Unit Irregular operations

Introduction

Irregular operations occur when operations do not proceed as planned. It is very difficult for airlines to operate perfectly at all times since airline operations are often affected by many circumstances including both human and natural factors. Irregular operations are caused by flight cancellations and delays due to severe weather conditions, aircraft mechanical problems, schedule changes, and/or problems with airport facilities.

Irregular operations are often upsetting for passengers and create extra expenses for airlines. These expenses include the cost associated with solving the mechanical problems as well as offering amenities to comfort and compensate the affected passengers and paying overtime wages to employees. The hidden costs include dissatisfied passengers who will be unlikely to fly with the airline again if the situation is not resolved to their satisfaction.

Delays are the most common flight irregularity and unfortunately may also lead to flight cancellations. Delays and cancellations hurt an airline reputation. Therefore, then airline's management team must make important decisions to minimize the inconvenience caused to the affected passengers.

When an extended delay occurs, the domino effects of the delay or cancellation are evaluated by the airline management. Airlines generally create tight schedules for aircraft operations. If one flight is delayed or canceled, subsequent scheduled flights on the timetable will also be affected. This is known as the domino effect. For example, if a flight that is scheduled to fly from Rome to Madrid and back has been delayed or canceled, the return flight from Madrid to Rome will be also affected

The following are typical options airlines consider when handling irregular events:

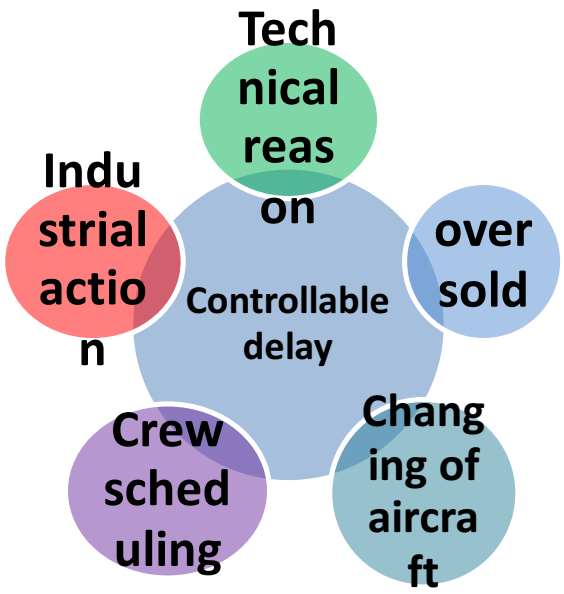
- **Delay the flight**. Reschedule the departure time of the flight to a later time. This option is usually the first choice and is used in instances of minor mechanical problems and unfavorable weather conditions.

- **Cancel the affected flight.** Remove the flight from the timetable. This option will be considered in view of severe issues that cannot be fixed in a reasonable amount of time and when the delay in departure time is not a viable option.
- **Change in aircraft**. If a mechanical problem cannot be fixed quickly and the airline has another aircraft available, this choice is obvious. In fact, airlines are known to cancel another flight with a lower passenger load and use the aircraft to operate the higher load flight or the flight whose cancellation would have a more severe domino effect.
- **Operate additional flights**. An airline may decide to cancel the original flight when a reschedule time cannot be established. When the condition improves, the airline would then arrange for an additional or ad hoc flight to meet the original scheduled load.

Flight Delays and Cancellations

A "delay" refers to a flight being unable to depart at its scheduled time. The various reasons causing flight delays are classified into two categories controllable and uncontrollable delays.

<u>Controllable delays</u>



Controllable delays are mainly caused by human-related factors and these are elements that can be controlled by the airlines.

Controllable delays include the following

Technical reasons

Airlines often create tight schedules so as to maximize the efficiency of their aircraft. The shorter the time an aircraft is on the ground, the more revenue the airline generates. Keeping an aircraft flying means that the airline is providing more transportation services and (hopefully) selling more tickets. However, creating a tight schedule for an aircraft also means that there is limited time available for routine maintenance and repairs. The aircraft's turnaround time will be extended when mechanical problems occur during the turnover period, causing a delay.

Changing of aircraft

When an aircraft is out of service, the airline may try to operate the service with a substitute aircraft to minimize the disruption caused to passengers. With this option, the airline is required to re-plan its aircraft schedules for the entire system which will take time and cause a delay. In addition, the substitute aircraft must be brought to a gate, the crew relocated, and all baggage unloaded and reloaded.

Oversold

Oversold, also known as overbooked, is a very common strategy used by airlines to maximize their revenues. Overbooking means airlines intentionally allow more passengers to make reservations and purchase tickets on a flight than the actual capacity of the aircraft so as to ensure a full flight. As passengers are often irate when denied boarding on a flight for which they have a confirmed seat, governments limit the number of oversold seats while other have banned the practice outright.

The airline's inventory is composed of the seats it has on each flight. If passengers do not show up for a flight for which they have made a reservation or purchased a ticket, the reserved seat remains unutilized and cannot be returned to inventory for future use after the flight has departed. In the instance of a non-refundable ticket, there is not financial loss to the airline. However, many tickets are changeable or refundable and this constitutes a real

loss, especially when the seat could have been sold to another potential passengers. Therefore airlines often overbook their flights to avoid unoccupied seats and to maximize their revenue. If all passengers who have booked the flight check-in, some of these travelers' plans will be affected and this results in travel delays to those affected passengers.

Rescheduling of crew

Airlines provide pilots and flight attendants on board long-haul flights an opportunity to rest and take an in-flight break away from passengers and to engage in their own activities. This is known as "crew rest".

The United States of America's Federal Aviation Administration (FAA) mandated that the flight attendants work a maximum of 14 hours, extendable to 20 hours, with minimum rest periods of nine hours in between flights. This policy has been adopted by all other countries. Pilots have slightly different restrictions—a maximum of 16 hours of work, extendable up to 18 hours if necessary. The duty hours clock starts immediately when the fight crew reports for duty. If a flight is delayed, the operation scheduler will recalculate the crew working hours by adding the delayed hours to the flying time. It the total hours exceed the maximum working hours, the airlines must either change the crew members or delay a flight so as to allow the pilots and flight attendants to have enough rest before they are considered fit for duty.

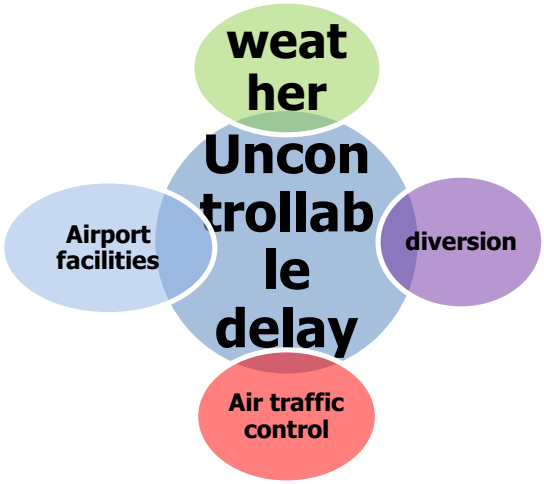
In addition, flight crew members reporting late to work or absent from work due to sickness and other personal issues may also cause flight delays.

Although airlines often schedule extra crew members to standby as backup, any last minute changes in flight crew will result in the backup crew having to report for duty or short notice. This will cause a flight delays as the backup crew will require time to get into uniform and make their way to the airport.

Industrial actions

Industrial actions refer to work stoppages by one or more groups of airline employees. When airline employees are on strikes, there might be insufficient staff to process the passengers at the check-in counters, to load and unload passenger baggage and cargo, *et cetera*. Any of these issues will inevitable cause flight delays.

Uncontrollable delays



Uncontrollable delays are caused by factors which the airline has no control over. These include the following:

Weather Conditions

Unpredictable weather conditions are one of the major challenges faced by airlines and they are the most frequent causes of flight delays around the world. While airlines can schedule extra time for deicing during winter, they cannot be expected to anticipate a blizzard, hurricane, sandstorm, or volcano eruption. Therefore, weather conditions are classified as uncontrollable delays. Extreme weather conditions causing flight delays or cancellations include the following:

- Fog. Thick fog conditions require extra time for taxiing, takeoff, and landing. Severe fog can cause closure of airports.
- Snow. Runways may be closed for snow removal during heavy snow seasons. Aircraft may require more than the usual time for deicing.
- Heavy rain. Heavy rain can cause reduced visibility. Aircraft require extra time for taxiing, takeoff, and landing.
- Typhoons and hurricanes. Strong winds and heavy rain create an unsuitable environment for an aircraft to land at an airport. Even if the heavy rain and wind are not affecting the departure or arrival airports, the aircraft flight plan may be changed. Instead of flying directly to the destination, the aircraft may need to detour around the stormy areas, thereby causing delays.

- Volcanoes. Pilots must change their flight path to avoid flying the aircraft into the path of any mass of volcanic ash because the ash causes damage to aircraft engines. This increases the flying time, thereby causing delays in arrival. In addition, aircraft are not allowed to fly at night when there is a chance that ash may be found in the flight path, causing pilots to divert to airports to await further instructions.
- Wind directions. Changes in wind direction might cause delays to a flight. For example, it is known that very strong headwind will increase the flight duration. In addition, high winds at an airport will mandate the delay of takeoff and landing to avoid wind shear situations, which are known to have caused serious aircraft crashed and loss of life.

Diversion

The term "diversion" refers to the aircraft flying an additional stop that is not part of the original flight plan. There are a number of reasons as to why pilots changes their flight plan to include an extra stop between the departure airport and the destination.

-Weather diversion

When the weather conditions render an airport unsuitable for landing, the pilots will then need to make the decision of whether to land at an alternative airport until the weather improves before flying to the original destination. Generally, the pilot will land at an airport as close to the destination as possible. Airlines have been known to take passengers by bus to the final destination when weather conditions are not expected to improve enough to allow for the continuation of the flight.

-Fuel diversion

Fueling diversion is often related to weather conditions, especially with strong headwinds on a long-haul flight. The aircraft requires extra time and power to fly to the destination. Therefore, extra fuel is needed and a refueling stop is required.

-Passenger diversion

Instances of passenger diversion include having a sick or injured passenger on board who requires immediate medical attention.

-Security diversion

Diversions may also occur due to security issues on a flight such as instances of hijackers or a bomb threat. The pilots' objective is to land as soon as possible to have the problem resolved.

-Emergency diversion

An aircraft having mechanical problems en route is usually diverted to the nearest airport when the problem poses an emergency or precaution. In a situation such as the bird strike described in the Case Feature on the next page whereby the passengers must deplane, the role of the GSA is to assure the passengers, handle their questions, and to make the necessary changes in flight connections while offering amenities when required. In addition, the GSA needs to contact the arrival airport to notify the respective personnel about the diversion so that arrival preparations can be postponed and updated.

-Air traffic control delay

An air traffic control (ATC) delay is another uncontrollable delay that occurs when an airport has scheduled more arrival flights than it can physically handle, or when delays occur elsewhere, causing groups of aircraft that would otherwise be separated in time to arrive simultaneously. The result is that aircraft are delayed in the air by circling in a holding pattern while waiting to land. ATC delays are often encountered by airlines during peak hours or peak-hub times when many aircraft arrive and depart in a short block of time. In addition, ATC delays occurring instances of bad weather conditions whereby previously delayed and diverted flights now need to take-off or land at the affected airport once the weather conditions improve boarding. Denied boarding occurs when a flight is oversold as well as due to other issues including substitution of aircraft, weight and balance, and mechanical problems.

Substitution of aircraft

When an aircraft encounters a mechanical problem, the airline might substitute it with another aircraft which may or may not be of the same model. Therefore, the capacity of the substituted aircraft may differ and it may not be able to carry the full intended passenger load. For example, in the event that

the original aircraft—a B767-400 with a full flight of 304 passengers—has mechanical problems, the airline may substitute the disabled aircraft with a B777-200, which is only capable of accommodating 301 passengers. Three passengers will not be able to take the flight due to the changes in capacity. In other words, there will be three passengers who will be denied boarding.

Mechanical problems

Mechanical problems that do not affect the flying of the aircraft but may compromise the safety of other flight operations might also result in denied boarding. These may include unserviceable seats, an inoperative emergency slide, or an inoperative crew bunk.

Unserviceable seat

Broken passenger seats causing discomfort or even safety concerns are prohibited from being used by passengers. At a destination with a short turnaround time, airlines will defer repairing the seat until scheduled maintenance takes place. If the flight is full checked-in, denied boarding occurs.

Inoperative emergency slide

An aircraft cannot take a full load of passengers when there are issues with the aircraft's safety equipment. The FAA requires evacuation of the entire aircraft within 90 seconds using 50% of the evacuation exit available. In instances of inoperative emergencies slides, the passenger evacuation time would increase with the same number of passengers evacuating using fewer emergency exit doors. Therefore, in view of safety concerns, airlines will need to reduce their capacity for the flight to fulfill the above-mentioned evacuation requirements. This requires the airline to deny boarding of some passengers.

Inoperative crew bunk

The crew bunk serves as a resting place for the flight attendants. It is normally a separate compartment, consisting of beds and pillows. In instances whereby the crew bunk is not operational or when no such facility is available on an aircraft, the airline will block a number of passenger seats in the main cabin to provide space for crew rest. When encountering a full flight, the airline may deny boarding to passengers to free up some seats.

Handling of denied boarding

denied boarding happens when your air carrier refuses to allow you board your flight even though you pose no health, safety or security risk to the air carrier and you arrived at the airport with;

- a confirmed reservation;
- the travel documentation required to complete your journey;
- sufficient time to complete check-in, security and boarding procedures.

Airlines seek to fill up every seat before they start looking for passengers who volunteer to be denied boarding. Therefore, the GSAs at both the check-in counter and the gate will upgrade or downgrade passengers accordingly before seeking for volunteers.

Upgrade

To upgrade a passenger means to move a passenger from a lower class of service to a higher class. For example, if the economy class cabin is overbooked and there are seats available in business class, airlines will, out of courtesy, upgrade some economy class passengers to business class. Similarly, airlines may give free upgrades to passengers from business class to first class in an overbooked situation. As a general rule of thumb, airlines will only solicit volunteer passengers to move to other flights when all seats on board are occupied.

Airlines usually select passengers to be upgraded based on the following three criteria: fare paid, frequent flier program status, and random.

- Fare paid. Offering upgrades to passengers who have paid the most expensive fare allows the airlines to provide better service to the passengers who purchase the higher priced tickets and at the same time, try to capture the attention of such passengers to ensure their future business.
- Frequent flier program status. Airlines often select their loyal passengers to be upgraded. Loyal passengers include the airline's very important persons (VIPs) or passengers who have frequent flyer program (FFP) gold status or above.
- Random. The third method is based on random selection. Some airlines simply upgrade the passengers at the point of time when they

run out of seats of the particular class that the passengers had purchased.

Downgrade

As opposed to upgrades, airlines may downgrade passengers to a lower class and give out compensations when the upper class is overbooked and the lower class still has seats available. These passengers are also reimbursed with the fare differences due to the change of class traveled.

For example, when the first class seats for a particular flight are oversold and seats are available in business class, airlines then look for volunteer passengers to be downgraded. Passengers are entitled to compensation and the fare difference between first class and business class.

There are two type of denied boarding:
1. Involuntary; and
2. Voluntary.

Voluntary denied boarding (VDB)

When a flight is completely full, the airline ground agent solicits volunteers who are willing to transfer to alternative flights at the check-in counter or the gate. The agents invite passengers who are not in a hurry to get to their destinations to give up their seats in exchange for incentives that are often lucrative enough to attract them to move to a later flight. A "volunteer" is a passenger who responds to the airline's request to give up his or her confirmed reserved space on the flight by accepting the airline's offer for compensation. Based on government regulations in some countries, airlines are liable to pay significant compensation to passengers who are denied boarding. However, airlines are allowed to ask for and negotiate with volunteers who may accept lower compensation. For example, upon check-in, the agent may check if the passenger would consider giving up their seats. When the flight is indeed full, the gate agent begins asking for volunteers and offering a level of compensation. If they do not get enough volunteers, they will increase the level of compensation. Passengers are often willing to give up because of the attractive compensation. In fact, the compensation is so attractive in 2009 by asking passengers upon check-in what it would take to

get them to give up their seats. In the events of an overfull flight, they offered denied boarding from the lowest to the highest bidders until the flight capacity is fulfilled.

Involuntary denied boarding (IDB)

An involuntary denied boarding scenario happens when an airline is unable to solicit enough volunteers to give up their seats on the flight. The airline must then remove passengers from the flight involuntarily. Passengers are entitled to compensation and the airline is responsible for organizing alternative flights for the passengers. Recently, the Europe, United States, India, and other governments have augmented the rights of involuntarily denied boarding passengers. In such instances, compensation will be based on the total traveling time required for the passengers to arrive at their destination.

Although passengers have been removed involuntarily from a flight, an event that creates a serious disservice to the passengers, the affected airline is protected by a contract that is part of International Air Transport Association (IATA) regulations agreed upon internationally in the Warsaw and Montreal conventions.

When passengers purchase their air tickets, the airline attaches a "Conditions of contract and other important notices," which states the conditions of and solutions in overbooked flights.

The GSA must have full knowledge of both the government and IATA rules and regulations governing the rights of the passengers and the responsibilities of the airlines. If they do not abide by these rules, the passengers may take legal actions.

Compensation and Amenities

During controllable delays or cancellations, airlines provide amenities such as meals, accommodation, monetary compensation, and travel credit compensation to the affected passengers. However, in instances such as bad weather conditions whereby the delay is not controllable, airlines are sometimes released from liabilities for any amenities or compensation. On the other hand, some governments require the airline to compensate passengers when the delay or cancellation is uncontrollable unless the cause is attributed to extraordinary circumstance such as natural disasters.

Many airlines have the gate agents offering amenities such as meals and beverages to passengers during uncontrollable delays as a goodwill gesture. This creates a positive image of the airline company and cultivates vibrant customer relationships.

Travel credit

A travel credit is a form of compensation offered to passengers who are unable to fly as scheduled. The passenger may use the travel credit to purchase tickets from the issuing airline for future travels. While the monetary value is indicated on the travel credit coupons, these cannot be redeemed for cash, In addition, travel vouchers usually have an expiration date.

Cash

Airline may offer cash to the passengers as compensation. However, rather than offering cash on the spot at the airport, some airlines use a miscellaneous charge order (MCO). The MCO is a coupon offered to passengers whereby they can redeem it for cash for the value indicated on the coupon at the respective airline ticketing office.

Other amenities

In events of controllable irregular operations when an airline is unable to provide the passenger with a flight departing on the same date, the airline will provide accommodation and meals to the passenger. Airline ground staff will then issue the passenger with meals vouchers and stopover paid by a carrier (STPC) coupons. Some airlines also issue phone cards for international calls if the affected passenger was scheduled for an international flight.

STPC or accommodation voucher

The STPC or accommodation voucher is issued to passenger when an overnight layover is required. These vouchers are often issued to passengers in instances of controllable cancellations and allow payment for accommodation in a hotel and other services as stated on the vouchers.

These expenses are paid by the airline. Additional services which are not stated but utilized by the passenger must be paid by the passenger.

Snack box

In instances of short delays, GSAs at some full-services airlines distribute complementary snack boxes and refreshments to passengers who are waiting at the departure gate for the next flight. The snack box has a light meal and includes sandwiches and beverages.

Meal voucher

When a flight irregularity occurs during meal hours, airlines offer meal vouchers to the affected passengers. These vouchers can be used within the airport terminal and passengers can use these for their meals at selected restaurants. The meals voucher has a stated value determined by the airline. Therefore, the passenger is responsible for any items that cause the total sum incurred to surpass the value of the voucher. It is the GSA's duty to explain the voucher system and its terms of usage to the passengers.

Delay verification

Upon passengers' request the airline's agent may issue a delay verification form to the passengers. Passengers may use the delay verification form as proof of uncontrollable absence from work or school or to make a travel insurance claim.

Additional compensation requests

The main role of the GSA is to provide services to passengers at the airport. When the passengers demand additional compensation that the GSAs are not authorized to offer, they should refer the passengers to the local sales office or customer relations department or return to their home city.

Upon request, the airline ground agent is required to provide a notice with a clear definition of the expenses which the airline is responsible for. This gives passengers a clear understanding of the airline's practices. In some countries, the respective airline needs to comply with the passengers' right, as required by the government. In such instances, the regulations and rules of the country where the airline is registered or the country where the delay occurred apply.

Alternate Flight Options

In the event of misconnections, cancellations, or denied boardings, the airline is sometimes required to transfer passengers to a flight operated by another airline. Airlines only transfer passengers to airlines with which they have established agreements. In this case, a ticket endorsement is required. An endorsement is a proof that the ticket-issuing airline has agreed to pay the value of the ticket to the airline to which the passenger has been transferred. For example, airline A is transferring passengers to airline B. The passengers will give airline B the tickets endorsed by airline A. Each endorsed ticket serves as an authorization for the transporting carrier (airline B) to bill the ticketing airline (airline A) for the value indicated on the ticket.

For paper tickets, this authorization is referred to as an endorsement, and for electronic tickets, it is referred to as **"push control".**

Endorsement

There are three methods of endorsing a ticket to another airline:

Endorsement stamp

An endorsement is stamped onto a paper ticket when a passenger is transferred to another airline that operates on the same route. For example, airline A is flying from Hanoi to Ho Chi Minh City. However, due to an overbooked flight, airline A needs to transfer passengers to airline B that operates a flight on the same route. Since the passenger is holding a paper ticket, airline A stamps and endorsement onto the ticket as an indication that the ticket is "endorsed to airline B".

Meter endorsement

A ticket endorsement must be issued by sending a Telex meter to the receiving airline. The airline ground agent must obtain the meter address from the receiving airline before sending the message as shown.

Push control of electronic tickets

If the ticket is in electronic form, the ticketed airline (airline A) may push control of the ticket to the receiving airline (airline B). This allows the receiving airlines to retrieve the electronic ticket from the department control system

(DCS) so that check-ins may be performed and the respective boarding pass may be issued.

Flight interruption manifest

Due to various restrictions on tickets, not all tickets are allowed to be endorsed. Passengers do not pay the same air fare even when they are on the same cabin within a slight. Airlines sell different types of tickets to meet the needs of different passengers. Generally, more restrictions apply to tickets that are sold at a lower price. ***The most restricted tickets will show VALID (CARRIER) ONLY, NON –ENDORSABLE, NON-END, NON-REROUTE, and/or NON-REFUNDABLE*** designations on the ticket. The GSA encountering passengers with a highly restricted ticket must attempt to seek alternative transportation for the passengers to their destinations. In extreme cases when there is no flight availability, land transportation might be offered.

Valid (Carrier) only/ non-endorsable-non-end tickets

Valid carrier only tickets are not allowed to be transferred to another airline even when there is an endorsement stamp stamped on the ticket. This ticket is only valid for the airline issuing the ticket.

Non-reroute ticket

Non-reroute indicates that the ticket's itinerary cannot be changed.

Non-refundable tickets

Non-refundable tickets refer to unused tickets that are not eligible to be returned to the airlines in exchange for money. In the event of irregular operations whereby an airline passenger is holding onto a special discounted ticket—which receiving carriers do not accept even with an endorsement stamp—the airline may issue a document known as a flight interruption manifest (FIM), which is also known as IATA resolution 735e. An FIM may be issued when an airline cannot provide an alternative flight with the same route for the passenger. Therefore, the passenger is required to take a route that is different from what is shown on the ticket.

The FIM has two formats:

- Ticket sized
- A 4 paper sized (297x210mm)

The ticket-sized FIM can be used for up to five passengers while the A 4 paper-sized can be used for up to 25 passengers.

The FIM is an accountable document that can serve as an airline ticket. Therefore, FIM stocks are to be kept in secured locations and may only be retrieved by specific airline personnel.

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