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4.3 AVSEC Training Task Force Developments (AVSEC/TRAIN/TF)
4.3.3 Passenger Screening Program Model

MAJOR INTERNATIONAL AIRPORT PASSENGER AND CARRY-ON BAGGAGE SCREENING GUIDANCE MATERIAL

(Presented by the International Air Transport Association [IATA])

SUMMARY

Passenger and carry-on baggage screening is one of the key front line security measure that helps ensure the security of international civil aviation. The human element is key to the success of that process. Therefore, training of screening personnel is paramount. This paper focuses on the security screening procedures that should be included in a passenger screening programme. Further, issues regarding screening checkpoint layouts are addressed.

References:

- IATA Security Manual, Section 4.8 (4th Edition, 1 January 2005) (**Appendix A**)
- Major International Airport Passenger and Carry-on Baggage Screening Measures **(Appendix B)**

1. Introduction

1.1 Screening and searching of passengers and their baggage is an essential and basic part of aviation security. States and air carriers have a responsibility to make sure that people and baggage boarding the aircraft will not decrease the safety and security of a flight.

1.2 Generally, the basic rule is that all passengers and their cabin baggage must undergo screening before being permitted to have access to an aircraft or a sterile area of an airport.

1.3 Screening of passengers and cabin baggage may be carried out by the use of metal detectors, X-ray, explosive trace detection equipment or other devices, by manual search or by a combination of both. In the interests of facilitation and to reduce the number of passengers and amount of cabin baggage subjected to manual search, experience has shown that screening devices should be used as a matter of standard operating procedures.

1.4 In addition to a standard complement of personnel, any screening system should also utilize technical equipment. The manual search of persons and cabin baggage can be effective, provided that there is ample time and the procedures are conducted by well-trained and skilled personnel. The use of metal detectors, X-ray and explosive trace detection equipment will significantly enhance the effectiveness of processing and facilitate passenger flow.

1.5 Whether the screening procedures are completely manual or are supported by the use of screening equipment, if the personnel in charge of performing the screening is not properly trained, the appropriate level of security will not be reached and the safety and security of the aircraft as well as some parts of the airport terminal may be put in jeopardy.

1.6 Security screening equipment, while essential to ensure the safety and security of international civil aviation, should always be considered as providing support to the security personnel. Therefore, it is paramount that training of security screening personnel is of the highest possible quality as it will have a direct correlation on the quality of the screening performed.

2. Training of Screening Personnel

2.1 Amendment 11 to Annex 17 – *Security*, Standard 3.4.3 states that: *Each Contracting State shall ensure that the persons carrying out screening operations are certified according to the requirements of the national civil aviation security programme to ensure that performance standards are consistently and reliably achieved.*

2.2 The requirement for certification persons carrying out screening operations signifies that not only initial training is essential for screening personnel but recurrent training followed by testing to ensure that the screening personnel has maintained the level of competency necessary to carry on security screening duties

2.3 The training curriculum for screening personnel will need to cover a variety of subjects which include but is not limited to:

a) Screening regulations and legislations;
b) Identification of firearms, weapons, incendiary or explosive devices, other dangerous devices, or parts thereof; (both visually and through the use of security equipment);
c) Operation and testing of security equipment (metal detectors, X-ray units, explosives detection devices);
d) Manual search of the person;
e) Manual search of baggage, cargo, mail and stores;
f) Screening procedures;
g) Emergency procedures; and
h) Customer service

2.4 Training programmes should have both theoretical and practical training that covers all the subjects of the training programme. Theoretical training is normally performed in classroom settings but can also be given via computer based training. Practical training will require the recruits to have perform the necessary duties in a “real-world” setting. The use of computer-based software and/or Threat Image Projection Software (TIPS) (for security equipment operations training) are efficient methods to ensure that recruits can utilise security equipment effectively.

2.5 "On-the-Job" training will provide the best method to ensure recruits are performing security procedures as they are prescribed. Ensuring that formalised screening procedures exist and are documented will greatly facilitate learning by new screeners since all will be expected to perform their duties in the same manner. For "On-the-Job" training, it is important that recruits are paired with competent and experienced personnel for a determined amount of time.

2.6 Security procedures should be designed in such a way that the passenger experience during screening is a pleasant one. It should aim to facilitate the duties of the personnel which will contribute in achieving a higher standard of performance **(Appendix A).**

2.7 Training programme should also have recurrent training session developed in order to ensure that screening personnel maintain their certification.

2.8 In order for any training to be validated, personnel attending training courses must be assessed on all training they receive. The purpose of assessment is to evaluate the knowledge (what), skills (how) and attitude (why) of personnel in the aims and objectives of the training. Knowledge must be tested in written tests. Skills must be tested by practical tests.

2.9 When choosing tests, care must be taken to ensure their technical quality and appropriateness to the task. Systematic and thorough validation of tests is necessary prior to their use in an aviation security operational context. Those responsible for procuring, designing, administering and providing feedback on tests should have the necessary professional qualifications and training.

3. Major International Airport Passenger and Carry-on Baggage Screening Measures

3.1 Regulatory requirements for security screening at airports vary tremendously from State to State. Moreover, different threat levels will force some States to apply stricter requirements on a permanent or temporary basis. Although harmonisation can always be wished for, passenger screening is one section of the aviation security where difficulties in achieving this goal clearly exist.

3.2 In order to help airport authorities implement best practices and efficient layouts for passenger and carry-on baggage security, IATA has drafted the Major International Airport Passenger and Carry-on Baggage Screening Measures **(Appendix B)**. This document aims to show best practices for screening of passengers and their carry-on items.

3.3 The document is not intended to be a How-to Manual but rather to provide examples of what passenger screening should be like in a perfect world. The ultimate goal of all the suggestions and best practices included is to improve passenger flow and subsequently mitigate the hassle factor at major international airports.

3.4 It should be noted that the guidance material provided is devised in a mindset where the airport is operating at the lowest threat level existing in that State. It should be clear that any increased threat should be met with the addition or substitution of additional security measures.

3.5 Further, it is important that human factors are also kept in mind when designing security screening checkpoints. The working environment can have a positive or negative effect on the performance and productivity of screening personnel.

4. Security and Facilitation Balance

4.1 Security screening is a step that every passenger has to go through. When a person decides to travel by air, they expect that some time will have to be allocated to the various security measures.

4.2 However, in recent times, some States have been requiring screening measures that have obligated passengers to arrive a substantial time before the scheduled flight departure time.

4.3 Also, screening measures are not always customer friendly. The so-called hassle factor of flying has pushed many people away from flying. If the security process dissuades a significant number of potential passengers from flying, then the security process has accomplished one of the terrorist's major goals of negatively affecting a State's economic activity.

4.4 Amendment 11 to ICAO Annex 17 – *Security*, Recommended Practice 2.3 states: *Each Contracting State should whenever possible arrange for the security controls and procedures to cause a minimum of interference with, or delay to the activities of, civil aviation provided the effectiveness of these controls and procedures is not compromised.* In this context, airport authorities should aim to have layouts of screening checkpoints and procedures that favour passenger flow.

4.5 Management of the Security and Facilitation balance is a very important component of airport security measures and therefore screening procedures should be drafted with flexibility in order to ensure that the proper level of security is constantly being implemented no matter what the threat level may be.

5. Actions by the Committee

5.1 The AVSEC Committee is invited to

a) note the guidance material on passenger and carry-on baggage provided **(Appendix A)** in order to develop screening and searching procedures and standards to form the basis of their training programmes for screeners;

b) note the guidance material on Major International Airport Passenger and Carry-on Baggage Screening Measures **(Appendix B)** in order to ensure that screeners are aided by the appropriate security equipment and functional security screening checkpoint layout and infrastructure to perform their duties at international standards; and

c) take into account the balance between security, facilitation, passenger flow and the safety of passengers and staff when implementing passenger and carry-on baggage screening checkpoints.

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APPENDIX A

SCREENING OF PASSENGER AND CABIN BAGGAGE GUIDANCE MATERIAL

1. Introduction

The effective screening of all passengers and their cabin baggage is recognised as an essential element in achieving a safe and secure operation. It should form part of the passenger handling procedures contained in the Airline Security Programme.

The appointment of an 'appropriate party' to perform screening duties will be made by the operating State. It can be employees of:

- the airport authority;
- a company contracted by the State or airport;
- the national carrier;
- the national/State police force;
- the military.

Beyond the basic requirements, additional measures should bear a direct relationship to the threat that exists at any given time, thus minimising the disruptive influence of security measures.

Staff who are responsible for monitoring the standards of airline security must be fully aware of the methods of searching passengers and their cabin baggage.

The following information gives the necessary guidelines regarding the screening of passengers and cabin baggage. It also explains what action should be taken on the discovery of prohibited articles, suspect explosive devices and confiscated items.

2. Screening of Passengers and Cabin Baggage

Technical equipment used for the screening of persons and baggage has limitations. Walk-through metal detectors (WTMDs) and hand-held metal detectors (HHMDs), for example, cannot detect non-metallic weapons and explosives and even conventional X-ray equipment has difficulty in imagining or defining explosive material effectively. To compensate for such limitations or to introduce a random element into the selection process, States may require an additional manual hand search of passengers and cabin baggage after being screened by technical means, which may include explosive trace detection.

2.1 Effective Search

In the interest of effective security and passenger facilitation a manual search of the person or baggage should be conducted in accordance with the following basic guidelines:

- consent should first be gained from the person being searched;

- the searcher should be tactful, courteous and use caution;

- it is important to adopt a systematic approach so that no part of the body, items of clothing or areas of the bag are overlooked;

- attention should be paid to an article of clothing with metal components (e.g. belt buckle) making sure no metal weapons are hidden between the body and the article of clothing;

- if hand-held metal detectors (HHMDs) are used, the screener should always follow the path of the HHMD with his/her bare hand;

- any items being carried should be searched and preferably passed through X-ray equipment or other approved means;

- baggage must be matched with the correct person/owner and positioned on the search table so that the owner can open the bag but not interfere with the conduct of the search;

- items found in baggage, which could conceal a prohibited article, should be opened or subjected to screening by X-ray or other approved means. To increase the detection of prohibited articles, such items should be X-rayed alone without extraneous clutter;

- baggage must not be returned to the person until they themselves have been security cleared;

- on completion of the search it is important to thank the person for their co-operation.

2.2 Limitations of Hand Search

Hand search of people or baggage is not without its own limitations, some of them are as follows:

- it requires co-operation from the person whose person or bag is being hand searched;

- electrical, electronic or mechanical items will need to be examined by technical equipment such as X-ray or trace detection e.g. mobile phones, laptop computers, cameras etc.;

- it can be time-consuming compared to technical screening equipment when many passengers or bags are involved;

- hand search is vulnerable to human failings such as bad habits, inconsistency, tiredness etc.;

- it can be unpleasant and unhygienic for the searcher.

2.3 Searching the Person

There are many places on the body that can be used to conceal items and which are difficult to search. Likewise items can be concealed in many items of clothing such as jacket linings, padding of shoulders, hats, ceremonial/religious head-dresses, ties, pockets, collars, lapels, waistbands, belts, top of shoes and boots, platform heels/soles of shoes and boots. Items can also be hidden in everyday articles carried by person being searched (e.g. newspapers, books etc.).

Searches of persons should normally be carried out in the open (i.e. not in cubicles). However, searchers should not expose to public view classified or private documents, nor should they draw attention to currency or valuables in the possession of a person being searched.

Searches of persons should be carried out in private when it is necessary to search in sufficient depth to establish whether a passenger is carrying a prohibited article. Searches may also be carried out in private if the passenger requests it or if the passenger has a prosthesis and is sensitive to having this disclosed in public.

When searches are undertaken in private, two searchers of the same sex as the person being searched are to be present. At some screening points it may be difficult to remove two members of the same gender from the point at the same time. In such cases, it would be acceptable to have another person of the same gender present, i.e. a member of the airline's customer service staff.

2.3.1 Method

Hand searches of an individual's person should be carried out as follows:

a) the person being searched should face the searcher;

b) when the person is carrying a coat, book, newspaper or other items, these should be searched and as far as possible X-rayed, set aside, and returned only after the person has been searched;

c) male personnel should search male persons; female persons should be searched by female personnel;

d) the search is to consist of an examination of the body and clothing by running the hands over the body and clothing, in a systematic fashion, back and front and should include:

- a physical examination of headgear and a physical or visual examination of hair;
- a physical examination of outer clothing (coat, jacket etc) in the order: back, collar, lapels, shoulders, pockets (externally & internally), arms;
- a physical examination of tie, waistcoat, blouse/shirt, sweater, cardigan, etc., including pockets;
- a physical examination of trousers/skirts in the order: waistband, pockets, turn-ups, hemlines;
- a physical examination of shoes and boots, special attention being paid to high heels and platform shoes, if necessary using a hand-held metal detector (HHMD) or passing through X-ray equipment;
- a visual examination to detect unusual or suspicious fat, bulges, etc. which should be further examined;
- special attention should be paid to the armpit, breasts, crotch, waistband areas, covered legs, ankles and footwear.

2.4 Procedures for Persons with Special Needs

Specific guidelines should be produced and training given to personnel, for procedures to be followed for persons with special needs. As a minimum, this should include instructions on what actions to take for the following classes of person:

- babies in pushchairs and children (will require consent of adult);
- pregnant women;
- disabled persons;
- passengers in wheelchairs;
- persons with medical conditions [limbs in plaster];
- passengers with religious reasons that prevent the hand search of them or their baggage;
- transsexuals;
- other special local criteria.

2.5 Procedures for Screening of Blind Passengers and Guide Dogs

Negotiating through an airport security checkpoint can be an unsettling experience for a person who is blind or visually impaired. It is only one of the many challenges they face on a daily basis. In the interests of good customer service, it's important for you to learn more about how to interact with people who are blind so that you can help to make their passage through security a pleasant experience.

2.5.1 General Tips

- Treat people who are blind or visually impaired as you would anyone else. They do the same things as you do, but sometimes use different techniques.
- Speak to them in a normal tone of voice.
- Talk directly to a person who is blind, not through their companion.
- If someone looks as though they may need assistance, ask. They will tell you if they do.
- Avoid grabbing their arm or their guide dog's harness. Pulling or steering a person is awkward, confusing, and can be humiliating.
- Ask "Would you like me to guide you?" Offering your elbow is an effective and dignified way to lead a person who is blind.
- Be sure to give useful directions. Say, "The conveyor belt is on your left" rather than "The conveyor belt is over there." "The doorway is to your right," is better than "Go through here."

2.5.2 Guide Dogs

Many people who are blind travel with the assistance of guide dogs. A guide dog is trained to lead a blind person around obstacles and to stop for steps and curbs. If possible, it is preferable not to separate the person from their dog. The guide dog user has been trained in the best ways to control their dog. Avoid interacting with a guide dog or distracting it from work. Please speak to the person directly, and answer any questions they have about the security process.

Here are the methods used by most guide dog users to pass through airport security with their guide dogs:

Upon arriving at the checkpoint, the person will first place their bags on the X-ray machine conveyor belt. If needed, they will ask security personnel for assistance in locating the opening of the metal detector. Before moving through the metal detector,

they may explain to security personnel that the metal in their dog's harness and on its collar will set off the alarm.

Method 1:
They will locate the security portal without moving into it, and will place their dog on a "Sit stay" just outside of the opening. Holding the end of the leash, they will walk a few steps through the portal to clear themselves.

They will call their dog with a "Come" command. When the dog passes through the detector, the metal in the harness will set off the alarm. Security personnel will know that it is the dog's harness that set off the alarm.

Method 2:
The person will walk through the detector with their dog, and the harness **will** set off the alarm. They will then request that the security personnel use hand-held detectors or "wands".

Method 3:
The person will ask security personnel to hold their dog while they walk through the detector portal. The security person then passes the leash to them through the portal. Once through the detector – they will collect their bags and proceed to their gate.

2.6 Procedures if the Person Refuses to be Searched by Hand

Any person who refuses to undergo screening before boarding or entering an aircraft must be denied boarding, and not allowed to pass the point of search. Local operating procedures should contain guidance on what further action to take.

Additionally any persons denied passage for refusal to be processed, or for some other security reason, should be referred to policing authority officials. All operators at the airport should be alerted accordingly to cover the situation where the passenger, deterred by additional attention, changes travel plans in a to attempt to travel on another airline.

IATA Passenger Services Conference Recommended Practice 1724 details the General Conditions of Carriage (Passenger and Baggage) under the Warsaw Convention and amended Protocols. Article 8.5 details a carrier's 'right of search'.

2.7 Hand Searches of Cabin Baggage

2.7.1 Concealment

A comprehensive range of methods of concealment has been used in the past that is relevant to hand searching baggage.

There is no limit to what can be used to conceal an explosive device. Hundreds of everyday articles can be modified and used to conceal an explosive or incendiary device, for example, radios, cassette players, tape cases, vacuum flasks, teddy bears, food, aerosol cans, boxes of sweets, gift-wrapped lead crystal vases that show up as opaque on X-ray are just a few. Experience has shown that simple concealment is just as effective as elaborate.

The actual containers, bags or boxes of an item can themselves can be turned into devices, for example by rolling plastic explosive into sheets and placing within lining.

If an item cannot be identified, the screener or searcher should be suspicious until its bona fides are
clearly established.

2.7.2 Method

Hand searches of an individual's cabin baggage should be carried out as follows:

a) the physical inspection of cabin baggage should always be carried out in the presence of the person presenting it;

b) baggage should be opened and examined to ensure that there is no false bottom. A straight edge gauge-rule, rod or other device should be used to establish whether there is a significant discrepancy in external and internal measurements;

c) particular attention should be paid to the lining, trim, seams, rims, studs, zip fasteners, locks, hinges, wheels and handles to identify signs of tampering or repair which may indicate the concealment of a prohibited article;

d) the contents of the bag should be removed layer by layer, each being examined until the bag is empty. The empty bag should then be lifted by hand and assessed for balance and empty weight. If there is suspicion that the bag is not of uniform weight, or not of a weight consistent with being empty, the bag itself should be examined for concealment of prohibited items, if necessary it should be screened by X-ray or other approved means;

e) electrical items that might conceal a firearm, weapon or explosive device (e.g. razors, calculators, radios, clocks, cameras, personal stereos and their cassettes etc.) should be examined to ensure they have not been tampered with, are of the expected weight, are balanced and have no additional batteries. If necessary an item should be screened by X-ray to ensure that it has no additional power source or that there is no organic material within what should be an inorganic shell;

f) articles such as vacuum flasks, books, umbrellas, crutches etc. should be examined in sufficient depth, by X-ray if necessary, to establish their bona fides;

g) attention should be given to the contents of containers and bottles capable of holding volatile liquids. Liquids shall be rejected when there are grounds for suspecting that they may be used to commit an unlawful act;

h) searchers should examine for greasy stains and small holes in the exterior of the case and for the smell of almonds, nail polish, glue, perfume or other masking vapours, which might indicate the presence of explosives;

i) bags should be closed and fastened on completion of the search; and

j) bags should be held until the person presenting it has been security cleared.

2.7.3 Percentage of Hand Search Requirements

When a percentage of baggage is required to be searched by hand, after screening by technical means, this should be measurable over:

- a time period of no more than 30 minutes for search facilities used to process persons and cabin baggage for more than one flight at the same time; or

- all persons and hand baggage processed using search facilities dedicated to any individual flight.

The security intention always being that the percentage requirement is to be continuously achieved in every 30 minute period or the time period that facilities are processing an individual flight, and that all persons and cabin baggage have an equal chance of being selected.

Selection of cabin baggage by equipment operators should always be made using the principle of reasoned selection and in a consistent manner throughout the period cabin baggage is being processed. Random selection should only be used, where applicable, for searching persons and always in conjunction with those who alarm the equipment.

Monitoring of the process for quality assurance and audit purposes may require written records to be kept of cabin baggage or persons hand-searched.

2.8 Discovery of Prohibited Article Procedures

Local procedures should be established for the discovery of prohibited articles either on passengers or in their cabin baggage during the screening process. Some guidance is offered here but national law and the local situation may dictate other requirements or actions. For further information and a list of prohibited items, refer to Appendix 4.

Slightly different procedures will apply for weapons found on the person and those detected in cabin baggage. Detection of explosive devices in cabin baggage may dictate yet another different response.

It is important for the searcher to remain calm and not cause a panic amongst other passengers, which may result in making the situation worse.

The searchers supervisor should be summoned covertly who should in turn take action to summon assistance form the local policing authority support unit.

A covert means to summon the authorities should be available at each screening point – usually a ‘duress’ alarm activated discreetly by the screener. Airport arrangements should ensure that a law enforcement agency is available to respond, and response times should be agreed.

The discovery of a weapon in a passengers cabin baggage may be dealt with by simply closing the bag and removing it from passenger's reach or keeping the bag within the X-ray equipment tunnel.

The latter course of action should not be taken with a suspect explosive device since it will severely hinder the work of explosive experts who will have to deal with the device and even add to the shrapnel effect of the device should it explode. Evacuation will be necessary and if a person breaches the sterile area and is in possession of a prohibited article, the sterility must be re-established.

If the item is confirmed as a suspect explosive device DO NOT TOUCH IT but carry out airline standard suspect explosive device procedure.

The course of action for discovery of a weapon on the person is not easily defined since it will depend on a number of situational factors such as the demeanour of the person, the proximity of armed police response forces and the training of the security staff manning the screening point in restraint techniques.

Consideration should be given to the possibility of the person trying to escape using armed force if they are confronted or even attempting an impromptu attack on nearby passengers if they think their planned attack has been thwarted. It may be more beneficial for the person to be discretely followed and monitored until they can be apprehended in an area that would offer the minimal risk to the public.

The decision will rest upon the level of security of the concourse area into which the person is about to pass and the ability of security staff and police response forces to follow the suspect discretely.

The chance that the suspect might be only one member of a team or attempt to pass on the weapon or device to a third party already within the concourse area should also be considered.

2.9 Handling and Recording of Confiscated Items

Items confiscated at a screening point by a policing authority officer or other authority must be handled and disposed of in accordance with national legislation. The airport security officer should ensure that an accurate record is maintained of all such items as well as those found abandoned on airport property or on aircraft. (See Appendix 2 for IATA Passenger Service Conference Recommended Practice 1750 – Handling of Security Removed Items.)

2.10 Undeclared Dangerous Goods

Many items which must be removed from passengers and their cabin and checked baggage during the security screening process are considered dangerous goods (hazardous materials) which are further regulated for transportation and storage. Dangerous Goods are defined in the IATA Dangerous Goods Regulations (DGR) as articles or substances which are capable of posing a significant risk to health, safety or to property when transported by air and which are classified according to Section 3 (Section 3 of the IATA DGR contains specific classification criteria for all 9 classes of dangerous goods). Owing to their own policies and procedures or due to local regulations, air carriers may implement additional restrictions on which types of dangerous goods they permit on one's person or in their cabin or checked baggage; however Subsection 2.3 of the

IATA DGR provides a summary of the types of dangerous goods item which are generally permitted to be carried on board an aircraft on one's person or as or in their baggage as specified.

2.11 Screening of Cabin Baggage by X-ray

When items of cabin baggage are screened by conventional X-ray, images of every part of the item being screened are to be displayed for no more than 5 seconds after which the baggage should be rejected if it cannot be cleared by the screener. Prescribed secondary screening and searching measures should then be used. Looking at a piece of carry-on baggage will not improve screening and will also slow down bag throughput below the commonly accepted baseline level of 12 bags/minute. In addition, the equipment operator should:

- check that the shading of the image of the bag is consistent throughout. Lighter edges may indicate the presence of sheet explosive that does not completely line the top or bottom of the case;
- pay as much attention to the framework and appendages as to the contents;
- ensure that any metallic or channelled part of a case, which could partially conceal the component of an explosive device, is examined for apparent bulges or protrusions;
- ensure that any dark object or area on an X-ray monitor image indicates an object or area through which the X-rays could not penetrate; this could conceal a weapon or device and therefore such bags should be subject to manual search.

2.12 Screening and Hand Search Environments

Screening and hand search environments should conform to the following criteria:

- passenger and cabin baggage screening should always be carried out immediately adjacent to each other to prevent the transfer of prohibited items form the person to the baggage and vice versa;

- they should be designed to facilitate the control of passengers and eliminate the risk of a passenger bypassing the screening procedures;

- they should be designed to facilitate the different passenger volumes resulting from the varying number of flights being processed at any one time, with the minimum of disruption to operations;

- they should be equipped with walk-through metal detectors, X-ray equipment and other explosive trace detection equipment to expedite the processing of passengers and cabin baggage;

- when locating security equipment consideration should be given to radio frequency interference affecting the security equipment from electrical equipment and ducting and the possible interference with airport communications equipment from the security equipment;

- they should be equipped with booths or screened areas in which manual searches can be conducted in privacy;

- they should be equipped with suitable horizontal surfaces on which cabin baggage may be searched by hand. Such surfaces should be high enough to permit inspection without requiring the examiner to bend and sufficiently wide to provide some measure of separation of the baggage from the passenger. The passenger should be able to witness the examination, but should not be in a position to interfere with the search;

- they should be designed so that person and cabin baggage searches can be conducted out of view of the general public or in such a way to avoid an analysis being made of searching standards and procedures;

- they should be equipped with both an overt communications system to obtain information or advice on routine matters and a covert communications system or alarm for use by the screening personnel to contact a police, security control, or emergency operations centre in the event assistance is required;

- they should display signs announcing that passengers and their cabin baggage are subject to search, and that firearms and other dangerous devices are prohibited. Legislative authority to search can also be specified;

- they should be provided with adequate heating, lighting and ventilation systems sufficient to provide an environment conducive to the efficient operation of the security staff and general passenger screening process;

- they should provide adequate space for supporting policing authority officers where appropriate.

- The use of CCTV should be encouraged, firstly to deter anyone from committing an offence at the screening point, and secondly as an important record for any future investigation. There must be sufficient cameras to ensure all screening activities are covered. All CCTV coverage should be digitally monitored and kept for at least 28 days.

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APPENDIX B

MAJOR INTERNATIONAL AIRPORT PASSENGER AND CARRY-ON BAGGAGE SCREENING MEASURES

1. General Considerations

1.1 Introduction

Screening and searching of passengers and their baggage is an essential part of aviation security. States and air carriers have a responsibility to make sure that people and baggage boarding the aircraft will not decrease its safety or its security.

Security screening is a step that every passenger has to go through. When a person decides to travel by air, he/she expects that some time will have to be allocated to the various security measures. However, in recent times, some States have been requiring screening measures that have obligated passengers to arrive a substantial time before the scheduled flight departure time. Also, screening measures are not always customer friendly. The so-called hassle factor of flying has pushed many people away from flying. If the security process dissuades a significant number of potential passengers from flying, then the security process has accomplished one of the terrorist's major goals.

Moreover, some screening requirements simply cannot be applied in a real-world environment without causing offloading of passengers and checked luggage, and subsequently, departure delays which also cost the air carriers a lot of money each year as well as affecting their reputation.

1.2 Objectives

Regulatory requirements for security screening at airports vary tremendously from State to State. Moreover, different threat levels will force some States to apply stricter requirements on a permanent basis. Although harmonisation can always be wished for, passenger screening is one section of the industry where difficulties in achieving this goal clearly exist. This document aims to show best practices for screening of passengers and their carry-on items.

This document is not intended to be a How-to Manual but rather to provide examples of what passenger screening should be like in a perfect world. The ultimate goal of all the suggestions and best practices included is to improve passenger flow and subsequently mitigate the hassle factor at major international airports.

It should be noted that the document is devised in a mindset where the airport is operating at the lowest threat level existing in that State. It should be clear that any increased threat should be met with the addition or substitution of additional security measures.

2. Check-In Area

2.1 Layout

- Check-in counters need to be spacious enough to cope with passenger traffic at peak times with a minimum amount of time. Quick check-in processing serves both a customer service and security function. Large groups of people represent an easy target

for attacks. Efforts to limit long waiting periods are especially important for high-risk flights.

- Check-in counters should be appropriately staffed in order to keep waiting lines at a minimum.
- Check-in areas, including queuing areas should be restricted to passengers and authorised staff only if mandated by the State. In these cases, the presence of police or barriers may be necessary in some States or for some flights.
- The rest of the departure concourse building can remain accessible to the general public if space permits.
- Where screening of checked baggage is done at the check-in counter, screening authorities should be required to assure that only passengers and their baggage have access to the area surrounding the screening post. In this case, staff should be on hand to help passengers requiring assistance with their bags. Passengers should not be able to access their checked baggage once it has been screened.
- Waiting lines should be arranged in such a way as to avoid a long single file. Having snake waiting lines makes it easier to manage passengers and the waiting process will appear less time consuming than if there is a long single file.
- Customer services signs should be posted in the waiting line area. The signs could indicate:
    - Approximate waiting time
    - Documents necessary for check-in
    - Items prohibited as carry-on but accepted in checked baggage
    - Items needed to be declared
    - Dangerous goods
    - Etc.

2.2 Check-In Counter

- The check-in counter should be reserved for passengers only.
- Check-in counters should be equipped with standard modern technology necessary for a rapid check-in
- All counters should be equipped with automated scales and conveyor belts systems for checked baggage. Baggage tags should be generated electronically and should reconcile passenger details in the automated systems.
- Counter agents should remind all passengers to insert all sharp objects and other accepted items prohibited in the cabin in their checked baggage. Note, some dangerous goods cannot be placed as checked baggage
- Counter agents, according to air carrier and State requirements, should ask appropriate security questions regarding their checked baggage.

A check-in counter requirement mathematical model can be found in the IATA Airport Development Reference Manual (ADRM), 9th Edition, Effective December 2003 and can be used by air carriers to determine how many counters will be necessary to provide a fast and efficient check-in for passengers. Further details and explanations are available in the ADRM.

3. Screening Checkpoints

3.1 Screening Point Layout

- The screening checkpoint should represent the division between landside and airside. The area beyond the screening point should only be accessible to passengers, air carrier staff and authorised personnel. The airside should be sterile of prohibited objects.
- If the design of the airport permits, the screening checkpoint should be centralised for all flights at a particular terminal.
- If possible, a screening point should be reserved for cabin and flight crews and authorised visitors.
- VIPs should be screened in a special area reserved for them. All VIPs, with the exception of Heads of State, should undergo screening.
- There should be sufficient screening checkpoints to permit the airport to cope with peak periods. When conceptualizing screening checkpoints, this number along with peak traffic should be taken into account. (Please refer to section 2 of Appendix 1 for more details)
- Congestion should be anticipated and the appropriate cordons to create a snake queue, should passenger volume increase, should already be in place. Long single file waiting lines are to be avoided as they create the appearance that the waiting period will be excessive. Congestion at the screening checkpoint should be the exception rather than the norm.

3.2 Equipment

All screening checkpoints should have the following screening equipment:

- Walk-Through Metal Detectors (WTMDs): They should be adequately calibrated to avoid too many false-positives yet be able to detect potentially dangerous metal objects. WTMDs should be tested regularly. Prior to installation it should be verified that there are no structural components that could interfere with the screening equipment.
- X-ray machine for carry-on baggage: each station should have an X-ray machine where all carry-ons and all loose objects carried by the passengers are to be placed.
- Hand-Held Metal Detector (HHMD): for secondary screening of passengers who have triggered the alarm at the WTMD.
- Explosive Trace Detection (ETD) equipment: To verify if carry-on baggage has explosive traces.
- Security Staff: For hand searches of carry-on baggage when there is doubt about the contents and for hand searches of passengers when they trigger both WTMDs and HHMDs.

For all pieces of equipment, it is important that brand name and model number are not visible to the public and passengers. Strengths and weaknesses of screening equipment are readily available. It can be easy for potential perpetrators to find a way to elude the equipment used by a certain airport if the name and model are visible. Any security equipment must meet the minimum specifications of the appropriate national authority.

3.3 Staff

Staff employed at screening checkpoints need to be carefully selected following stringent requirements and adequate training implemented by the appropriate national authority. At a minimum, a screening checkpoint should be staffed by the following:

- Travel document/ticket checker: located at the entrance to the screening checkpoint, makes sure only ticketed passengers enter the screening area. Should also make sure that passengers are at the right location. These staff members should be trained in passenger risk assessment to identify which passengers should be subjected to increased screening measures. Training for these staff members does not need to be the same as screening checkpoint employees. Moreover, they can be employed by a different (often the air carrier) organisation than screeners.
- X-ray loader: makes sure baggage is appropriately loaded on the conveyor belt. Will also make sure that all electronic items (laptop computers, cameras, etc.) are removed from main carry-on baggage and put in another container for screening. Will also ask passengers to empty their pockets of loose metal articles.
- X-ray operator: reads the image projected by the X-ray machine and selects bags for searches that may cause a concern due to prohibited contents or unclear images. The X-ray operator should not stay in his/her position for more than 20 minutes.
- Bag searcher: manually searches the bags signalled by the X-ray operator. The number of X-ray operators/bag searchers should be such that a rotation can be performed without slowing the screening process.
- Passenger searcher: the number of searchers should be dependent on the passenger flow but there should be at a minimum two people, one of each gender. They are responsible for secondary screening of passengers who trigger the WTMD.
- Explosive Trace Detection equipment operator: Responsible for swabbing baggage highlighted by the X-ray operators for explosive trace components.
- Supervisor: Responsible for the overall efficiency of the screening checkpoint. Should not get involved with the operation of the screening equipment.

3.4 Passenger and Carry-On Screening Process

This section aims to describe the ideal passenger experience at a screening checkpoint. The screening checkpoint should be relatively effortless for passengers and should take the least amount of time possible. In cases where local regulations prevent the application of the model suggested, they must take precedence.

- Elderly and physically disabled passengers should be given priority through the screening checkpoint. It should be verified in some way that the disabled passengers are genuinely disabled and are not using a handicap as a ploy to smuggle weapons inside the sterile area. Elderly and physically disabled passengers must be subjected to the screening process in some form (WTMD or hand search).

- Passengers who are blind or unable to walk should not be processed through a WTMD. These disabled passengers should be scanned by hand and/or HHMD.

- If accepted on-board, Seeing Eye dogs should be screened with an HHMD and/or by hand. These dogs are very obedient and should not mind being screened if the owner has

been made aware what is necessary for the dog to do and commanded his/her dog appropriately. Seeing Eye dogs are viewed by their owner as an extension of themselves, the screener should approach their screening similarly.

- Infants under the age of 2 should be held by a parent/guardian and thus processed through the WTMD. Baby carriages should be screened using Electronic Trace Detection (ETD) equipment, if available. Able-bodied infants over 2 years of age are assumed to be able to walk and should be treated as adult passengers. Search of infants must always be conducted with either a parent or guardian present.

- As passengers progress through the waiting line leading to the screening checkpoint, signs should be posted instructing them about the screening process as well as prohibited items. This eliminates unnecessary delays and increases the level of passenger acceptance of the screening procedures.

- Before entering the security screening area, a staff member will verify that the boarding pass and passport are valid. In some States, for domestic flights, a photo ID is a valid piece of identification. The staff member will also encourage the passenger to remove all loose articles from his/her pockets as well as all jackets and hats to limit delays at the screening checkpoint.

- The passenger will then be directed to a screening checkpoint.

- All carry-ons should be place on the conveyor belt of the X-ray machine.

- A staff member should ask the passenger to remove all electronic items and place them in a bin provided to them. At this point, all jackets and hats should also be removed and placed in the bin. Carry on bags will also be placed in a bin. To prevent theft of carry-on baggage in the case of a secondary screening, a tag with a number corresponding to the bin(s) will be handed to the passenger. As far as possible, all carry-ons belonging to one passenger should be placed in a single bin to favour flow of passengers.

- As the passenger's carry-on goes through the X-ray machine, the passenger should go through the WTMD. If the WTMD is triggered, a passenger searcher should ask the passenger if all of his/her pockets are empty. A person who sets off the first WTMD can be sent back to remove more items, provided this does not block the traffic flow. If traffic flow is likely to be impeded, the passenger can be directed to a second WTMD offset from the main path through the point. That person can then be cleared without disruption to the rest of the traffic. If the alarm is triggered again a secondary screening will be necessary.

- There should also be a continuous random secondary search of passengers who do not trigger the alarm. Random selection should be genuinely random and not concentrated during off-peak hours.

- The passenger needing a secondary check should have his/her carry-on baggage removed from the conveyor belt by checkpoint staff and left behind the conveyor belt. Following the secondary screening, the passenger can redeem his/her bags .

- Passengers requiring secondary screening, should be “wanded” by a HHMD. To improve the efficiency of the secondary search, the screener’s hand should always follow the HHMD to feel if the person is carrying any objects. Screeners cannot assume that the HHMD is triggered only by an innocent object worn by the passenger. They should make sure that no offensive item lies behind or next to the object triggering the HHMD. If the metal detectors keep being triggered, a hand search will be necessary. Secondary searches should be performed by persons of the same gender as the passenger. Before a secondary search can be performed, screeners should ask for consent by the passenger. Refusing a secondary search will deny the passenger access to the aircraft.

- Hand searches should be performed by a security staff member of the same gender as the passenger. Although necessary, a hand search can seem invasive to the passenger, therefore courtesy is very important. Further, guidelines on hand searches can be found in Appendix 2.

- Carry-on baggage should be carefully screened by the X-ray operator. (Appendix 2). If he/she sees an item that either seems suspicious or cannot be readily identified, the bag should be hand searched. No more than 5 seconds should be allotted per bag in order to maintain throughput averaging 12 bags/minute and avoid delays in passenger flow. If a bag cannot be cleared after 5 seconds it should be searched by hand. When a bag is identified by a screener, the conveyor belt should be stopped to avoid other bags going through the X-ray machine without the full attention of the operator.

- Much like passenger hand searches, manual inspections of baggage can appear intrusive. Care and courtesy are very important. Appendix 2 describes how to manually search carry-on baggage. Passengers who have their carry-on hand baggage searched may be asked to turn on their electronic equipment. Consent by the passenger should be granted before a manual search of carry-on baggage.

- Hand searches should be complemented with Explosive Trace Detection (ETD) inspection. Moreover, a continuous random check by ETD of cleared bags should be performed at each screening station. Depending on the threat level, available equipment and manpower a carrier should consider tracing bags inside and out. Again, randomness has to be genuine throughout the hours of operation of the airport and not concentrated at off-peak times.

- If cabin restricted items are found during a hand search the security staff should hand them over to an air carrier employee who will load them into the cargo hold before which they will be identified appropriately according to IATA Passenger Services Conference Resolution 1750 (Appendix 3).

- Any prohibited items (Appendix 4) and prohibited dangerous goods should be confiscated by the security staff. They should be handled and disposed of in accordance with national legislation. The airport security officer should ensure that an accurate record is maintained of all such items. .

- Once passengers have left the screening area, they should be in a sterile area and should remain in the sterile area. Anybody who leaves the sterile area and wishes to re-enter must go through the screening process again.

4. Gate Screening

Gate screening is not recommended as a primary mode of passenger screening for the following reasons:

- Too much of the airport terminal is exposed to weapons and explosives
- The possibility of delays is greater if the appropriate staff is not available and equipment is not in use
- Gate access needs to be secured when not in use
- Departure delays can adversely affect security staff deployment to other gates.

If gate screening is performed as a primary screening process, it should be performed following the guidelines suggested in Section 3.

At all gates, prior to boarding, passenger IDs should be verified and compared to their boarding pass.

Extensive gate screening is used by some States as a secondary screening process. Gate screening as a secondary process should follow the following guidelines:

- The air carrier should consider closing the flight earlier to avoid departure delays if gate screening is used
- High-risk flights should be selected as well as a random selection of other flights
- Selected passengers for gate screening should be chosen at random and continuously
- The selected passenger should hand carry-on baggage to a security agent.
- Screening should be performed either using a HHMD or a WTMD if it is available at the gate.
- If WTMD and HHMD cannot clear the passenger, he/she should be hand searched.
- EDT and hand search of all carry-ons of selected passengers.
- If carry-ons need to be unlocked by the passenger it should be done prior to having the passenger screened.
- Screeners should follow hand search guidelines of passengers and baggage according to IATA Recommended Standard No. 7 (**Appendix 1**)

5. Passenger Mix

This section only covers the intermingling of arriving and departing passengers. Mixing of transit and transfer passengers will be addressed in Section 6.

Both arriving and departing passengers should be considered to be sterile as they will have been screened at their airport of origin. However, less stringent screening requirements may be a cause for concern.

Every effort should be made to avoid arriving and departing passengers intermingling with each other.

If the design of the airport permits, arriving passengers should disembark on a different level than the departure lounge or should be directed to an area of the airport dedicated to arriving passengers only.

If physical means to avoid contact are not possible, passenger mix can be prevented by restricting access to the departure lounge until all arriving passengers have cleared the area. This solution does however pose serious problems in large airport terminals with many gates close to each other.

Concerns existing about the sterility of arriving passengers will most likely be limited to a few flights originating from States where screening requirements are considered to be inadequate by the State of arrival. In order to limit the disruption of passenger flow within the entirety of the terminal, it might be considered that all such flights be assigned a disembarking gate in the same sector of the airport. These areas can then be more easily cordoned off and/or monitored by security personnel. Such monitoring should be present until passengers arrive at an area of the terminal where contact with sterile departing passengers is impossible. In such a case, it is recommended that once all arriving passengers have vacated the arrival/departure lounge, a search of the area should be undertaken in order to ensure that no items have been left behind.

If the meeting of unscreened or inadequately screened passengers cannot be prevented, departing passengers will need to be re-screened at a point where contact with unscreened passengers is impossible.

6. Transit and Transfer Screening

Ideally, all interline and transfer passengers and their carry-on baggage should be subjected to security screening prior to boarding a connecting flight.

When screening transfer passengers, the following steps should be taken in order to favour a more efficient transfer:

- To avoid any introduction or removal of objects, checked baggage should, as far as possible be transferred in-line. This can also contribute greatly to improved passenger flow, reduced transit times and minimum connection time (MCT). It is possible that checked baggage might have to be screened at the interline airport.
- Passengers should be directed to an interline lounge area where onward boarding passes can be issued, if necessary following verification of the passenger status.
- The passengers should then go through immigration procedures required for the onward journey, as necessary.
- Passengers should then be allowed to move to the sterile waiting area for their onward flight.
- If the area between the disembarkation point and the sterile waiting area is quite extensive and impossible to keep sterile, passengers must undergo screening before re-entering the waiting area of their onward flight.
- The entrance to the screening area should be staffed by airport security personnel who should verify the validity of boarding passes and passengers' identification.
- The screening procedure for transfer passengers should be the same as for originating passengers, which is contained in Section 3.

Transit passengers should be allowed to remain on board if they so wish unless all passengers are required to disembark for technical reasons or if a security search has to be undertaken. When all passengers have re-boarded, the crew should verify that all carry-on baggage stored in the aircraft can be reconciled to a passenger inside the aircraft. The baggage of any missing passenger must be removed before the aircraft is allowed to leave.

If a passenger leaves a flight prior to its ultimate destination, his/her carry-ons and checked baggage must be removed from the aircraft before the flight is allowed to continue its journey.

7. Boarding

Gate security screening has been addressed in Section 4. Independent of gate screening, a few security measures should be undertaken during the boarding process for all flights:

- Check boarding pass and appropriate government issued photo ID at the same time prior to boarding.
- If passengers have to walk to the tarmac, care has to be taken to ensure that passengers walk immediately to the aircraft and board it. Any possibility of having passengers wandering on the tarmac can represent a serious safety and security hazard. The safety hazard arises because of the danger of passengers not being adequately escorted. The security hazard arises because the passengers have been reconciled in the terminal, and if not properly supervised a passenger could hide airside and fail to board the aircraft, and his/her absence would not be noted as the earlier reconciliation had been correct.
- If transportation has to be provided to passengers to move them from the terminal building to the aircraft, care should be taken to ensure only authorised personnel and passengers are allowed to board the aircraft.
- Prior to being operated, passenger transportation vehicles should be security searched.
- When transportation or walking out on the tarmac is necessary, passengers and crews boarding flights considered high risk should be escorted by security personnel in order to prevent perpetrators infiltrating the passenger population and to prevent criminal acts.

8. Law enforcement

Law enforcement presence is very important at an airport. Visual presence is essential to serve as a deterrent. The airport being a large complex, it is often necessary to have many different organisations responsible for the security of the whole building. States should regulate who is responsible for which tasks or section of the airport.

The whole airport security infrastructure relies on good communications between the various agencies, and a clear understanding of each organisation's role and responsibilities. The security structure needs to be documented and published in an airport security manual. All agencies need to meet regularly so that in an emergency their interaction solves rather than causes difficulties. The structure needs to be tested by regular exercises.

Some items to keep in mind when law enforcement is deployed at an airport are:

- Landside: Police presence (airport specific force or local department) should be visible to act as a deterrent and may be covert as a supplement. In times of heightened threat level, police presence should increase. Police should be present throughout the hours of operation of the airport. Police officers can be armed. Regular patrols should be performed.
- Airside and security checkpoint (usually the responsibility of the Civil Aviation Authority (CAA) or airport authority): Security tasks airside could include:
    - Maintaining access control at arrival and departure halls
    - Screening
    - Perimeter
    - Ramp and aircraft security
    - Security at baggage sorting area, cargo and catering centres
    - Managing the Hold Baggage Screening system

- Conducting foot and mobile patrols

If contracting firms are employed, they should be rigorously audited regularly to make sure that performance is kept to an acceptable level.

Security staff should not be armed as they will be assigned posts in the sterile area of the airport but should be equipped with mobile communication devices and be capable of contacting an armed police presence quickly if needed.

Subsequent security tasks such as car park security and other landside security should be the responsibility of the airport authority security or a contracted firm representing them. Their power should be limited and only be of a supporting role to local police as being the eyes and ears of the police force in areas of low risk.

9. Immigration

At airports where passengers meet immigration officials prior to departure, the immigration departure area has to remain a passenger only area.

Security staff should be posted at the entrance to the immigration area and verify that each person entering the area has a valid boarding pass and valid passport.

10. Increased Threat Level

As mentioned in the introduction, this document addresses passengers and carry-on screening procedures when the threat level is at the lowest or normal level. Using sections of the IATA Industry AVSEC Risk Management Matrix, the following modification to centralised and gate screening are suggested under increased threat.

Measure	**Baseline (Level 1)**	**Intermediate Threat (Level 2)**	**High Threat (Level 3)**
Passenger Screening (Where centralised)	Search all departing passengers by hand or screen them with metal detection equipment before access is allowed into the Security Restricted Area. A continuous random search of passengers who do not cause metal detectors to alarm.	As Baseline plus: Continuous searching of passengers by hand (or by approved imaging technology equipment) at the departure gate where airport facilities permit, otherwise these searches must be carried out at another suitable location. To facilitate such additional passenger screening air carriers should consider earlier closure of check-in/gate operations for each flight	Search all departing passengers again at the departure gate by hand or screen them with metal detection equipment before boarding the aircraft. Continuous searching of passengers by hand (or by approved image technology equipment) who have been screened by metal detection equipment. To facilitate such additional passenger screening air carriers should consider earlier closure of check-in/gate operations for each flight

Measure	Baseline (Level 1)	Intermediate Threat (Level 2)	High Threat (Level 3)
Passenger Screening (At Departure Gate)	As for Centralised Passenger Screening	As Baseline plus: Continuous searching of passengers by hand (or by approved imaging technology equipment) at the departure gate. To facilitate such additional passenger screening air carriers should consider earlier closure of check-in/gate operations for each flight	As Baseline plus: Continuous searching of passengers by hand (or by alternative approved imaging technology equipment) who have been screened by metal detection equipment. To facilitate such additional passenger screening air carriers should consider earlier closure of check-in/gate operations for each flight
Cabin Baggage Screening (Where centralised)	Search all cabin baggage of departing passengers either by hand or by conventional x-ray equipment with hand searching of screened bags also being conducted on a continuous random basis including those about which the air carrier has concerns, or by High Definition x-ray fitted with Threat Image Projection (TIP) equipment which is actuated (where permitted).	As Baseline plus: Continuous searching of cabin baggage by hand (or approved advanced technology) at the departure gate where airport facilities permit, otherwise these searches must be carried out at another suitable location.	Search the cabin baggage of all departing passengers again at the departure gate either by hand or by x-ray equipment before being taken on board an aircraft where airport facilities permit, otherwise these searches must be carried out at another suitable location. Continuous searching of cabin baggage by hand (or approved advanced technology) which has been screened by x-ray equipment.
Cabin Baggage Screening (At Departure Gate)	As for Centralised Cabin Baggage Screening	As Baseline plus: Continuous searching of cabin baggage by hand (or approved advanced technology) which has been screened by x-ray equipment.	As Baseline plus Continuous searching of cabin baggage by hand (or approved advanced technology) which has been screened by x-ray equipment.
Separation of Screened and Unscreened Passengers	Separate screened departing passengers from inbound passengers. Where physical separation cannot be achieved, application of compensatory measures in accordance with risk assessment by appropriate authority(ies).	As Baseline.	As Baseline but no compensatory measures permitted.

11. The Way Forward

The following model was developed by IATA's Airport Development Department and provides a glimpse of the ideal passenger and carry-on baggage screening systems (figures 11.1, 11.2 and 11.3). This proposed system is one that can only be implemented in a new airport or a completely retrofitted airport as the existing conventional screening checkpoint cannot be easily adapted to cope with this design. Obviously the issue of cost is the biggest obstacle in implementing a system of this sort. Lack of space may also be a problem. More details of this model are available in the IATA Airport Development Reference Manual, 9th Edition.

Passenger Risk Assessment (PRA) techniques should be used at the locations defined within figure 11.1 and figure 11.2.
PRA allows the airport to assign the correct proportion of security scrutiny to those passengers who have been identified to be of higher risk. The security staff can then direct the passenger and any hand baggage to appropriate passenger and hand baggage screening. The majority of passengers will experience normal levels of adequate pre-board security. Whilst the overall passenger processing time marginally increases for all passengers, the increase in security performance is substantial and focused on where the risk is evaluated to potentially reside.

The use of automatic random 5% and 10% searches of passengers and their hand baggage is commonly used in many areas of the world. The random sample is determined by means of a computer programme. The "random" sample of searched passengers and their baggage should be taken over a 24-hour repeating cycle and should not be unnaturally biased toward any one particular part of the operational day. The percentage of random manual searches of passengers and their hand baggage will normally increase with higher threat levels.

Figure 11.1 represents a typical recommended departure and transfer passenger screening process map. It can be seen that arriving (terminal exit and transfer) passengers and departing passengers should not be mixed or be permitted to exchange goods items on their person within the airside.

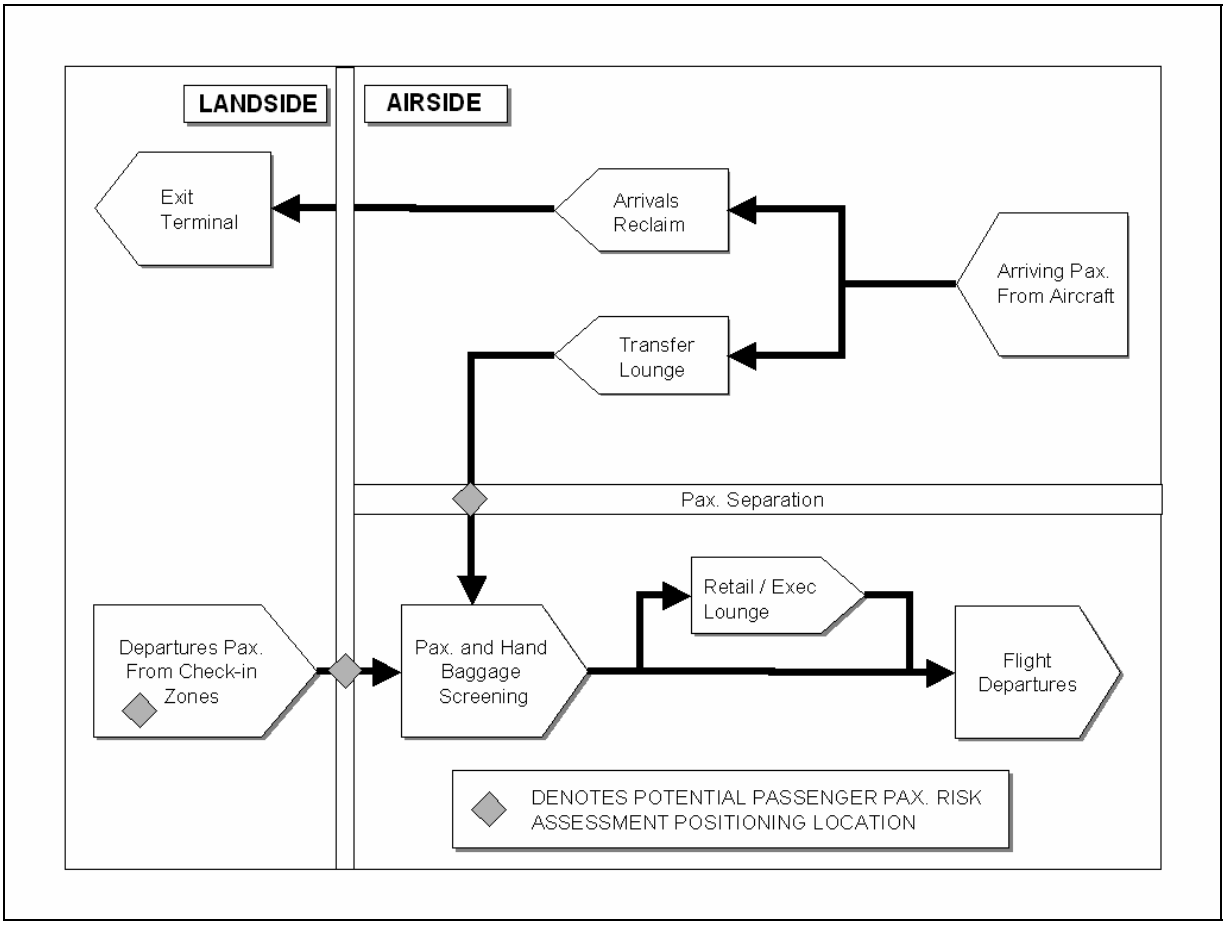

Fig 11.1 Typical Departures and Transfer Passenger Screening Process "High Level"

Figure 11.2 shows a typical departure and transfer passenger screening process map at a much more detailed level, where all of the interrelationships between the process steps are clearly shown. It can also be seen that the task of reuniting the passenger with his/her hand-baggage after screening becomes quite complex. It is very important that staff and passengers have adequate space and passengers have clear instructions as to where they should go.

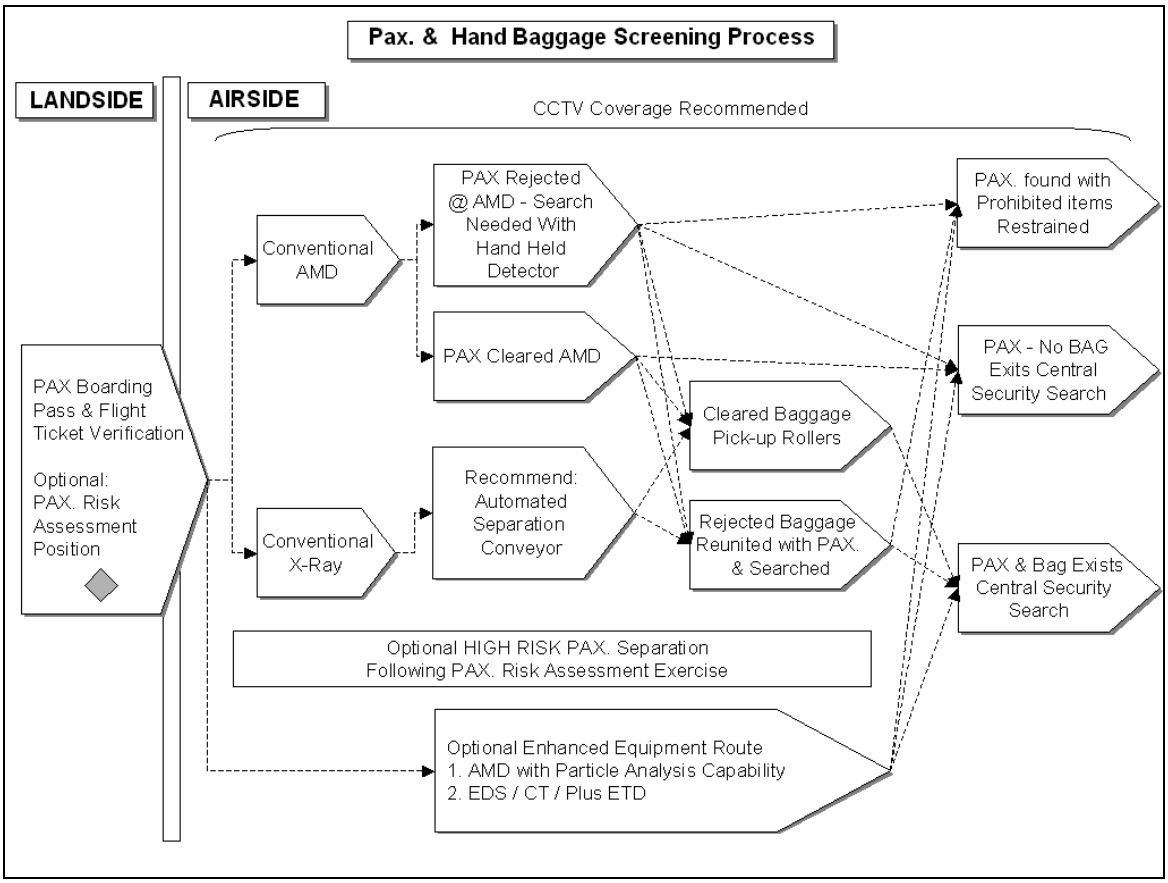

Fig 11.2 Typical Departures and Transfer Passenger Screening Process "Low Level"

The process should be as follows:

Step 1	Passenger enters security search area.
Step 1a	Optional: Passenger Risk Assessment (PRA) questioning at landside/airside barrier.
Step 2.	Passenger metallic object scan using WTMD unit.
Step 2a	Optional: Higher risk passengers' scan using WTMD with particle analysis capability.
Step3.	Passenger s cleared at WTMD permitted to pick up cleared hand baggage or review contents of rejected baggage.
Step 3a.	Passengers rejected by WTMD should then be scanned using hand-held metal detector.
Step 3b.	Passengers cleared by hand- held metal detector permitted to pick up cleared hand baggage or review contents of rejected baggage.
Step 3c.	Passengers rejected by hand-held metal detector referred to Electronic Trace Detection (ETD) equipment.
Step 3d.	Passengers cleared by Electronic Trace Detection (ETD) equipment. permitted to pick up cleared hand baggage or review contents of rejected baggage.

Step 3e. Passengers rejected by Electronic Trace Detection (ETD) equipment referred to Police and Security.

Step 4. Passengers exist security search area

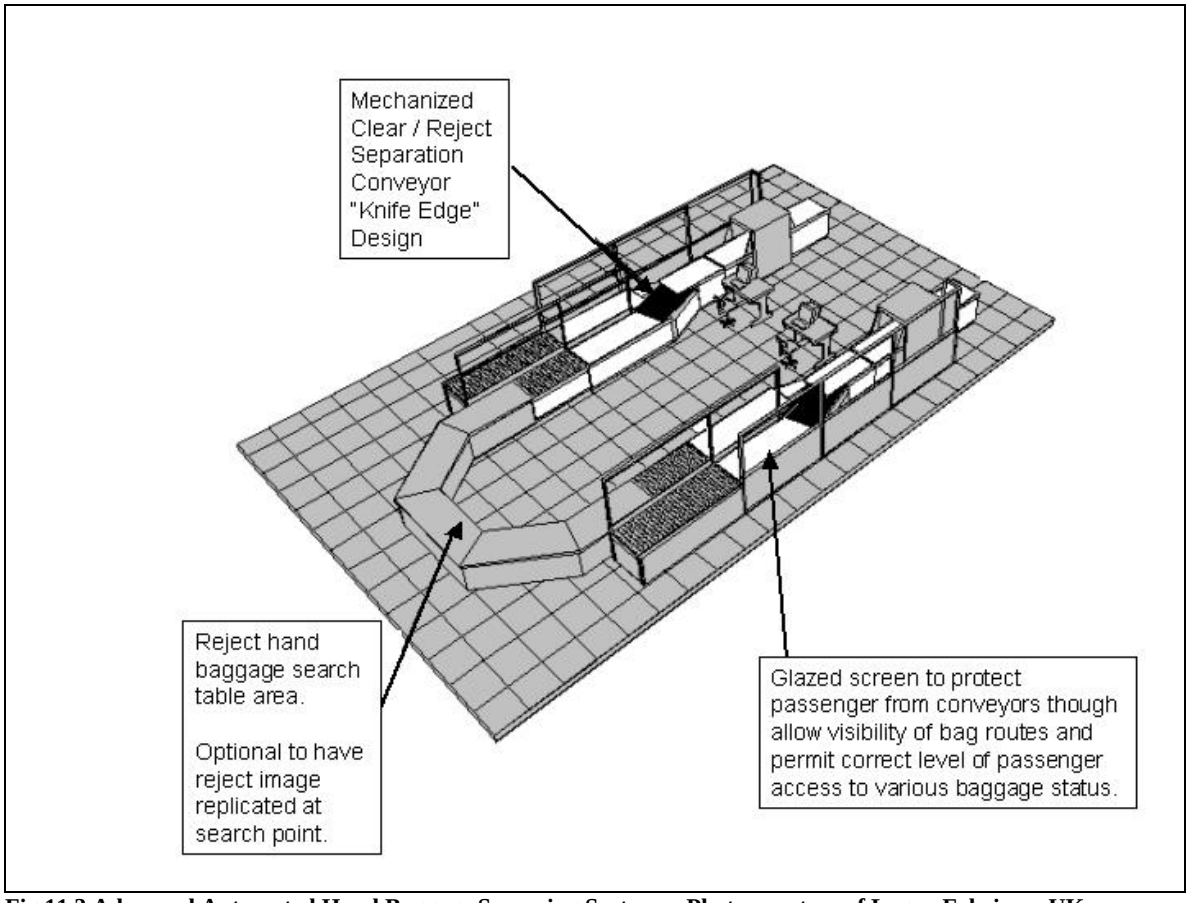

Fig 11.3 Advanced Automated Hand Baggage Screening System -- Photo courtesy of Logan Fabricom UK

- END -