 2 – Intention of the trips

<b>Airport*</b>	<b>Leisure</b>	<b>Business</b>	<b>Other</b>
<b>POA</b>	31,21	65,25	3,55
<b>CWB</b>	16,11	80,54	3,55
<b>BSB</b>	20,71	68,57	10,71
<b>BEL</b>	19,15	78,01	2,84
<b>FOR</b>	46,26	52,38	1,36
<b>SSA</b>	22,70	71,17	6,13

\*IATA code (International Air Transportation Association)

In the next Table 3, to follow more frequently displays the weighed mean of the indication

Table 3 – Weighed mean of the indicators

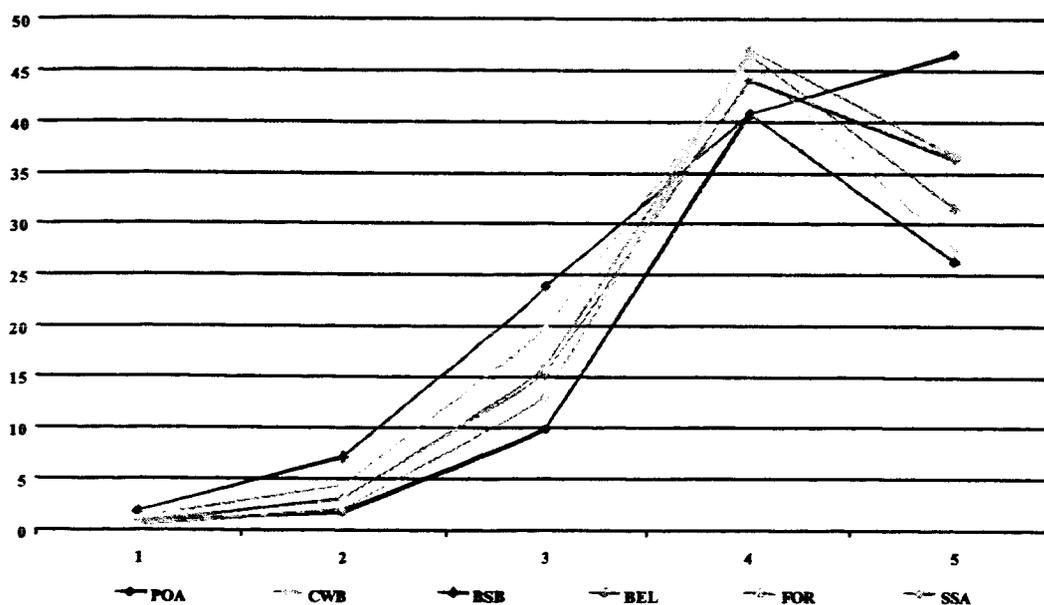
Quality indicators	Airports					
	POA	FOR	BEL	SSA	CWB	BSB
<b>Access/Parking</b>						
general signalling	4,10	4,19	4,10	4,06	4,16	4,14
vacant number	4,03	4,06	4,11	3,91	3,77	3,53
variety of transports	3,64	3,79	3,60	3,84	3,53	3,40
<b>Airport/Terminal</b>						
available areas	4,56	4,41	4,49	4,24	4,27	4,04
distance between instalations/components	4,30	4,10	4,11	3,82	3,97	3,76
availability of elevators/escalators/moving walkways	4,31	4,14	3,91	3,95	3,79	3,78
availability of trolleys	4,41	4,41	4,40	4,37	4,27	4,16
thermal comfort	4,57	4,37	4,33	4,17	3,75	4,23
acoustic comfort	4,47	4,27	4,14	4,21	4,03	3,84
visual sensation (esthetic)	4,68	4,28	4,50	4,28	4,15	3,99
availability/comfort of seats	4,34	4,29	4,17	3,53	3,53	3,67
availability of the signaling	4,25	4,18	4,09	4,00	3,99	3,81
availability/cleannes of the sanitary	4,40	4,08	4,43	4,24	4,33	4,19
general security	4,42	4,18	4,06	4,21	4,14	4,01
general cleanliness	4,60	4,36	4,46	4,49	4,42	4,12
general satisfaction/quality of service	4,42	4,29	4,18	4,09	4,05	3,80
<b>Essential commercial services</b>						
practised prices	3,43	3,40	3,43	2,88	3,11	2,79
available areas	4,25	3,79	3,75	2,91	3,63	3,53
quality of the attendance	4,13	4,01	3,94	3,82	3,87	3,73
variety of installations	3,67	3,86	3,72	3,56	3,46	3,41
<b>Information services</b>						
availability of the service	4,22	4,03	3,77	3,85	3,76	3,59
quality of the attendance	4,29	4,09	3,88	3,94	3,13	3,82
<b>System of information FIDS</b>						
FIDS availability	4,24	4,03	3,84	3,91	3,87	3,80
<b>Check-in</b>						
processing time	4,14	4,19	3,99	3,85	3,73	3,70
available area	4,35	4,11	4,16	3,92	3,79	3,80
staff friendliness/attitude	4,49	4,31	4,33	4,16	4,19	4,05
<b>Security Check</b>						
processing time	4,37	4,17	4,16	3,99	4,08	3,94
available area	4,35	4,13	4,19	4,10	3,98	3,87
attendance	4,49	4,27	4,26	4,36	4,19	4,04
<b>Embarkment room</b>						
available services	4,01	4,05	3,84	3,97	3,60	3,63
confort/availability of seats	4,31	4,24	4,03	3,51	3,59	3,53
available area	4,45	4,35	4,39	4,44	3,93	3,85
cleanliness	4,68	4,48	4,52	4,59	4,41	4,15
thermal comfort	4,56	4,29	4,21	4,31	3,85	4,18
acoustic comfort	4,49	4,29	4,18	4,19	4,09	3,83
visual sensation (esthetic)	4,60	4,19	4,41	4,33	4,15	3,99

In the next Table 4, it is observed frequency of distribution of the concepts that indicate the global situation of the quality of services and installations of the airports.

Table 4 – Frequency of distribution of the concepts

Concepts	Airports					
	POA	FOR	BEL	SSA	CWB	BSB
1 - poor	0,87	0,59	0,77	1,05	1,28	1,84
2 - bad	1,82	2,01	3,16	2,98	4,46	7,19
3 - average	9,9	13,03	15,28	15,96	19,8	23,91
4 - good	40,75	47,08	44,12	46,53	45,75	40,70
5 - very good	46,66	36,75	36,38	31,6	27,59	26,35

Graph 1 – Frequency of distribution of the concepts



In the previous graph, observes that Brasilia (BSB) presents greater taxes of indication of concepts poor (1), bad (2) and average (3). Fortaleza (FOR) presents the biggest incidence of good concepts (4), but Porto Alegre (POA) if detaches with the biggest incidence of very good (5) and the minor of the unfavourable index. The results of POA and BSB if show discordant. Still that, excessively they receive a conceptualization relatively similar. Applying the calculation of the weighed mean in the results of table 4, one gets the indices of global quality of the airports displayed in table 5. These index had been gotten being multiplied for 2, the result of the weighed mean, for a scale of 1 at 10.

Table 5 – Index of global quality of the airports

Index of quality	Airports					
	POA	FOR	BEL	SSA	CWB	BSB
	8,62	8,32	8,22	7,98	7,82	7,66

It can be concluded that in the period of accomplishment of the location survey between the searched airports, the Salgado Filho International Airport, Porto Alegre (POA), is distinguished as most attractive for offering to the best quality of services and the best installations according to its passengers.

### CONCLUSIONS

The developed methodology serves as an instrument to evaluate the quality of the installations and services in the airport.

This work is resulted of two years of research that resulted in the master dissertation of the author. The developed methodology made possible that the proper users of the airport installations contributed of direct form in the analysis of the terminals, how much to the installations and offered services making possible, thus, to get the quality indicators that are the essentials, desirable and indifferent in the airport terminals and the analysis of the installations and the quality of the services offered for the searched airports.

The survey had an application limited (in 3 days for airport) for the gotten resources, but, these, had been indispensable for the extend of passengers and airports that was possible to analyze. To get itself resulted still more trustworthy they are indicated to the application of the methodology in at least four months during the period of one year and per seven days of the week, thus making possible to identify to the quality of the installations and services in all the operational scenes of the airports as, hours peak and seasonal.

Finally, the work made possible the validation of plus an aid tool the designers and operators of airports, that they start to make use of a methodology to identify to the characteristics or the aspects that more contribute for the perception of quality of services of the airports for its users, making possible to the professionals to undertake solutions that contribute for a perception greater of quality, making possible after all the greater satisfaction of the customers (passengers) inside of the aeroportuário terminal.

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