ACI EUROPE OFF THE GROUND:
Mapping sanitary measures at airports

#	Measures	Pros	Cons	Timeline	Recommendation
1	**Cleaning and disinfection**				
a	**Increase frequency of cleaning and disinfection at high contact areas in the terminal (i.e. self service equipment, baggage trolleys, PRM equipment, buggies, counters, elevator panels, handrails etc.)**	• Very effective to reduce transmission • Easy to implement • Well perceived by passengers in health crisis situations • Improves confidence	• Additional staff needed • Higher costs • Airport is not responsible for all touchpoints and therefore close cooperation with stakeholders is needed	Short, medium and long term	To be implemented at all airports immedietly Cooperation with concerned stakeholders needed
b	**Increase frequency of cleaning and disinfection of staff facilities (i.e. offices, desks, office appliances etc.)**	• Very effective to reduce the risk of transmission • Easy to implement • Well perceived by staff in heath crisis situations improves confidence of staff	• Additional staff needed • Higher cost • Airport is not responsible for all staff areas and therefore close cooperation with stakeholders is needed	Short, medium and long term	To be implemented at all airports immediately Cooperation with concerned stakeholders needed
c	**Strengthen HVAC (heating, ventilation and air conditioning systems) and adapt to airborne infection**	• Prevents transmission	• Additional costs	Short, medium and long term	To be implemented at all airports immediately Cooperation with concerned stakeholders needed
d	**Install hand sanitiser stations before and after every passenger touch-points**	• Reduces the risk of transmission, • Enhaces passenger confidence	•Additional costs	Short, medium and long term	To be implemented at all airports immediately
e	**Increase frequency of waste disposal**	• Reduces the risk of transmission	• Additional costs • Environmental impact	Short, medium and long term	To be implemented at all airports immediately
f	**Use of disposable single-use equipment**	• Reduces the risk of transmission	• Addional costs • Additional waste • Environmental impact	Short, medium and long term	To be implemented at all airports immediately
2	**Social distancing**				
a	**Physical distancing at all touchpoints (for travellers and visitors)**	• Proven effective measure to reduce the risk of transmission • Ensures minimum physical distances between passengers especially in the areas of queue management in line with similar measures applied in all public areas • Complies with WHO standards and recommendations from medical experts - suitable measure to restore passenger confidence during first recovery phase	• Reduction of terminal peak capacity of up to 75% • Space constraints • Enforcement: additional staff, cooperation with authorities • Different approaches adopted by Member states (1m, 1.5m, 2m)	Short term only (compatible only with small traffic numbers)	To be implemented immediately according to national requirements To be replaced by alternative measures during traffic recovery All related measures must be implemented in a consistent manner across all stakeholders and airport service providers

#	Measures	Pros	Cons	Timeline	Recommendation
b	**Provide signage, floor markings, announcements to encourage physical distancing**	• Easy to implement	• Significantly reduces capacity	Short term only (compatible only with small traffic numbers)	To be implemented immediately according to national requirements To be replaced by alternative measures during traffic recovery
c	**Rearrange, block or reduce terminal seating to ensure social distancing**	• Easy to implement	• Significantly reduces gate capacity	Short term (with small traffic numbers)	To be implemented immediately according to national requirements To be replaced by alternative measures during traffic recovery
d	**Install partitions, physical barriers**	• Useful to separate adjacent queues without using extra space	• Cost and time needed for implementation • Could block escape routes • SLAs in place	Short term only (compatible only with small traffic numbers)	To be implemented immediately according to national requirements
e	**Restriction and control of the maximum number of passengers in a given space (gates, shops, lounges, etc.).**	• Re-opening of retail and lounges • Non-aeronautical revenue	• Significantly reduces capacity • Entrance to terminal for departing or arriving passengers could be denied	Short term only (compatible only with small traffic numbers)	To be implemented immediately according to national requirements To be replaced by alternative measures during traffic recovery

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3	**Use of face masks for departing and/or arriving passengers**				
a	**Use of face masks for departing and arriving passengers and visitors**	• Increases passenger confidence • Effective for symptomatic passengers • Consistent with some country's current national policy • Useful to deal with higher traffic volumes in areas where social distancing will not be possible • Means of source control complementary to other measures already in place to reduce the transmission. May be a valid alternative to social distancing - Have been used extensively in the public in Asian countries and have been linked to a slightly lower risk of SARS among persons without known contact with SARS patients during the 2003 SARS epidemic - Non-medical face masks and other face covers made of textiles have the advantage that they can be produced easily; they are washable and reusable.	• Supply chain issues, the availability of masks has to be ensured • Different national approaches • Enforcement problems • Limited evidence of effectiveness as a means of source control • Passengers needs to remove the mask for the facial recognition at border control/ landside security checks and have to put it on again after the check • Counterproductive regarding landside security measures since detection of suspicious persons will be impeded • Airport managing body to ensure they are available for purchase at the terminal (landside/airside) • Need to define: medical or non-medical • Need to be carefully put on and taken off in order to prevent self-contamination. • Not well tolerated by certain population groups (e.g. children) or by persons with chronic respiratory disease. • Need cooperation with carriers (especially for non-EU flights)	Short term recommendation (in case social distancing measures are not possible) Medium term requirement (after lifting social distancing measures)	To be implemented at all airports in line with national policies Passengers must be responsible to bring a mask, but they should be able to purchase at the airport at a reasonable price A clear and effective model for distribution needs to be developed, to avoid issues encountered with STEMs - Distributers must be placed at terminal entrances, train/metro stations and parking; or inside the terminal after the entrance doors if security checks (facial recognition) are required to enter the terminal - Type of mask needs to be defined based on expert recommendations - Clear regulation on the responsibilities for enforcement is needed (maybe airport police?)
4	**IT Solutions**				
a	**Contact tracing apps**	• Easy tracking and alerts	• Being developed, • multiplicity of tools • voluntary basis • privacy issues • unproven effectiveness • Additional costs	Short and medium term if available	Cooperation with national authorities

#	Measures	Pros	Cons	Timeline	Recommendation
b	**Technology to assist in social distancing**	• Technology can assist airports in monitoring social distancing during the passenger journey. • More advanced technology that combines Computer Vision and Artificial Intelligence would enable monitoring areas where it is difficult to maintain the social distance (e.g. passenger screening area or bag claim/carousel area) – the solution would use feed from existing CCTV cameras and infrastructure layout to provide video analysis with a heat map showing where people are getting closer to the recommended social distance. • IoT sensors could also be used to monitor density information by providing anonymous real-time occupancy data. • Other solutions that are used for Queue and Flow monitoring could also be used to monitor social distancing. • Queue dispensing token uses a mobile app adapted from other service industries. For example, passenger screening: with the mobile app passenger scan a QR code to get in a queue, then receives a queue number on the mobile	• Additional costs	Short term if available	Cooperation with stakeholders and national authorities
c	**Contactless processes (digital/biometric identification) with technologies such as:** **-Check-In – Self-Service Kiosks and Bag Drop - Security Screening – Boarding card reading gates - Boarder control – Biometric electronic gates - Aircraft Boarding - Boarding Card reader and / or Biometric electronic Gates**	• Maximizing the use of these technologies will greatly limit the need for direct contact between staff and passengers	• Social Distancing rules may impact the use of these self-service technologies as many are installed within close proximity of each other • Third country nationals are usually not permitted to use automated border control • Additional costs	Short and medium term if available Spacing out existing technologies (where possible) to take account of Social Distancing - case by case Moving existing self-service solutions to full Biometric Solutions – case by case	Should be implemented at airports if funding is available Cooperation with carriers to enhance remote check-in
d	**Automatic counting of number of passengers in spaces/areas to regulate access and prevent areas from overcrowding**	• Provides accurate data and heatmaps on the volumes of passengers and staff within defined areas • May be used to trigger actions such as automated announcements, and additional cleaning based on footfall	• Not currently available in many airports • Additional costs	Short term if available 6 – 12 months for new installations	

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#	Measures	Pros	Cons	Timeline	Recommendation
5	**Staff-related measures**				
a	**Protective (e.g. plexiglass) screens**	• Substitutes social distancing • Provides protection and reassurance for staff and passengers	• Additional costs	Short term only	To be immediately implemented at all airports Where possible and where needed
b	**Provision of personal protective equipment PPE (masks, gloves, face shields, etc.) to staff**	• Positive public perception • Provides reassurance • Masks proven to be effective for symptomatic people • Effective protection of staff	• Supply chain issues, the availability of masks and gloves has to be ensured (i.e. PPE retained for healthcare workers as priority)	Short term only	To be immediately implemented at all airports according to national requirements Masks and gloves should be provided to all airport staff Clear guidelines for risk based approaches are needed to define the proper PPE for staff with different risk exposures Cooperation with stakeholders to ensure they provide their own staff with PPE
c	**Other stakeholders also to provide PPE to their employees**	• Positive public perception • Provides reassurance • Masks proven to be effective for symptomatic people • Effective protection of staff	• Coordination required • Multiple stakeholders	Short term only	To be immediately implemented at all airports in line with national policies - Clear guidelines are needed which all stakeholders can apply

#	Measures	Pros	Cons	Timeline	Recommendation
6	**Entry/ Exit screening**				
a	**Full-body infrared scanners, handheld infrared thermometers and ear gun thermometers**	• Provides sense of confidence • May detect symptomatic travellers and act as a deterrent for infected passengers • Risk of importation/ exportation of the disease may be reduced if associated with early detection of symptomatic passengers and their referral for medical follow up.	• ECDC suggests that these measures are not effective in delaying or mitigating a pandemic • Low sensitivity of the systems used to detect mildly symptomatic infections and their inability to detect cases during the incubation period (false negatives) • Identifying passengers with other types of infection (false positives) • Need supporting medical teams • Need specific areas to install thermal cameras/ Space requirements • Different approaches by Member States • Handling of positive/ suspect cases • Equipment and staff costs •Temperature screening should always be accompanied by dissemination of risk communication messages at points of entry • Additional costs	Short and medium term if required by national authorities	European common approach required
b	**Health declaration/ interview. Certain countries in Asia Pacific (e.g. Singapore and Hong Kong) have setup Electronic Health Declarations that are available to be completed online. The content focuses on contact and symptoms.**	• Provides sense of confidence, Questionnaire can be done online before going to the airport	• Inaccurate delarations • Language barriers • Need a designated area (space constraints)	Short and medium term if requred by national authorities	European common approach required

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#	Measures	Pros	Cons	Timeline	Recommendation
7	**Rapid testing**				
a	**Rapid antigen tests:** The non-governmental organisation FIND https://www.finddx.org/ lists ten CE-marked rapid SARS-CoV-2 antigen detection tests, meaning they conform with the relevant EU legislation, Directive 98/79/EC on IVDs. However, the ECDC informed they are not necessarily available to purchase on the EU market as the manufacturer may mark them for third-country markets or there may not be distributors selling these devices in all Member States. Reports from competent authorities of 18 European countries indicate three such CE-marked devices as of 26 March 2020.	• Passenger confidence • Alternative to social distancing • Certainty that all passengers will be low-risk	• Currently not given reliable tests • Large volume of passengers have to be separated before testing is taking place • Concerns about the availability of massive tests and GDPR issues • Currently not available in the EU market	Medium term if required by natioonal authorities	Common agreement is needed in order to gain real value Do not put in place rapid tests until there are reliable products in the market European common approach required
b	**Rapid antibody tests:** In addition, there are many (over 60) CE-marked rapid SARS-CoV-2 antibody tests and more continue to be placed on the market. Research groups have also developed and are validating in-house antibody detection tests which may serve as potential platforms for commercial tests in the near future. It should be underlined that SARS-CoV-2 antibody detection tests have limited usefulness for early COVID-19 diagnosis as it can take 10 days or more after onset of symptoms for patients to become positive for detectable antibodies and because the antibodies persist long after the infection has cleared.	• Passenger confidence • Alternative to social distancing • Certainty that all passengers will be low risk	• Currently not given reliable tests • Large volume of passengers have to be separated before testing is taking place • Concerns about the availability of massive tests and GDPR issues • Currently not available in the EU market	Medium term if required by national authorities	Common agreement is needed in order to gain real value Do not put in place rapid tests until there are reliable products in the market European common approach required
8	**Immunity**				
a	**Immunity Passports**	• Screening is done in advance of travel. • Provides additional passenger confidence • Alternative to social distancing • Certainty that all passengers will be low risk	• Subject to change based on medical advice, e.g. can someone be re-infected and render their passport invalid? • Updating and validating • No technical guidance available	Medium term if required by national authorities and adivsed by ECDC and WHO	Cooperation with national authoritries European common approach required

#	Measures	Pros	Cons	Timeline	Recommendation
9	**Communications**				
a	**Announce the restart of airport operations by providing information on the sanitary and health measures taken by airports. This includes:** **Disseminate information on both general measures (e.g. ''Our airport terminals are disinfected every hour'') and more concrete measures (''e.g. ''You can find gel stations at our airport before the security checkpoints'')** **Reinforce communication with more vulnerable consumers (e.g. elder consumers, passengers more concerned about health-related issues)**	• Build trust and confidence to mobilise consumers to travel • Emphasise the strategic and positive role of the airport in promoting the well-being of the travelling public • Promote an image of the airport as a clean, healthy and safe place to travel through		Short term	Identify the most appropriate communications channels and ensure accurate communication and information flow through airport information desks, airport digital media/website tools and on-site communications Work hand in hand with the airport facilitation teams to define and provide the most accurate information at the right moment Use a segmentation approach to communication to personalise content to target audiences (e.g. elder public, passengers more concerned about health-related issues)
b	**Push out reminders and reassuring messages for the travelling public (e.g. ''Our airports help you comply with the necessary sanitary measures''; ''Our airport is working to offer you a healthy and safe passenger experience'', ''Remember to wear your face mask when travelling through the airport'')** **Reinforce communication with more vulnerable consumers (e.g. elder consumers and passengers more concerned about health-related issues)**	• Emphasise the strategic and positive role of the airport in promoting the well-being of the travelling public • Strengthen engagement with the travelling public to mobilise them to travel		Short, medium and long term	Identify the most appropriate communications channels and accurate communication and information flow through airport information desks, airport digital media/website tools and on-site communications Use a segmentation approach to communication to personalise content to target audiences (e.g. elder public, passengers more concerned about health-related issues)

#	Measures	Pros	Cons	Timeline	Recommendation
c	**Anticipate and monitor potential negative reactions from local communities**	• Manage local communities' expectations to reduce future conflict • Emphasise the positive role of the airport in the community as a vital local economic engine and a key transport infrastructure for regional connectivity. Highlight the airport's sustainable actions aimed at protecting local communities from climate change • Improve local communities' perceptions and influence behaviour (motivate them to play a role in the aviation/economic recovery) • Build trust and help local communities feel they are heard in order to identify more effective communications actions		Underway, short, medium and long term	Map and prioritise local communities and their main concerns about the restart of airport operations to help define potential actions Collaborate with aviation stakeholders to ensure all key local communities have been identified
d	**Engage with stakeholders from within and outside the aviation industry to reach out to larger groups of consumers**	• Amplify airports' health and sanitary messages through a wide variety of stakeholders and business partners' communications channels • Strengthen cross-industry collaboration to foster European aviation recovery		Short, medium and long term	Discuss and clarify the goal and key messaging to be pushed out in collaboration with EU and national stakeholders and regularly assess the communications actions put in place