

INTERNATIONAL FEDERATION OF AIR TRAFFIC CONTROLLERS' ASSOCIATIONS

COVID-19 (CORONAVIRUS)

Guidance Material on dealing with COVID-19 in Air Navigation Facilities

Version 2.0 - May 2020

GUIDANCE MATERIAL

IFATCA is the recognised international organisation representing air traffic controller associations. It is a non-political, not-for-profit, professional body that has been representing air traffic controllers for more than 50 years, and has more than 50,000 members in over 120 countries.

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COVID-19 - THE PANDEMIC

INTRODUCTION

The world is once again facing a global crisis that is not sparing the aviation industry. This crisis will impact each and every one of us in a number of ways. It is inevitable that every Member Association will be asked to contribute to the effort of their ANSP to manage the crisis.

This Guidance Material has been developed to help IFATCA Member Associations respond to the COVID-19 crisis surrounding the responses of their employers and the aviation industry in general. This Guidance Material aims to support the IFATCA Member Associations to assist where possible their employers (Governments, National Agencies, Air Navigation Services Providers).

The current crisis has hit the global civil aviation industry and recovery will take some time. On March 11th 2020, the World Health Organisation has declared a global pandemic. The order of magnitude is unprecedented and will affect all activities of our society. Mathematical models on exponential growth can assist to better understand how the COVID-19 will evolve:

https://www.youtube.com/embed/Kas0tlxDvrg

BACKGROUND INFORMATION¹²

Coronaviruses are a large family of viruses which may cause illness in animals or humans. In humans, several coronaviruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). The most recently discovered coronavirus causes coronavirus disease COVID-19.

The most common symptoms of COVID-19 are fever, tiredness, and dry cough. Some patients may have aches and pains, nasal congestion, runny nose, sore throat, or diarrhea. These symptoms are usually mild and begin gradually. Some people become infected but don't develop any symptoms and don't feel unwell.

Illness due to COVID-19 infection is generally mild, with most people (about 80%) recover from the disease without needing special treatment. Around 1 out of every 6 people who gets COVID-19 becomes seriously ill and develops difficulty breathing. Older people, and those with underlying medical problems like high blood pressure, heart problems or diabetes, are more likely to develop serious illness. People with fever, cough and difficulty breathing should seek medical attention.

It is important that measures taken to combat the spread of the virus are based on solid health care principles and are not disproportionate to the risk.

¹ https://www.who.int/news-room/q-a-detail/q-a-coronaviruses (accessed 9 May 2020)

² https://www.cdc.gov/coronavirus/2019-ncov/community/guidance-business-response.html



HOW COVID-19 SPREADS³ ⁴

When someone who has COVID-19 coughs or exhales they release droplets of infected fluid. Most of these droplets fall on nearby surfaces and objects - such as desks, tables or telephones. People could catch COVID-19 by touching contaminated surfaces or objects – and then touching their eyes, nose or mouth. If they are standing within one meter of a person with COVID-19 they can catch it by breathing in droplets coughed out or exhaled by them. In other words, COVID-19 spreads in a similar way to flu.

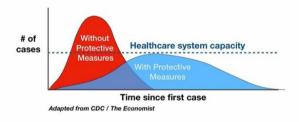
It is not certain how long the virus that causes COVID-19 survives on surfaces, but it seems to behave like other coronaviruses. Studies suggest that coronaviruses (including preliminary information on the COVID-19 virus) may persist on surfaces for a few hours or up to several days. This may vary under different conditions (e.g. type of surface, temperature or humidity of the environment). ⁵

WHAT IS HAPPENING

The COVID-19 originated in the beginning of December 2019 in the province of Hubei with the epicentre being located in the city of Wuhan. It has since spread nearly all over the planet. Where curtailing the spread of the virus was not possible, the affected governments are trying to delay or reduce the spread of the disease to the level where the solicitation of the hospitals and the emergency

Flattening the Coronavirus Curve

This chart explains why slowing the spread of the infection is nearly as important as stopping it.



services can be managed. This can only be achieved by imposing drastic measures, such as reducing travel to the essential and vital minimum. According to the available data the population most at risk are elderly persons and persons with reduced immunity. The aim of most measures is shown in the figure below.

Some regions of the world have been put under confinement and governments have imposed drastic measures with regard to flights being allowed into their territory. This has resulted in airlines downgrading their offers and grounding of their fleets.

THE SECOND WAVE

The 1918 flu pandemic demonstrated how the second 'wave' of a pandemic can be much more deadly than the first. What became commonly known as the Spanish flu (although there's no evidence its origins were in Spain) first began infecting people in January 1918. The first wave resembled typical flu epidemics in that those most at risk were the elderly, while younger, healthier people recovered easily.

However, by August the virus mutated to a much more deadly form and this second wave quickly spread around the world. The virus now not only affected the elderly and frail but also the young and healthy. October 1918 was the month with the highest fatality rate of the whole pandemic.

³ https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf?sfvrsn=359a81e7_6

⁴ https://www.cdc.gov/coronavirus/2019-ncov/about/transmission.html

⁵ https://www.who.int/news-room/q-a-detail/q-a-coronaviruses 'How long does the virus survive on surfaces?' (accessed 8 March 2020)



For this reason, a number of epidemiologists are warning people to remain vigilant for signs of a second wave of the coronavirus. Especially so as it may coincide with the onset of the yearly 'flu season' in some parts of the world. Until a vaccine is developed, the most effective measures to control the spread of the virus are those that have been implemented by most States: social distancing and good hygiene practice.

As air traffic controllers, we are used to holding ourselves to a higher standard. So even as States begin to wind back some of the measures implemented to control the spread of the virus, we should continue to be vigilant. Remain cautious about congregating in large numbers, whether that be in a crowded bar or restaurant, or at sporting events. Continue to practice good hygiene habits. For the foreseeable future, this will be the new normal.

COVID-19 AND THE IMPACT ON AIR TRAFFIC SERVICES

Air Traffic Control is a critical infrastructure. In some countries, it is designated an essential service and thus particular measures have and will be put in place which will affect air traffic controllers. Although it is too early to be able to assess the full impact of the global crisis on Air Traffic Services, two distinct threads can be observed. They can be grouped into three distinct categories:

- → Control Healthy physically
- → Control Healthy mentally
- ✤ Continue to control air traffic

CONTROL HEALTHY - PHYSICALLY

Like any other citizen, the aim is that an air traffic controller does not contract the virus. Different measures have been put in place and are guided in most of the nations by the rules and regulations imposed by the public health authorities. ATCOs shall pay particular attention to these recommendations and follow them strictly:

- → WASH YOUR HANDS
- → RESPECT SOCIAL DISTANCE
- → COUGH AND SNEEZE INTO YOUR ELBOWS
- → IF YOU HAVE FLUE-LIKE SYMPTOMS OR ANY OTHER HEALTH ISSUE STAY AT HOME

Should your government or employer impose certain restrictions (e.g. quarantine, or shadow teams), follow them strictly. The health of your work colleague, your family and your neighbours depend on it.



As air traffic control is part of the critical infrastructure, it has to be the aim of any professional in ATC to remain fit and reduce exposure to the widest extend possible. There is however real risk that ATCOs and ATM professionals will contract the virus, thus leading to isolation and possible quarantine measures. This puts unprecedented challenges on Air Navigation Service Providers and staff. Critical infrastructure is the body of systems, networks and assets that are so essential that their continued operation is required to ensure the security of a given nation, its economy, and the public's health and/or safety.⁶

CONTROL HEALTHY - MENTALLY

In this time of uncertainty, it will be more likely that people will be experiencing feelings of anxiety due to the ill-health of loved ones, financial disruption and changes to future plans. While ANSPs usually focus on the physical wellbeing of controllers, their mental wellbeing often receives less attention.

People have different coping mechanisms. Some people may seem unaffected and continue to go about their work as if nothing has changed. Others treat the new reality as a challenge and adapt their behaviour accordingly. Others may be more obviously affected by events. All are normal reactions and don't necessarily indicate how someone is coping. A person displaying any of these reactions may still be experiencing high levels of stress and anxiety, even depression.

Acknowledging that it is normal to be experiencing these feelings can be important for mental and emotional wellbeing. Being more mindful of your own thoughts and feelings can be an important first step. Often your physical wellbeing can be a good indicator of your mental and emotional state.

Some people advocate "mindfulness" as a tool for mental and emotional wellbeing. Meditation is a form of mindfulness. For those interested, the following is an introduction to meditation:

https://www.youtube.com/watch?v=YiC8ktpev30

IFATCA provides guidance material on these topics. Refer to the **IFATCA Coping Guidance Material** on the IFATCA COVID-19 Website (<u>https://www.ifatca.org/covid-19/)</u>.

CONTINUE TO CONTROL AIR TRAFFIC

Travel bans, cancellation of flights and grounding of fleets will result in a dramatic fall in air traffic in all regions of the world. As has happened before, this drop may lead to the perception that there is overstaffing of ATCOs and other ATM Professionals. Experience with past crises (2001, 2003 and 2008) has taught IFATCA that adapting to a situation with low traffic brings many challenges. This guidance material should help Member Associations, as well as individual ATCOs, to be prepared to assist their employers, thus striking a balance between the necessary crisis measures and the worker's rights and duties.

⁶ Definition from whatis.techtarget.com, accessed on 12.3.2020



CHALLENGING TIMES AHEAD - TIME TO ACT

What is needed now is to focus on making sure that we do not need to close down towers or centres and to get through the situation as smoothly as possible, without upsetting the crisis measures that we have taken in order to ensure that the ANS will retain a strong foundation. As part of the Critical Infrastructure ANS will have to provide continuous operations to any possible users of the system (in particular emergency, search and rescue, government and special flights).

IFATCA advises you, as a Member Association, to help your ANSP as much as possible in the current situation. This includes being flexible with shifts, helping each other with measures that will reduce the spreading of the virus, listening to the advice from health authorities, etc. Apply Critical Incident Stress Management where available. It is essential that IFATCA and its members can provide the necessary infrastructure and service where and when needed during times of distress and need.

Air Navigation Services that need long-term planning and is part of the essential infrastructure. It is not a business that will recover in six months, especially if training is stopped or operational staff dismissed. It is a governmental task that needs to be part of national responsibilities and funding in line with firefighting and roads.

What we are experiencing now will take some time to pass, but after the crisis we will have to deliver 'normal service' again.

This means help your decision makers to continue training programs and not to take measures that would curtail core ANSP activities. If required, stop involvement in non-essential projects. Remain focussed on your core work.

So, what can professional associations do in this current situation? The following possible actions are suggested as ways that our Member Associations can contribute to, or even lead, the discussions in their countries. Of course, any measures taken need to be adapted to your local requirements and conditions.

- ✤ Initiate the discussion and do not wait for actions or decisions by your ANSP. Ask your management what measures they are considering taking at a local and national level.
- → Request that your association be included as a partner in these discussions and decisions. Point out that no matter what decisions are taken, it is your members who have to implement them and make them work.
- ✤ Work with your ANSP to develop containment measures that will not compromise the safety of operations, now or in the future.
- ✤ If it is acceptable to your members, negotiate changes to working conditions that can help the situation, while respecting local agreements and conditions.
- → As always, safety is paramount. Analyse any proposed changes and the impact they might have on operations from both a technical and professional aspect, both in the short and long term.
- ➔ Any measures which are proposed which change the working procedures or technical environment should be supported by a safety case or assessment.
- → Be aware that employers that force people to take (unpaid) leave may inadvertently be encouraging employees to come to work when they are not feeling well or even sick. Such a policy may therefore be more costly in the medium term, since more people could get infected.
- ✤ Encourage ANSPs to plan for the recovery. Use the traffic downturn as an opportunity to utilise ATCO staff to accomplish the desperately needed "long lead time" ab initio training to help reduce the shortage of ATCOs and plan for the future.



In many cases, the actions that can be taken now might have significant effect on the ATC service. IFATCA warns against rushed decisions that can lead to long-term problems. Overreaction and drastic cost reductions will only INCREASE future costs and add to the already critical shortage of ATCOs that currently exists.

PREVENTING MISINFORMATION - DOING OUR PART

Misinformation (incorrect or malicious information), colloquially referred to as fake news, is often circulated in various media, particularly social media. With the heightened anxiety surrounding the coronavirus (COVID-19) pandemic, this may cause increased confusion and speculation. At worst, it may adversely affect peoples' health if they follow dubious advice. When considering information regarding the pandemic, and particularly if you are considering forwarding such information, ensure you are not contributing to the spread of misinformation by considering the following:

Consider the source

→ To identify misinformation, firstly check the credibility of the source.

Supporting sources

→ Click on supporting sources to see where the information is emanating from and whether the sources provide evidence-based information. Consult multiple sources before considering information as factual.

Check the author

→ Is the author known? Do they have a credible site they write for and are they real?

Check the date

→ Old news stories may not be relevant to current events.

Read beyond headlines

→ Headlines can be misleading to capture readers' attention therefore read beyond the headline.

Check your biases

 → Consider if your own beliefs could influence your judgement of the information you are taking in.



SHARE YOUR EXPERIENCE!

The situation is a unique one, IFATCA therefore up a discussion forum on Google Groups to enable you to share your experiences in dealing with this crisis with your colleagues at a global level.

https://groups.google.com/d/forum/ats-covid

Since then, IFATCA has started conducting online surveys amongst its member associations. The results of these can be found on our website:

https://ifatca.org/covid-19-survey

IFATCA is also conducting interviews with our Member Associations who are willing to share their experiences during COVID-19.



COVID-19 Interviews - part 14

Our series of COVID-19 interviews heads east again: Marc Baumgartner, IFATCA SESAR Coordinator and past President talks to Cheryl Chen and Hao Wei of ROCATCA,

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COVID-19 Interviews - part 13

The IFATCA COVID-19 interviews return to Africa. Marc Baumgartner, IFATCA SESAR Coordinator and former President, talks to Khadidja Armiyaou who works for ASECNA, and Ait COVID-19 Interviews – part 12

Part 12 of our COVID interviews: this time, Marc Baumgartner – former IFATCA President and currently the Federation's SESAR Coordinator – talks to the Presidents

Read More »

The interviews are available in the members restricted area on the IFATCA website – check with your IFATCA Liaison Officer, with your regional EVP or any other IFATCA Board Member:

https://www.ifatca.org/covid-19-interviews/

Do not hesitate to contact your respective Regional Executive Vice-president for any further assistance you might need.



EXAMPLE 1

INITIAL MEASURES WITHIN AN ANSP AND HOW TO RESPOND TO THE CURRENT SITUATION

To reduce the risk to operations, all line managers are requested to **critically scrutinise missions with regard to urgency and/or need**, especially when the mission would include the use of public transport and/or the destination involves a large group of people. Using video- and telephone conferencing is encouraged as an alternative.

- 1. All non-essential visits to operational environments are suspended, including private, professional, individual or group visits. Exceptions may only be granted by the head of unit. Visitors should comply with the same entry conditions as staff members and follow the same hygiene etiquette as staff.
- 2. Staff members and their family members are encouraged to avoid going to known risk areas. Staff members who, in the 14 days prior, have been in the currently known risk areas and/or have been in contact with others travelling back/from those areas, shall contact their line managers by phone and stay home for 14 days unless otherwise instructed. For nonoperational tasks, teleworking might be a possibility.
- 3. All staff are requested to apply increased hygiene measures to reduce exposure and transmission:
 - Controllers, system controllers and any other staff who share work equipment (keyboards, mouse, touch screens, etc.) must clean their workplace after handover with the available antiseptic cleaning material placed at each workstation and inform if a refill is needed;
 - → Clean equipment regularly with the antiseptic cleaning material made available around the building. Staff should clean communal equipment (e.g. in break rooms or sport facilities) before and after using them with the available cleaning material;
 - ✤ Door handles, keypads, sports and leisure equipment need to be cleaned more frequently by cleaning staff.
 - → Avoid any direct contact (e.g. shaking hands);
 - ✤ Avoid touching your eyes, nose or mouth with your hands;
 - ✤ Wash your hands frequently for at least 20 seconds with soap;
 - → When coughing or sneezing, cover your mouth or nose with disposable paper tissues and throw them away immediately, wash your hands immediately or disinfect using alcohol tissues or cleanser;
 - ✤ Avoid close contact with anyone who has cold or flu-like symptoms (fever and sneezing/coughing);
 - → Take care of your own health by making sure you sleep enough and eat healthily so that your immune system is strong enough to fight the virus if you get in contact with it.
- 4. The procedures and advice above are recommended to also be applied responsibly by all staff outside of the workplace e.g. avoid large crowds wherever possible. Staff is advised to follow the advice of the national health authorities regarding travel arrangements.
- Anyone who shows symptoms of the coronavirus disease and feels ill shall go home immediately and they should contact their line-manager/supervisor by phone or email. Symptoms include fever, excessive sneezing, muscle pain, coughing, difficulty breathing etc.



EXAMPLE 2

MEASURES TO TAKE

ANSPs should ensure workplaces are clean and hygienic, implement general preventative measures, and provide personnel with education on self-measures to limit the spread of the virus.

Personal initiatives may include: 7

- a) Avoid physical contact, avoid hugging or kissing others, and avoid shaking hands just wave.
- b) Avoid close contact with people and public assemblies.
- c) Regularly wash hands with soap and water.
- d) When sneezing, cover the nose and mouth with the inside of the elbow or using a tissue instead of the hand.
- e) Self-check body temperature twice per day. Seek medical advice if the temperature is above 37.3°C or 99°F.

Workplace initiatives may include: 8

- a) At work, employees take temperature before shift, middle of the shift and after the shift.
- b) Increase cleaning of door handles, handrails, and lift buttons.
- c) Surfaces (e.g. desks and tables) and objects (e.g. telephones, keyboards) need to be wiped with disinfectant regularly.
- d) For operational positions, provide sanitising wipes. Personnel take a wipe and perform a general wiping of the keyboards, mouse and touchscreen (protected with a layer to prevent any chemical damage to equipment) when handing over/taking over positions.
- e) Create one-way entrance and exit to minimize chances of cross infection.
- f) If multiple groups of personnel work in the same building, segregate the lounge, resting area, cafeteria etc.
- g) Promote regular and thorough hand-washing by employees, contractors and customers
- h) Put sanitizing hand rub dispensers in prominent places around the workplace. Make sure these dispensers are regularly refilled
- i) Display posters promoting hand-washing ask your local public health authority for these or look on <u>www.WHO.int</u>
- j) Ensure that face masks and/or paper tissues are available at your workplaces, for those who develop a runny nose or cough at work, along with closed bins for hygienically disposing of them. Remind personnel that masks are necessary for health care professionals and sick persons, healthy persons should not use masks as it limits the availability to those that need them.⁹
- k) Brief employees, contractors and customers that if COVID-19 starts spreading in your community anyone with even a mild cough or low-grade fever (37.3 C or more) needs to stay at home. They should also stay home (or work from home) if they have to take simple medications, such as paracetamol/acetaminophen, ibuprofen or aspirin, which may mask symptoms of infection. Make clear to employees that they will be able to count this time off as sick leave.
- I) Advise employees and contractors to consult national travel advice before going on trips.

⁷ https://doh.gov.ae/en/health-information/Coronavirus---COVID--19

⁸ https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf?sfvrsn=359a81e7_6

⁹ https://www.dha.gov.ae/Covid19/Pages/home.aspx, https://www.who.int/news-room/detail/03-03-2020-shortage-of-personal-protective-equipment-endangering-health-workers-worldwide



ACTION PLANS

ANSPs should have a plan of what to do if someone becomes ill with suspected COVID-19 at one of the workplace. Consider the following:

- a) The plan should cover placing the ill person in a room or area where they are isolated from others in the workplace, limiting the number of people who have contact with the sick person and contacting the local health authorities.
- b) In case any staff develop symptoms or there is a confirmed case, the workplace should go through deep cleansing by professionals. This process should be pre-planned for efficient implementation if needed.
- c) Consider how to identify persons who may be at risk, and support them, without inviting stigma and discrimination into your workplace. This could include persons who have recently travelled to an area reporting cases, or other personnel who have conditions that put them at higher risk of serious illness (e.g. diabetes, heart and lung disease, older age).
- d) Consult with the local public health authority to assist in developing the plan and seek their input.

TRAVELLING

Unless suggested by the health authorities, mandatory quarantine of operational personnel that have travelled but do not display any symptoms may be excessively disruptive to the operation.

Employees who have returned from an area where COVID-19 is spreading should monitor themselves for symptoms for 14 days and take their temperature twice a day.

If they develop even a mild cough or low-grade fever (i.e. a temperature of 37.3°C / 99°F or more) they should stay at home and self-isolate. This means avoiding close contact (one meter or nearer) with other people, including family members. They should also telephone their healthcare provider or the local public health department, giving them details of their recent travel and symptoms.

Caution against additional health verifications or certificates that may place unnecessary burden on the health care system.

CONTINUITY PLANNING

ANSP's should have a plan for an outbreak in the local communities to help prepare the organization for the possibility of an outbreak of COVID-19 in its workplace. It may also be valid for other health emergencies in the future.

Consider:

- a) Review the following provisions and guidance:
 - i. ICAO Annex 11 Attachment C MATERIAL RELATING TO CONTINGENCY PLANNING (Annex 11 Chapter 2, 2.32 refers).
 - ii. ICAO State Letter on the implementation of contingency arrangements to reduce the risks of the spread of COVID-19 (Ref <u>AN 13/35-20/47</u>), which lists State obligations to provide ATS and the importance of avoiding undue or inadvertent restrictions for certain types of operations.
 - iii. Reference Guide to EUROCONTROL Guidelines for Contingency Planning of Air Navigation Services (including Service Continuity) Edition 2.



- b) promote regular teleworking across the organization for non-operational personnel. Teleworking will help the services keep operating while employees stay safe, and the reduction of on-site personnel will minimise the risk of introduction of the virus into the facility. Consider only requiring the physical presence of essential personnel.
- c) The plan should address how to keep the services running even if a significant number of employees, contractors and suppliers cannot come to your place of business – either due to local restrictions on travel or because they are ill. Remain within fatigue management and rostering principles.
- d) Communicate to employees and contractors about the plan and make sure they are aware of what they need to do – or not do – under the plan. Emphasize key points such as the importance of staying away from work even if they have only mild symptoms or have had to take simple medications (e.g. paracetamol, ibuprofen) which may mask the symptoms.
- e) Addresses the mental health and social consequences of a case of COVID-19 in the workplace or in the community and offer information and support.
- f) For small and medium-sized organisations without in-house staff health and welfare support, develop partnerships and plans with your local health and social service providers in advance of any emergency.
- g) The local or national public health authority may be able to offer support and guidance in developing a plan.
- h) ANSPs should ensure rostering practices (such as shift teams) are adapted to minimise potential contact between personnel should someone become ill. Ensure to consult with Employee Associations.



ONGOING OPERATIONS IN A REDUCED TRAFFIC ENVIRONMENT

INTRODUCTION

The Coronavirus (COVID-19) pandemic continues to create havoc on a global scale with many States implementing a so-called 'lock down' strategy to help protect the health of their citizens. Although an effective strategy, it's having a devastating effect on the world economy including the aviation industry. Travel restrictions mean people are no longer travelling in the numbers they were before the pandemic. Airlines, many already operating on thin margins, have seen their revenues drastically reduced.

Air Navigation Service Providers (ANSPs) have also been severely affected. Not only has revenue all but dried up, but there are unique challenges for ANSP operations in a reduced traffic environment. IFATCA offers the following guidance material to Member Associations and ANSPs to consider while operating in this challenging environment.

ROSTERING

ANSPs should consider implementing rostering techniques with the dual purpose of minimising the risk of multiple air traffic controllers falling ill to COVID-19 and to provide a contingency if this does occur. To achieve this dual purpose, some ANSPs have implemented a 'team' structure, or where teams already existed, modified them accordingly. A simple example for a group with 24-hour operations would be three/four teams each doing six/eight-hour shifts with the fourth/fifth team on standby. Each team would cycle through the standby shifts. Should an infection occur, the diagnosed controller and their team should as far as possible all be replaced immediately.

Other ANSPs, whilst not implementing a team structure, ensure that any spare capacity due to low traffic levels is used so that controllers are on standby and ready to replace any absences that may result from a COVID-19 infection. Should an infection occur, the controller, and all controllers working within immediate proximity, should be replaced, as far as possible, with controllers on standby.

To avoid the impact (or potential) of multiple COVID-19 infections, teams or individual controllers should work as separately as possible with only the bare minimum of interaction. Where multiple groups work in the same environment (a large ATC centre for example), controllers should align so there is as little as possible interaction across groups of controllers. For large centres, and where possible, consideration should be given to having separate stand-down areas, washroom facilities and/or access corridors to reduce the risk of cross-contamination should a controller be diagnosed with COVID-19.

Finally, where available, consideration should be given to using tools to predict traffic levels in advance. This can not only be used tactically to ensure adequate staffing on a day-to-day basis but strategically over a longer period to determine when staffing will need to return to normal, prepandemic levels. Frequent consultation between roster managers and operational staff will ensure demand matches controller capacity.



LICENSING

ANSPs and their associated Licensing Authorities are looking to mitigate the impact of the virus on the ATC service they provide. With reduced rostering, social distancing, reduced traffic levels and the potential for increased sickness, it is becoming increasingly difficult for controllers to meet the regulatory requirements to maintain a valid licence. A balance must be found that allows extensions to the validity of licences and endorsements and maintains the competence of the holder.

Some regulators have provided guidance for the extension of validity periods for air traffic controller endorsements and certificates. For example, EASA and the United Kingdom have provided advice on the extension to the following:

- ↔ Unit Endorsements;
- → Class 3 medical certificates;
- → Language proficiency endorsements;
- → OJTI endorsements;
- → Assessor endorsements;
- ✤ Synthetic Training Device Instructor endorsements.

In particular, the following should be considered for these endorsements and certificates:

Unit Endorsements and competency assessments

In a low traffic environment, assessing competency for unit endorsement revalidations or skill assessments is difficult. Other methods to assess competency can include:

- → use of a simulator; and
- → written or oral examinations.

The use of a simulator for endorsements and assessments may have regulatory implications and, if necessary, the ANSP should coordinate with the regulator.

Medical

With the increased demand for medical professionals, there is a risk that they will not be available to perform routine medical examinations resulting in the potential for an air traffic controller having to work with an expired medical. To address this, some regulators have extended the period of validity of medicals. However, controllers may still be required by the ANSP or regulator to carry their expired medical certificate and a copy of the exemption notice as part of their licence and any previous limitation, condition or requirement shall continue to be adhered to.

Language

Language assessments are normally undertaken off unit at specialist test centres. Where this is not possible, training and assessment could be made available by other means such as online courses.



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ENSURING PROFICIENCY IN REDUCED TRAFFIC ENVIRONMENT

During the COVID-19 outbreak, almost all airlines have grounded their fleets completely. Many cargo flights are operating to bring essential supplies to the respective states, where help is needed. We, as controllers, contribute to that period to offer a high level of service together with our usual high level of safety.

While there are regional variations, according to Official Aviation Guide (OAG), the number of scheduled flights are 64% less than last year for the same period (<u>https://www.oag.com/coronavirus-airline-schedules-data</u>). As opposed to the daily fluctuations of traffic levels, the prolonged nature of this downturn will have a substantial effect on how air traffic controllers and support staff do their job.

Global Scheduled Flights Change year-over-year

Region	Jan	Feb	2 Mar	9 Mar	16 Mar	23 Mar	30 Mar	6 Apr	13 Apr	20 Apr	27 Apr	4 May
ALL	0.8%	-8.6%	-7.9%	-10.1%	-12.4%	-28.7%	-47.7%	-59.2%	-64.9%	-67.2%	-66.8%	-69.9%
Spain	-3.7%	-1.8%	-1.4%	-2.9%	-13.7%	-74.3%	-88.5%	-92.6%	-94.2%	-95.1%	-94.1%	-92.39
Hong Kong	-9.7%	-46.5%	-70.4%	-77.5%	-80.8%	-81.7%	-88.3%	-92.3%	-94.2%	-94.5%	-93.2%	-93.69
Germany	-8.5%	-6.9%	-5.0%	-15.4%	-30.2%	-71.9%	-88.6%	-92.6%	-92.5%	-93.7%	-92.9%	-90.5%
Singapore	-0.1%	-16.1%	-25.4%	-35.7%	-35.5%	-76.9%	-90.8%	-89.9%	-92.5%	-97.1%	-95.9%	-97.0%
Italy	-3.3%	-4.2%	-8.8%	-21.6%	-73.9%	-88.0%	-89.2%	-89.0%	-92.2%	-81.2%	-80.2%	-78.1%
France	-0.8%	0.4%	-2.0%	-3.8%	-13.7%	-41.3%	-81.4%	-87.0%	-92.1%	-91.7%	-91.8%	-91.9%
UK	-3.8%	-3.3%	-2.7%	-15.5%	-19.3%	-53.5%	-75.6%	-90.7%	-92.0%	-93.2%	-93.5%	-92.59
Australia	-3.5%	-3.2%	-1.7%	-2.3%	-2.9%	-15.9%	-63.1%	-78.1%	-84.6%	-83.7%	-84.4%	-83.05
Sweden	-9.2%	-5.6%	-4.8%	-6.4%	-14.1%	-65.3%	-77.1%	-84.2%	-84.4%	-90.0%	-89.8%	-88.59
UAE	-1.9%	-3.0%	-2.9%	-8.3%	-24.4%	-57.6%	-85.8%	-84.4%	-78.5%	-79.7%	-81.4%	-78.19
South Korea	2.2%	-11.6%	-34.1%	-52.1%	-56.1%	-55.7%	-56.6%	-59.3%	-60.5%	-58.8%	-48.5%	-49.5%
USA	1.7%	1.2%	-2.1%	-1.3%	-0.5%	-4.8%	-23.0%	-45.2%	-58.0%	-60.8%	-63.5%	-74.5%
ndia	2.1%	6.3%	9.9%	10.0%	8.3%	1.8%	-68.0%	-71.1%	-79.9%	-88.5%	-93.6%	-90.95
China	4.3%	-55.1%	-41.6%	-42.9%	-38.7%	-37.5%	-43.9%	-46.2%	-42.6%	-42.4%	-39.2%	-32.09
Japan	2.4%	-3.5%	-7.6%	-15.0%	-19.2%	-24.3%	-27.9%	-32.0%	-40.1%	-44.4%	-44.6%	-47.09

Source: Schedules Analyser

As traffic levels have fallen, many ANSPs have implemented reduced rosters including single person operations. Sectors that may not have usually been combined are now being operated by one controller. At some aerodromes, runways have been closed to provide parking for grounded aircraft. In many cases, controllers are working with airspace and/or runway configurations they have never experienced before. For the area controller, this may result in the controller needing to be aware of underload and new tracks and confliction points. For the tower controller, different runway modes and rarely used or unusual procedures without adequate training increase traffic complexity and can result in delayed responses and interventions.

IFATCA has recognised in its Technical and Professional Manual (TPM), that periods of reduced traffic might also decrease the level of concentration and awareness (TPM p.248). Prolonged operations in a reduced traffic environment also present mental challenges for air traffic controllers. Just as high workload can result in overload and low performance, so can low workload situations. Some non-aviation related studies concluded that going from a high-stimulus to a low-stimulus environment results in a greater decline in performance than going from low-stimulus to high stimulus (Cumming and Croft, 1973; Goldberg and Stewart, 1980; M.L. Matthews, 1986). Cognitive changes occur such as paying less attention, being easily distracted and reduced situational awareness. Changes to control techniques such as delayed intervention, creating more complex solutions to traffic scenarios and increased risk appetite may also occur. These can manifest by controllers not completing routine tasks such as coordination or updating Human Machine Interface (HMI) in a timely manner.



Single person operations carry a higher level of risk generally due to the lack of redundancy, but particularly in a reduced traffic environment. Single person operations should be avoided if possible. If it must be used, it should only be used sparingly and only if adequate mitigation is in place. Mitigation should include the opportunity for more frequent breaks and closer operational supervision.

VIGILANCE STRATEGY MEASURES

The International Organisation for Standardisation, ISO EN 10075 defines monotony and reduced vigilance as:

Monotony

Slowly developing state of reduced activation which is mainly associated with drowsiness, tiredness, decrease and fluctuations in performance, reductions in adaptability and responsiveness...

Reduced vigilance

State with reduced activation and detection performance mainly associated with monitoring tasks offering only little variation.

MAs are encouraged to approach their ANSPs to implement measures which mitigate the possibility of being bored or fatigued due to reduced traffic levels.

The following are a number of strategies that have been adapted from the Eurocontrol publication 'Monotony in Air Traffic Control' (<u>https://www.eurocontrol.int/publication/monotony-air-traffic-control-contributing-factors-and-mitigation-strategies</u>). This list is not exhaustive and gives an indication of what could help mitigate boredom and increase vigilance in the ops room.

→ Non task-related communication

o Chatting with colleagues whilst avoiding emotionally sensitive subjects.

→ Task-related activities

- Check everything again and again;
- Find the smallest thing to remain active;
- Do not pre-plan too much in advance;
- Break down your clearances into smaller steps;
- Avoid giving clearances in advance, those are the ones you tend to forget;
- Keep scanning.
- → Ambience
 - Increase lighting;
 - Introduce music at appropriate levels;
 - Consider reading stimulating material that engages the brain;
 - More frequent change-overs and breaks;
 - Physical movement around the ops room.

ON-THE-JOB TRAINING (OJT) IN A REDUCED TRAFFIC ENVIRONMENT

In a recent IFATCA survey, member associations reported that 83% of ANSPs had stopped OJT from the beginning of the coronavirus (COVID-19) pandemic. Ceasing air traffic controller training can have adverse effects on trainees, ANSPs and global aviation generally. Maintaining proficient and sufficient air traffic controllers is important not only in the medium term in a reduced traffic environment, but particularly in the long term as traffic levels increase again during the recovery.



Before the coronavirus (COVID-19) pandemic, many ANSPs were already facing challenges in ensuring there were adequate numbers of air traffic controllers. Whilst this downturn has resulted in a reduction in demand for air traffic controllers, there is no certainty as to how quickly aviation will return to pre-pandemic levels. Any interruption in the controller training may result in even greater shortages when traffic levels begin returning to pre-pandemic levels. If not managed carefully, the lead-in time required for controller recruitment and training may result in even more critical shortages than existed before the pandemic.

Of course, training controllers in a reduced traffic environment presents unique challenges. A trainee in a live traffic environment would be likely accumulating training hours with little or no training value. Certain competencies such as the ability to work under pressure and prioritization of tasks would be more difficult to learn. Furthermore, these competencies can only be effectively assessed during busy traffic periods making it difficult for trainees to demonstrate they have attained the required level. Increased prevalence of single person operations would also make teamwork challenging to train and assess.

Ceasing OJT may also have implications in situations where a maximum duration has been set within which the trainee has to complete their training. For example, some ANSPs and regulators require OJT to be completed within a certain period. This may be difficult in a sustained low-traffic environment. It may also have contractual consequences and affect a probation obligation of the trainee's employment.

Other challenges may result from national legislation dealing with the pandemic. For instance, social distancing may result in OJT instructors not being able to adequately supervise a trainee. Or air traffic control trainees may not be considered 'critical workers' and therefore not permitted to attend the training. IFATCA acknowledges the right of States to legislate according their individual requirements but urges ANSPs to consider the long-term effects of ceasing air traffic controller training.

Two strategies that may be implemented for OJT in a reduced traffic environment are increased use of simulation and 'dynamic OJT'.

Where available, increased use of simulator training can supplement the lack of sufficient 'live' traffic. While most training includes an element of simulation, usually it is used to bring the trainee up to a level where they are competent enough to commence OJT. However, with only reduced levels of live traffic, simulator exercises could be designed to further develop the trainee's competence. With reduced traffic operations, experienced controllers could be re-tasked to develop these lessons for advanced simulator exercises. Whilst this is not OJT, it will help ensure that when traffic levels return the trainee will be in a better position to continue OJT.

While training with reduced traffic levels may lead to accumulation of non-beneficial training hours, ANSPs could still adopt 'dynamic OJT'. This involves trainees being assigned standby shifts, performing active observation and discussion with instructors until a period with training value emerges such as a traffic surge or complex scenario. At that point, the instructor could release the control to the trainee and accredit that period to the accumulation of beneficial training hours.



REDUCED CONTROLLER DEMAND

It's clear that the reduction of traffic levels requires less operational air traffic controllers to manage the remaining aircraft. For ANSPs, the temptation may be to stand down controllers either with or without pay. However, the spare capacity generated by the reduced requirement for operational controllers presents ANSPs with a rare opportunity to undertake a range of activities that would not normally be possible because of the inability to release controllers from operational duties.

AIRSPACE AND PROCEDURE REDESIGN

Airspace and procedure changes typically require input from operational air traffic controllers. However, under normal circumstances, it can often be difficult to secure their release from operational duties. The availability of operational air traffic controllers generated by the recent reduction in traffic levels can be used to 'fast-track' airspace or procedure changes that would normally take a lot longer to develop and implement.

For example, controllers could be tasked to carry out hazard analysis, feasibility studies and investigative work while using methods to maintain social distancing while at the unit or even at home. This enables staff to continue to be productive and ensures there is capacity in the ATC system when the traffic picks up again. It may also help to reduce a back log of projects and changes that would otherwise still be waiting for completion when traffic levels return to pre-pandemic levels.

There may also be opportunities for managers and operations personnel to meet on a regular basis to discuss developments. Not only could this identify areas for further procedure developments but also establish a fast and flexible dialogue for dealing with any issues that may arise.

LOCAL DOCUMENTATION

Due to the pace of change in the aviation environment, it is an on-going struggle for ATC units to ensure local documentation and manuals reflects current practice. It's not uncommon for units to issue 'temporary' instructions or amendments as these are typically easier to approve and issue. Sometimes controllers adapt their practices to reflect changes to the operational environment without any amendments to supporting documentation.

The result is that operational documentation and manuals are often convoluted and difficult to read. Updating of this material can typically only be done by controllers with current and recent operational experience. With spare capacity generated by the reduced requirement for operational duties, controllers could be used to update local documentation and manuals.

TRAINING COURSES

The development of operational training courses also typically requires the input of controllers with current and recent operational experience. As with the tasks above, it is a challenge to release these controllers from operational duties to conduct training courses, let alone give them the time to ensure the courses are up-to-date to reflect current procedures and, in the case of simulator lessons, traffic patterns. Spare controller capacity could be used to update a unit's training material ensuring it is fit-for-purpose when traffic levels return to pre-pandemic levels.

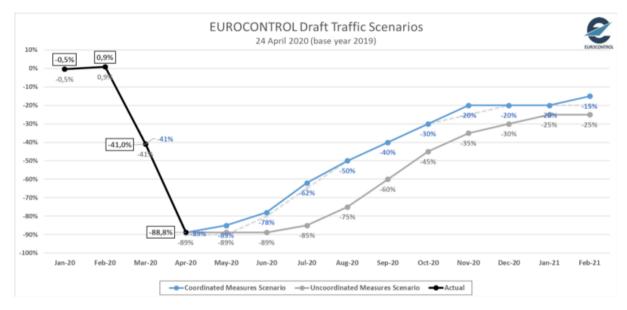
The benefits of 'advanced' simulator lessons to supplement training during a reduced traffic environment has already been touched upon. However, these simulator lessons can also be used to ensure experienced controllers remain proficient. Using spare ATC capacity to develop these lessons achieves multiple benefits.



RECOVERY PHASE

AS TRAFFIC LEVELS INCREASE

Most ATS units are staffed with respect to the current reduced traffic levels. However, Eurocontrol (a European example) is predicting a slow increase in traffic from May 2020.



As detailed above, managing reduced traffic levels for extended periods of time presents unique challenges for controllers. However, the return to pre-pandemic traffic levels will also present challenges. Controllers may have gone for substantial periods of time without managing increased traffic levels with a resulting decline in proficiency.

A gradual return to pre-pandemic traffic levels may permit controller proficiency to also gradually increase. However, this won't prepare controllers for the inevitable increase in 'traffic spikes' as traffic levels recover.

When traffic levels start increasing, it's important for controllers to be aware of the effects operating for long periods with reduced traffic will have had on their proficiency. Controllers should expect to ask for support more often than they may have had to in the past. Controllers should also expect to have to offer more support to each other and be more mindful of potential proficiency gaps.

Although high intensity simulator sessions may help controllers and trainees to achieve greater proficiency than they might have otherwise, it is not a substitute for OJT and instructors and ANSPs should be aware that controllers and trainees may need additional time to adjust accordingly.



This potential increase may be more marked in one ANSP or region than in another. In order to respond appropriately to this challenge, MA's are encouraged to work together with their ANSP to adapt rostering accordingly. As an example, a minimum staffing level on stand-by or available for adhoc shifts may be necessary.

IFATCA encourages all ATCOs to support this flexibility in negotiation with their ANSP, whilst respecting their collective agreement.

PREPARATION

Controllers should be given the opportunity to maintain their proficiency in areas that do not require high traffic levels. For instance, controllers should practice and perfect phraseology and application of the ruleset. This can be achieved through self-directed learning or through more formal means such as classroom and computer-based training.

ANSPs can facilitate controller preparation for a return to pre-pandemic traffic levels by providing controllers with computer access to documentation, procedures and manuals.

RISK ASSESSMENT

Prior to the estimated increase in traffic, ANSPs should run, via an established Safety Management System, a risk assessment. The risk assessment should consider the challenges, including human factors issues, for controllers returning to normal traffic levels after an extended period of low traffic. This process is considered in more depth below in 'Safety Management Systems and principles'.

SIMULATORS

The use of simulators, where available, presents the greatest opportunity to ensure controllers' proficiency remains at levels that will best equip them to deal with a return to pre-pandemic traffic. If necessary, new simulator lessons should be designed with the objective being to maintain the proficiency of experienced controllers rather than the more conventional uses of cross training and ab-initio training.

More generally, simulators are probably the most useful tool for ANSPs to manage the impacts of the coronavirus (COVID-19) pandemic. Not only can they be used to help maintain the proficiency of experienced controllers, they can also be used to simulate high traffic levels to trainees in lieu of actual traffic thus minimising any delays to their training when traffic returns to pre-pandemic levels. Finally, spare controller capacity can be used to design and run simulator exercises to achieve both these outcomes. If used productively, simulators, and the support staff required to operate them, should be as busy, if not busier, than before the pandemic struck.



SAFETY MANAGEMENT SYSTEM (SMS) AND PRINCIPLES

INTRODUCTION

This section provides guidance for MAs and a methodology for ANSPs to meet the challenges of the current COVID-19 pandemic and to prepare for the eventual return to normal traffic levels. ANSPs and regulators would be familiar with the requirements of ICAO Annex 19 and Safety Management Manual (SMM) (Doc 9859). The return to pre-pandemic traffic levels after an extended period of low traffic presents challenges when applying these safety management principles including:

- ↔ decisions relying on scarce or novel information;
- → ANSPs relying on alternative, dynamic ways to collect information and implement the change;
- ✤ organizational structure and inter-departmental coordination; and
- → controller representative access to decision makers to achieve trust between stakeholders.

CRISIS AND SMS

We are in the middle of an exceptional situation where uncertainty is enormous and developments are difficult to predict. SMS is a vital function used by almost all ANSPs in tackling crises in general, but it might not be sufficient for all situations. COVID-19 has highlighted the complex interfaces at play within ANSPs and authorities demonstrating the challenges of making decisions. Decisions may need to be made based on incomplete information and that the access to expert operational opinion is necessary to make interpretation of dynamic information. This is necessary to understand the available information. Where information may not be available, posing questions to understand the tolerability of threats associated to decisions is also useful e.g. supporting evidence available, consequences of less than ideal decisions, delays in decisions, available time and resources.

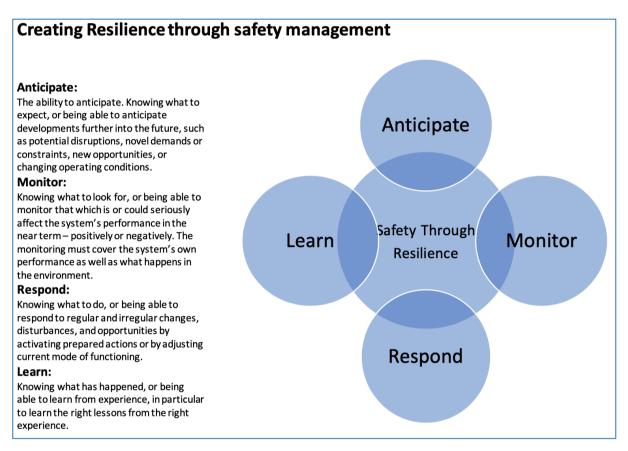
Conventional methods of collecting information may be not appropriate and a more dynamic approach may be necessary. To prepare for the increase in traffic, coordination and communication between stakeholders needs to be redefined to permit a unified, effective response. Consultation between controller representatives and decision makers is paramount and critical in achieving trust between stakeholders.

ANSPs should re-double efforts to break down communication barriers both internally (within the ANSP) and externally (national and international stakeholders). This is essential to ensure effective coordination between groups and committees that possess the knowledge, experience and support to ensure a safe, secure aviation environment in which services are delivered in a reliable and efficient manner.



IFATCA METHODOLOGY

'Resilience Engineering' is a methodology proposed by Erik Hollnagel and can be used to achieve these objectives and meet the challenges ahead. The methodology proposes a 'Resilience analysis Grid' that ensures the aviation system performs in a manner that is resilient by sustaining required operations during expected and unexpected conditions by adjusting to events prior to, during, and following changes, disturbances, and opportunities (HollInagel, 2015).



Hollnagel, E. (2015). RAG – The resilience analysis grid

For a detailed description of the methodology, please see https://tinyurl.com/ifatcareg



AREAS TO CONSIDER

The following is a non-exhaustive list of areas ANSPs should consider when planning a recovery from a prolonged period of low traffic to normal traffic levels.

PLANNING AREAS

- → Capacity imbalance and unusual traffic patterns caused by uncoordinated different pace of capacity recovery by ANSPs;
- ✤ Planned ATC sector configuration/inflexible to actual traffic demand;
- → Reduced sectors/working positions open in the ATC unit due to rules for physical separation of staff (room layout not adequate for this);
- ✤ Coordination with other ANSPs, airspace users and airports;
- → Shortfall in the number of operational staff to meet the increasing demand in the transition period (e.g. disproportionate demand due cancelation of lockdown measures/countrybased/region-based and significant number of staff locally is still under quarantine);
- Scarcity of ATCOs in OPS room, due to COVID-19 infection, which cannot be prevented due to impossibility to ensure physical separation at the sector positions;
- Reduced ATCO staff numbers for traffic through forced redundancies due to the resulting financial crisis;
- ✤ Transitioning between crisis rostering techniques and usually implemented ones;
- Designing flexibility into the rostering systems to afford sufficient breaks for those operating whilst at the same time providing the ability to adapt flexible sectorisation to potentially unpredictable and varying levels of demand;
- ✤ Ensuring a quick adaptation of planned rostering, if required, to bring back all ATCOs at a short, but socially acceptable timeframe
- → In the long term, over demand on sectors due to lack of investment in projects and staff.

ATCO RECENCY/CURRENCY AND COMPETENCY AREAS

- ↔ ATCO (both experienced and recently qualified) difficulties to maintain skills which would be needed in increased traffic scenarios, while they are working a longer period of reduced traffic levels;
- Diminished ATCO skills whilst working once again in a multi-sector environment with many sectors and their accompanying coordination;
- → Transitioning from issuing shortened and direct clearances to those used in busy periods;
- ✤ To keep scanning techniques on a level necessary for busy traffic scenarios and reducing nonoperational distractions;
- → Supervisors with unfamiliar experience in handling situations due to the reduced traffic periods might need some refresher training while the traffic is increasing;
- Planning revalidation, continuation training and simulator training, whilst also respecting social distancing rules;
- Ensuring validity of competency rules and medical certificate validity. At the very least, ICAO Annex 1 principles should apply.



OJT/INSTRUCTOR AREAS

- ✤ Mutual appreciation of the ability of both the instructor and trainee;
- → Ineffective or prolonged on-the-job training as traffic will be minimal and not easy to assess the trainee's skills;
- ↔ Motivational challenges and drive from trainee;
- ✤ Instructor getting distracted delivering OJT during reduced traffic periods;
- ↔ 'Startle' factor from trainee during a traffic peak.

THIRD PARTY AREAS

- ✤ Pilot competency challenges causing ATC issues and/or increased workload;
- ✤ Increase of airspace infringements by GA pilots (pilot skills challenges due to the GA flight ban during the crisis in some states);
- → Lack of recency/currency of airport ground personnel in local procedures;
- New stress-inducing factor for operational staff (e.g. ANSP/airline financial issues, personal financial problems, government will/could help but what do they expect in return, social agreements, redundancies, Contractual Labour Agreement (CLA) issues, effect on pension entitlement);
- ✤ Potential increase in aircraft/ airport/ ATC system defects through lack of use.

CHECK OUR OUR WEBSITE FOR MORE COVID-19 INFORMATION AND RESOURCES

www.ifatca.org/covid-19

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