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DEALING WITH AN UNEXPECTED CRISIS. AIRPORT MANAGEMENT IN THE COVID-19 PANDEMIC IN PORTUGAL AND ROMANIA

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Abstract

Airports are arguably among the most well-prepared structures in the world to face crises and contingencies and their staff undergo abundant training for these types of events; however, the COVID-19 pandemic events were largely unexpected and unpredictable, thus creating a somewhat rare happening in the industry: a novel type of crisis.

This study aims to realize the types of strategies and elements that made a difference in positive and negative critical incidents, using semi-structured interviews and the critical incident technique, to managers from Portuguese and Romanian airports (N=8), focusing on the type of skills that the management required and developed in a crisis.

In accordance with the Competency-Based Education framework, leadership, communication, subject matter excellence, teamwork, ethics and integrity, and resilience and innovation, were crucial soft skills in critical situations.

The present study contributes with new insights on airport managers and leaders facing crisis situations, key issues and strategies during the first wave of COVID19.

Keywords: crisis management, soft skills, COVID-19 pandemic, airport management, aviation industry, leadership

Resumo

A indústria de aviação civil é conhecida pela forma como gere situações de crise, tendo planos de contingência para qualquer situação e capacidade de desenvolver estratégias rapidamente. Os aeroportos têm planos ou estratégias para qualquer tipo de ocorrência que poderia pôr em risco o os passageiros ou os colaboradores. Contudo, as crises são cada vez mais imprevisíveis e difíceis de gerir, e a imprevisibilidade da pandemia de COVID-19 fez com que na indústria surgisse um novo tipo de crise.

Este estudo explora as estratégias e os elementos que fizeram uma diferença em incidentes críticos, tanto positivos, como negativos, utilizando entrevistas semiestruturadas e a técnica do incidente critico para avaliar os gestores dos aeroportos de Portugal e da Roménia (N=8). O objetivo deste estudo é descobrir quais são os tipos de competências que foram desenvolvidas e necessárias numa situação de crise.

Conforme o quadro estudado, liderança, comunicação, excelência, trabalho de equipa, ética e integridade, e resiliência e inovação foram as competências essenciais em situações de crise.

O estudo cria novas perspetivas sobre o comportamento dos gestores e da liderança dos aeroportos perante uma situação de crise inesperada, problemas-chave e estratégias implementadas durante a primeira vaga de COVID-19.

Palavras-chave: gestão de crise, competências, pandemia de COVID-19, gestão aeroportuária, indústria de aviação, liderança

List of Abbreviations and Acronyms

IATA – International Air Transport Association

ICAO – International Civil Aviation Organization

WHO – World Health Organization

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1. Introduction

The aviation industry has represented a strong sector in the past years, showing constant growth in revenues and number of passengers at a global level. Global traffic air passenger demand has been showing positive values in the past 15 years, with a slight decrease in 2009, due to the economic crisis (Mazareanu, 2020). In 2019, there was a 4,2% increase in the demand, in 2017 the passenger growth had a 8.1% increase, while in 2018, had a 7.4% increase. In the first quarter of 2020, the sector already was showing a 4.1% increase in demand, which made the aviation industry a safe bet and this indicator was a positive influence for other sectors, like tourism.

Research of IATA (2020a) showed that flying was the preferred travelling method by over 4.5 billion passengers in 2019, both for people who intended to travel for business and personal reasons. Both domestic and international flights seemed to be unshaken, despite the issues that the industry faced (grounding the Boeing 737 MAX models, due to safety concerns) (IATA, 2020b).

The scenery for the aviation industry was optimistic and promising until the pandemic hit mid-March of 2020.

Airports are highly safety and security-oriented structures, and since 9/11, when the terrorist incident shook the world 20 years ago, the airports have raised their security procedures and the screening of the passengers increased substantially, including thorough screening of the passengers at the security gates and checking the luggage for any kind of objects or other material that could put in danger the flight and other travelers (Blalock et al., 2007).

Standard procedures state that each airport should have a preparedness plan that must include information about the type of "communication with the public, screening, logistics (transport of travelers to health facilities), equipment, entry/exit controls, and coordination with the local/regional/national public health authority" (ACI, 2009). Therefore, the airport authorities strive to be "one step ahead" and have a plan for any of the possible scenarios that might occur.

Airport and airline safety managers are prepared for a crisis as all the airports have a set of procedures specific for each kind of emergency, but it is difficult to measure the real impact

of a crisis, as there is no pattern, and those plans must be easy and quick to adapt to the changing of a typical crisis (Enoma et al., 2009).

The WHO declared COVID-19 a global pandemic on 11th of March 2020 (WHO, 2020a) due to the extent it was affecting the health and putting in risk the global population.

Consequently, countries started closing boarders and nearly all international travel was halted, leaving people all over the world in a state of uncertainty, sometimes near panic trying to return to their home countries (Alper & Bloom, 2020; BBC.com, 2020). This led to an unprecedented crisis in airports all over the world, with an inordinate amount of people flooding the airports to get a passage home, often ignoring safety and security indications from organisms of different natures in society.

Some of the main challenges that the airports had to face during the COVID-19 pandemic were trying to follow as strictly as possible the safety and health rules, manage the cancelled or delayed flight passengers that were waiting to be sent back to the country of origin, the storage of the airplanes that were no longer flying because of the conditions, or shifting the handling division to a more cargo-oriented traffic (IATA, 2020b).

The aviation sector took one of the biggest hits. This was due to two important factors; the way of the transmission of the virus, that lead to closing the borders and restricting international flights.

In the aftermath of COVID19 the aviation sector is reported to have taken one of the biggest hits economically speaking: IATA (2020b) estimated that 2020 would bring a net loss of over $118 billion for the industry, with another forecasted loss of $38 billion in 2021, while the demand in the post-COVID period of 2020 would abruptly decrease by 61%. Airports suffered a serious challenge since the beginning of the pandemic. Airports are highly transited places, that are the point of connection between different countries and regions. The fact that the transmission of the new coronavirus was more facilitated by closed spaces and direct contact with a host of the virus exposed the flights and the airports.

In this context, it is therefore evident that airport management had to face a lot of challenges. The airports had to focus on the effectiveness of the health safety, assure that the passengers feel safe and trust the airport management and staff, certify that the handling capacity is maintained and find an optimum strategy to be financially efficient and not to limit the passenger flux (Airport Research Center, 2020) amidst an unpreceded crisis.

In the aftermath of these events, it is important to understand how these critical issues have been dealt with, in particular, how did the airport management plans changed and how they adapted and dealt with the situation, what were the key elements for their successes and failures were and what are the lessons to be learned from this situation for the future crisis.

Even being vulnerable to diseases like COVID-19, which spreads through air, the airports are also highly prepared for crises and any kind of life-threatening event that could possibly arise.

As crisis will be less predictable and more serious, the Airport community needs to adapt fast to the changes, quicky evaluate the past events and constantly improve the Emergency plans, in order to tackle better the next crisis. It is arguable that the COVID-19 pandemic was a paradigm-shift and a proof that the crisis will happen more often, as the humankind is constantly exposed to risks like terrorism, climate change, other pandemics, or epidemics.

Giving this information, the study will be focused on how did the managers in airports, **which make part of a sector that always trains for the unknown and have a plan for every crisis, dealt with the first wave of COVID-19 pandemic?**

Because of the nature of this theme and its specificities, semi-structured interviews with the management of the Portuguese and Romanian airport were chosen for the data collection, focusing on the aspects related to the requires skills in the case of a crisis. Due to health concerns, the interviews were conducted online. The goal was to study the phenomenon and see how this can be dealt with in disruptive contexts predicted to become ever more prevalent such as pandemic crises, but also extreme weather events and terrorist attacks (European Commission, 2019). The study will explore the gap in the literature, as most of the studies are focused on airline companies and pilots, and few attentions is given to the airports and the airport management.

This study is pertinent to the aviation industry, respectively, the airport community to understand the impact of the COVID-19 pandemic, and to support the Airport management in dealing with future crisis. and evaluate if the contingency plan for this type of crisis was well constructed and well applied. Additionally, it helps assessing more accurately if an organization is in fact well prepared for both predictable and unpredictable crisis. This framework could later be applied to other industries or sectors.

2. Literature review

In the following chapter, it will be explained the definition of a crisis, as well as the effects of the past events in the aviation industry and which were the measures that were taken in order to combat the disruptions that occurred. Furthermore, the literature review will highlight the impact of COVID-19 pandemic in the aviation industry, understanding the role of soft skills in a crisis and the importance of such competencies among the airport managers.

2.1. Crisis, Disaster and Emergency

The terms Crisis, Disaster or Emergency are terms whose meanings are usually mistaken and are being often hard to differentiate (Al-Dahash, 2016).

The United Nation Office for Disaster Risk Reduction (s.d.) states that an emergency could be used as a term when referring to other events like biological disasters or health issues, that do not have a serious impact and does not provoke a grave disruption at the community level.

Crisis has been given different definitions along the time. According to Al-Dahash (2016, pp. 2) "it is a disruption that physically a system as a whole and it threatens its basic assumptions, its subjective sense to self and its existential core".

According to the UNDRR (s.d.), a disaster is an event of serious matter, that causes a big disruption, at a local, regional or national level and causes a big negative impact on the society. This includes negative impacts in the economy, losses of lives, material losses, etc. Out of the three, the disasters are considered to have the biggest severity.

The disasters could be classified according to different criteria. UNDRR (s.d.) categorizes the type of disasters by size. The small-size disasters are the ones that affect small communities and do not require assistance from the outside of the community, the problems being easily solved at the local level. The large-scale disasters are the events that require the help at a national or international level, being difficult to handle at a local level. However, disasters are hard to be patterned has the gravity and the evaluation of a disaster depends on the effects that they have (Al Dahash, 2016).

In this work crisis will encompass the three types of refereed events as to simplify analysis and since they since these concepts are comparable (Al-Dahash et al., 2016), including in the disorder and urgency they create (Zhang et al., 2012).

2.2. The nature of a pandemic and former pandemics

According to Porta (2008, pp. 79) an epidemic is "the occurrence in a community or region of cases of an illness, specific health-related behavior, or other health-related events clearly in excess of normal expectancy. The community or region and the period in which the cases occur must be specified precisely.". A pandemic meets the same criteria as the epidemic, only that the area on which is present is larger "An epidemic occurring worldwide or over a very wide area, crossing international boundaries, and usually affecting a large number of people" (Porta, 2008, pp. 179).

The risks and effects of the epidemics are not new to the civil aviation industry, which faced pandemics or epidemics that are considered a risk for the airports, since they are crowded places, with a high risk of transmission. Influenza pandemics in 1957, 1968, 1977 and the H1N1 influenza pandemic in 2009 (Nickol and Kindrachuk, 2019) caused millions of deaths worldwide. Other notable epidemics in the recent years were the Severe Acute Respiratory Syndrome (SARS) from 2002, Middle East Respiratory Syndrome Coronavirus (MERS-CoV) in 2012 (de Groot et al., 2013) and the Ebola pandemic (Read et al., 2014).

2.2.1 Measures taken following the emergence of pandemics

According to Clegg (2010), ever since the first outbreaks that seriously threatened the globe, the countries tried to collaborate to stop the viruses to spread, with the first convention held in France in 1851. Following the Spanish Influenza pandemic from 1918, the authorities tried to collaborate in fighting the potential future outbreaks by holding conventions and elaborate strategies to prevent the spread. In 1948, WHO, along with the United Nations established the first agency to fight against this potential threat, followed by the International Sanitary Regulations (ISR), published in 1951, which was the first document to specify the measures that should be taken in the aviation area.

International Health Regulations (IHR) is the document preceded by the ISR, that was launched in 1969 and revised in 1995 and 2005, the latter revision being made after the SARS outbreak (International Health Regulations, 2005). According to IHR (2005, pp. 1) the purpose of the document is to "prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade".

2.3. Pre- and post-COVID pandemic in the aviation industry

Over the past 20 years, the aviation industry was, globally, one of the most promising industries, exhibiting constant growth. The demand of the passengers had shown growth since 2009, when there was a negative impact on the demand, due to the Economic crisis that hit the world (Mazareanu, 2020). The airports have difficultly recovered from the past crisis like 9/11, the Influenza pandemics, SARS pandemic and Economic Global crisis, and was set on a positive evolution until the COVID-19 pandemic (Sehl, 2020).

In late 2019, a novel virus was detected in Wuhan, China. SARS-CoV-2, spread across the globe, provoking the illness called COVID-19 (Gorbalenya et al., 2020). In March 2020, the World Health Organization (2020a) declared the COVID-19 pandemic, which was a moment of disruption for all the sectors and represented a crisis at a global level.

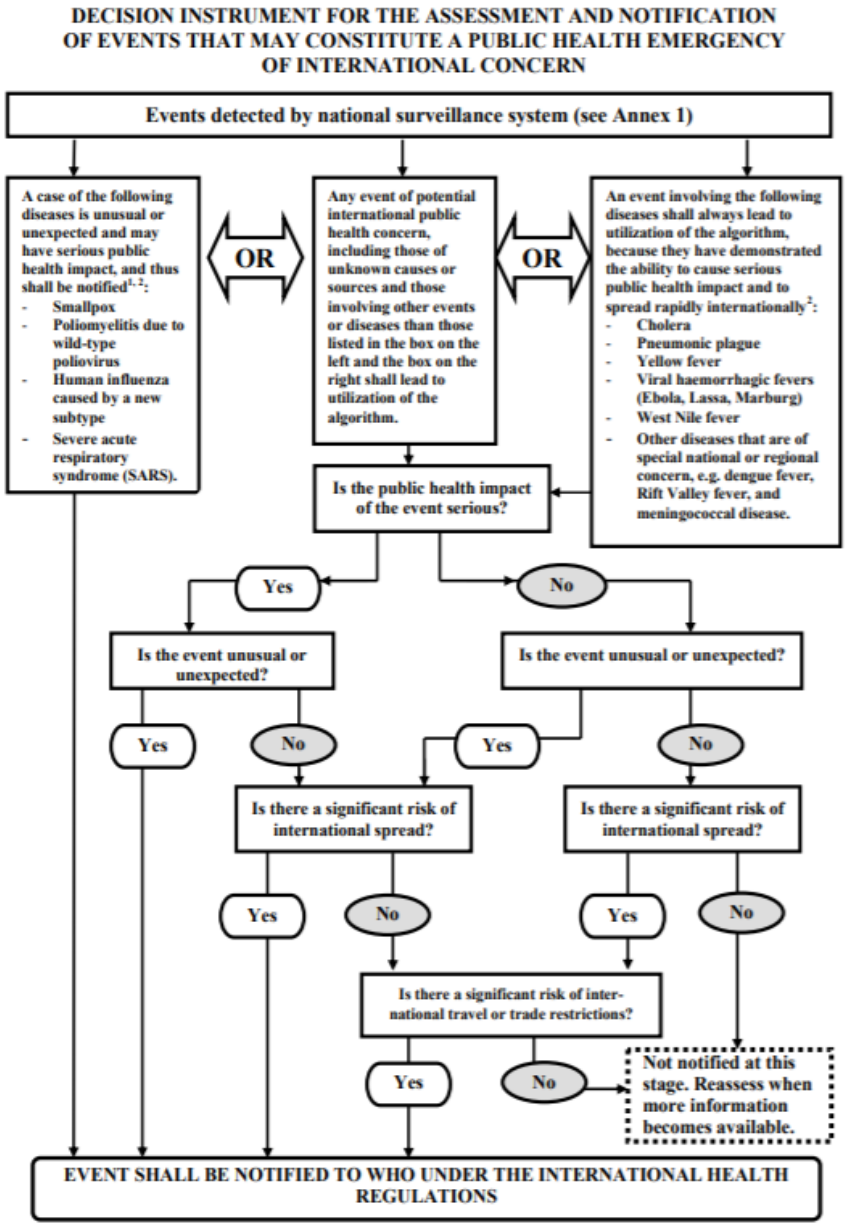
The economic impact over the aviation industry was a drastic one, which had a negative impact, of around 61.2% on the expenditure on flights and air travel (IATA, 2020a). This meant less financing for the airports and harsh times for the airlines, with a forecasted loss of bn$118 in 2020 for the whole industry.

Airports, a remarkably preparedness-oriented segment, faced an important challenge, which was to understand what kind of phenomena the airports were facing and what measures to put in place in a rare unpredicted event.

According to the IHR, there are some procedures that should be followed in the case of a potential outbreak. The outbreaks are categorized by their impact and level of spread. The type of health emergency is evaluated and filtered by the seriousness of the impact of the possible disease, and after gathering the sufficient information, the event is notified to WHO, in order to take measures.

Figure 1. Framework used in the event of a public health emergency of international concern

Source: IHR (2005)



2.3.1. Pandemics in airports and the measures taken in the past (Ebola, H1N1, SARS and MERS)

As previously stated, airports have faced other public health outbreaks although in not the same magnitude; in this section we will focus the SARS (circa 2003) and Ebola (circa 2014) and H1N1 epidemics because these outbreaks were easy to transmit and had an impact on aviation.

The severe acute respiratory syndrome (SARS) from 2003 was an outbreak that started in December 2002 in China in the Guangdong region and slowly spread worldwide, registering 812 deaths. This outbreak was threatening and in a two-year period, the cases slowed down and disappeared, but this questioned the capacity of the authorities to understand the transmission path and to implement measures to stop the spread (Likhacheva, 2006). The SARS outbreak imposed new restrictions and regulations in the air travel segment, as the virus could have spread easily between different regions and countries. For that, the World Health Organization issued recommendations for all the travelers that departed the affected areas, screenings were made and in some countries like China, United States, Canada, and Taiwan, quarantine was imposed. The WHO advisories were the toughest given to the travel segment until that time, and airports were the main target. The limitations over the right of travel or returning home have been questioned, because while there are international laws and right that allow international movements, in the case of an emergency like an outbreak, this should be reconsidered (Gostin et al, 2009).

Swine Flu (H1N1) was another outbreak that took place in 2008 and spread across the globe. It was the first pandemic in the last forty years, with cases in over 208 countries and 13,554 deaths (Clegg, 2010).

The Ebola outbreak also affected the world in 2014 and its biggest impact was on the countries from the West of Africa, and it spread across the whole continent (WHO, s.d.). As in the case of SARS, there were screenings made at the airports in the case of the flights that originated from the countries with existing Ebola cases (Read et al., 2014).

Koenig (2015) describes the actions that were taken in the case of the Ebola outbreak, placing them in three categories; identify, isolate and inform. This is a three steps rule applied to the passengers that were showing symptoms at the screening made in the airports. The first step is to isolate the potential patient, in order to avoid the spread of the virus, passing to identify

the disease, as there are other viruses that could trigger the same symptoms (normal flu), and the last step that should be made is to inform the authorities.

These past events have provided some pointers to what type of action to take in case of a global outbreak of a disease and what could be the framework that could be applied to any kind of outbreak, especially in the aviation industry.

2.4. The COVID-19 pandemic in the studied countries

Portugal and Romania, the countries studied, are both member-states of the European Union, which means both countries had to follow European directives during the COVID-19 pandemic, and ICAO regulations and recommendations. At a local level each of the national authority imposed own states of emergency and laws according to the pandemic situation in the respective countries.

In Portugal, the first registered COVID-19 case was in the beginning of March 2020, a 60-year-old male who had recently travelled to Italy and presented symptoms on 29th of February (Rico, 2020). On 19th of March 2020, the president of the Portuguese Republic declared the State of Emergency in Portugal following the declaration of a pandemic of the WHO on the 11th of March 2020. The state of emergency restricted rights given by the Constitution, such as the right of travel or commute, both inside the national territory and internationally, the transition to remote work or to a lay-off regime, highlighting that traveling should be avoided and controls and screenings are applied (Decreto do Presidente da República n.º 14-A/2020, 2020).

In Romania, the state of emergency was declared on 16th of March 2020 by the President of Romania, which restricted right of travel or commute, both inside the national territory and internationally, the right of property, economic freedom, among others, while measures such as closure of borders and limitation of movement were taken (Decret nr. 195, 2020). The measures taken were related to the decrease of the number of cases of SARS-CoV-2, as well as avoiding the spread of the disease among the citizens.

At the European Union level, the European Council has held various meetings and tried to mitigate the impact of the COVID-19 crisis, encouraging the Member States to cooperate in order to stop the spread of the virus, by creating plans and strategies to tackle the possible increase of SARS-CoV-2 (European Council, 2020a). On March 2nd the European Council activated the Integrated Political Crisis Response (IPCR) in "full mode", allowing the

European Union members to "take rapid decisions when facing major cross-sectoral crises requiring a response at EU political level" (European Council, 2020b).

Regarding the aviation sector, the European Union adopted a "slot waiver" in order to ease the airlines' struggle facing the pandemic (European Council, 2020c). Before the waiver, the airlines complied with the airport slot requirements, which obliged them to use 80% of more of the take-off and landing slots, in order to maintain them in the following year. The measure was taken with the goal of helping airlines during the traffic drop caused by the COVID-19 pandemic (European Council, 2020c). As per the European Union structure, both countries studied followed the issued measures by the council.

2.5. The impact of COVID-19 pandemic on the airport management

As mentioned before, the COVID-19 not only affected the airlines and travelers, but also the airports and their staff. The grounding of the flights and travel bans imposed by the E.U. and other countries like Australia (Doherty, 2020; BBC, 2020) and the decision of the former-U.S. president Donald Trump to ban all the flights coming from the European Union (Alper & Bloom, 2020) have caused a big disruption, leaving the airports to deal with unexpected and unpreceded issues, due to the passengers that were stuck in the airports, looking to get back to their home countries.

The main challenges that the Airport management and staff had to face were, according to Airport Research Center (2020) "effectiveness of the health safety, passenger confidence in safety, number of permitted travelers, ensuring the handling capacity, and the financial impact". Each of the main challenges had a realistic objective that was focused on decreasing the overall negative impact of the COVID-19 pandemic in the Airport community.

2.6. Importance of human capital and soft skills in a crisis

In a crisis like the COVID-19 pandemic, which was a health crisis, an important aspect is the human interaction. Sorribes et al. (2021) conclude that during an event like a crisis, human capital should not be disregarded, and the organizations should keep focusing on the aspect, despite the situation of uncertainty. Management is one of the stakeholders of the airport, and it should be involved in the crisis resolution, without disregarding soft skills like communication or situational awareness during the process (Mantzana et al., 2020)

Soft skills could be defined as the ability to communicate, deal with an urgent situation and the ability to work under pressure (Dixon et al., 2010). It is important to study the soft skills in the case of an airport management, since in a case of a crisis, those characteristics are crucial for a fast response. When a disruption like the COVID-19 pandemic occurs, it is important for leaders to communicate the problem, maintain an active role in the organization and to adapt to the situation with a good and strong response to the situation (Dirani, K. et al., 2020).

There has been a lack of in-house training for soft skills, recognized by the ICAO in an agenda item. The organization highlighted that the aviation industry must find ways of training soft-skills and compete with other specialized institutions, although it is fully aware that they cannot fulfill the existing training needs completely, suggesting internships and volunteering as a solution for the gap (ICAO, 2019). Uchronski (2011) describes how a crisis team is formed, which includes members of the airport management and explains the importance of communication in these situations, yet hard skills are given more value than the soft skills.

According to Nathanial and Van der Leyden (2020), in the case of COVID-19 pandemic, there are different phases for the management of the crisis. The first step is to look for patterns from the past crisis and try to apply the measures that were taken before in a similar situation. The next step is to get deeper into understanding the situation and how it should be tackled, followed by the explanation of the decisions that will be made, applying the measures that were previously agreed and last, to evaluate the strategy for improvement purposes.

Bongiovanni and Newton (2019, p. 1283) refers to the disruption in the safety activities of an airport and that being influenced by small decisions or actions taken by lower-level employees that could destabilize the entire system in case of an emergency like a health-related one. An alarm is raised in the case of the catering department and the employees that handle food, as this is considered also a danger when goods are mishandled and delivered improperly to the aircraft for the passengers. (Bongiovanni & Newton, 2019).

This kind of exercises are meant to improve the coordination between different authorities, airport staff, air companies, pilots and even passengers.

Research of Bongiovanni and Newton (2019) in three airports showed that they have different classification for the dangers and gather information and collect it based on different criteria. It is important to highlight that the likelihood of an emergency-type situation is based on several factors specific to each of the airport (individual, task, tools & tech, environmental, cultural, etc.). An airport that mostly manages traffic from low-cost airlines are more likely to have breaches in the safety procedures, as the staff is either scarce or the time between the flights, or other aircraft-related verifications could not allow a thorough check from the health safety point of view.

From a financial perspective, Lufthansa Consulting (2020), part of the German aviation group Lufthansa, issued a report regarding the effects of past crisis and future COVID-19 implications stating the main actions that the aviation industry should take after the end of the crisis. The main actions recommended are on the financial level, with cutting costs, having financial support from the governments, but also scenarios in the case of insolvency of the strategic partners, maintaining and protecting the more experienced and crucial staff, and strategically reopen routes and fulfill the needs of the passengers (Lufthansa Consulting, 2020).

According to the ACI (2009), each airport should have a preparedness plan that should include information about the type of communication with the public, screening, logistics (transport of travelers to health facilities), equipment, entry/exit controls, and coordination with the local/regional/national public health authority. Another crucial aspect is providing the staff all the equipment and the sanitizing substances that are needed.

Although there have been simulated drills of a pandemic in airports, such as the now defunct Tegel Airport from Berlin along with the Fire Department, Police department, Armed Forces, and other authorities, to see the efficiency of the latter in the event of an epidemic emergency at the airport (International Airport Review, 2019) this does not necessarily indicate a full preparedness, the simulation not being specific. According to the Airport International Council (2009), airports have some guidelines in the case of an outbreak, as plane traveling being one of the ways that a potential virus could be transported between different countries. The management of this kind of situation is attributed to the local authorities and the airport operator. Martin and Boland (2018) present the exercise made in an airport in Ireland in 2016, which was a simulation of possible case of MERS-CoV in an aircraft, plus a fire. In the simulation, various aspects were evaluated, and some conclusions

were draught. The exercise should set priorities well, and it is important not to deprioritize the public health response. Also, it is important to keep updating the plans and set the roles and responsibilities very well.

In most of the cases, tackling a crisis is highly linked to hard skills, and less importance is given to soft skills, which could be the key factor to a good approach on the management of the crisis. Robert and Lajhta (2002) emphasize that, in most of the cases, top management, which could give a good support in crisis, is not involved in the events and there is a noticeable absence of soft skills among the people which directly face the events. However, soft skills training can improve the communication and collaboration between people and organizations, increase resilience and awareness of the situation, all which can contribute to a better crisis management (Lucini, 2020).

2.7. Competency-Based Education Framework

Mott et al. (2019) proposed an outcomes-based model, the Competency-Based Education Framework, a framework for aviation management programs, which is important in the growth and the development of aviation leaders. The framework aims to bridge the gap on the lack of importance given to the soft skill training in aviation management, being generally focused on other members of the aviation industry, such as flight attendants or pilots, and often disregarded in the competencies of the management.

The need of training soft skills among the airport managers is crucial as their capabilities of interaction, communication and general behavior can have a strong impact on the other members of the organization (Gov & Çoten, 2021), this influencing the process of crisis management.

This framework is based on six important competencies that are mandatory for an airport manager: Leadership, Subject Matter Excellence, Ethics and Integrity, Communication, Teamwork, and Individual Resilience and Innovation, which will be further analyzed.

Leadership

According to Mott et al. (2019) leadership is a crucial aspect that require both "independent and interpersonal skills", this having an important impact on how the organization and its members receive information and how effective a problem could be solved. In a crisis, a leader could change completely the dynamic of the organization, by including the staff in the

decision-making process, giving complete information and welcoming feedback (Fener & Cevik, 2015). Moreover, leadership plays an important part in the aviation industry, as it could significantly influence the degree of safety and airworthiness (Ayiei et al., 2020). Leaders should "generate ideas, build teams and work with team to develop ideas, evaluate them and successfully deliver a good product" (Mott et al., 2019, pp. 7).

Subject Matter Excellence

According to Mott et al. (2019), the subject matter excellence in relation to the aviation management has to take into account skills of "implementing and managing effective safety, health, and environment systems, effectively solving problems and making decisions thinking critically and possessing a satisfactory level of business acumen." (Mott et al. 2019, p.10)

Given the nature of the crisis, the health system applied was a crucial aspect during the pandemic duration, as safety it is an important aspect in the aviation. The health safety measures taken by the airports during the first wave of SARS-CoV-2 were social distancing and mandatory use of masks, travel bans between countries, quarantine, COVID-19 test screening, passenger data collection, health declaration and measurement of the body temperature (Blistanova et al., 2020). Decision making process can positively influence the reaction to a current and future crisis and should adapt similar past situations to the new reality, create the best solution that adapts to the situation and reshape the organization or the environment, in order to improve (Coccia, 2020).

Ethics and Integrity

Ethics and Integrity are two important aspects, strongly related to the skill of leadership, as from an ethical point of view, leaders could influence the others on maintaining an ethical behavior (Butts, 2012), while integrity, is how the members of the organization apply the ethical principles when not monitored (Mott et al., 2019). Ethical behavior should be taught to aviation managers, as the decisions of an airport management could have disastrous outcome if not made considering all the potential risks (Oderman, D., 2000). In the aviation industry, ethics and integrity are significantly more important, because of its prone-to-incidents nature, meaning that a lack of ethics could lead to unsafety and higher probabilities of incidents (Stanford & Homan, 1999, p. 6)

Communication

Vieira et al. (2014) emphasize that communicational skills, especially in the aviation sector, have an influence on a very important aspect, which is safety. Most of the accidents happen because of human error, which means that communication could be an important element of the level of safety of the aviation processes (Vieira et al., 2014).

Teamwork

Teamwork has been known to be a critical skill in aviation, as team training is common, and sometimes mandatory in the case of airlines, flight crews, pilots, Air Tower Control, etc. (Reader & Cuthbertson, 2011). This skill was crucial during the pandemic, as fast and coordinated actions were needed to be taken. Tannenbaum et al. (2020) highlights that during crisis, members of the organization tend to work as a team, but stress could be an issue on a long-term perspective. There is also evidence of increase team resilience (Tannenbaum et al., 2020), which also could be observed in crisis situations.

Individual Resilience and Innovation

According to Mott et al. (2019) individual resilience is "the ability to persevere in the face of adversity and changing circumstances" while innovation "is the ability to creatively seek solutions and find opportunities in changing environment". Rai et al. (2021) explain that resilience is a skill that could positively influence actions during a crisis, as they are easier to be tackled, as members of the organization can rely on the help of the others. As per past events, such as the financial crisis from 2008-2009, there could be observed an increase of innovation due to the crisis (Markatou & Vetsikas, 2015), while during the COVID-19 a study showed that innovation it is important, as the industries need to adapt to the new reality and embrace change (Bar Am et al., 2020).

Mott et al. (2019) proposed the Competency-Based Education Framework which can be used to evaluate the airport management programs, which is important in the growth and the development of aviation leaders. The framework highlights the lack of importance given to the soft skill training in aviation management, being generally focused on other members of the aviation industry, such as flight attendants or pilots, indicating a lack in the competencies of the management.

The need of training soft skills among the airport managers is crucial as their capabilities of interaction, communication and general behavior can have a strong impact on the other members of the organization (Gov & Çoten, 2021), this influencing the process of crisis management.

This framework is based on six important competencies that are mandatory for an airport manager: Leadership, Subject Matter Excellence, Ethics and Integrity, Communication, Teamwork, and Individual Resilience and Innovation, which will be further analyzed.

Leadership

According to Mott et al. (2019) leadership is a crucial aspect that require both "independent and interpersonal skills", this having an important impact on how the organization and its members receive information and how effective a problem could be solved. In a crisis, a leader could change completely the dynamic of the organization, by including the staff in the decision-making process, giving complete information and welcoming feedback (Fener & Cevik, 2015). Moreover, leadership plays an important part in the aviation industry, as it could significantly influence the degree of safety and airworthiness (Ayiei et al., 2020). Leaders should "generate ideas, build teams and work with team to develop ideas, evaluate them and successfully deliver a good product" (Mott et al., 2019, pp. 7).

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innovation due to the crisis (Markatou & Vetsikas, 2015), while during the COVID-19 a study showed that innovation it is important, as the industries need to adapt to the new reality and embrace change (Bar Am et al., 2020).

2.8. Literature review conclusion

Disruptive events like crisis have been existing for many years, with the COVID-19 pandemic being the last major crisis which spread quickly worldwide, severely affecting industries like aviation, which was constantly growing and showing good prospects, until its activity abruptly stopped in mid-March of 2020.

The aviation industry is well known for having contingency and emergency plans for any kind of situation, however, due to the complexity and constant change, crises are becoming harder to be anticipated and be tackled with standard measures.

Skills are crucial in a crisis, and although trainings for soft skills have been made among pilots or cabin crew, there has been less focus on training soft skills of the airport management. Due to being a health crisis, which directly affected people and human interaction was restricted, but still needed, the COVID-19 pandemic showed the necessity of soft skills.

A framework studied in airport management programs could be the key to developing soft skills among the management of the airport and preparing for a future crisis and will be further applied on the two airport managements which have been included in this study. It is important to understand how the airport management tackled the COVID-19 pandemic and how it adapted to the situation.

3. Methodology

In this section, the strategies in order to reach credible results and conclusions are explained. Due to the novelty of the phenomenon, we are focusing on, a qualitative methodology was chosen, with semi-structured interviews using the Critical Incidents Technique (CIT), a qualitative method commonly used in the cases of studying the skills and the factors in the case of a critical situation, such as the airport management in a crisis, like the COVID-19 pandemic (Butterfield et al., 2005). The approach used will allow future research to understand the impact of a serious crisis in the aviation industry, respectively airports and their management. It is relevant for the study to recognize the issues that the airport management had to face during the first wave of the COVID-19 pandemic, what were the measures that were taken and how can the airport management could better face the future crisis.

3.1. Selected methodology

This study will follow a qualitative research, based on semi-structured interviews. According to Patton (1987), qualitative research should indicate the relevant information, how the results may be used for further purposes, and what are the resources available for this kind of research. It is the suggested method in the case of in-depth analysis of the events and the situation in which the subjects found themselves.

For this study, the qualitative research will be made through semi-structured interviews and will be conducted among the management of the airport authorities in two countries: Portugal and Romania. Qualitative research allows a more complex understanding of the crisis and how the airports and their management was affected by the COVID-19 Pandemic that started in the beginning of 2020

3.2. Analysis of airport management behavior during COVID-19 pandemic

The present study was conducted among managers and leaders of different departments from two distinct European airport communities: Portugal (N=4) and Romania (N=4). It is important to reckon that both countries and their aviation leadership had different strategies and different contingency plans, but both acted accordingly to the European Union directive regarding the COVID-19 pandemic and according to the main aviation regulator,

International Civil Aviation Organization (ICAO). From each of the studied aviation communities, there were conducted 4 interviews, 8 in total, for the study to gain relevance.

Each of the leaders interviewed held roles in the Strategy department, Statistic, Airport handling, Human Resources, Supply or Public Relations. All the interviewees had to coordinate human or material resources during the pandemic and the processes they were responsible for were strictly related to the airport processes.

Table 1. Study participants

Interviewee code	**Country**	**Occupation**
B1	Portugal	Human Resources Manager
B2	Portugal	Operational Manager
B3	Portugal	Commercial Director
B4	Portugal	Supply Assistant
A1	Romania	Airport Manager
A2	Romania	Handling Director
A3	Romania	Airport Planning
A4	Romania	Spokesperson

The comparison and analysis of the soft skills from two countries is relevant, as it gives a better perspective on how the crisis management was done in two different environments.

4. Analysis of the soft skills in Portugal and Romania based on the Competency-Based Education Framework

The soft skills developed in both Portugal and Romania were analyzed using the Competency-Based Education Framework (Mott et al, 2019) which has therefore 6 major categories: leadership, subject matter excellence, ethics and integrity, communication, teamwork and individual resilience and innovation comparing the presence of the previously mentioned in the behavior during the COVID-19 pandemic crisis.

4.1. Leadership

The aviation managements from the countries studied showed both similarities, as well as differences in terms of leadership behavior during the COVID-19 pandemic crisis.

From the conducted interviews based on the Critical Incident Technique, leadership skills have been noted in both countries' management. In Portugal, managers confronted the pandemic crisis having in mind both the welfare of the employees and the financial cost of the crisis. Given the nature of the crisis, the employees were worried about their health, the future, and the unpredictability of the pandemic. However, managers empathized with them, understanding the fears, and tried to give support as much as possible. Another important aspect which requires leadership skills is the power to adapt and lead the organization during uncertain times. The managers also had to deal with budget cuts, contract termination and other financial aspects, while bearing in mind the members of the organizations.

> *"In terms of motivation at the organizational level also, because the people weren't ready, we all had a lot of fear, and this must be managed at the company level. Also, there was the financial aspect that was associated. […] We had to handle people that started to become sick, and especially family members of colleagues that had COVID-19. We were forced to deal with death among the colleagues and their families"* – B1

> *"Because of the breach in the aviation and the infection situation, we tried as much as possible to have the teams working from and we adjusted quickly. […] We tried to measure the impact that the situation at a budget level and we saw that it was way bigger than believed. We "took the machine, unplug and only let the heart beating". We analyzed from A to Z where we can cut costs." – B2*

> *"The most important lesson of this pandemic is that we have to be agile and show great flexibility when making a fast decision and making decision that the next day you might need to change." – B3*

In Romania, managers showed leadership when having to motivate the team and the employees during the transition to remote work or dealing with incidents at the airport facility. Leadership skills were demonstrated when the airport management had to make decisions regarding the future investments and had to demonstrate a quick reaction to the crisis, by adapting and making decisions fast.

A1 stated that there was a necessity of quick adaptation to the situation, creating sort of a "task-force" with managers, directors, and other leaders from the airport community in order to plan the way the crisis was going to be tackled.

> "We *didn't have a special crisis management department, we have contingency plans, but at that time, no one thought about this scenario, were all the planes would be grounded. We managed to create an "emergency group" created by all the managers and directors of the company. – A1*

> "*What was challenging, and it was new for me was to find new methods of motivate the people, which were already in quarantine at home, partially not updated to the informational flux. […] It was difficult to organize them, it was a new element, they needed moral support, encouragement, I had to empathize with each person and their own personal problems."* – A3

The management of the handling company that served the airport in Romania had to exhibit leadership skills in relation to shareholders, and the financial decisions taken that affected them and the future of the organization.

> *"For us, the biggest challenge was given by the fact that in 2019 we made massive investments in order to open the Cargo division in 2020. We had converted all our reserves that were allocated to a crisis like COVID to invest and develop in 2020. The things changed. The biggest challenge was to take responsibility for the fact that we couldn't deliver what we promised to our business partners, because we didn't know how long it would take (the COVID-19 pandemic). I could say that the decisions we made were about business sustainability."* – A2

> *If there is a crisis tomorrow, would I have resources? If up until now we thought about contingency plans for sustaining a business for a 6-month period, now we enhanced it to 12 months"* – A2

Table 2. Comparison of leadership actions taken in Portugal and Romania during the COVID-19 pandemic

Portugal	Romania
- Empathizing with staff and team members during the pandemic - Empathizing during periods of illness - Assisting other employees and the team members in the processes - Making quick decisions and adjustments - Flexibility and resilience together with the team members and other employees - Budget reduction and better management of the available cash	- Empathizing, motivating, and giving support to the team members during the pandemic - Making quick decisions and adjustments - Assisting other employees and the team members in the processes - Assuming responsibilities and risks before the shareholders - Flexibility and resilience during the crisis

As per the table above, the leadership-based decision taken in both countries were similar, both managements having related behavior regarding the management of the COVID-19 crisis, with a small accent on financial aspects from the Portuguese airport management, which emphasized the necessity of cost-cutting more than the Romanian airport management.

4.2. Subject Matter Excellence

According to the interviewed managers from the analyzed countries, health measures among the airport employees and the passengers were taken from the beginning of the pandemic. As safety and health measures, apart from the basic measures, the airport management from Portugal implemented remote work for the processes that didn't require presence at the airport, while the for the on-site processes and tasks, back-up teams had been established, in order to reduce the contact between the members of the organization and track easier the

COVID-19 cases, if existed. Improvement of touchless and digitalized processes was also a priority, along with remote work.

> *"We already had everything digitalized, we don't use paper. We have never had remote work like this before, but it was very easy to install it, since we were all ready to work from home. Basically, all the administrative roles and support went home and for the roles that required presence at the airport, we ended up working with back-up employees." – B1*

> *"In the case of the Ramp team, we didn't make changes, because we had a lot of activity in the Cargo segment and for this, we need a bigger staff at the ramp. […] In the Passenger area, we had to place people in remote work, have the minimum number of teams working at the office and avoid the infection and the contact between the teams, it was an immediate action."* – B2

In Romania, remote work was also implemented in the departments that didn't require presence at the airport, having some designated members of the organization going to the headquarters when necessary to complete basic tasks. In some departments, members were taking turns to go to the airport, respecting the social distancing and using masks in the premises.

> *"Amongst the first measures that were taken and had an impact in the department that I mange was remote work. We had to reduce the presence of the personnel on the airport by 80-90% and switch to remote work, which was interesting because we weren't ready for such thing" – A3*

As for the passengers, the screening was made a different way, there was a screening of the passengers made in tents outside, in the parking lot of the airport, which were sent in small groups to the check-in, and then the people that were going along with them had to cross the border, go back, and pick more people up.

> *"We had to set everything up in the parking lot of the terminal, in Departures. We did a screening and a pre-check-in there, after that, we were doing the boarding. We were taking 10-15 people at a time through the screening, so it was a big resource consumption. As an airport, we had to give support through this process. They were taking the people from the screening tents, through the frontier to the gates, and were coming back to take more" – A1*

Table 3. Comparison of subject matter excellence actions taken in Portugal and Romania during the COVID-19 pandemic

Portugal	Romania
- Health safety measures - Implementing remote work where possible - Implementing back-up teams for on-site work employees	- Health safety measures - Implementing remote work in necessary departments - Turn-taking system for on-site work employees - Restructuring/creating designated spaces for health screening

4.3. Ethics and Integrity

As studied above, during the COVID-19 pandemic, managements from Portugal and Romania exhibited leadership skills based on ethic decisions, that were health-related. The members of the organization demonstrated integrity, by following the recommendations of health regulators and respecting the health etiquette imposed.

> *"There is here a public health situation, and it is important to preserve the health of the people, this situation is fundamental, and, if we see the Maslow's pyramid, the health is in the bottom. We have to protect the passengers, the employees and we had to take actions that we have never taken before, we had to adapt buildings, everything related to cleaning, improve the touchless and biometric processes."* – B3

There is, however, one concern that should be highlighted in the case of the Portuguese management. Due to the changes made by Handling, during uncertain times, under different circumstances – *low traffic* -, the switch might cause incidents that could be related to the integrity of the staff.

> *"Restructuring and testing with low traffic and then say that it was a positive change, that you cannot say, because we are talking about different fluxes of traffic. I think that the negative part was that this was not well thought, and the decision was rash; we are in a more dangerous situation that we think. Firstly, we still didn't measure it because of the countries opening and closing borders all the*

time […] my greatest fear is that the alterations might create some kind of accident or incident among the teams, or maybe even among the passengers. Usually, in aviation, when we are in the peak of the operations, everyone is on alert and no errors are made. After the peak, we feel confident that we did a good job and we let our guards down, and this is how accidents happen" – B2

Table 4. Comparison of ethics and integrity actions taken in Portugal and Romania during the COVID-19 pandemic

Portugal	Romania
- Respecting respiratory etiquette and health measures imposed - Switch to a new management model in Handling	- Respecting respiratory etiquette and health measures imposed

4.4. Communication

During the COVID-19 pandemic, communication was crucial, as the unpredictability of the decisions that were taken was high and people needed to communicate, whether about the organizational decisions or the personal welfare (sickness, tracing the origin of the infection, etc.)

In Portugal, the interviewees didn't draw attention to any major communication flaws, and the transition to remote work as done smoothly, without any major incidents to be mentioned. The communication was done well in the departments and the airport organizations studied, the transition to remote work was successfully done.

"The flexibility aspect, having the capability to take the work home overnight, the flexibility to do so. Those things, we used to do from time to time, remotely. This capability of resilience and change that we had, wouldn't have been possible, hadn't existed a crisis like this." – B3

In Romania, the airport management confronted three communication issues: with the passengers, the authorities and in the internal processes of the organization. During the first weeks of the pandemic, when the State of Emergency was implemented, the passengers coming from repatriation flights didn't have enough information and the airport officials

could not offer exact details, as rules and conditions were rapidly changing. However, due to an extent effort, this was normalized as the time passed and there was a better coordination among the airport community members. The authorities were not giving exact information regarding the procedures, and the situation was normalized later, after some months, when the Government issued a clearer set of rules, according to one of the interviewees. The airport management from Romania was proactive and worked together with the authorities to create a set of procedures that could be followed. The internal communication was poor in the beginning of the pandemic crisis, as the employees weren't given resources to perform their tasks from work (access to the company's system, computers, telephones) and the employees had to use their own equipment. This situation was also solved as the time passed.

> *"We can say that until July, it was a bit of a chaos, considering the decisions that were made each and every day, the flight restrictions on some countries, while the planes were already cruising. The authorities' intervention, the decisions were a little bit chaotic. There was no coordination, no one knew what to do, each one of us was making decisions however we saw fit at that time. Somewhere in July we became more organized, we also received a Minister Order that included the measures we were supposed to take." – A1*

> *"Even though they were receiving e-mails, working from home is different than being at the office." – A3*

> *"There was a funny situation, the software incompatibility. Each of us was using their own version of Excel and I had to redo a lot of the reports, because the information was not harmonized. I had to merge the work of each of the five of my co-workers so that the information would be coherent." – A3*

> *"The number of passengers was lowering, we didn't know what to communicate to them, because we didn't have enough information (from the authorities) and we were some kind of pioneers, because we had to come up with some procedures and then we would transmit them to the authorities. It was a difficult period, because the country was in a State of Emergency, and everyone was affected." –* A4

Overall, in both countries, communication was done well between the members of the organization, as they could manage the crisis without any major problems. This is crucial in an environment like an airport since it could create a disruption and cause safety problems.

Table 5. Comparison of communication actions taken in Portugal and Romania during the COVID-19 pandemic

Portugal	Romania
- Remote work and back-up teams successfully implemented - Relatively good communication during crisis period - Overall, good communication between the members of the organization	- Lack of communication with the authorities and the passengers during the first weeks of the pandemic - Lack of material resources, which caused small issues in the coordination - Overall, good communication between the members of the organization

4.5. Teamwork

Portugal also showed good teamwork skills during the COVID-19 crisis, notably among the back-up teams that were created to reduce the probability of infection.

> *"A group of people would work in the airport and other people were preserved, to minimize the contact between different persons and allowing, in case there was an outbreak in one of the teams, to have someone in back-up, at home."* – B1

The teams working on-site were well harmonized with the remote employees, being assisted by their leaders during the whole period of the pandemic. The high resilience, which will be further explained, and flexibility, played an important part in the executed processes and the good coordination among the teams.

> *"The people's will to give in and the level of comprehension were much bigger. They have been more tolerant and accepted the need of change easier. In aviation, we are always prone to change and sometimes there is a resistance. I think has been more tolerance and comprehension."* – B2

> *"The unity between the employees facing the adversity created by the COVID-19 pandemic allowed the company to keep working, even though the conditions were though"* – B4

In Romania, leaders of the teams and departments became more than that, as they helped with the processes that had to be made, the changes in tasks and the other processes that weren't theirs on a normal basis. In one department, the team had to work together on new reports generated for COVID-19, help with the tasks of other departments, while at the airport facilities, different employees from completely different departments (protocol, special needs, business lounges) formed a team to help on the screening area. This change of tasks that weren't included in the job description was well dealt with and served as a lesson for future crisis.

> *"Of course, each of us has their own activities, but we realized that it becomes useful if we know what the other does, so that, if I cannot work, who will replace me at the office can do my tasks […] What we get from here is that we can do it, there is a bigger openness, we taught each other some particularities of our tasks"* – A3

> *"We learned. People that used to work in business lounges started to do the management of the mass of people at the arrivals. They help people with filling the forms. We also moved people from the mobility service, and probably in a future situation, we will be more coordinated. We learned that we can do things that are not necessary in our job description"* – A1

Table 6. Comparison of teamwork actions taken in Portugal and Romania during the COVID-19 pandemic

Portugal	Romania
- Remote work facilitated by the teamwork and cooperation - Back-up teams that eased the processes when on-duty teams couldn't - Involvement of the leaders in all the processes	- Completing tasks out of the job description - Reallocating employees to other areas - Team spirit when needed to complete processes - Involvement of the leaders in all the processes

4.6. Individual Resilience and Innovation

In both analyzed countries, resilience was the skill that was mentioned the most, as all interviewees saw it as a positive outcome after the COVID-19 pandemic. Airport leaders

from both Portugal and Romania declared that the resilience of each of the employees was a crucial factor during the crisis. As per Rai et al. (2021), openness, high availability was among the characteristics noted in the behavior of the people.

Along with resilience, innovation was an important skill that emerged during the COVID-19 pandemic, as airport managements had to adapt, and create new methods to function.

Portugal airport management experienced resilience in all the departments studied, this making the crisis easier to be tackled. The decisions that need to be made were faster than the usual, given the fact that there was an ongoing crisis, and people complied and executed the tasks, despite the unpredictability.

> *"Because we had no idea about the traffic forecasts, we didn't know what it was going to happen. We had to go and speak to the regulator and explain that we didn't have the capacity for the model, at the time […] either we were doing the forecasts as usual and we would have had crazy forecasts, either we were stalling and and we would leave our confort zone. We adapted to a new timing and the taxes were applied starting 1st of April instead of 1st of January."*- B3

Remote work and digitalizing the tasks and meetings could be considered an innovation that could be adopted in the future crisis and on a daily basis, as it could bring real benefits to the organization.

> *"An important aspect was the remote work, which managed to allow us, especially the ones that have children, to spend more time with them […] I finished work earlier, I went to pick my child up from kindergarten and we went to the park. It is a positive thing to understand that there are other ways to get organized during remote work and there is some flexibility that we hadn't had explored yet."* – B1

However, a decision like restructuring during COVID-19 pandemic, could go both ways, either be considered as an innovation and success or as a failure due to the lack of data to perform such change.

> *"Restructuring made on the run might not give a good result. The fact that we have time, we start to think, and it is no longer outside the box, there is no more box and too ahead. The lesson that I take from this is that restructuring in crisis times is dangerous, we didn't have time to evaluate it because we still don't have the traffic that we had so we could see the impact"* – B2

"Planning a crisis is very important. The flexibility of managing a crisis, believing in the ability of adapting and in the resilience of the people is essential. This crisis will end, but in fact, it was a big earn" – B1

"There are unpredictable factors that could have serious negative impact on the activity of the company. Nothing is guaranteed." – B4

Having to make quick and confident decisions and be fast is also an important lesson when facing a crisis.

"It is not every four months; it is making quick decisions and not being afraid of doing so." – B3

In Romania, the resilience was observable in the interaction between organization members and in the interaction with external organizations. While the communication skill was sometimes lacking, as previously mentioned, this was compensated by the resilience of the leaders and the employees. New tasks were created, new sets of rules were adopted, this giving the opportunity of acquiring new job-related skills to the people. Resilience skill triggered innovation, meaning that in a future crisis, issues will be easier to tackle and the reaction to the change will have less of a negative impact on the organization as a whole.

"We are ready to manage even worse situations that we had before in our emergency plans. We are paying more attention on the measures so that we can be responsive when something like this happens" – A1

"In terms of lessons, in my opinion, also as an economist, I believe that one of the most important lessons was to use all the tools that you have available and how to use them in a crisis. If there is a crisis tomorrow, would I have resources? If up until now we thought about contingency plans for sustaining a business for a 6-month period, now we enhanced it to 12 months" – A2

"*The responsibility. No one from our team felt like they cannot continue, even thought it was human to not be able to continue. I see that the level of responsibility of each of the team member was above the expectations and above the limits, even though not all the activities were in our job description. It matters a lot to have a team for which the responsibility is important, I believe this kind of people should be appreciated and kept*" – A3

"We learned a lot of lessons, one of the main ones was to act and be responsive, think in advance. Another lesson was that if today everything is fine and it seems that nothing could go wrong, well, it could." – A4

Table 7. Comparison of individual resilience and innovation actions taken in Portugal and Romania during the COVID-19 pandemic

Portugal	Romania
- Quick decision-making process - Innovating through remote work and digital processes - Openness and low resistance to change	- Quick decision-making process - Innovating through remote work and digital processes - Openness and low resistance to change - Compensate lack of communication by high resilience and cooperation

5. Application of the Competency-Based Education Framework in the airport management

Based on the analysis of the interviews, centered on the framework compiled by Mott et al. (2019), the findings could be implemented in the airport higher authorities' framework and contingency plans. As previously mentioned, the ICAO has a gap in the soft skills training, which is more focused on the elements that are directly linked to the airport-related tasks and disregards the management.

In 2014, the aviation regulator published a document that included a framework for Crisis management, where several categories of events are explained and what their impact would be on different sectors (ICAO, 2014). In the case of "Airborne spread diseases/Pandemic", the category Persons discuss the health and workload of personnel, passenger, and flight crew, however, the framework is not extended to management, nor soft skills are mentioned.

Therefore, an adapted framework by Mott et al. (2019) can be adapted to the ICAO Crisis management framework as recommendations as it follows:

- Leadership involvement in low level tasks and processes
- Psychological support for leaders and their teams
- Creation of a crisis taskforce constituted of all managers
- In-depth personal and professional ethics training
- Creation of a clearer communication protocol
- Regular taskforce meetings for a better communication
- Switching from individual tasks to more team-oriented tasks
- Scenario-based training to test resilience

Therefore, upon the events that occurred during the beginning of the COVID-19 pandemic, aviation authorities should implement the measures presented above as part of a crisis framework. It is important to understand the importance of the airport management in the decision-making process and how critical soft skills training is in such crisis.

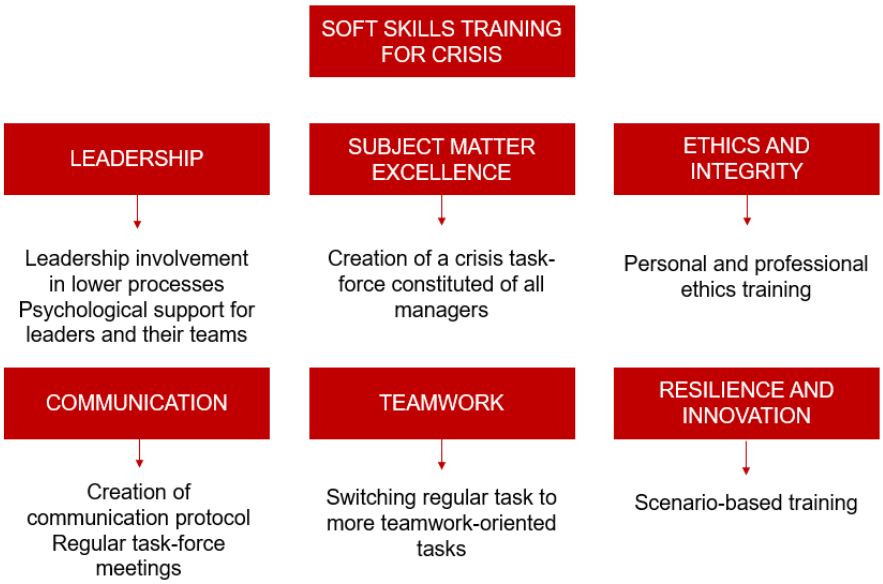

Figure 2. Recommendation on implementing the studied framework for soft skills

The recommendations for soft skills training in aviation authorities are highly linked to the involvement of the management in low-level tasks management, since it is noticeable that during a crisis like the COVID-19, leadership, resilience, teamwork, communication, ethics, openness, and empathy are crucial.

The soft skills displayed by the eight managers from the two countries studied could be found in the Competency-Based Educational framework, some being mentioned more than others.

Upon a comparison between the skills mentioned in the framework and the ones displayed by the managers, leadership competencies were aligned, although the sub-competencies mentioned which were "achieving mission, goal and vision and utilizing situation, context, and cultural aspects of organizations effectively" (Mott et al., 2019, pp. 8) were not mentioned managers interviewed. Subject Matter Excellence competencies can be highly linked to Ethics and Integrity and Leadership, as they were noticeable in the managers' behavior during the COVID-19 pandemic. Communication skills, however, were an issue for the managers as the unpredictability of the crisis caused disruptions and difficulty in communicate problems and decisions. Teamwork is a competency which was highly valued and visible, as managers coordinated teams and involved themselves in the basic tasks. Lastly, individual resilience, which was a crucial skill during the crisis, lead to an innovation in the

airport management processes. The pandemic was a paradigm shift, meaning that the management had to adapt and innovate, which lead to an extraordinary resilience.

Although, all the six pillars of the framework should be taking into consideration, it should be stressed that not all should be treated equally, as soft skills such as leadership, communication, teamwork, and individual resilience and innovation were most required in the analyzed situation. Ethics and integrity and Subject Matter Excellence, should be treated as sub-skills of the Leadership pillar, without disregarding that these competencies are crucial in aviation. Leadership should be considered the foundation of the framework, as the other soft skills are highly linked to it.

6. Conclusion, limitations, and future research

It can be concluded that, despite not having a clear and specific plan adapted to a situation like the COVID-19 pandemic and not having a specific soft skills training, the airport managers have managed to overcome the challenges of the crisis that hit in March 2020. The Competency-Based Education Framework can be considered relevant for a further soft skill training of airport management and can be applied and adapted for future crisis. The discoveries are fundamental for a future new approach of a crisis in leadership.

The study reinforces the importance soft skills in the leadership behavior in a crisis, like the one caused by the recent COVID-19 pandemic. Soft skills are aptitudes which leaders should be trained in, as, although disregarded, are crucial in crisis management in the aviation industry.

This study has various limitations. As qualitative research, this study was time consuming, the results cannot be generalized and there was a certain difficulty in obtaining data (Queirós et al., 2017).

Furthermore, due to the nature of the organization/industry studied and to the hard economic times airports are facing, collecting data was especially difficult and obtaining collaboration from workers was extremely difficult (hence the small sample size). Over 30 people have been contacted through the method of snowballing (Sedgwick, 2013) or through professional social media networks (LinkedIn), only 8 people showed interest in the study.

The method used for the study, Critical Incident Technique, has its own disadvantages that might result in limitations. Even though it was a semi-structured interview, some of the questions were not answered or the answers were not necessarily fitting the Critical Incident Technique, this being a disadvantage (Kain, 2004).

The findings of this study revealed that it was a relevant subject for aviation and the research could be extended to other European airports or airports from other countries which didn't have a higher authority. Also, this study can be broadened to other organizations related to the airport management, such as airlines or it can be done from the perspective of employees which had to deal directly to passengers.

7. References

Airports Council International (2009) Airport preparedness guidelines for outbreaks of communicable disease. https://aci.aero/wp-content/uploads/2020/01/Airport_preparedness_guidelines_for_outbreaks_of_communicable.pdf

AL-Dahash, H. & Thayaparan, M. & Kulatunga, U. (2016). Understanding the Terminologies: Disaster, Crisis and Emergency.

Alper, A. & Bloom, D. (2020) Trump curbs travel from Europe as coronavirus disrupts schools, sports. Retrieved January 05, 2020. https://www.reuters.com/article/us-health-coronavirus-usa/trump-curbs-travel-from-europe-as-coronavirus-disrupts-schools-sports-idINKBN20Y1Z0

ARC (2020) Airport Challenges in Reacting to Covid-19. https://arc.de/consulting/airport-challenges-in-reacting-to-covid-19/

Bar Am, J., Furstenthal, L., Jorge, F., & Roth, E. (2020) Innovation in a crisis: Why it is more critical than ever. https://technologyleaders.co.uk/wp-content/uploads/2020/07/Innovation-in-a-crisis-Why-it-is-more-critical-than-ever.pdf

BBC.com (2020) Coronavirus: EU entry ban hits travellers as lockdown widens. https://www.bbc.com/news/world-europe-51945180

Blalock, G., Kadiyali, V. & Simon, D. (2007). The Impact of Post-9/11 Airport Security Measures on the Demand for Air Travel. Journal of Law and Economics. 50. 731-755. 10.2139/ssrn.677563

Bongiovanni, I., & Newton, C. (2019). Toward an epidemiology of safety and security risks: an organizational vulnerability assessment in international airports. Risk Analysis, 39(6), 1281-1297

Butterfield, L., Borgen, W., Amundson, N. & Maglio, A. (2005). Fifty years of the critical incident technique: 1954-2004 and beyond. Qualitative research. 5. 475-497. DOI: 10.1177/1468794105056924

Butts, J. B. (2012). Ethics in organizations and leadership. Nursing Ethics: Across the Curriculum and into Practice, 3rd Edition, Jones and Bartlett, Boston.

Coccia, M. (2020). Critical Decisions in Crisis Management: Rational Strategies of Decision Making. Journal of Economics Library, 7(2), 81-96.

Clegg, C. (2010), The Aviation Industry and the Transmission of Communicable Disease: The Case of H1N1 Swine Influenza, 75 J. Air L. & Com. 437, https://scholar.smu.edu/jalc/vol75/iss2/5

de Groot, R. J., Baker, S. C., Baric, R. S., Brown, C. S., Drosten, C., Enjuanes, L., Fouchier, R. A., Galiano, M., Gorbalenya, A. E., Memish, Z. A., Perlman, S., Poon, L. L., Snijder, E. J., Stephens, G. M., Woo, P. C., Zaki, A. M., Zambon, M., & Ziebuhr, J. (2013). Middle East respiratory syndrome coronavirus (MERS-CoV): announcement of the Coronavirus Study Group. Journal of virology, 87(14), 7790–7792. https://doi.org/10.1128/JVI.01244-13

Decreto do Presidente da República n.º 14-A/2020. Diário da República: Série I n.º 55 (2020) https://dre.pt/pesquisa/-/search/130399862/details/maximized

Decret nr. 195 din 16 martie 2020. Monitorul Oficial nr. 212 (2020) http://legislatie.just.ro/Public/DetaliiDocumentAfis/223831

Dirani, K., Abadi M., Alizadeh A., Barhate B., Garza, R. C., Gunasekara N., Ghassan I. & Majzun, Z. (2020) Leadership competencies and the essential role of human resource development in times of crisis: a response to Covid-19 pandemic. Human Resource Development International, 23(4), pp. 380-294. https://doi.org/10.1080/13678868.2020.1780078.

Dixon, J., Belnap, C., Albrecht, C., & Lee, K. (2010). The importance of soft skills. Corporate finance review, 14(6), 35. https://search.proquest.com/openview/aa5f345bde23cacbf99574378aeef44b/1?pq-origsite=gscholar&cbl=46775.

Doherty, B. (2020) Thousands of Australians stranded overseas as countries close borders over Covid-19 fears. https://www.theguardian.com/world/2020/mar/20/thousands-of-australians-stranded-overseas-as-countries-close-borders-over-covid-19-fears

Enoma, A., Allen, S., & Enoma, A. (2009). Airport redesign for safety and security: Case studies of three Scottish airports. International Journal of Strategic Property Management, 13(2), 103-116.

European Commission (2019). Orientations towards the first Strategic Plan implementing the research and innovation framework programme Horizon Europe. https://ec.europa.eu/research/pdf/horizon-europe/ec_rtd_orientations-towards-the-strategic-planning.pdf

European Council (2020a). Council Conclusions on COVID-19. https://data.consilium.europa.eu/doc/document/ST-6038-2020-INIT/en/pdf

European Council (2020b). COVID-19 outbreak: the presidency steps up EU response by triggering full activation mode of IPCR. https://www.consilium.europa.eu/en/press/press-releases/2020/03/02/covid-19-outbreak-the-presidency-steps-up-eu-response-by-triggering-full-activation-mode-of-ipcr/

European Council (2020c). COVID-19: EU adopts slot waiver to help airlines. https://www.consilium.europa.eu/en/press/press-releases/2020/03/30/covid-19-eu-adopts-slot-waiver-to-help-airlines/

Fearn-Banks, K. (2011). Crisis communications. A casebook approach. Routledge, New York.

Fener, T., & Cevik, T. (2015). Leadership in crisis management: Separation of leadership and executive concepts. Procedia Economics and Finance, 26, 695-701

Gorbalenya, A., Baker, S., Baric, R., de Groot, R., Drosten, C., Gulyaeva, A., Haagmans, B., Lauber, C. Leontovich, A., Neuman, B., Penzar, D., Perlman, S., Poon, L., Samborskiy, D., Sidorov, I., Sola, I. & Ziebuhr, J. (2020). Severe acute respiratory syndrome-related coronavirus – The species and its viruses, a statement of the Coronavirus Study Group. Doi:10.1101/2020.02.07.937862

Gostin L.O., Bayer R., Fairchild A.L. (2003) Ethical and Legal Challenges Posed by Severe Acute Respiratory Syndrome: Implications for the Control of Severe Infectious Disease Threats. JAMA. 2003;290(24):3229–3237. doi:10.1001/jama.290.24.3229

Göv, S. A., & Çöten, O. H. (2021). The Image of Airport Managers An Assessment of Airport Employees. Journal of Economics and Business Issues, 1(1), 01-12.

Heath, L. and Palenchar, M., (2009). Strategic issues management. Sage: Thousand Oaks, CA

IATA (2020a) Slower but Steady Growth in 2019. https://www.iata.org/en/pressroom/pr/2020-02-06-01/

IATA (2020b) Economic Performance of the Airline Industry. https://www.iata.org/en/iata-repository/publications/economic-reports/airline-industry-economic-performance---november-2020---report/

ICAO (2014) ICAO Crisis Management Framework. https://www.icao.int/eurnat/eur%20and%20nat%20documents/forms/allitems.aspx?RootFolder=%2FEURNAT%2FEUR%20and%20NAT%20Documents%2FEUR%20Documents%2FEUR%20Documents%2F031%20ICAO%20Crisis%20Management%20Framework%20Document%202014&FolderCTID=0x012000DAF95319EADD9946B510C5D7B595637D00AA5EB47B299B9A4BAD1968B24E18655C&View=%7BE414A939-5FB4-4CB9-9139-466754ED0FA9%7D

ICAO (2019) Education and performance in aviation: Realising and sustaining benefits. https://www.icao.int/Meetings/a40/Documents/WP/wp_408_en.pdf

International Airport Review (2019) Tegel Airport rehearses epidemic alarm emergency drill. https://www.internationalairportreview.com/news/102721/tegel-airport-epidemic-emergency-drill/

INE, PORDATA. (2018). PORDATA - Base de Dados de Portugal Contemporâneo. Obtido em 6 de dezembro de 2020, de Tráfego de passageiros nos principais aeroportos: Lisboa, Porto e Faro: https://www.pordata.pt/Portugal/Tr%C3%A1fego+de+passageiros+nos+principais+aeroportos+Lisboa++Porto+e+Faro-3248

International Airport Review (2019) Tegel Airport rehearses epidemic alarm emergency drill. https://www.internationalairportreview.com/news/102721/tegel-airport-epidemic-emergency-drill/

International Health Regulations: Third Edition (2005) Available at: https://www.who.int/publications/i/item/9789241580496

Kain, D. L. (2004). Owning significance: The critical incident technique in research. Foundations for research: Methods of inquiry in education and the social sciences, 69-85

Koenig, K. (2015). Identify, Isolate, Inform: A 3-pronged Approach to Management of Public Health Emergencies. Disaster Medicine and Public Health Preparedness, 9(1), 86-87. doi:10.1017/dmp.2014.125

Likhacheva, A. (2006) SARS Revisited AMA Journal of Ethics 8(4):219-222. doi: 10.1001/virtualmentor.2006.8.4.jdsc1-0604.

Lucini, B. (2020). Soft skills for governing new threats: training methods for LEAs in preventing and countering violent extremism and radicalisation. Sicurezza, Terrorismo e Società, 45

Lufthansa Consulting (2020) Airports in crisis: Measures to respond and recover from COVID-19. https://www.lhconsulting.com/fileadmin/dam/downloads/studies/200407_Article_Airports_in_Crisis_LHConsulting.pdf

Mabey, D. & Flasche, S. & Edmunds, W. (2014). Airport screening for Ebola. BMJ (Clinical research ed.). 349. g6202. 10.1136/bmj.g6202.

Markatou, M., & Vetsikas, A. (2015). Innovation and crisis: An analysis of its impact on the Greek patenting activity. Procedia-Social and Behavioral Sciences, 195, 123-132

Martin, G. & Boland, M.. (2018). Planning and preparing for public health threats at airports. Globalization and Health. 14. 10.1186/s12992-018-0323-3

Mantzana, V., Georgiou, E., Chasiotis, I., Gkotsis, I., Stelkens-Kobsch, T. H., Kazoukas, V., ... & Komninos, F. (2020). Airports' Crisis Management Processes and Stakeholders Involved. Annals of Disaster Risk Sciences: ADRS, 3(1), 0-0

Mazareanu, E. (2020) Annual growth in global air traffic passenger demand from 2006 to 2021. https://www.statista.com/statistics/193533/growth-of-global-air-traffic-passenger-demand/

Mott, J. H., Hubbard, S. M., Lu, C. T., Sobieralski, J. B., Gao, Y., Nolan, M. S., & Kotla, B. (2019). Competency-based education: A framework for aviation management programs. The Collegiate Aviation Review International, 37(1), https://doi.org/10.22488/okstate.19.100211

Nathanial, P. & Van der Heyden, L. (2020). Crisis Management: Framework and Principles with Applications to CoVid-19. SSRN Electronic Journal. 10.2139/ssrn.3560259.

Nickol, M. & Kindrachuk, J. (2019). A year of terror and a century of reflection: Perspectives on the great influenza pandemic of 1918-1919. BMC Infectious Diseases. 19. 10.1186/s12879-019-3750-8

Oderman, D. B. (2002). Ethics education in university aviation management programs in the US: Part one-the need. Journal of air Transportation, 7(3), 3-32, doi=10.1.1.510.9574

Patton, M. Q. (1987) How to Use Qualitative Methods in Evaluation. 4th Edition, SAGE: Los Angeles, CA

Porta, M. (2008). A Dictionary of epidemiology, 5th Edition. American Journal of Epidemiology, https://doi.org/10.1093/oxfordjournals.aje.a114344

Rai, S. S., Rai, S., & Singh, N. K. (2021). Organizational resilience and social-economic sustainability: COVID-19 perspective. Environment, Development and Sustainability, 1-18

Rico, C. (2020) Confirmado primeiro caso de coronavírus em Portugal. Segundo caso aguarda contra-análise. https://www.tsf.pt/portugal/sociedade/confirmados-dois-primeiros-casos-de-contagio-pelo-novo-coronavirus-em-portugal-11876592.html

Read, J. M., Diggle, J. P., Chirombo, J., Solomon, T. & Baylis, M. (2014). Effectiveness of screening for Ebola at airports. The Lancet, 9962(385), 23-24, https://doi.org/10.1016/S0140-6736(14)61894-8

Robert, B., & Lajtha, C. (2002). A new approach to crisis management. Journal of contingencies and crisis management, 10(4), 181-191

Queirós, A., Faria, D., & Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. European Journal of Education Studies.

Sedgwick, P. (2013). Snowball sampling. Bmj, 347

Sehl, K. (2020). How the Airline Industry Survived SARS, 9/11, the Global Recession and More. https://apex.aero/articles/aftershocks-coronavirus-impact/

Sorribes, J., Celma, D., & Martínez-Garcia, E. (2021). Sustainable human resources management in crisis contexts: Interaction of socially responsible labour practices for the wellbeing of employees. Corporate Social Responsibility and Environmental Management, 28(2), 936-952.

Uchroński, P. (2011). Responsibilities of Airport Management in a Crisis Situation-Information Flow. In International Conference on Transport Systems Telematics (pp. 299-305). Springer, Berlin, Heidelberg

UNDRR. (n.a.) Disaster. Retrieved December 01, 2020, from https://www.undrr.org/terminology/disaster

United Nations (2015) Sendai Framework for Disaster Risk Reduction 2015 – 2030. Available at: https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf

World Health Organization (2020a). Archived: WHO Timeline - COVID-19 Retrieved January 08, 2021 from https://www.who.int/news/item/27-04-2020-who-timeline---covid-19

World Health Organization. (2020b). Ebola virus disease. https://www.who.int/health-topics/ebola/#tab=tab_1

Zhang, Z., Jia, M., & Gu, L. (2012). Transformational leadership in crisis situations: Evidence from the People's Republic of China. International Journal of Human Resource Management, 23(19), 4085–4109. https://doi.org/10.1080/09585192.2011.639027

Annex 1

Interview script

Overall, how was the COVID-19 pandemic dealt with in your department in the first wave?

Describe the biggest challenge that your department had to face.

Describe a situation which resulted in a negative impact.

- How did you feel you/the department managed the situation?
- What were the actions taken by you/the department?
- What would you change in this behavior?

Describe a situation which resulted in a positive impact.

- How did you feel you/the department managed the situation?
- What were the actions taken by you/the department?
- What would you change in this behavior?

What was the most valuable lesson this pandemic has taught the airport management?

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