

The challenges of regulations, policies and procedures relating to persons with disabilities



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2

Try to be with someone you don't know well

1

Divide your table into groups of 2 or 3 people



3

Find out from the other person / people 4 facts:

- a) Their name
- b) Where they work
- c) What was the last thing they ate
- d) An interesting fact about them or one of their hobbies

GOLDEN RULES

- NO-ONE IS ALLOWED TO SPEAK
- YOU ARE ALLOWED TO USE ANY OTHER WAY TO COMMUNICATE



Overview of Workshop

1. Accessibility Overview – current state and the challenges of accessible aviation

2. Passenger Acceptance – safety considerations

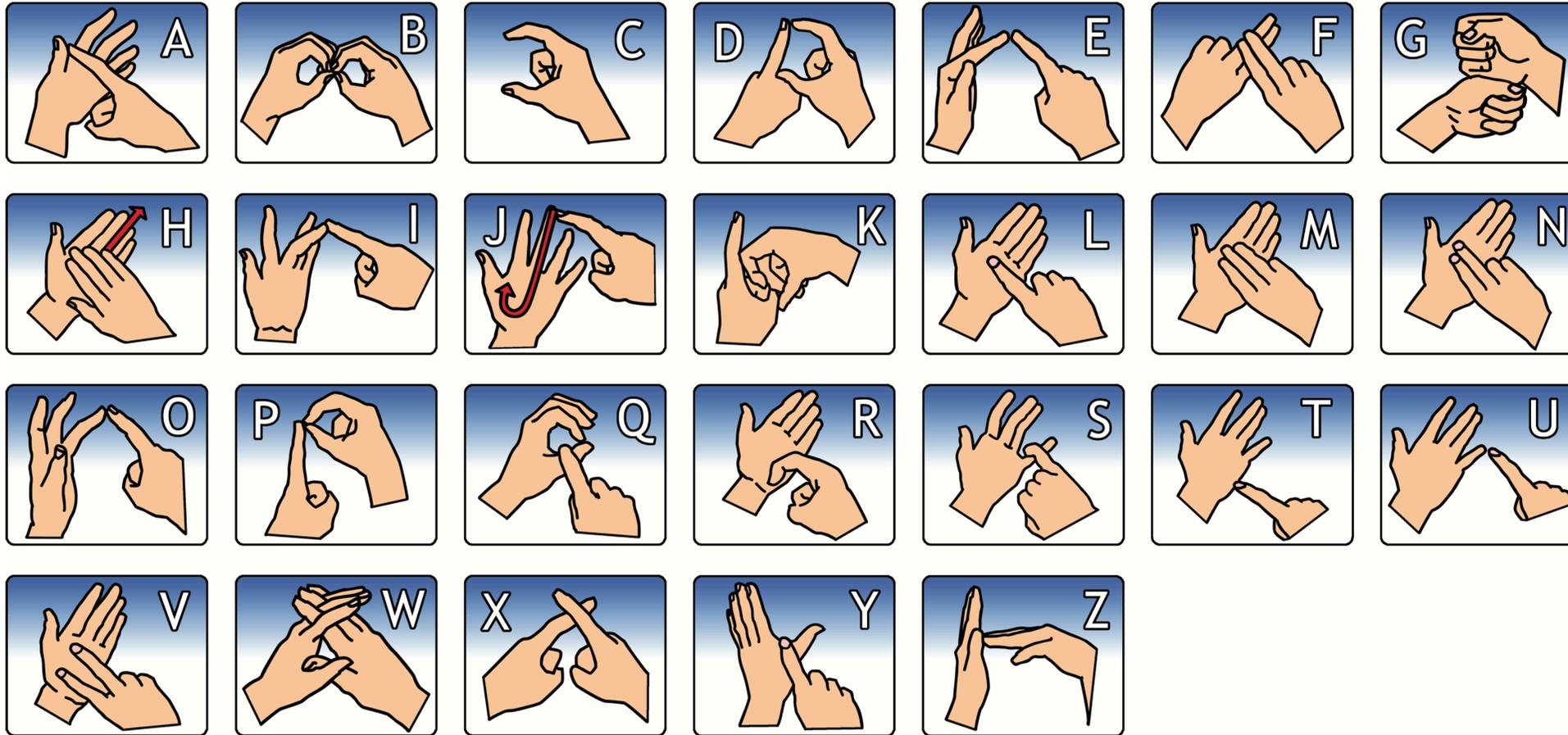
3. SSR codes

4. Rules and regulations

5. Mobility / Assistive devices



BSL - FINGERSPELLING ALPHABET



Accessibility Statistics



Prevalence of Disability
– Age, Type Distribution



PRM Penetration Rate



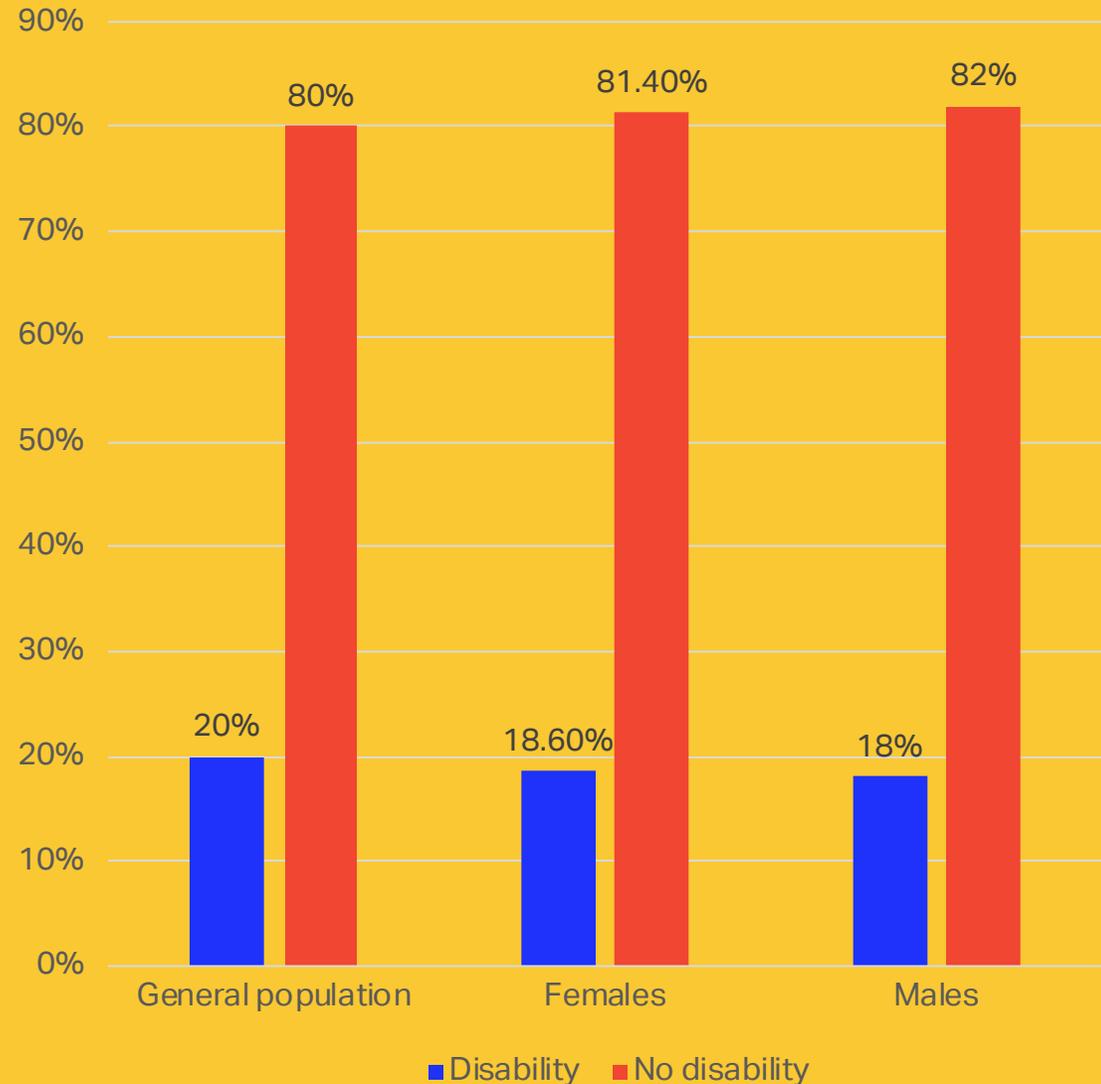
Growth of PRM
Penetration Rate



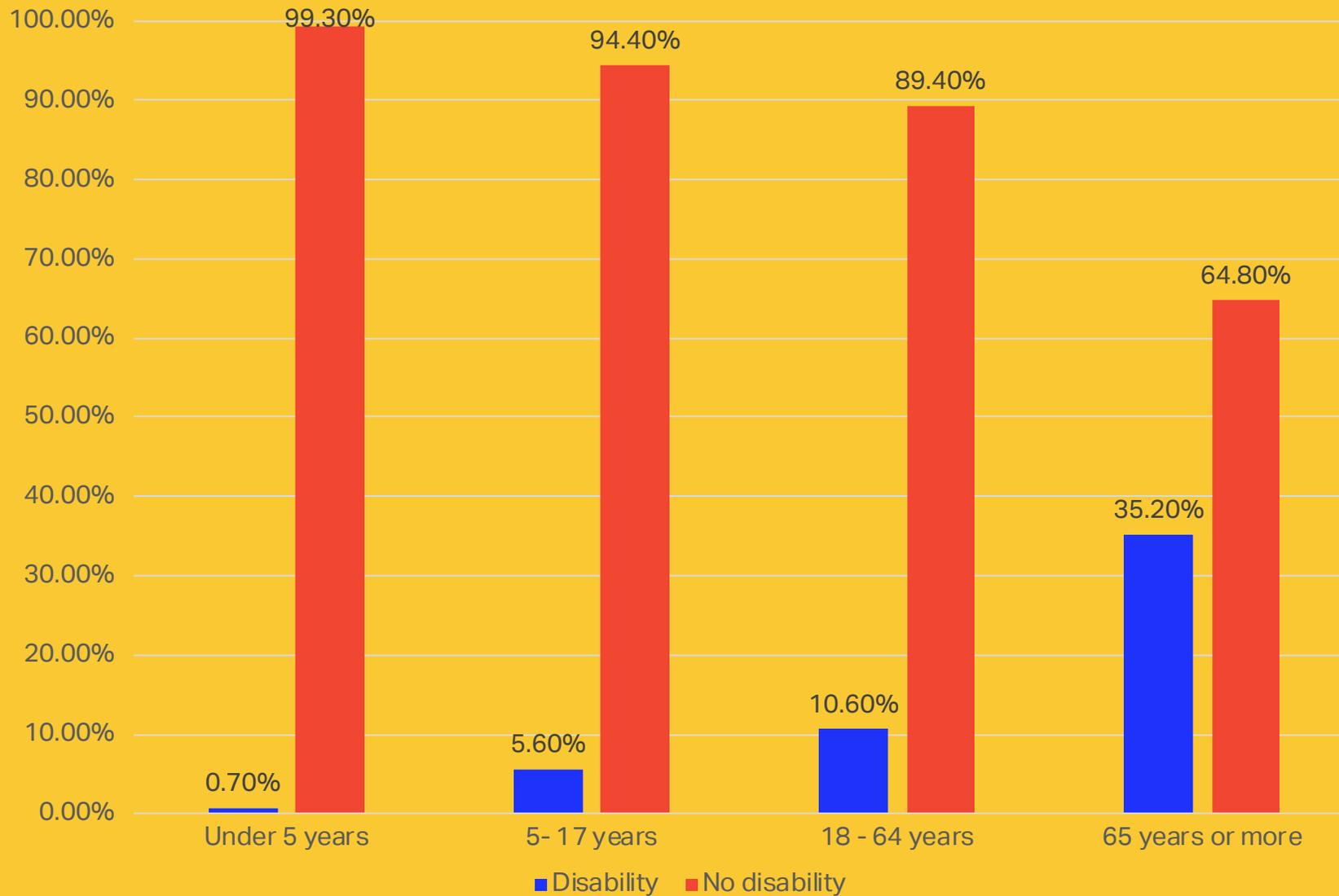
Average Incidence of Disability (Australia)

Demographics

- Over 4 million people in Australia have some form of disability. That's 1 in 5 people.
- 18.6% of females and 18.0% of males in Australia have disability.
- The likelihood of living with disability increases with age. 2 in 5 people with disability are 65 years or older.



Prevalence of Disability* (Age)



*2017 Disability Statistics Annual Report Institute on Disability/UCED, University of New Hampshire



Inclusivity Developments

Change In Attitude

Technological
Developments



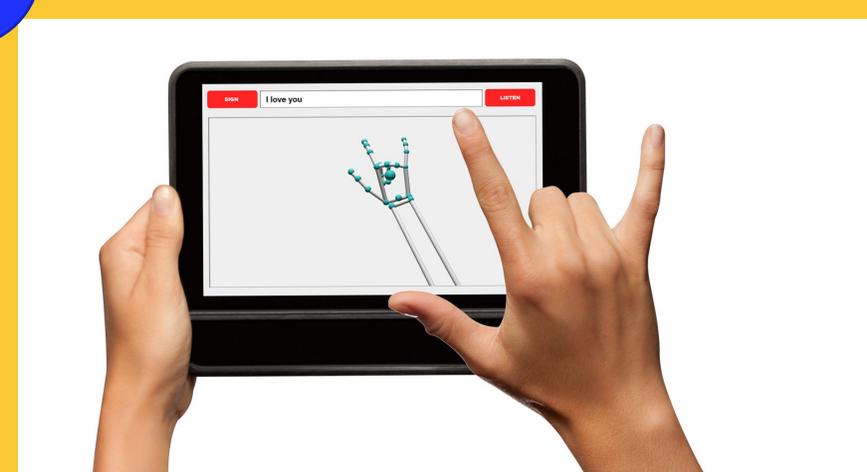
Attitudinal Changes



Technological Developments

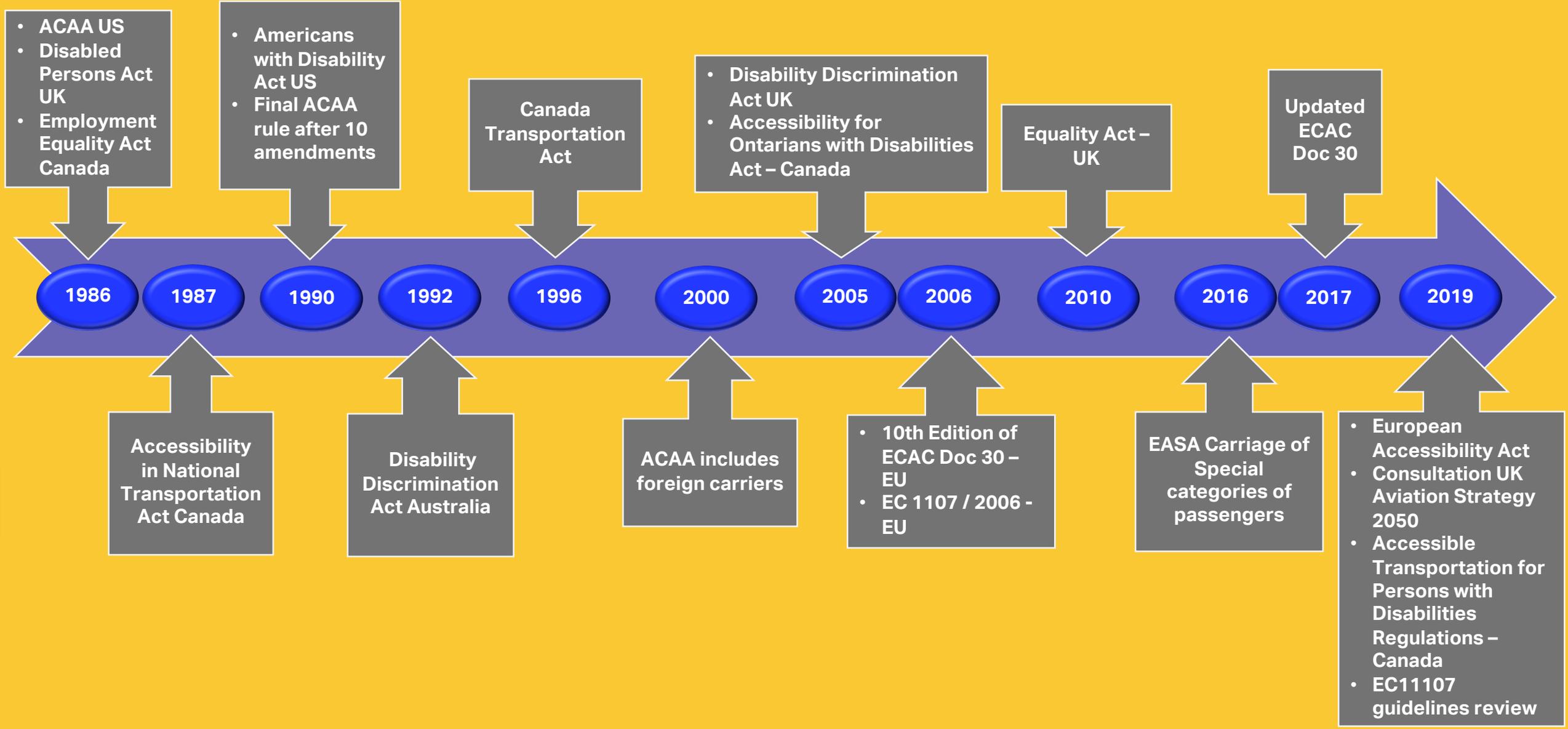


- WhatsApp
- Twitter
- Facebook
- Instagram

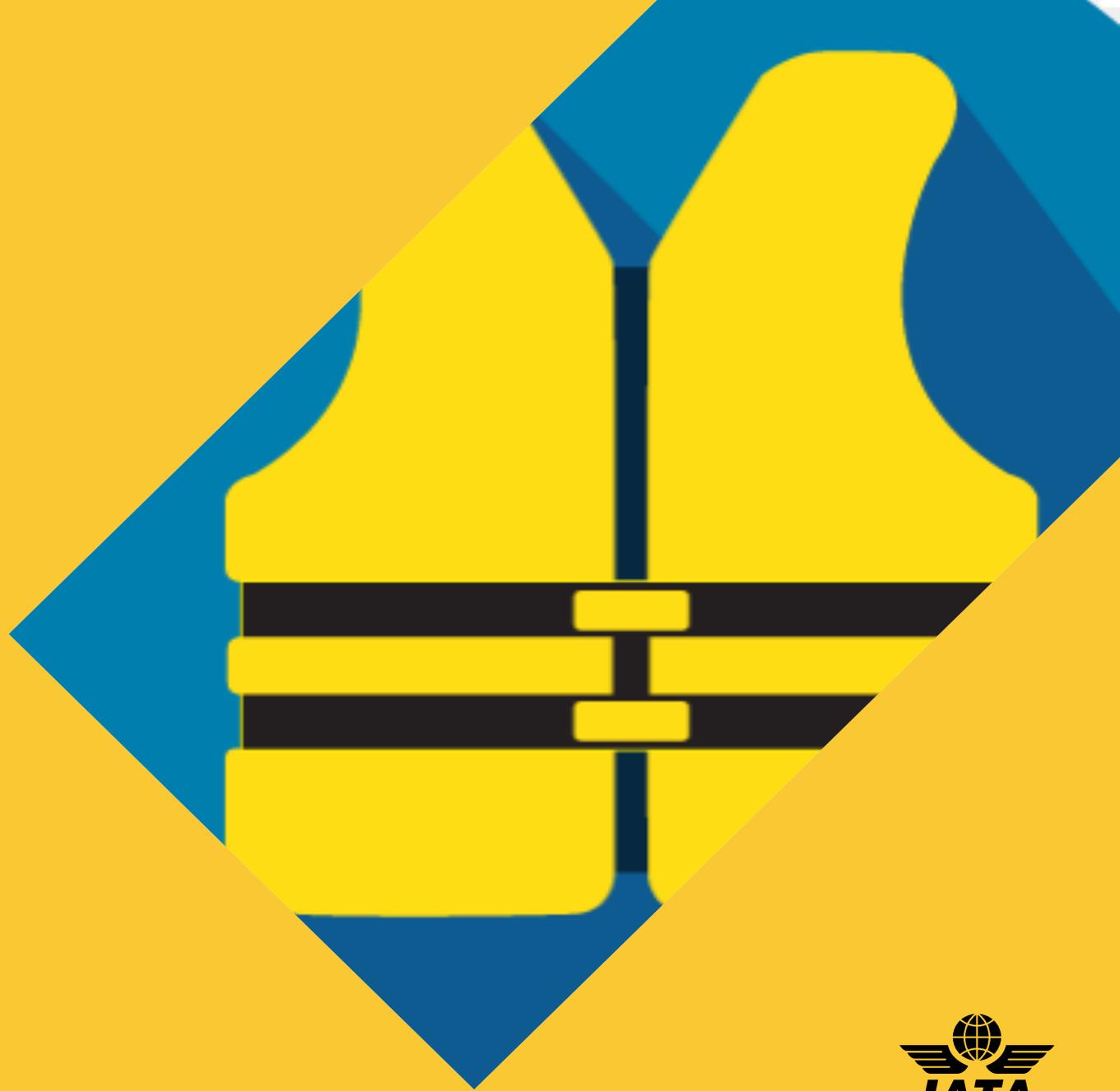


Legislation





Safety





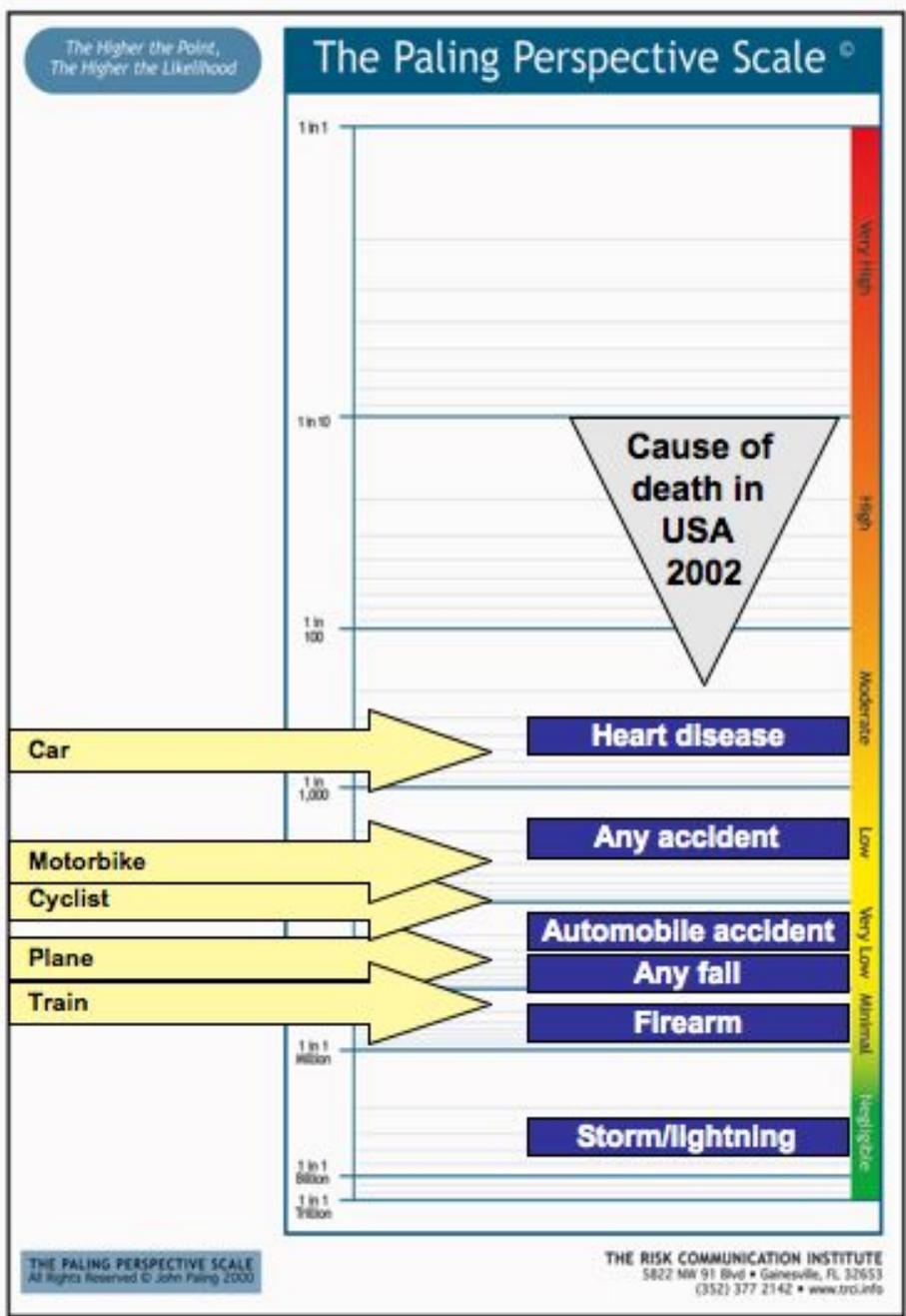
ICAO

Aviation safety is at the core of ICAO's fundamental Objectives. The organization is constantly striving, in close collaboration with the entire air transport community, to further improve aviation's successful safety performance while maintaining a high level of capacity and efficiency.



IATA

Safety is IATA's number #1 priority. Every day approximately 100,000 flights take to the sky and land without incident. Flying continues to be of tremendous importance to modern life and getting on an aircraft is among the safest activities that one can do. Safely connecting people and businesses is our top priority.



Air Travel Safety Perspective

Want to keep it at least as safe as this
IATA 2019 annual report

- Circa 12 million passengers flying per day in 2018
- Equates to circa 235,000 passengers with disabilities every day



Brand reputation

Frontier Airlines fined for bumping passengers, not helping people with disabilities

News > World > Europe

Air travel in India remains a nightmare for persons with disabilities

Easyjet fined £50,000 by French court after refusing to let disabled passenger board flight

New Zealand: Disabled passenger involved in "humiliating" incident in

Qantas sued by disabled

Airline Disabled woman suing Virgin Airlines after she fell out of her wheelchair as she was being pulled up an airbridge by a flight attendant

'They threatened to get police': Mother slams Emirates after her epileptic and autistic son is kicked off a flight and made to wait in an airport for nine hours - even though he had a medical certificate to fly

City complaints to

Japanese Airline Apologizes After Disabled Man Crawls Aboard

Financial costs

Part 382 Penalties



Cost of retrofit / rectification if a Cease and Desist order

OTP implications – A4A - FAA/Nextor estimated the annual costs of delays (direct cost to airlines and passengers, lost demand, and indirect costs) in 2017 to be \$26.6 billion.

<http://airlines.org/dataset/per-minute-cost-of-delays-to-u-s-airlines/>





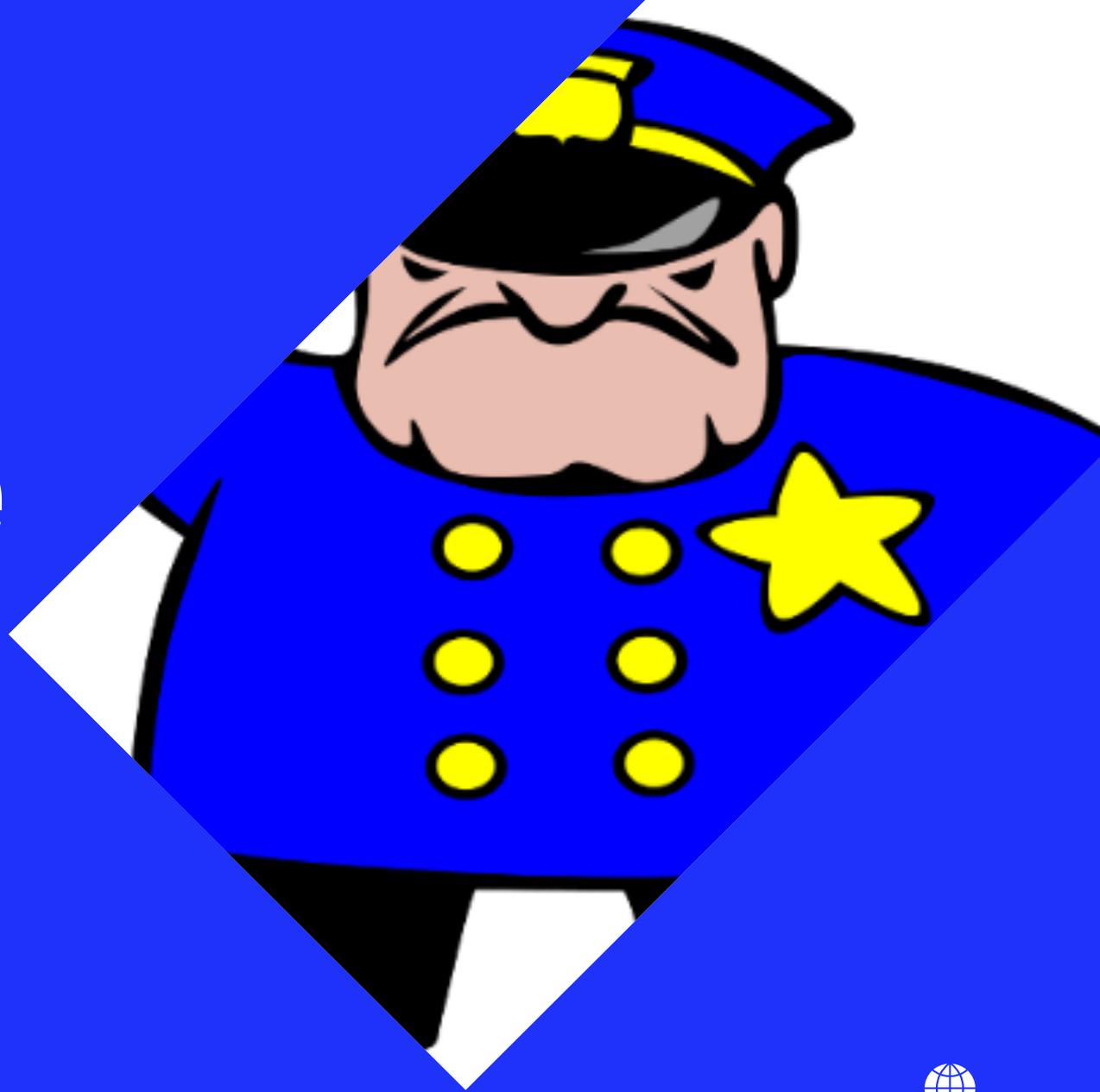
Numbers
of people
with a
disability
rising

Numbers
travelling
by air
rising

Exercise #1

- 1) Where is the industry now?
- 2) Do you know how many passengers with disability travel on your airline?
- 3) Do you know what is the breakdown of different types of disability?
- 4) What types of disability cause you most challenges?
 - a) What are those challenges?
- 5) What types of disability do you think cause your passengers most challenges?
 - a) What are their challenges?

Passenger Acceptance – Safety



What rules are we aware of?



US DOT PRM 14 Part
382

EASA Carriage of
Special Categories
of Passengers

Canadian
Transportation
Agency - Aircraft
Accessibility for
Persons with
Disabilities

EC 1107 / 2006 -
concerning the
rights of disabled
persons and persons
with reduced
mobility when
travelling by air

Aim of the Regulations – Passenger Perspective

EC 1107/2006 - ... " disabled persons and persons with reduced mobility, whether caused by disability, age or any other factor, should have opportunities for air travel comparable to those of other citizens"

14 CFR Part 382 – "The purpose of this Part is to carry out the Air Carrier Access Act of 1986, as amended. This rule prohibits both U.S. and foreign carriers from discriminating against passengers on the basis of disability; requires carriers to make aircraft, other facilities, and services accessible; and requires carriers to take steps to accommodate passengers with a disability"

The Canadian Transportation Agency helps ensure that any undue obstacles to the mobility of persons with disabilities are removed from federal transportation services and facilities:
- air carriers operating within, to, or from Canada;

Exercise #2

Regulations – acceptance perspective

- Unaccompanied WCHC category passenger contacts your airline to book. Ten hour flight. What aspects do you need to consider?
 - Dropped on boarding – what other considerations?
- A deaf blind couple travelling with their guide dogs. What aspects do you need to consider?
 - On boarding a passenger in same row objects to dogs on cultural grounds. What should be considered?

Did you Consider?

- Do they fulfil the safety criteria for your airline and the route to travel unaccompanied?
- If they need a safety assistant / companion who will provide this assistant?
- If it is the passenger who provides assistant who covers the cost of the fare?
- How is information about the passenger and their wheelchair transmitted to your staff and any provider who assists at the airports?
- Do they need assistance at the airports?
- Personal assistance – toileting not a reason to deny travel but what information can be provided to the passenger?
- If passenger cares for any personal needs in aircraft seat do you have biohazard bags, processes and procedures to facilitate this?
- Onboard wheelchair – do you have one and if so do your crew let the passenger know it is available?
- Onboard accessible lavatory?
- Information about moveable armrests / safety restrictions on your website?
- Information about any onboard wheelchair stowage if available?
- What type of wheelchair do they use? Safety aspects for carriage.
- Weight of wheelchair – how will it be loaded and how repatriated with passenger?
- If wheelchair is damaged do you have a process in place for repair / replacement / compensation etc?

- If they are injured when dropped can they still travel?
- Cannot deny on grounds of disability but are they now medically safe to travel?
- How will you check this?
- What processes and procedures do you have in place?
- If you deny travel as you believe they cannot safely complete this flight as a result of their injury do you have processes in place to comply with legislation?



Did you Consider?

- Are guide dogs allowed in the cabin on your airline?
 - Are the passengers able to travel without a safety assistant? Can they establish a means of communication with the crew in the event of any safety related incident?
 - Safety briefing – how can you deliver this - can they read braille?
 - Safety assistant provision / payment considerations
 - Do the dogs meet all the criteria needed for acceptance both ends of their journey? – Training, inoculations, pet passport, etc – will vary depending on airline and route
 - Can you accept two dogs?
 - Where will the dogs sit, especially if they are large?
 - Do you provide a seat space FOC?
 - How will the dogs be secured?
 - Do you have deep clean procedures in place for post flight?
 - Assistance through the airport and requesting / communicating this to all parties
 - Process / procedure / equipment for the dogs to relieve themselves if necessary pre, during and post flight
 - Do you have a process in place for the dogs if an evacuation is necessary?
-
- If another passenger objects explain that the dogs are necessary and allowed onboard
 - Consider moving the passengers – dogs will need appropriate seating area
 - Which passengers will you move – the deaf blind couple or the complaining passenger?
 - Complaining passenger may not want to move as could be in a row with extra leg room / bulkhead
 - What would you do if the complaining passenger refuses to cooperate?

Main Take-Aways

- Any refusal of acceptance has to be on safety based grounds
- Airlines must take least restrictive option from the aspect of the passenger
- Any decision to deny must be on a case by case basis



IATA SSR Codes



Special Service Requirement (SSR)

IATA Codes are used to capture and transmit information about:

- Passenger with reduced mobility
- Disabled passengers
- Special baggage handling (wheelchairs)
- Specific seat request/reservation
- Dietary requirements/requests
- Passenger requiring medical care

The level of assistance required may vary:

- According to the individual particular needs
- One individual to the other
- Aircraft type and configuration



IATA SSR Codes and Description

Physical Disabilities	
CODE	DESCRIPTION
BLND	Blind Passenger
DEAF	Deaf Passenger
MAAS	Meet and Assist
WCHR	Wheelchair for distance, can ascent and descent steps
WCHS	Wheelchair for distance and steps, can walk to cabin seat
WCHC	Wheelchair, passenger is completely immobile

Note: May travel with Service Animal

Wheelchair Codes	
CODE	DESCRIPTION
WCBD	Wheelchair (dry cell battery)
WCBW	Wheelchair (wet cell battery)
WCMP	Wheelchair (manual powered)
WCMB	Wheelchair (lithium ion battery) 
WCOB	On-board Wheelchair provided by airline

Note: Battery powered wheelchairs require advanced notice for preparation/(dis)assembly.

IATA SSR Codes and Description

Intellectual Disabilities	
CODE	DESCRIPTION
DPNA	Passenger with intellectual or developmental disability ↗ Alzheimer Disease ↗ Down Syndrome ↗ Autism ↗ Mental retardation ↗ Learning difficulties ↗ etc.

Note: Airlines may request passengers to be accompanied

Medical Cases	
CODE	DESCRIPTION
LEGL	Left leg in cast
LEGR	Right leg in cast
LEGB	Both legs in a full cast
OXYG	Passenger needing oxygen during flight
PPOC	Personal Portable Oxygen Concentrator
STCR	Stretcher Passenger

Note: Airlines may request a medical certificate or medical clearance

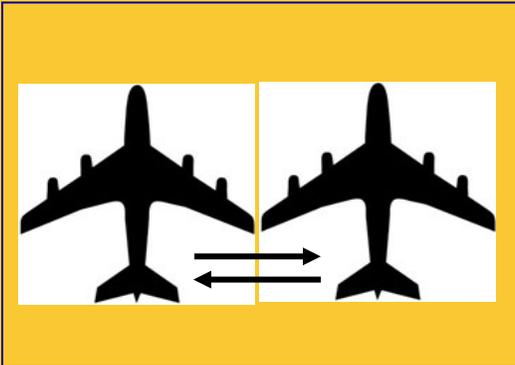
Information flow

Booking system to Airline



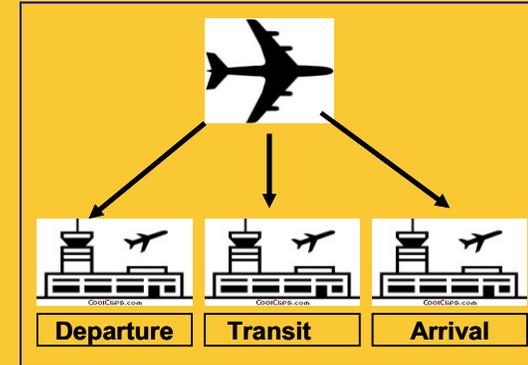
Travel Agencies, E-booking,
Phone booking, Direct sales

Airline to Airline



Code share flights,
Interline journeys

Airline to Airport



Airports, Ground Handling,
Caterers, Service providers

Assistance at Airports

Enplaning/Deplaning



Lifts, ramps, wheelchairs,
high loaders

Connecting



Transit, reaching
connecting flight

Assistance



To lavatory, gate-checked or
carry-on bags, assistance dog

Assistance by Air Carrier

Seating



Aisle moveable armrest,
seat next to escort

Lavatories



Assistance to wheelchair
accessible lavatories

Transportation



Carriage of assistance dogs,
mobility & medical equipment

Why passengers require assistance?

1. Age (elder passengers)
2. Distance (unable to walk)
3. Language challenges
4. Priority access (security/ immigration)
5. Temporary disability (other medical conditions)
6. Wayfinding (worried of being lost at the airport)



Do and Don'ts

- The majority of passengers needing assistance are experts in their own needs
- When interacting with a disabled person, focus on the person and not on the disability
- Disabilities may not always be visible and may not be covered by an IATA category code
- Seek feedback to ensure you are providing appropriate assistance: sitting a passenger on a wheelchair may not be what they need

Exercise # 3

Codes

1. List of codes relating to disability– which do you know are used most? Which codes least?
2. Are the codes used accurately? If not what could be improved?
3. Do you use free text along with the code?
4. Without resorting to any resource can you please define:
 - WCHC
 - DPNA
 - WCHR
 - WCHS



Main Take-Aways

Recent Industry meeting with airlines, airports and regulators in UK

- It is premature to amend the IATA disability codes and Reso 700 by adding new codes: we need first to investigate the use of current IATA SSR codification included the use of free text for the DPNA etc;
- There was a call for IATA to set standard guidelines and business processes to ensure harmonization. Not taking this option in consideration means that more airports, providers and travel agents will be focusing on their own processes e.g Charles de Gaulle created a PSM code in answer to that specific airport, that is not an IATA standard.
 - Review of airline websites, Amadeus/Galileo training sites, airport websites and passenger information – all different descriptions of codes;

- Passengers must be educated as well: pre-notification and better communication should be supported by regulatory endorsement;
- Hidden disability lanyard and logo == > disability associations, regulators and airports asked that this be driven by an IATA standard.

	WCHR	WCHS
System Training Manual	WCHR -- airline supplied wheelchair - traveller can ascend/descend stairs	WCHS -- airline supplied wheelchair - traveller cannot ascend/descend stairs
System Training Manual	Wheelchair – R for ramp. Passenger can ascend/descend steps and make own way to/from cabin seat	Wheelchair – S for steps Passenger cannot ascend/descend steps and must be carried up/down steps
System Training Manual	Wheelchair - for ramp	Wheelchair - up and down steps
Airport	WCHR: Passenger who can walk up and down stairs and move about in an aircraft cabin, but requires a wheelchair or other means for movements between the aircraft and the terminal, in the terminal and between arrival and departure points on the city side of the terminal.	WCHS: Passenger who cannot walk up or down stairs, but who can move about in an aircraft cabin and requires a wheelchair to move between the aircraft, in the terminal and between arrival and departure points on the city side of the terminal
Another Airport	WCHR (Wheelchair Ramp) Assistance to the aircraft: A passenger with a walking disability - requires a wheelchair or similar aid before embarkation or after disembarkation; - requires assistance in the airport terminal to/from the gate or exit; - can manage steps and use an apron passenger bus unaided. - does not need assistance in the cabin	WCHS (Wheelchair Steps) Assistance to the aircraft door: A passenger with a severe walking disability - has very restricted mobility; - cannot manage steps unaided and is unable to use an apron passenger vehicle; - does not, however, need assistance in the cabin.
Airline	Wheelchair R for ramp	Wheelchair S for steps
Wikipedia	Wheelchair ramp – passenger can use stairs but needs a wheelchair or other means of transport for longer distances	Wheelchair stars – passenger cannot use stairs and needs a wheelchair or other means of transport for longer distances

	WCHC	DPNA
System Training Manual	WCHC -- airline-supplied wheelchair - traveller completely immobile	Nothing
System Training Manual	Wheelchair – C for cabin seat. Passenger completely immobile	Passenger intellectually disabled or with developmental disability
System Training Manual	Wheelchair - all the way to seat	Disabled passenger with intellectual or development disability needing assistance
Airport	WCHC: Passenger who is completely immobile who can move about only with the help of a wheelchair or any other means and who requires assistance at all times from arrival at the airport to seating in the aircraft, or if necessary, in a special seat fitted to his/her specific needs the process being inverted at arrival.	DPNA: Disabled person needing assistance. A code has yet to be agreed for PRMs using assistance dogs
Another Airport	WCHC (Wheelchair Carry) Assistance to the aircraft seat: A passenger who is unable to walk: - but can use a passenger seat with the backrest in the upright position - cannot move unaided (e.g. on account of paraplegia or advanced multiple sclerosis)	All other passengers requiring special assistance, including the mentally handicapped
Airline	Wheelchair C cabin seat	Disabled pax needs assistance
Wikipedia	Wheelchair completely – passenger needs a wheelchair	Passenger with developmental or intellectual



PRMs & Safety



EC 1107/2006

Notwithstanding the provisions of Article 3, an air carrier or its agent or a tour operator may refuse, on the grounds of disability or of reduced mobility, to accept a reservation from or to embark a disabled person or a person with reduced mobility:

- a) in order to meet applicable safety requirements established by international, Community or national law or in order to meet safety requirements established by the authority that issued the air operator's certificate to the air carrier concerned;
- b) if the size of the aircraft or its doors makes the embarkation or carriage of that disabled person or person with reduced mobility physically impossible.

Part 382 - 382.17

As a carrier, you must not limit the number of passengers with a disability who travel on a flight. 382.19 (c) You may refuse to provide transportation to any passenger on the basis of safety, as provided in 49U.S.C. 44902 or 1414 CFR 121.533, or to any passenger whose carriage would violate FAA or TSA requirements or applicable requirements of a foreign government.

- 1) You can determine that there is a disability-related safety basis for refusing to provide transportation to a passenger with a disability if you are able to demonstrate that the passenger poses a direct threat(see definition in § 382.3). In determining whether an individual poses a direct threat, you must make an individualized assessment, based on reasonable judgment that relies on current medical knowledge or on the best available objective evidence, to ascertain:
 - i. The nature, duration, and severity of the risk;
 - ii. The probability that the potential harm to the health and safety of others will actually occur; and
 - iii. Whether reasonable modifications of policies, practices, or procedures will mitigate the risk.
- 2) If you determine that the passenger does pose a direct threat, you must select the least restrictive response from the point of view of the passenger, consistent with protecting the health and safety of others. For example, you must not refuse transportation to the passenger if you can protect the health and safety of others by means short of a refusal.

AMC1 CAT.OP.MPA.155(b)

Carriage of Special Categories of Passengers (SCPs) PROCEDURES

When establishing the procedures for the carriage of SCPs special categories of passengers, the operator should take into account the following factors:

- (a) the aircraft type and cabin configuration;
- (b) the total number of passengers carried on board;
- (c) the number and categories of SCPs, which should not exceed the number of passengers capable of assisting them in case of an emergency evacuation; and
- (d) any other factor(s) or circumstances possibly impacting on the application of emergency procedures by the operating crew members.

Exercise #4

Regulations - safety perspective

What do you need to consider for the following groups? Different tables have different aircraft configurations.

- Group of injured veterans travelling for sports event (range of physical and psychological disabilities but all very fit)
- Group of passengers of larger stature travelling to a holiday specifically tailored for larger people (many WCHR and WCHS category)
- Your country's Boccia team flying to the 2020 Paralympics (all WCHC category)



The private Bahamas resort designed for plus-size people



Main Take-Aways

- Did you limit the number of passengers with disabilities in any way? If so why?
 - Part 382.17 – you must not limit the number of passengers with a disability on a flight
 - EASA AMC1 CAT.OP.MPA.155(b) (c) the number and categories of SCPs, should not exceed the number of passengers capable of assisting them in case of an emergency
- Did you consider safety assistants for those who would require assistance in the event of an evacuation? Did you seat your safety assistants next to your passengers with disabilities?
 - EC 1107/2006 Where a disabled person or person with reduced mobility is assisted by an accompanying person, the air carrier will make all reasonable efforts to give such person a seat next to the disabled person or person with reduced mobility.
 - EASA AMC1 CAT.OP.MPA.155(c) If the SCP travels with an accompanying passenger, the accompanying passenger should be seated next to the SCP
- Did you discuss if there was sufficient space for all the number of wheelchairs in the hold?
- Did you put anyone with a disability on the upper deck of a multi-deck aircraft?
 - EASA AMC1 CAT.OP.MPA.155(c) (b) If the SCP is unable to negotiate stairs within the cabin unaided, he/she should not be seated on the upper deck of a multi-deck aircraft if the exits are not certified for emergency evacuation both land and water,

Main Take-Aways cont...

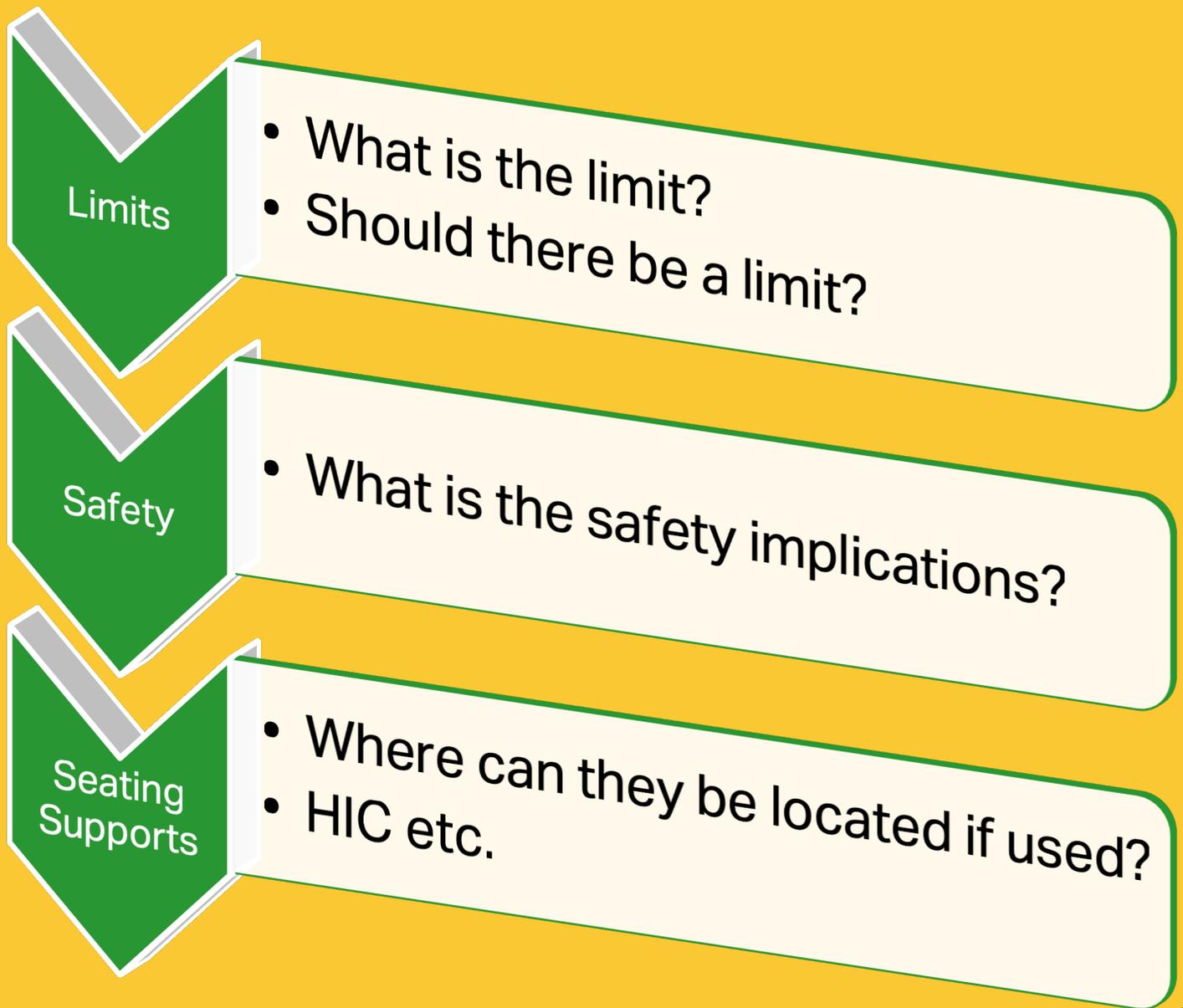
- How did you distribute your passengers around the cabin?
 - EASA GM1 CAT.OP.MPA.155(c) Carriage of Special categories of Passengers (SCPs) GROUP SEATING (a) Taking into account access to exits, groups of non-ambulatory SCPs should be seated throughout the cabin to ensure that each SCP is surrounded by the maximum number of passengers capable of assisting in case of an emergency. (b) If non-ambulatory SCPs cannot be evenly distributed throughout the cabin, the operator should establish procedures to mitigate the increased safety risk such as seating of passengers capable of assisting in case of an emergency in the vicinity, additional information or training of cabin crew
- Did you discuss adding additional information to your safety briefings – such as mobility aids may not be accessible in an emergency?
- Did you discuss not overloading the structure of the seat / row of seats?
 - GM1 CAT.OP.MPA.155(c) Carriage of Special categories of Passengers (SCPs) GROUP SEATING (c) A group of passengers whose physical size would possibly prevent them from moving quickly or reaching and passing through an emergency exit, should not occupy the same seat row segment to avoid overloading the structure of the seat.
- Did you discuss ensuring that the passengers of larger stature were sat near to main door type exits?
- Did you also think about passenger experience considerations such as not too far in cabin to seat or to lavatory?



Mobility Or Assistive Devices



What is a mobility device?



What is a mobility/assistive device?

EC 1107/2006 guidance

How can mobility equipment be defined?

There is no clear definition of 'mobility equipment' in EC 1107/2006. However it can be defined as any equipment the purpose of which is to provide mobility to disabled persons and persons with reduced mobility or assist them in their mobility.

EC 1007/2006 is to be interpreted in a way that the right to take mobility equipment is not limited to those items needed during the journey but also extended to those needed at the destination...taking into account that the Regulation limits the number of items to be carried for free to two.



Part 382.3

Assistive device means any piece of equipment that assists a passenger with a disability (PWD) to cope with the effects of his or her disability. Such devices are intended to assist a passenger with a disability to hear, see, communicate, manoeuvre, or perform other functions of daily life and may include medical devices and medications

382.121(a)

- must permit PWD to bring the following kinds of items in to the aircraft cabin, provided they can be stowed in designated priority stowage areas or in overhead compartments or under seats, consistent with...applicable...requirements.
- Manual wheelchairs, other mobility aids and other assistive devices for stowage or use...prescription medications, medical devices, vision enhancing devices, POCs, ventilators, respirators

382.121(b)

- in implementing your carry-on baggage policies, you must not count assistive devices (including the kinds of items in (a) toward a limit on carry-on baggage.



Summary

- Not necessarily a limit – depending on jurisdiction
- Carried FOC (within any limit if set)

Exercise #5



Mobility aids – acceptance and safety considerations

- Do you impose any limits on the number of assistive / mobility devices a passenger can take?
- What range of assistive / mobility devices have you been asked to accept?
- What must you consider for the following types of mobility devices - EMAs and seating supports?



Main Take-Aways

Did you consider:

- Safety and dangerous goods limitations for transporting EMAs – IATA 60th Edition of IATA Dangerous Goods Regulations (DGR) and IATA guidance <https://www.iata.org/whatwedo/cargo/dgr/Documents/mobility-aid-guidance-document-2019-en.pdf>
- If EMA has a lithium battery did you consider recent changes i.e.
 - Where the battery is removed by the user, if the mobility aid is specifically designed to allow it to be, following the manufacturer's instructions, the battery must not exceed 300 Wh, or for a device that is fitted with two batteries required for its operation, each battery must not exceed 160 Wh. If the battery is not removed, there is no limit to the Wh rating for the installed battery(ies) A passenger may carry a maximum of one spare battery not exceeding 300 Wh or two spares each not exceeding 160 Wh. Any battery removed from the mobility aid and any spare batteries must be carried in the passenger cabin. The removed or spare batteries must be protected from damage (e.g. by placing each battery in a protective pouch)
- If you have information about your safety restrictions available for passengers travelling with mobility aids?
 - Part 382.41 As a carrier, you must provide the following information, on request,
 - (c) Any aircraft-related, service-related or other limitations on the ability to accommodate passengers with a disability, including limitations on the availability of level-entry boarding to the aircraft at any airport involved with the flight. You must provide this information to any passenger who states that he or she uses a wheelchair for boarding, even if the passenger does not explicitly request the information.
 - (d) Any limitations on the availability of storage facilities, in the cabin or in the cargo bay, for mobility aids or other assistive devices commonly used by passengers with a disability,

Main Take-Aways cont....

Did you consider:

- Limiting the number of wheelchairs / mobility aids per passenger?
 - EC 1107/2006 Annex II: In addition to medical equipment, transport of up to two pieces of mobility equipment per disabled person or person with reduced mobility, including electric wheelchairs (subject to advance warning of 48 hours and to possible limitations of space on board the aircraft, and subject to the application of relevant legislation concerning dangerous goods.
 - Part 382.3 - *Assistive device* means any piece of equipment that assists a passenger with a disability to cope with the effects of his or her disability. Such devices are intended to assist a passenger with a disability to hear, see, communicate, maneuver, or perform other functions of daily life, and may include medical devices and medications.
 - Part 382.121 (b) In implementing your carry-on baggage policies, you must not count assistive devicestoward a limit on carry-on baggage.

Main Take-Aways cont....

Did you consider:

- What type of seating supports / restraints you accept (if any) and also do you restrict them to particular types of disability?
 - Some airlines – restrict use of supports to physical disabilities not intellectual / emotional disabilities
 - https://www.faa.gov/travelers/fly_children/#cares The CARES Child Safety Device is the only FAA-approved harness-type restraint for children weighing between 22 and 44 pounds. If you're using a CARES child safety device, make sure it has "FAA Approved in Accordance with 14 CFR 21.8(d), Approved for Aircraft Use Only" or "FAA Approved in Accordance with 14 CFR 21.305(d), Amd 21.50 6-9-1980, Approved for Aircraft Use Only" on it.
- Where you place a seating support / restraint if it has a strap that goes around the aircraft seat?
 - Head Impact Criteria (HIC) considerations AMC2 CAT.OP.MPA.155(c) Carriage of Special Categories of Passengers (SCPs) SEATING ALLOCATION OF SCP WITH A DISABILITY AND/OR RESTRAINT AID (a) A disability and/or restraint aid that requires to be secured around the back of the seat should not be used if there is a person seated behind unless the seating configuration is approved for the use of such devices. This is to avoid the changed dynamic seat reactions with the disability and/or restraint aid, which may lead to head injury of the passenger seated behind. (b) If the seat design or installation would prevent head contact of the person seated behind, then no further consideration is necessary

Useful Resources

(Not comprehensive and not recommending / promoting any product or company)

Equipment

- <https://www.promove.uk.com/> / <https://prevalis.nl/>, <http://www.haycomp.com.au/>, <https://www.ablemove.co.uk/> , <https://www.thedrive.com/tech/7782/mit-creates-a-self-driving-wheelchair>, <https://www.thedrive.com/tech/7782/mit-creates-a-self-driving-wheelchair>

Technology that can assist some customers

- <https://aira.io/>, <http://loudsteps.com/>, <https://signlive.co.uk/>, <https://interpreternow.co.uk/#intro>, <https://www.language.com/interpreting/video>

Facilities

- <http://www.changing-places.org/>, <https://posabilitymagazine.co.uk/roommate-the-revolutionary-audio-device-for-visual-impairment/>

Links

Links for studies of commercial market referred to

- https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/572187/spending-power-of-disabled-people-and-their-families-2014-15.pdf - information about the spending power of people with disabilities and their families in UK
- [https://www.surrey.ac.uk/features/lack-accessible-tourism-costing-economy-billions,file:///C:/Users/025149/Downloads/study%20A%20Economic%20Impact%20and%20travel%20patterns%20of%20accessible%20tourism_final%20\(1\).pdf](https://www.surrey.ac.uk/features/lack-accessible-tourism-costing-economy-billions,file:///C:/Users/025149/Downloads/study%20A%20Economic%20Impact%20and%20travel%20patterns%20of%20accessible%20tourism_final%20(1).pdf) – information to article and paper commissioned by European Commission on the impact of Europe not being truly accessible for travel
- <https://www.air.org/system/files/downloads/report/Hidden-Market-Spending-Power-of-People-with-Disabilities-April-2018.pdf> - paper by AIR (American Institute for Research) highlighting the spending power of working population with disabilities in the US

Thank you!



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