

## THE IMPACT OF DESIGN AND CONSTRUCTION OF AIRPORT TERMINALS ON THE BEHAVIOR OF PASSENGERS

**Ing. Viktória ERBYOVÁ, Ing. Ján FERENC, PhD.**

Technical University of Košice, Faculty of Aeronautics, Departments of the Air Transport Management, Rampova 7, 041 21 Kosice, Slovakia

\*Corresponding author: viktoreriaerbyova@tuke.sk, jan.ferenc@tuke.sk

**Summary.** The theme of design was and will always be important. In the aerospace industry, the concept of design very much needed, especially construction of modern airport terminals. From the perspective of passenger logistics, the commercial developments at the airport seem to be at odds with the operational management processes. Shopping passengers may not only forget the time and consequently delay their flights, but commercial developments might also block off visual lines that facilitate passengers' wayfinding and reduce their orientation.

The impact of design on the passenger terminal is very important because it ultimately affects their behaviour. The aim of the thesis was to find out how architectural features and overall design of airport terminal impact on the behaviour of passengers.

**Keywords:** design, construction, airport terminal, modern terminal, behaviour of passengers

### 1. INTRODUCTION

The airport in the past aimed to get passengers to their luggage as efficiently as possible as quickly as possible. Today the emphasis is on the advertising of good marketing, as even the architecture of the design, which can be even used to facilitate passenger flows in airport.

However, in recent decades the development of advertising design is increasingly important for overall gain marketing Airports. Business sales now account for about half of total sales. To increase revenues from the commercial district, the passenger must be designed redesigned to avoid restrictions on the movement of passengers.

The goal was to explain the need, airport terminal, the description of terminals Buducnost see how design impacts construction of airport terminal to the feelings of the behavior of passengers. The work method was used a questionnaire in order to determine satisfaction with the design of structures and even to the Košice airport.

### 2. BASES FOR DESIGN OF TERMINALS FROM A DESIGN PERSPECTIVE

What we mean by modern design ? Modern design means planning and creating objects adapted to our lifestyle, our skills and ideals. Its origins date back to the 19th century, when creative and sensitive people react to far widespread problems caused by changes in the areas of mass production and technology. Modern design ever since during their balanced development received many external forms.

Intelligent design the airport can offer much more than just terminal building and look beautiful and iconic . Good design offers the advantage of virtually every aspect of airport operations. Some of the world's best architects working on projects of airport terminal buildings and give the iconic look both inside as well as outside. A good example is the TWA Flight Center in New York, which is interesting as the exterior as well as interior design and architecture (figure no. 1 ) Bc. Viktória Erbyová



Figure. 1 Terminal TWA in New York

### 3. ANALYSIS OF STRUCTURAL MATERIALS AND ON PASSENGER SATISFACTION OF KOŠICE AIRPORT

From an urban perspective, the new terminal is designed to respect the original building structures and to appropriately allocated additional urban unit from the arrival to Kosice. An arch plan of the new terminal functionally and mass supports the future integration of the control tower at the airport. Urban design and functional airport allows seamless connection to existing facilities while fully retaining its logical functionality. Allows the creation of high-quality space as part of the city as well as by the operational areas.

Architectonic- art solution is based on the footprint cutouts annulus. The total mass solution is designed with an effort to hollow core, clean and airy and original compositions with a strong action of the roof plane and morphological elements evocative aerial vehicles. More precisely, the terminal roof Kosice resembles the shape of an aircraft wing (Fig. 2) and round windows, windows resemble small aircraft.

As the Kosice airport we consider small regional airports such as for recreation as well as for business travelers, advertising and marketing are not playing up such an important role as in other major international airports. Given the low number of passengers carried per year for architects and designers it has been important to design interior with many shops, bars and restaurants. Despite a small and cozy terminal, there still lacks sparkle design and comfortable feeling.

The aim of Košice airport should be progress not only ensure air services but also to modernize the interior design of airport terminal. In the next chapter, we analyze passenger satisfaction at the Kosice airport.



Figure. 2 Košice Airport .

### 3.1. Analysis satisfaction of passenger on Košice airport

The goal was to identify the needs of passengers and the impact of design and construction of airport terminals to their feelings and behavior. In a study they were asked random passengers, which was a total 310, which was sent a questionnaire on the Internet. Average time to complete the questionnaire was 10 minutes. Gender Representation was almost balanced. 51.9 % were women and 48.1 % were male. Most respondents had 30 years, which can be misleading for the results since they failed to achieve a balanced representation of other ages. 86.1% , accounted for traveling for recreational purposes and only 13.9 % were business passengers.

The main objective of the questionnaire was to find out what travelers prefer shape exterior and interior terminals. Whether they like them more modern, rounded, atypical edges, or whether they prefer a simple straight line. Comparison dark interior to the light, or they would have taken more green or green in not missing, the questionnaire we asked what favor materials and prefers high ceilings or low, what they lack the Košice airport, whether in their opinion the Košice airport attractive in terms of design or a design at all terminals somehow affects their feelings and behavior at the airport.



Figure. 3 shows an example of the use of questions in order to determine which terminal exterior passengers prefer

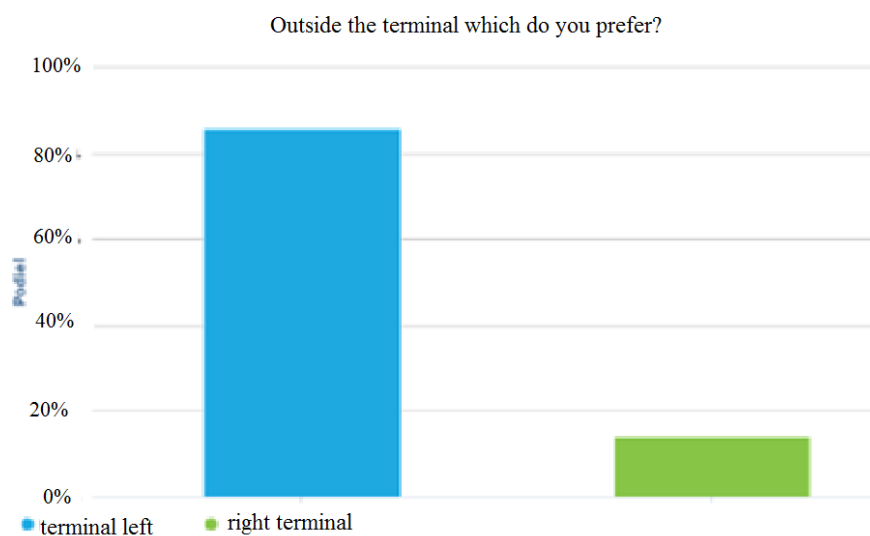
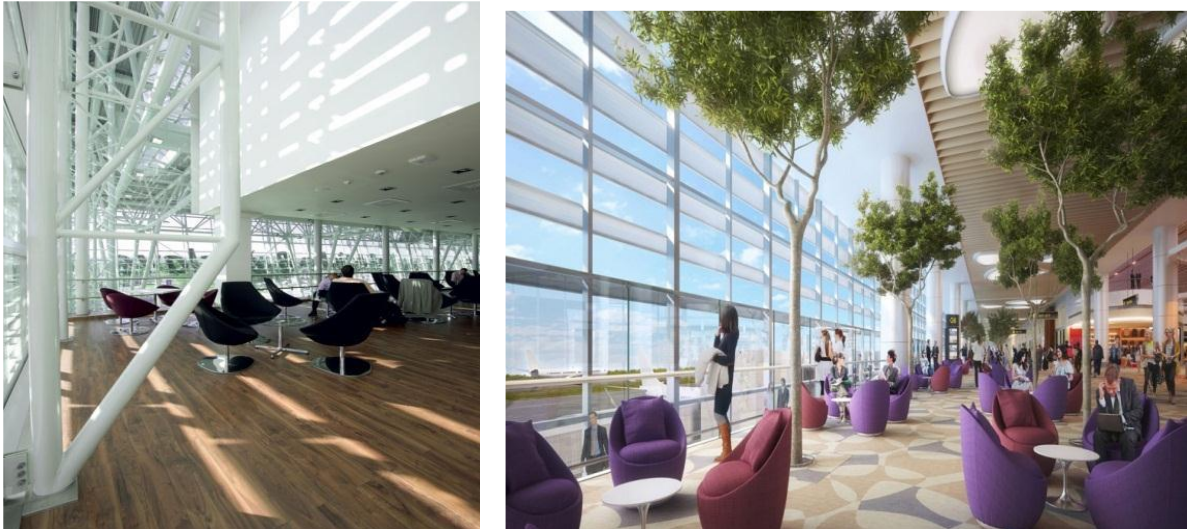


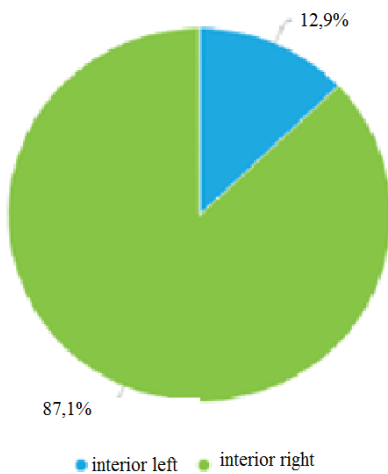
Figure. 4 Exterior of terminal

Figure no. 5 shows an example of the use of questions in order to determine which terminal interior passengers prefer. The aim was to find out which terminal interior is more like them in terms of lighting, ceiling, green, and overall design. Up to 87.1 % of the respondents clearly prefer the interior right. It is known that high ceilings, a lot of natural light and green operate at air and soothing.



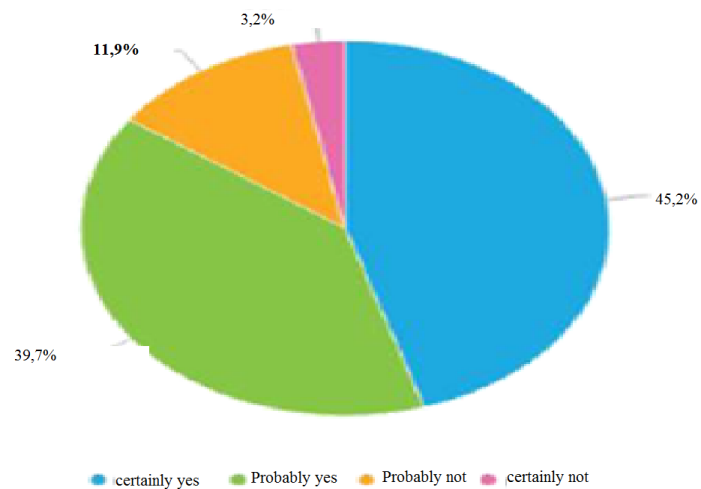
**Figure. 5** shows an example of the use of questions in order to determine which terminal interior passengers prefer

Interior terminal which do you prefer?



**Figure. 6** Interior of terminal

It affects you think the interior design of terminals your mood and behavior ?



**Figure. 7** Impact of design

Figure no. 6 is displayed respondents' answers to the question whether the existing terminal interior design affects their mood and behavior. This question is a central issue of the questionnaire. 84.9 % of respondents said that design really affects their feelings and behavior.

### 3.2. Summary of the survey questionnaire

In general, passengers clearly prefer the wide open space with high ceilings and bright lighting. Preferred curved, more modern terminal in front of the terminal with simple clean lines. Grocery design features a curved roof was far more interesting than ordinary duty-free shop. Greenery has been the missing link for passengers, contributing to a sense of peace and comfort. This can also be a



way to increase revenue from commercial activities in the Kosice airport. The material that was missing most of the respondents to the Košice airport was mainly wood. An important finding of this study was that the design of terminals has a major impact on the emotions and behavior of passengers. People perceive design and architectural design features, such as colors, shapes and lighting. Finally, it is possible to emphasize the importance of culture and design of airport terminals. In the future, the construction of new or extension of the old terminal it is important to take account of the needs of passengers, or to do research in humans in design.

I therefore recommend that when designing the passenger compartment has been much more attention to the cultural background to those for whom it is intended space, although this issue requires deeper research .

#### 4. PROPOSAL POSSIBILITY OF IMPROVING THE ATTRACTIVENESS OF KOŠICE AIRPORT

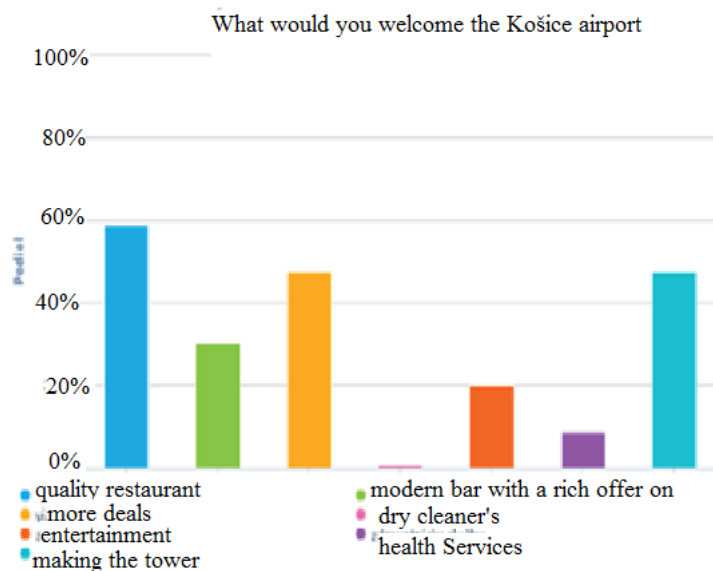


Figure. 8 Demand for Košice Airport

Košice airport more attractive to propose the following tasks:

- Making the tower to the public for observation arriving or departing aircraft .
- Building a representative restaurant overlooking the operational areas with available times arriving or departing aircraft .
- Creating a rooftop terrace terminal.
- Open trade , which could be useful , such as food , dutty free ...
- Create a more comfortable environment in the public bar , comfortable chairs and a wider range of drinks , newspapers and magazines .
- Create relaxation zone with WiFi access. Comfortable chairs with integrated socket for connection to the Internet
- Attract tourists large map activities and services in terminals , which will contain information about leisure activities in Kosice ( accommodation, restaurants, museums, sports and entertainment centers and many others) .

- Attracting tourists representational video of Kosice, which will be shown in the arrivals terminal at aircraft.

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