Civil Aviation Authority

SAFETY NOTICE

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Awareness of Skill Fade and Suggested Mitigations

This Safety Notice contains recommendations regarding operational safety.

Recipients must ensure that this Notice is copied to all members of their staff who need to take appropriate action or who may have an interest in the information (including any 'in-house' or contracted maintenance organisations and relevant outside contractors).

Applicability:	
Aerodromes:	All Aerodrome Operators All Ground Handling Organisations
Air Traffic:	All ATS
Airspace:	Not primarily affected
Airworthiness:	All UK CAA approved organisations
Flight Operations:	All CAA Approved or Declared Organisations and Operators
Licensed/Unlicensed Personnel:	All ATO and DTO

1 Introduction

1.1 The purpose of this Safety Notice is to offer guidance to those managing and supporting front-line workers who are expected to resume operations soon. Many aviation personnel have not operated in their normal capacity for some time or may have been on furlough. Also, it is important to consider that some aviation personnel may not have stopped working, but the nature of their work and the environment in which they have been operating may have changed. They may also be affected by increasing operational activity. Working regularly helps to maintain professional skills and competence, and the decrease or change in work during this time means that personnel are likely to experience 'skill fade'.

1.2 'Skill fade' means that skills have decayed over time because they have not been used. Personnel may experience this as; finding it harder to remember and carry out some tasks, carrying them out in the wrong sequence, doing the wrong task at the right time or the right task at the wrong time, forgetting whole or parts of tasks and processes, or failing to realise that they have carried out a task incorrectly. If personnel realise that their skills have decayed this may make them feel frustrated or anxious.

1.3 There are many factors which may make skill fade more likely or more severe. For example, a longer break from professional practice could increase skill fade, and some complex and more nuanced skills (e.g. decision making in complex situations) may be more prone to skill fade than less complex skills which have been 'over-trained' (e.g. actions which have been learned by

'drill' so that they do not need conscious attention, such as changing gears in a manual car while driving).

1.4 For flight crew, the experience of skill fade may also make a startle or surprise response more likely, and mitigations to deal with this response should be included in simulator training before line flying recommences.

2 Suggested Mitigations

2.1 Operators should consider human performance risks including skill fade, using a holistic approach proportionate to the risks identified. Safety management and quality control systems should be used to review and mitigate hazards associated with skill fade.

2.2 Aviation is a complex system of systems and there are likely to be safety issues at the intersection of roles and tasks. For example, a pilot experiences skill fade and makes an incorrect action during landing, at the same time as an air traffic controller experiences skill fade and issues an incorrect landing clearance. The outcome of both actions may be more severe in this situation than during 'normal' operations. These complex hazard situations should be considered as part of safety management reviews.

2.3 The following general principles are useful in managing aviation personnel who are likely to experience skill fade:

- Encourage people to take more time and be more thorough with preparation tasks than they are required to in 'normal' operation. For example this may include reviewing checklists more slowly and carefully, conducting a slower aircraft walk-around or inspection, taking extra time on a pre-brief, introducing a team pre-brief before an activity that has changed, or having an opportunity to spend time understanding revised operating procedures.

- Extra time considerations may need to be built into the tasks to allow for delays and congestion in other parts of the aviation system that may impact the task being performed. These may be issues such as delays in processing passengers leading to delayed departures, or the bunching up of work due to multiple aircraft arriving or departing at the same time.

- Consider using an extra check or inspection for tasks which have not been completed for some time. For example, a more senior engineer may perform a check on a maintenance task the first time it is conducted after a long break. Equipment may need an extra thorough inspection and test before first use after a long break.

- Have clear parameters for 'go / no-go' decisions and agree on 'no-go' criteria beforehand, to avoid being tempted to go ahead with a task when conditions are not adequate. An example might include deciding on a time when you will need a break from a maintenance task before starting rather than working through until you feel tired, or agreeing on criteria to stop a trial of new equipment before it is used.

- Adjust training and work schedules to allow for additional practice with tasks that have not been performed for some time. For example, some complex tasks such as flight crew simulator currency that require regular training may need a longer training period, while other tasks may need a longer time for completion after the break.

- Review decision making strategies and resources such as mnemonics (DODAR, FORDEC) to remind personnel of their options. For example, if your organisation uses particular decision-making strategies, provide personnel with an opportunity to review these before they re-start work.

- Plan for times of increased workload and allow people to delegate, defer or share tasks to manage the situation. It may not be possible to predict exactly how workload will increase as operations re-start, and there may be task adjustments required to ensure that individual personnel have an achievable work routine.

- Use a threat and error philosophy to discuss likely threats during a task and possible mitigation options if they occur. Ask personnel to use their expertise to help identify likely threats or hazards in their roles and at the intersection of roles and tasks as they come back to work, especially if tasks and work have changed during the break.

- If you have had personnel who have experienced longer absences from work before the pandemic (for example maternity leave or a leave-without-pay period), ask them what they noticed about their return to work, and what support worked well or was needed most on their return. Using the experience of people who have had longer breaks in work before may highlight areas that need extra attention as more people come back to work following a long break.

2.3 Operator support programs including peer and employee assistance programs should be alerted to and proactively prepare for an increase in assistance. It is likely that personnel may access these services as they deal with changed working circumstances.

3 Action to be Taken

3.1 Operators should review and mitigate human performance risks, including skill fade, as operations resume.

3.2 Operators are encouraged to read related Safety Notices and consider how to mitigate the range of human performance risks in a holistic way.

4 Additional Resources

4.1 The following resources provide additional material relating to skill fade if required:

Skill Fade - SKYbrary Aviation Safety

Maintaining safety focus during the COVID-19 pandemic | EASA Community (europa.eu)

https://www.icao.int/safety/OPS/OPS-Normal/Pages/default.aspx

5 Queries

4.1 Any queries or requests for further guidance as a result of this communication should be addressed to an Operator’s CAA inspector, auditor, or surveyor in the first instance.

6 Cancellation

5.1 This Safety Notice will remain in force until further notice.