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**Aviation articles Summary**

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### **Present Trends and Problems in Aviation Industry**

Kondo & Hegedus (2020) concentrated on providing the present trends and issues in the international aviation industry. Therefore, since the article utilized information obtained from the Slovak Space Tech Day 2 and the Slovak aviation keynote speech, the authors explained the All-Nippon Airways (ANA) as an organization and provided the trends and problems faced in the aviation sector basing their evidence from ANA as a company and their upcoming projects and projections. Furthermore, the article has also emphasized the capacity ANA has invested in fighting carbon footprint in their organization, social facet of the globalized continent and uniting with several components to attain an improved and supportable future for the next generation. Also, the authors claimed that ANA was established in 1952 and has emerged into being the most influential airways company in the world because of the immense quality of service provided. ANA started with twenty-eight employees and 2 helicopters, and is now the biggest in Japan and has managed to get a five-star rating by Skytrax identified by Air Transport World as airline of the year for ten years from 2007 to 2018. ANA has emphasized the diversity of their employees by uniting them to work together and are involved in a truthful and authentic discussion. The company is determined to change the aviation industry through innovation and taking courageous ingenuities. For the past sixty-eight years, the company has continuously progressed and adjusting its operations to overpower the existing challenges along their way; therefore, during the pandemic, ANA has managed to reduce the spread of the virus by securing their clients through the use of new necessities and security protections referred to as ANA Care Promise.

The coronavirus had significant impacts on the aviation sector because it caused a substantial reduction in passenger and goods carriage. Although ANA had faced a challenge

because of this drop in operations, they reduced their global route movement by nearly ninety-six percent and domestic flights by eighty-four percent, indicating a deficit of five billion United States dollars in 2020. However, the ANA Holdings Inc. has united with Japan Aerospace Exploration Agency (JAXA) in understanding the Remote Sensing opinion on atmospheric elements utilizing passenger aircraft and satellites. Therefore, based on the research indicated by JAXA, which has invested in exploring the intensification of greenhouse gas emissions worldwide from 2009, they estimated that greenhouse gas release from the city accounts for about seventy to eight percent of the anthropogenic carbon II oxide. Moreover, the article has also discussed ANA company future. One of their futures is the space project they have united with other corporations such as the PD Aerospace and developing an entirely reusable subocular spacecraft. This spacecraft will have the capacity to alternate ignition approaches between rocketed and jet mode and start flying and land like the usual aircraft. ANA is also in the drone project with Aerosense Inc. in making sustainable drones to be used in carrying blood samples from easily accessible health service to inaccessible places. AVATAR X is another groundbreaking project ANA is working on with JAXA, which focuses on developing space exploration by utilizing Avatar technology.

The article is critical in the airport field because of the presentation of immense trends in the aviation sector. The aviation industry is wide, so understanding the use of trends and challenges enables one to recognize the solutions that need to be handled. For instance, the article is significant as it has explained the challenges of greenhouse gas emissions facing the aviation industry. Also, realizing effective aviation trends such as those in ANA is working on, for instance, the use of drones that will help the health sector and the individuals be served.

Trends of the aviation industry make the student focus on understanding the emerging issues in their field and change from the traditional way of working.

### **Sustainability reporting in the aviation sector**

The aviation sector is among the largest industries in the world because they help in the movement of people and cargo around the globe. However, with the immense contribution of the sector to the economy, significant concerns have been raised regarding the environmental effects such as contributing to climate change. Similarly, the global nature of the aviation sector has contributed to the escalation of the tourism industry, which has resulted in substantial effects on developing and less developed countries and making them susceptible because of their feeble legal and directive administrations. The increased apprehensions in the aviation sector have resulted in industry firms creating ideals and suggested practices for utilization of energy and the creation of justifiable ecosystems as well as recommending projection for utilizing other sources of energy. Nevertheless, although several studies have focused on understanding sustainability reporting in the aviation sector, Karaman et al. (2016) focused on investigating the stand-alone reports presented by aviation firms to realize their sustainability reporting experiences. While the authors aimed to examine the effects of the <sup>2</sup>Global Reporting Initiative (GRI) together with sustainability reporting besides its association with the company recital in aviation sector. The main goal of the Global Reporting Initiative is to develop directions as a globally recognized framework that enhances equivalence in sustainability reporting among firms. Furthermore, the authors utilized GRI SDD to get GRI reports and the Thomson Reuters EIKON database to get financial data.

Karaman et al. (2018) focused their examination on availability of GRI-based maintainability reports, revealing that company size together with leverage are related to

sustainability reporting. Nevertheless, ownership of the aviation company was found to negatively related to sustainability reporting. Besides, free cash was examined if it associated with sustainability reporting. They found that free cash flow had low impacts on sustainability reporting and was against the hypothesis to be tested. Therefore, the authors indicated that greatly and vastly leveraged aviation firms can provide sustainability reports to evade agency expenses and authorize their operations. Similarly, the authors examined the factors that affect the GRI-based report count, including the overall number of published reports in an evaluation time and the application stage of the reports in the time of interest. The results found that development adversely related to the application stages of reporting; hence report availability, count and stage outcomes greatly align. Consequently, the same explanation will be utilized in the results of the examination on the relationship among corporate features and GRI report count as well as among the corporate appearances and GRI report application stages. Nevertheless, the authors also checked the relation between sustainability reporting and company performance but found that maintainability report does not positively affect firm performance. The reason was that stockholders are focused more on financial performance rather than reports. Also, investors see the report as nonessential and shareholders see it as an instrument for greenwashing.

The article plays a critical role to me because it provides a chance to understand sustainability reporting in the aviation sector. Also, I have learned that aviation companies can benefit enormously through sustainability initiatives because the organizations are directed to incorporate sustainability initiatives in business events hence assisting in creating a reputation and improving economic performance. Also, by enhancing reputation, companies can efficiently communicate sustainability initiatives by several sources such as GRI databases. The article is

significant in understanding how to maximize the company value through passenger satisfaction, workers retention and corporate governance.

### **Composite Recycling solution for Aviation**

Wong et al. (2017) researched the present aircraft recycling exercise and evaluates critical recycling technologies regarding thermoset composites. With many aircrafts required to expire in the next twenty years, appropriate recycling methods need to be developed to ensure they are the environment is protected. Therefore, as advancements in the reuse possibilities of the recycled elements are already initiated, the technologies' energy use needs to be considered. Similarly, the authors also focused on understanding the problems of working with the feathery fibre. The advantages of their arrangement are outlines for inspiring an extensive utilization of the fibre. Aircraft industries provide a significant amount of carbon fibre to the environment; however, it is critical to note that several companies have undertaken recycling most of the end-of-life aircraft. The authors stated that several practices had been established for recycling aircraft and are considered effective experiences because specialized dismantlers and recyclers utilize them. Nevertheless, the recycling process is an expensive process that requires extensive integration of technology to reduce the cost. Cos efficient tactics are executed but they guarantee less development of manufacturing scrap. Therefore, this makes the manufacturing companies devoted to recycling events, especially on complex waste. However, more energies are needed to enhance the technology preparation stage of several recycling technologies and their scalability needs to be evaluated economically.

Moreover, the authors noted that the need for carbon fibre had had a substantial increase in the past few years and it is projected to intensify by twelve per cent every year. Therefore, this will make the need for carbon fibre will augment from fifty-eight thousand tones in 2015 to one

hundred and sixteen thousand tones in 2021. Nevertheless, apart from the majority of the fibre obtained from the industrial companies, including the energy industry and the automotive sector, much needs are obtained from the aviation sector. Furthermore, carbon fibre strengthened polymer increases mechanical possessions, coming out as the best material where weight reduction is considered in aviation engineering. Although recycling companies are trying to make the world a safer place, they are faced with enormous challenges; this issue needs to be countered as soon as possible by the fibre recyclers, especially by having a reliable quality control evaluation for the recycled fibre and decreasing energy use. Besides, many for-profit organizations have emerged in the recycling business, hence interfering with the recycled product quality. Another issue facing the recycling industry is producing more chances for increasing the utilization of the ever-growing volume of recycled carbon fibre. Furthermore, the authors found that it is critical to transforming individuals' outlook of the recycled carbon fibre to be of low quality because its utilization is overly recognized in the low-grade usage. Besides, the source claimed that recyclers are motivated to enhance consciousness and realize the values of recycled carbon fibre by developing systems that can contest other metallic elements.

Recycle carbon fibre is a critical part of solving environmental pollution caused by the end-of-life of aircraft. Therefore, it is important to understand the technologies used in recycling composite elements in the aircraft and providing critical solutions to changing individuals' views concerning the perception of the recycled carbon fibre. The article is significant in my area of study because it impacts someone with knowledge regarding the concerns of carbon fibre materials after the aircraft's end-of-life. Also, important recycling technologies are explained in the article, such as pyrolysis and the fluidized bed process, in helping come up with proper strategies that will improve the technologies in renewing composite materials.

## Airport Operation

The civil aviation sector forms a core part of the American transport organization. This sector is managed under the division of transport in which helm is the secretary of transportation. Under DOT are several other administrative units that coordinate various modes of transport in regional and national transport logistics to ensure seamless transportation within the US. The Maritime Administration, The <sup>1</sup> Federal Railroad Administration, The Federal Highway Administration, The Federal Motor Carrier Safety Administration, FTA, and NHTSA (Ashford et al., 2013). The one managing and running the affairs of the aviation sector is FAA. FAA sole mission is to ensure the safety and security of civil aviation. Its responsibilities involve rating as well as certifying pilots especially those commercial flying carriers. The installation, maintenance, operation of the nation's air traffic control system and management of visual and electronic navigational aids and control towers found at the airports are all done by FAA. The other major function of the agency is to administer rules and regulations that are applied in governing civil aviation and airport operations and not the mention its key role in the funding of the airports for service delivery as well as improvement and expansion. The selected manager heads this federal government agency by the transportation secretary in five years.

FAA headquarters are based in Washington, D.C. Also within FAA are offices and other agencies in the aviation transport sector, including Air Traffic Service, AST, Regulation and Certification, ARA and ARP Office of Security and Hazardous Materials (ASH), and the preparation and development office. The aviation guidelines are implemented in this administration. Furthermore, FAA is subsumed geographically into nine other regions; and in every region, there are at least two Airport District Offices (ADOs). The main function of ADOs

is to ensure coherent communication with respective airports facilitating compliance with federal regulators and help the management of the airport in matters of safety, planning and efficiency and smooth running of operations. The airports that are civilian used may be run and managed by individual states through their departments of transportation and relevant attached offices and in those respective regions. It promotes coherence and reduces potential conflict that every state's airport management should familiarize themselves with management, including the government levels such as federal and local administrations will need to manage their airport. ICAO is also responsible for creating and providing suggestions on the international guidelines to be used in the airports. International Civil Aviation Organization, which has its headquarters in Montreal. ICAO is an association comprising of one hundred and eighty-eight contracting countries around the world. This international aviation organization was formed in 1944 as part of the Chicago Convention on International Civil Aviation.

Understanding airport planning and strategic management help me appreciate the systematic framework of the aviation industry's regional, national and international architecture. The regulations involved locally and the diplomacy involved overseas since politics, geopolitics affect to a large extent how the aviation industry operates and relates around the world. Awareness of the users of aviation industry services is a critical aspect. As much as ICAO has an international standard code of conduct, international countries may drift away from this norm. One is better placed to handle different situations when awareness exists. This involves identifying the problems, analyzing and designing solutions in good time to avoid conflict within the context of airport planning and management.

### **Airport Experience**

The article presented by Wattanacharoensil et al. (2016) focused on developing a theoretical framework for developing the airport experience in association with the tourism viewpoint by obtaining information from other pieces of research relating to sociological, psychological and service marketing and management concepts. Also, the results are then supported by the case studies as empirical evidence. Nevertheless, various elements obtained from the framework can be utilized in other transportation sectors such as the training industry, but the outline presented is particularly for the airport setting. Moreover, because of the exceptional situations of space, detailed procedures and events and time are presented in the airport setting, which results in the inimitable feature of airport anxiety and fairness. Since the author's utilized the qualitative research design method, developing elements have been consequent and included in the framework. Also, the authors stated that the deregulation of airports changed the way things used to operate and increased the possibility of the airport sector, which has intensely transformed. The critical factors that have resulted in this transformation comprise deregulation, privatization and commercialization of the aviation sector. The transformation resulted in enhanced implications for air passengers as well as caused the airport sector to implement a business management aspect in their working. Furthermore, air travel was not held for the privileged and travel routes were increased across the world by enhancing the operations of the airlines and airports to be more effectual, organized and focus on quality and production.

Moreover, the authors added that the conceptual model utilized as a vital framework and modified to fit the airport sector. Therefore, it is the theoretical archetypal intended to develop an all-inclusive customer experience and in retail enterprises. The archetype is appropriate to the

framework because it is obtained from research on client experience and founded on specific inter-related associations among the customer experience and the aspects of psychology, societal and marketing, and service administration. The author added that the model is appropriate because it makes people realize the customer experience as an all-inclusive perception by concentrating on the function of client experience management through the airport service. Therefore, the framework will operate on several elements by converging on the retail initiatives. However, most of the elements are perceived to be working well with the airport sector especially in business management. The airport needs to advance in its service and handle clients because it will change how the airport serves their clients not just as travellers but as customers involved in the tourism sector. The airport plays a crucial role in the advancement of the tourism sector because it facilitates tourist movement around the world. The next thing making the model suitable is that it comprises an inclusive result for experiences reaction including the reasoning, effectual, societal and physical reactions of customers to the services they get in the airport. The condition including competitors, and the culture and the customer's insouciances which may influence the experiences.

The article is essential in understanding how the airport can help in progressing the tourism sector by taking customers to a different destination and improving their experiences by performing different functions such as an experienced provider and an organizer. Therefore, as a student, the article provides essential elements on how the customers need to be treated and the components that need to be upgraded in the airport. For instance, realizing how social media and mobile applications can make customers interact and create better relationships is the airport. Also, the travel experience can make customers have memory and in their destinations.

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