

# Management Directions towards Social Responsibility in Special Population Groups by Airport Enterprises: The Case of Autism

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**Abstract**—Air transport links markets and individuals, promoting social and economic development. The review of management direction towards social responsibility and especially for the enhancement of passengers with autism is the key objective of this paper. According to a top-down approach, the key dimensions that affect the basic principles and directions of airport enterprises management towards social responsibility for the case of passengers with autism are presented. Conventional wisdom is to present actions undertaken in improving accessibility for special population groups and highlight the social dimension in the management of transport hubs. The target is to focus on transport hubs serving special groups of passengers such as passengers with autism and highlight good practices and motivate transport infrastructure management authorities and decision makers to promote the social footprint of transport. The highlights and key findings are essential for managers and decision makers to support actions and plans towards management of airport enterprises towards social responsibility, focusing on the case of passengers traveling with Autism Spectrum Disorder (ASD).

**Keywords**—Social responsibility, special groups, airport enterprises.

## I. INTRODUCTION

THE issue of sustainable development of the transport market has become increasingly prominent in the last decade. Typically, international organizations such as the OECD (ITF) and the World Bank have focus on actions to promote sustainable mobility and accessibility. These actions focus on the social component of economic development required by the adoption of the 2030 Sustainable Development Agenda by the United Nations General Assembly (2015) consisting of 17 Sustainable Development Goals (SDGs) and 169 specific targets. The actions based on this social component encourage and promote actions to drive the global community in a sustainable direction, and efforts are being made to combat all forms of inequality while ensuring that no one is left behind these developments.

In the above framework of actions, the principles mainly on environmental management measures and policies are highlighted, while few studies and publications [22]-[24] illustrate the contribution to transport social issues, as for example the contribution of transport to society and, in particular, to policies and measures to upgrade and enhance new services to special population groups.

The purpose of the paper is to present actions undertaken in

improving accessibility for special population groups and highlight the social dimension of the management of transport hubs in the direction of serving special groups of passengers such as passengers with autism. The aim of the paper is to highlight good practices and motivate transport infrastructure management authorities and decision makers to promote the social footprint of transport.

## II. SUSTAINABLE DEVELOPMENT AND SOCIAL RESPONSIBILITY PRINCIPLES

Sustainable development, a key concept for the 21<sup>st</sup> century, cannot be overlooked by scientists, decision makers, researchers dealing with development and the environment. Sustainable development is the common starting point for interaction between all "stakeholders": national and local governments, authorities, public and private sectors, such as and non-governmental organizations [1].

The principles of sustainable development were formally formulated for the first time at the 1992 Rio International Conference, which resulted in Agenda 21 [2], [3]. The sustainable development was initially defined as "development that provides long-term economic, social and environmental benefits by taking care of the needs of present and future generations." The 1992 Maastricht agreement [4], Amsterdam in 1997 [5] and the Johannesburg International Conference in 2002 [6], confirmed the necessity of sustainability and the systemic framework, incorporating sustainable development into European Union Law.

Despite the recent developments, there are still many trends and issues in several different areas that are not based on the principles of sustainable development. Demand for natural resources has increased rapidly, while biodiversity has declined overall, and larger ecosystems are receiving more and more pressure. Energy consumption in transport continues to rise, poverty persists, and therefore more efforts are needed globally to achieve the Millennium Development Goals [7]. Moreover, the recent economic and financial crisis has shown that sustainability is a crucial factor for financial stability and economic development.

Sustainable development is analysed according to the literature in three dimensions: the environment, society and the economy. Each dimension is interacted and linked to the other two [7].

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Different depictions of the concept of sustainable development have been proposed in the literature. A model, which seems to be the most widespread, is the representation of sustainable development through overlapping cycles [8]. The boundaries between sustainable development and the other components are well defined within the limits of the overlap of three cycles; the concept of sustainable development is indifferent to its three dimensions, thus reinforcing the view that sustainable development is a single goal interacting with the three dimensions [9].

### III.PASSENGER IN THE SPECTRUM WITH AUTISM

Nowadays autism is a really important issue as more and more young children are affected. Boys who are diagnosed with ASD are 4 times more than girls. Especially, 1 in 59 kids have ASD [10]. Travelling by plane is extremely difficult for a child with ASD due to unique aspects of an airport and airplane. The airport can be an extremely complex and demanding environment for a passenger with ADS, since they must respond to multiple simultaneous senses (lights, crowd, announcements etc.). Therefore, if someone is not prepared properly, he will experience anxiety and insecure feelings. Strong stress, however, arises from weakness of people to communicate their needs and to decode what's happening around them: Such conditions are obviously the environment an airport, flight, trip, unknown destination.

Nowadays traffic and especially air transport is growing fast. Adequate infrastructure and facilities are needed in order to meet these trends and provide equity accessibility and mobility, especially for passengers with hidden disabilities. The target of this paper is to review and investigate airport enterprises management directions towards social responsibility for the case of passengers with autism.

### IV.DIFFICULTIES IN ENHANCING PASSENGERS WITH AUTISM

Main differences in sensory responsiveness distinguish passengers with ASD from other groups. Often, children and adults are required to travel long distances for the vital issue of their therapies. However, this is often not feasible, as the whole air travel process is quite distracting (noises, waiting times, delays, take-off and landing, possible turbulence, etc.) [10]. Children with ASD tend to have difficulty to enhance basic rules and especially regarding social information [11]-[13]. A portion of children with ASD face high levels of anxiety, so many researchers and specialists consider that this type of the disorder is anxiety driven [14].

The evidence that children with ASD cannot act positive in different environments and daily routine is based on the fact that this is a basic attitude of this disorder. It is noteworthy that while many parents report that their child with ASD is extremely persistent in completing his or her favorite activities [10]; this behavioral propensity appears to be context-specific and is not generalized across activities and settings [15].

Procession of attending procedures inside airports should be included in social skills training, as it helps to solve social problem [16]. Passengers with ASD are objected to

communication disorders that have to do with difficulties in social interactions and understanding. In order to address these difficulties for social communication, children with ASD could be enhanced and encouraged by taking part in groups and training by special educated staff [17].

Traveling by airplane is a unique experience. Traveling by plane for a child or adult with ADS is not always a matter of leisure. Often, children and adults are required to travel and especially long distances for the issue of their therapies. Children diagnosed with ASD, face difficulties in areas such a terminal due to deficits in adaptive skills compared to the general population [18].

There are many publications that have highlighted the interrelation between issues in complicated processes for children with autism like the procedures in traveling by plane and complicated behaviors and responses in stimulating environments [19], [20]. As a result, these responses can lead to significant difficulties in a child's ability to response in such an environment and can limit the child's participation in all the social interaction, such as play, self-care, and learning activities [20].

There are two basic stages in the air travel process that are likely to create the biggest difficulties for a child with ASD. These stages include the procession through the security checkpoint and boarding at the aircraft. There are many behavioral responses that children with ASD have to engage, otherwise disruptions will be caused when a family is attempting to travel by airplane. As a result many parents will not travel by airplane with their children out of fear that their child will not be able to proceed through the airport without an extremely high level of distress [21] and this prevents the equity mobility and accessibility.

Given that in the developed world about 1 in 59 children of the general population are diagnosed in the wider range of autism, the difficulty of using the plane as a means of transport as a matter of concern for a large share of the population has created the need for appropriate transport infrastructure conditions, especially at airports, to facilitate accessibility for all of the population.

### V.REVIEW OF AIRPORT ENTERPRISES MANAGEMENT DIRECTIONS TOWARDS SOCIAL RESPONSIBILITY IN AUTISM

Many airports in recent years have developed special programs and innovative ideas to support passengers' special groups with autism to enhance mobility and accessibility. The two main approaches and strategies for managing this special group are by development of special infrastructures and educating properly staff in airports and airlines. Different types of airports, with different traffic and capacity deploy different strategies.

Malta's Airport, with 16.000 pax per day, provides quiet rooms, assistance by qualified staff during check in and boarding time and at the Baggage Reclaim. Passengers with autism and their families can experience this process a day before their flight with the support of a member of the trained staff.

UK airports have developed recently in June 2018, different

strategies with basic principles. Most of them provide special guidance's, special routes with quite paths and sunflower lanyards. Some airports like Newcastle, London Luton and Doncaster provide to this special passenger's wristband, sticker or "passports". These strategies make easier the accessibility for passengers with hidden disabilities.

Canadian airports have developed strategies and programs to support special passengers, as for example Toronto airports offer Magnus Card, which is an app for passengers with autism and other cognitive special needs and their families use it in order to enhance their mobility and accessibility. Vancouver airport promotes the program "I can fly" which includes YVR Autism Access Sticker to accelerate the accessibility process and support passengers during the process until airplane takes off.

Airports such as Vienna or Krakow offer to passengers special qualified staff. Hamad International Airport, in integration with Shafallah Centre (Qatar Foundation for Social Work) developed a lounge with special equipment and assistance inside the airport terminal. Shannon Airport in Dublin offers a Baseball cap and a wristband to each passenger and a special room to meet their needs. Brisbane airport in Australia provides special lanyard and information cards to passenger with hidden disabilities.

New Castle airport established a special program in order to provide tips for passengers with autism before departure and during the flight. Passengers can inform the airport and the airline staff prior and during their flight, about their special needs. Moreover, they may spend creative time, avoiding stressful activities. By watching videos regarding airplane landing and take-off, they will be more comfortable as they are familiar with the process. The special passengers can use the fast line and avoid anything that can make them anxious, such as wearing a belt. In addition, the special and educated staff provides them with chewing gums or sweets to make them feel calm and not anxious. The passengers with these special needs are able to ask for seat in the front part of aircraft in order to have fast and easy access. During the flight the passengers may also ask for ear defenders to create a quiet environment and staff could make them feel more comfortable by giving them a blanket, a pillow or a small parcel.

Many airlines around the world have developed programs and strategies to provide help to passengers with hidden needs. Air France airlines provides special assistance 48 hours before the flight. In Air New Zealand passengers can be informed in advance and ask for upgrade in order to enhance a more comfortable flight.

In Virgin Atlantic passengers with special needs may have a rehearsal visit and prebook special seats in a specific zone quieter than the others. Etihad Airways employ qualified staff that support children with autism and entertain them during flights. Qatar Airways under the auspice of the Child Development Centre, in Doha, educated the crew to be able to manage successfully that kind of travellers.

Airlines in Greece such as Aegean Airlines and Skyexpress are interested to educate their crew properly and offer help to passengers with hidden needs. These actions will support the

Boarding Pass to Autism program, due to the fact that the difficulties for passengers with autism exceed the airport terminal, which is a crowded, noisy area, to the aircraft, a cramped place, with no possible exit.

## VI. THE CASE OF ATHENS INTERNATIONAL AIRPORT IN GREECE

Athens International Airport (AIA), the busiest airport in Greece, established a special program, called Boarding Pass to Autism. The program is an educational program run by the Onassis Foundation and helps children with ASD familiarize themselves with the procedures involved in air travel. The program targets to set the appropriate substructures inside the terminal and the airport lounges and educate the staff of airport and airlines in order to qualify them to cope with passengers with ASD. In order to achieve this, a program of training and familiarization with pre-flight procedures was followed, with children, parents and therapists ending up in an air travel procedure stimulation. The program also included training for both Athens International Airport employees and AEGEAN staff in autism-related facts, investigating all the possible issues that children with ASD and their parents may face in the air travel procedure particularly in the airport. A special training by executives on the subject, with 200 staff participating helped the staff to be able to support the program.

With the aim of allowing children with ASD to "FLY", the "Boarding Pass in the Autism" includes four pillars:

1. Simulating air travel procedures for children with autism,
2. Creating an educational textbook with stories for therapists and parents of children with ADS,
3. Training part of staff working at Athens International Airport and AEGEAN Airlines, as well as
4. Promoting a flyer for all travelers

In addition, last year, the staff of Athens International Airport's helped a group of children with autism and their therapists to participate in a training program. The program was based on an air procedure simulation for the children with autism, their parents and their therapists.

The application of the program started with an open call in October 2017. A group of children emerged from the process, which along with parents and therapists followed the planned preparation for an air travel through a thorough and complete program. The peak of the program was on Monday, April 2, 2018, World Autism Day, with the visit of these children, their parents and their therapists, to Athens International Airport for a simulated air travel.

The simulation began at the entrance at the departure level of the airport, followed all the necessary steps to the air flight and ended inside the aircraft, where about 30 participants - children, parents and therapists - followed the prescribed procedures and safety instructions before take-off.

## VII. CONCLUSIONS

Children with ASD and their families are likely to face many difficulties traveling by plane mainly due to the fact that the airport is a complex environment that requires those special passengers to react in a specific complicated process. The

programs that have been established by various international airports differ at the amount and type of support that is provided to children with ASD. The common principle in their strategies is a simulation experience that gives passengers with ASD the opportunity to practice traveling through an airport and boarding an aircraft.

Based on the information gathered from the established air travel support programs, some recommendations on the development and success of such programs could support airport management to enhance social responsibility by handling passengers with ASD. Examples of this could be a special music in airports and aircrafts, creating positive vibes and enhancing children communication skills and a box of suggestions inside the terminal in order to inform airport management and stakeholders for their special real needs.

Airport authorities, managers, stakeholders and decision makers should focus on these strategies to enhance social responsibility especially on this field to promote equity and meet the SDGs, prevent passengers with ASD feel victims of discrimination. As a result, each airport enterprise should drive management direction towards social responsibility with appropriate and adequate infrastructures, facilities and programs to enhance accessibility and equal mobility opportunities for all.

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