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Assuring ground handling safety aviation standards after the COVID-19 crisis within the global cooperation

The author would like to emphasize the importance of a coordinated approach to the safety ground handling aviation measures of the post-COVID management on a global level. Guidance material for ground handling operations, recovery measures as well as the new and amended recommendations and updated guidelines are described.

At the beginning of the coronavirus pandemic, almost all global industry organizations and carriers predicted that after the lifting of quarantine restrictions, aviation would recover quickly, but, unfortunately, the reality was quite different.

According to the analysis of the International Air Transport Association (IATA), the total loss of revenue of the global aviation industry in 2020 amounted to about \$ 400 billion [1].

One of the consequences of the coronavirus pandemic was a drop in passenger traffic, which decreased by 60% and actually returned to 2003 levels. International Civil Aviation Organization (ICAO) reports that as seat capacity fell by 50 per cent last year, passenger totals dropped by 60 per cent with just 1.8 billion passengers taking to the air during the first year of the pandemic, compared to 4.5 billion in 2019. Its numbers also point to airline financial losses of 370 billion dollars resulting from the COVID-19 impacts, with airports and air navigation services providers (ANSPPs) losing a further 115 billion and 13 billion, respectively. An estimated loss of approximately 64.2% of passenger traffic and 65% or over USD 111.8 billion airport revenues in 2020 compared to business as usual [2].

The reduction in air travel has affected the number of passenger services on the ground in Ukraine as well as worldwide. In 2020, including powerful pre-quarantine January and February, the Boryspil International Airport State Enterprise (BIA SE), which is our country's largest airport, provided services for 5.16 million passengers, which is 66% less than in 2019. At the same time, the transfer of passenger traffic in the BIA almost completely disappeared, it was only 14% of the 2019 figure. In 2020, 47 thousand flights were performed or 42% of the 2019 figure. 3.1 million passengers were transported by regular flights (-73%), and 1.98 million (-46%) by non-scheduled flights. Along with the reduction in the number of passenger flights, Boryspil recorded an increase in the number of cargo flights. In 2020, the airport served 1,653 cargo flights against 1,095 flights in 2019 [3].

Facing the crisis ground handling as an integral part of airline operations services it is vital for stakeholders to provide the effective global coordination of measures against pandemic impact and recovery efforts.

The COVID-19 crisis has negatively affected the aviation industry in such a way that the main task of airlines and stakeholders is to stay afloat. The problems and consequences in the context of the COVID-19 crisis, which are:

- Rapid change of regional and local regulations;
- Staff training/retraining and maintaining of personnel readiness;
- Maintaining the readiness of facility and equipment;
- Preparing for operational readiness and maintaining for recovery and return to service

• Unpredictable and changeable flight schedules create difficulties for Ground Handlers to plan appropriate numbers of equipment, supplies, and resources;

• Safety of employees and passenger, which includes accordance to new biosafety procedures.

In an effort to support the industry with Return to Service and to maintain operations during COVID-19 pandemic, IATA together with various stakeholders, has compiled a series of reference guidance material for Ground Handling.

In response to the emerged crisis and to support the aviation sector, IATA developed COVID / pandemic appropriate guidance and regulation material for Ground Operations, which include Aircraft cleaning and disinfection, Ground handling recovery to service, Guidance for ground operations during COVID-19, and Transport of Cargo in Passenger Cabin.

It is likely the guidance regulations, mentioned above, will support the recovery of aviation sector, which reflected with the return of employee and passenger confidence by ensuring common, simple, and comprehensive measures and procedures which are designed for global implementation. [4].

According to the operational and biosafety measures most operational procedures remain unchanged, however various biosafety measures and multi-layered strategies are being developed and intensified for the purpose of protection of personnel, this includes:

- (a) Qualified hygiene measures;
- (b) Consistent usage of appropriate Equipment for Personal Protection;
- (c) Disinfection and cleaning of equipment and facilities;
- (d) Health screening, monitoring, and testing [5].

According to Aircraft cleaning and disinfection during and post pandemic IATA regulation, in principal, “the standard cleaning procedures remain unchanged, however additional disinfection measures need to be added in the context of pandemic management. The standardization of aircraft cleaning and disinfection processes is essential to successfully restart operations and reinstall passenger confidence. It is important that the ground handling community endeavors to remain fully updated on all guidance material as well as remain flexible to adapt the measures according to risk-based and data-driven decisions” [6].

The COVID-19 pandemic significantly impacted to the aviation business and caused the crisis of the whole aviation sector, which is in unprecedented situations. Airports, governments, suppliers, airlines, and other aviation stakeholders need to join forces and collaborate in coming up with a comprehensive plan to allow an effective restart of the operations, namely ground services.

For this purpose, IATA proposes a number of regulations to ensure that the aviation sector provides an integrated and common approach, and that all subsequent measures are agreed in accordance with a single set of international rules and standards (e.g. through IATA, ICAO, WHO).

Due to economic instability, limited resources and operational disruptions caused by the COVID-19 epidemic situation; standardization of ground operations processes is crucial for the successful restart of all necessary operations [7].

Airport Councils International (ACI) introduced “Airport Operational Practice Examples for Managing COVID-19”, which describes a set of typical measures implemented at major international airports, gathered from across ACI’s membership. This document is intended to provide a number of options and examples that airports can use, rather than being a best practice [8].

Moreover, Manual on Testing and Cross-border Risk Management Measures was developed by ICAO-led aviation health experts with the support of the European Center for Disease Prevention and Control (ECDC), the US Centers for Disease Control and Prevention (CDC), and others, with the participation of the WHO, and aviation health and medical experts from industry and governments. Thanks to collaborative work the Cooperation Agreement for the Prevention and Management of Public Health Events in Civil Aviation (CAPSCA) was formed. CAPSCA brings together local, regional, national, and international organizations to collaborate for further improvement for planning and response to health developments, which affect the aviation industry [9].

March, 24, 2021 ICAO announced the release of a new (revised) second edition of the UN Aviation Agency's Manual on Cross-Border Risk Testing and Management. This handbook is crucial to effective global collaboration of epidemic response and recovery after it, as well provides national airlines and governments with important updates on broad pandemic response and recovery measures concerning the health interventions and civil aviation. [10].

It is interesting to notice, that ICAO has optimistic intentions towards aviation development. Thus, ICAO Secretary General Dr. Fang Liu believes that we should focus on new technologies. “Looking ahead to the post-pandemic, innovation is at the heart of the emerging new era of aviation. An autonomous aircraft that does not require pilot intervention in flight control; renewable energy sources; Artificial Intelligence; suborbital flights (flights at very high altitudes); new methods of collecting, storing and processing information, such as "blockchain" and "big data". These and many other remarkable developments will completely change aviation. The success of innovative projects depends on the level of international cooperation - only by combining efforts, it is possible to carry out the process of standardization and coordination of innovations. This is the only way we will overcome the problems associated with the spread of COVID-19, and mitigate the socio-economic consequences of restrictions on transportation in developed and developing countries [11].

Conclusions

All elements of the aviation industry will need to cooperate effectively to restore the potential of aviation and continue its development after the COVID-19

pandemic. Continuous improvement of ground aviation security measures requires a common approach involving all stakeholders' collaboration, with the common goal of decreasing the impact of COVID-19 on the aviation sector.

To provide worldwide recommendations on health measures and to avoid further COVID-19 outbreak, as well as to improve special ground handling safety, special measures and regulations have been developed by WHO, IATA, ICAO, the European Aviation Safety Agency (EASA), ASI, as well as other aviation community organizations. Only if efforts are made at the global level to overcome the effects of the Kovid-19 for aviation can be overcome.

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