

# Safely Navigating the Industry Recovery



## Bulletin 2

# Maintaining Competency & Training during Recovery

## 1. Background

The aviation industry continues to face several challenges since the outbreak of the COVID-19 pandemic. One of the main impacts is the ripple effect of lockdown measures and travel restrictions. This situation has led to the inaccessibility of training facilities, such as simulators, and the extension of licenses validity. The COVID-19 Contingency Related Differences (CCRD) system was created by ICAO to capture any differences from ICAO Standards on certification and licensing that may arise from mitigation measures due to the COVID-19 pandemic. Those alleviations were established as interim measures to support continued operations during the initial stages of the pandemic. However, ICAO has requested that States plan to put in place measures to mitigate the risks associated with prolonged regulatory alleviations. To avoid extending alleviations beyond 31 March 2021, States that are in need of alternative actions to enable service providers and personnel to maintain the validity of their certificates, licenses, and other approvals during the COVID-19 pandemic should use the Targeted Exemptions (TE) system from 1 April 2021.

Recovery of traffic is expected to vary per region. As traffic starts to increase, there could be spikes in traffic driven by relaxing of government measures for travel. After long periods of reduced traffic levels, additional attention will be required to ensure that operational staff are re-acquainted with complex or higher levels of traffic. Physical distancing requirements may still be required after the roll out of vaccination on a large scale which may continue to impact working and training environments.

Additionally, since the outbreak of COVID-19, there has been an increase in the use of virtual (remote) training for aviation professionals. However, there is room for improvement of such new training tools to ensure the effectiveness of such platforms and the ability to ensure proper oversight.

To better understand the impact that COVID-19 has on maintaining competency and training, the Civil Air Navigation Services Organisation (CANSO), the International Federation of Air Traffic Controllers' Associations (IFATCA), the International Federation of Air Line Pilots' Associations (IFALPA) and the International Air Transport Association (IATA) continue their collaboration to assist the industry with the restart and recovery effort. The safety risk assessment (SRA) example, provided at the end of this bulletin, was reviewed and was used to shape a webinar organized on 22 April 2021. This joint bulletin is an update of Bulletin-2, which was issued in 2020 and is a result of the revised SRA and the webinar.

## 2. Maintaining Competency and Training During Recovery

### **Unpredictable traffic levels and sporadic operations combined with changes to workforce**

The working environment has changed due to reduced traffic levels, new operating procedures, and different impacts on operational staff. The new requirements for physical distancing and rostering constraints are impacting the rotation of staff. As traffic levels and complexities continue to be dynamic during the restart of aviation, bringing back ATCOs, pilots and dispatchers could require additional attention to training and competency levels. This will be particularly important when ATCOs and dispatchers have been exposed to limited traffic levels and flights, resulting in a potential risk of degradation of both technical and non-technical skills.

Therefore, a holistic approach is needed to identify where potential gaps might be, and not solely focus on changes in traffic levels. While combining sectors/positions can be a good measure when traffic is low, the result can mean the skills required to manage traffic at peak hours is not being practiced. It is the combination of different factors and measures due to COVID that needs to be considered when assessing the local impacts for an ANSP or a specific FIR.

After an extended period away from the flight deck, pilots are often surprised by what knowledge and skills have been retained and which have degraded. Some skills return quickly while others return and develop more slowly. Experience indicates that often skills such as general procedural knowledge and manual aircraft handling are retained better or quickly regained while some areas of non-technical skills such as workload management will return at a slower rate. One area that is sometimes overlooked is the degradation in proper phraseology.

Therefore, it is critical that both pilots and air traffic controllers maintain standard phraseology and ensure that correct procedural language is used.

<b>Recommended Mitigations</b>
Organizational response to different levels of staffing, including a strategy for staffing and training for different levels of traffic build-up.
Incremental return to service plans that considers possible spikes in traffic levels.
Return-to-work procedures, including additional training/briefings.
Encourage operational staff to practice threat and error management.
Emphasis on preparation before a flight or shift and not rushing through any procedure

### **Challenges Associated with Recurrent Training, Re-validation, and OJT**

Due to the lockdown measures that have been imposed in many jurisdictions, access to training facilities has been limited. This has limited the access of staff and trainers to simulators. In most cases, staff training, and validation have been postponed. Routine medical checks that were considered low priority have also been delayed. Due to these challenges, the operational staff might be a mix of qualified and current, qualified following extended breaks (requiring re-training and checking), and/or not current with no recent experience in specific operational environments. Therefore, a “one size fits all” solution is not viable. At the same time, while each type of operation must address its unique risks related to potential skills decay, consideration should be made to how risks may affect adjacent operations. In that context, there needs to be a balance between individual cases and addressing safety issues across the different domains in a concerted manner to successfully manage the risk factors.

The requirements for physical distancing present challenges for On-the-Job Training (OJT) and may impact the effectiveness of re-validation of dispatchers and operational controllers (ATCOs). For example, physical distancing requirements have limited the opportunities for, or complicated “over the shoulder” validation. Skills that are usually acquired or emphasized during OJT could be reduced. With health protocols that continue to be required for working environments, there are challenges affecting the re-validation/OJT of dispatchers and operational controllers (ATCOs) and Flight information service officers (FISOs), e.g., renewal of medical, over the shoulder, phraseology, etc.. Due to these elements, skill degradation could be more difficult to detect. At the same time, extensive use of OJT during reduced traffic levels may be limited when considering the time investment required. Therefore, refresher training as traffic levels increase needs to be considered.

<b>Recommended Mitigations</b>
Where possible combine simulator (SIM) and OJT for ATCOs
Include simulator training with higher and more complex traffic levels situations.
Increased post operational reviews using recordings and increase revalidation frequency.
Increase performance check periodicity for ATCOs.
Increased supervision with increased workload.
Additional briefings to prepare for different traffic levels, new operations, new requirements.
Allow for specifics when designing and delivering training (one size does not fit all).
For pilots, additional training should be planned and provided while retaining the normal checking pattern.

The following resources are available to support maintaining training and competency during COVID:

- [Guidance for Post-COVID Restart of Operations: CBTA Training Solutions - IATA](#)
- [Guidance for Managing Pilot Training and Licensing During COVID-19 Operations - IATA](#)
- [White Paper - ATO-AOC Partnership Including Instructor Provisioning - IATA](#)
- [White Paper - Ensuring the quality of training when classroom instruction is delivered via virtual classroom - IATA](#)
- [Training Considerations for Return to Operations - IFALPA](#)
- [Return to Flying Checklist for Pilots - IFALPA](#)
- [Coping with COVID-19 Guide - IFATCA](#)
- [Returning to Normal Crew Training - ICAO](#)

## Changes in the Training Environment

The socio-economic impacts of COVID-19 will most probably introduce changes that will sustain beyond the pandemic. The working environment has changed; not all people will be vaccinated, and teleworking will continue to be used. At the same time, learners, as well as learning expectations have changed. Therefore, falling back to pre-pandemic training approaches may not adequately meet the needs of the present (and the future).

With the anticipated increased dependency on automation, exploring tools such as combinations of Augmented Reality (AR) and Virtual Reality (VR) in recurrent training could serve the industry in maintaining competency during and beyond COVID-19. The use of gamification to prepare and train for certain contingency scenarios could ensure the availability of skills needed to handle contingency situations. Some ANSPs are looking into various technology solutions and different ways of working that will allow remote learning. At the same time, several organizations and parts of the industry are investigating advanced technologies like artificial intelligence, digital twins and gaming theory to support learning progression and learner diversity.

The expanded application of Competency-Based Training and Assessment (CBTA) to different operational functions can ensure performance-based training programs, and continuous monitoring and evaluation. Under CBTA, the training system performance is measured and evaluated through a feedback process that uses training metrics.

Adapting training post COVID-19, will require additional work and research with training organizations and regulators to develop a training framework that is fit for the post-pandemic "new normal" and makes effective use of the most recent developments in technology. A revised training framework will most probably combine different layers of virtual modules, in-classroom and simulator sessions, and apply CBTA principles.

## 3. Recommendations

To utilize the best practices in this bulletin, the safety risk assessment in **Attachment – A** can be used as an example. However, individual organizations should conduct their own internal safety risk assessment prior to making any decision and include the rate their risks as per their internal policies and tolerance levels.

## 4. Additional Resources

Additional resources and information can be found through the following links:

- [iata.org/en/programs/covid-19-resources-guidelines/](https://www.iata.org/en/programs/covid-19-resources-guidelines/)
- [ifatca.org/covid-19/](https://www.ifatca.org/covid-19/)
- [canso.org/navigating-covid-19](https://www.canso.org/navigating-covid-19)
- [ifalpa.org/publications/covid-19-resources/](https://www.ifalpa.org/publications/covid-19-resources/)
- [icao.int/covid/Pages/](https://www.icao.int/covid/Pages/)

If you have any question or would like more information, please contact [infrastructure@iata.org](mailto:infrastructure@iata.org).

## SRA Baseline Example

### Maintaining Competency & Training

Event	Hazards	Already Used Controls	Additional Mitigation Actions during Restart/Recovery from COVID
<b>Varying traffic levels combined with changes to workforce and sporadic operations</b>	<ul style="list-style-type: none"> <li>Reduced resources/competency</li> <li>Challenges associated with roster planning</li> </ul>	<ul style="list-style-type: none"> <li>Licensing, training and recency requirements</li> <li>Virtual Training</li> <li>Line Checks</li> </ul>	<ul style="list-style-type: none"> <li>Strategic staffing during reduced operations</li> <li>Incremental return to service, including:               <ul style="list-style-type: none"> <li>All stakeholders to work together to address planning schedules and manpower requirements</li> <li>Return to work training and briefs</li> <li>Increase supervision</li> <li>Continue awareness campaign</li> </ul> </li> <li>Re-enforce due diligence and colleague proficiencies.</li> <li>Reduce the period for revalidation.</li> </ul>
<b>Lack of access to recurrent training</b>	<ul style="list-style-type: none"> <li>No improvement in competency and familiarization with procedures</li> </ul>	<ul style="list-style-type: none"> <li>Online training</li> <li>Sims sessions</li> </ul>	<ul style="list-style-type: none"> <li>Explore enhancing online training options</li> <li>Work with regulators and training organizations to address backlog of licenses and medical revalidations</li> <li>Ensure staff have access to online training</li> <li>Improved supervision for personnel with extended licenses</li> <li>Considerations for ATCO's workload</li> <li>Prioritize SIM-sessions for staff with extended licenses</li> </ul>
<b>Physical distancing impacts effective re-validation/OJT</b>	<ul style="list-style-type: none"> <li>Potential skill degradation that goes un-noticed</li> <li>Potential drift from standard procedures</li> <li></li> </ul>	<ul style="list-style-type: none"> <li>Supervision</li> <li>Effective tracking of license currency and validation.</li> </ul>	<ul style="list-style-type: none"> <li>Increased post operational reviews using recordings</li> <li>Use longer headsets</li> <li>Use PPE to make up for physical distance requirements</li> <li>Monitor from adjacent positions rather than over the shoulder</li> <li>Increase performance checks</li> <li>Review check requirements to include simulators with high traffic situations</li> </ul>
<b>Increased reliance on virtual training methods resulting in not meeting the training objectives and or requirements for advanced and complex scenarios</b>	<ul style="list-style-type: none"> <li>Training needs not addressed properly.</li> <li>An observable degradation in certain skills and/or familiarization with procedures</li> </ul>	<ul style="list-style-type: none"> <li>Competency assessments after recurrent training.</li> <li>Quality control of existing training and implementation.</li> <li>Supervision.</li> </ul>	<ul style="list-style-type: none"> <li>Explore availability of remote/virtual simulators for training</li> <li>Industry should study effectiveness of virtual training</li> </ul>
<b>Reduced competency in emerging contingency scenarios in a changing environment</b>	<ul style="list-style-type: none"> <li>Existing contingency procedures not adequate for new/emerging risks.</li> </ul>	<ul style="list-style-type: none"> <li>Emergency Response Plans</li> <li>Training</li> </ul>	<ul style="list-style-type: none"> <li>Contingency procedures need to be reviewed and adapted to new/emerging what-if scenarios.</li> <li>New/modified contingency procedures need to be communicated, coordinated, and exercised.</li> <li>Reinforce contingency training</li> </ul>
<b>Operational assessment of skills will be conducted in reduced traffic conditions, not providing the appropriate complexity for full operational capacity.</b>	<p>Assessments during low traffic will not give a full picture about competency and any gaps.</p>	<ul style="list-style-type: none"> <li>Supervision.</li> <li>Tactical opening of sectors.</li> <li>Tactical use of resources by the supervisor.</li> </ul>	<ul style="list-style-type: none"> <li>Increased Supervision with increased workload.</li> <li>Where available, use of simulators to practice higher traffic levels.</li> </ul>

<p><b>Combination of the unpredictability of traffic recovery, the expiration of the exemptions, and reduced access to training facilities, affecting staff training and availability.</b></p>	<ul style="list-style-type: none"> <li>• Different pressure drivers impacting crew rostering.</li> <li>• Insufficient resources to meet traffic demand, especially when there is a spike in traffic levels.</li> </ul>	<ul style="list-style-type: none"> <li>• Flow management.</li> <li>• Combining sectors.</li> <li>• Strategic rosters/scheduling.</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of public health corridors to facilitate access to training facilities. (ICAO CART)</li> <li>• Allowing flexibility without compromising safety.</li> </ul>
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