

Practical scenario 4

Note: this document complements the core guidelines on the “role of operators’ management systems in the COVID-19 recovery phase”.

Revision record

Issue	Date of issue	Summary of changes
01	20.10.2021	Initial issue

1. Foreword

The scenario mainly addresses the air operators, when identifying and addressing the safety hazards associated with the return to normal operations (RNO) following the COVID-19 pandemic.

The scenario has been developed with the support of subject-matter experts from air operators, international associations and national competent authorities.

From a safety risk management's perspective, the scenario only provides guidelines for consideration.

The list of “hazards”, “threats”, “consequences” and “mitigation measures” is **not exhaustive**.

The air operator will have to assess whether these proposed elements are relevant and effective. In no case, the proposed elements pretend to be sufficient or be the right approach to control the risks to an acceptable level.

There is no full risk assessment proposed as such: the comprehensive risk assessment for each identified hazard and consequently the determination of the needed mitigation measures, remain the ultimate responsibility of the air operator, as the context may widely vary from one airline to another.

It can be also useful to consider the other EASA-developed scenarios, which provide with a different list of hazards adapted to the nature of the scenario, but may remain a source of inspiration.

The national competent authorities can also use these guidelines in the course of their surveillance activities.

Comments, suggestions and improvement can be addressed to safety.management@easa.europa.eu.

2. Description of the practical scenario

Context:

This scenario applies to air operator's crews with limited or no recent experience and with limited exposure to training that, after a long period (beyond 6-12 months) of inactivity, return on duty.

Every crew member is supposed to apply, during his/her duty, nine competences. These are:

- Application of knowledge;
- Application of procedures;
- Communication;
- Use of automation (aeroplane flight path management);
- Manual flying skills (aeroplane flight path management);
- Leadership and teamwork;
- Decision making/Problem solving;
- Situational awareness;
- Workload management.

These competences will suffer a different level of decay based on how long the crew member has not used them.

Application of knowledge

The “Decay Theory” suggests that if someone does not access or use knowledge he/she has learned, it will slowly decay over time. The risk today, after a long period where the knowledge had not been used, is that the crew member will forget it. There can be numerous reasons why crew forget what they’ve learnt; however, the main one is because they don’t have the opportunity to apply what had been learnt.

AREA	APPLICATION OF KNOWLEDGE		
THREAT	HAZARD	CONSEQUENCES	MITIGATIONS
FLIGHT CREW			
Reduced flight activity and training exposure Explanation: flight crew, due to the reduced exposure, to the operational environment may forget operational requirements and limitations of the specific approvals	Aircraft specific Knowledge decay	<ul style="list-style-type: none"> - Forget aircraft and system limitations - Reduced system knowledge 	<ul style="list-style-type: none"> - Amend the ground training before Flight Crew return to fly to address the identified hazards. - Give unlimited access to CBT material to allow Flight Crew to refresh their knowledge on aircraft specific topics - Introduce a ground training refresher to address the return to operation - Increase the number of standardization meetings for instructors Flight Crew (Ground instructor, Line Training Captain, Type Rating Instructor and Type Rating Examiner) - Introduce a crew rostering practice avoiding the pairing of pilots both with long periods of reduced flight activity
	Operational Knowledge decay	Reduce adherence to the operational requirements for: <ul style="list-style-type: none"> - Performance Based Navigation - Low Visibility - ETOPS - MNPS 	

AREA	APPLICATION OF KNOWLEDGE		
THREAT	HAZARD	CONSEQUENCES	MITIGATIONS
CABIN CREW			
Reduced flight activity Explanation: cabin crew, due to the reduced exposure to the operational environment, may forget operational procedures	Operational Knowledge decay	Reduce adherence to SOP normal and non-normal (i.e. normal procedure arm and disarm slides, passengers)	<ul style="list-style-type: none"> - Introduce a ground refresher training before Cabin Crew return to fly - Give unlimited access to CBT material to allow Flight Crew to refresh their knowledge on aircraft specific topics - Develop a handout to refresh Cabin Crew knowledge - Increase the number of standardization meetings for instructors Flight Crew and Cabin Crew (Ground instructor and Cabin Crew line trainers)

Application of procedures

The notion of skill degradation and skill decay in highly procedural workplaces such as an aircraft cockpit is widely known to be a side-effect of automation. With time, and without rehearsal or refresh of the acquired knowledge and skill, performance declines. This skill degradation is observed in an increased response time or decreased accuracy of the performed tasks.

AREA	APPLICATION OF PROCEDURES		
THREAT	HAZARD	CONSEQUENCES	MITIGATIONS
FLIGHT CREW			
Reduced flight activity Explanation: Flight Crew, due to the reduced exposure to the operational environment, may lose confidence on operational procedures knowledge. This may have an impact on situational awareness.	Lapses and errors applying SOP	<ul style="list-style-type: none"> - Exceeding operating limits (Max flap speed, MMO, Max extended gear speed) - Unstable approaches - Disrupted flow pattern - Incorrect A/C configuration - Increased workload - Confusion - Wrong prioritization of tasks - Use of wrong checklist 	<ul style="list-style-type: none"> - Develop a video to use as refresher training to review preflight procedures and cockpit preparation - Prepare a handout to be used by pilot to review the cockpit preparation and the preflight - Adapt the ground training refresher content to reflect the current pilot situation - Introduce a CRM recurrent oriented to long break period/absence from flight activity - Introduce a crew rostering practice avoiding the pairing of pilots both with long periods of reduced flight activity
	Inadequate cockpit preparation and	<ul style="list-style-type: none"> - Wrong entries on FMS during pre-flight - Errors in performance calculation - Errors in W&B calculation - Poor pre-flight briefing - Wrong aircraft configuration (i.e. pitot) 	

AREA	APPLICATION OF PROCEDURES		
THREAT	HAZARD	CONSEQUENCES	MITIGATIONS
	<p style="text-align: center;">pre-flight procedure</p>	<p>cover or landing gear pins not removed, not all covers / doors safely fastened)</p>	
	<p style="text-align: center;">SOP knowledge decay</p>	<p>Reduce adherence to SOP normal and non-normal</p>	
	<p style="text-align: center;">Possible conflicting information between current and old procedures (SOPs, OMA, OMD etc.)</p>	<ul style="list-style-type: none"> - Workload - Confusion - Wrong prioritization of tasks - Unclear communication between the pilots - Wrong task sharing 	

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THREAT	HAZARD	CONSEQUENCES	MITIGATIONS
CABIN CREW			
<p>Reduced flight activity</p> <p>Explanation: Cabin Crew, due to the reduced exposure to the operational environment, may lose confidence on operational procedures. This may have an impact on situational awareness.</p>	<p>Lapses and errors applying SOP</p>	<ul style="list-style-type: none"> - Open doors with slide armed - Wrong prioritization of task - Misleading communication with flight crew - Wrong task sharing 	<ul style="list-style-type: none"> - Develop a video to use as refresher training to review preflight procedures and cabin preparation - Prepare a handout to be used by Cabin Crew to review the cabin preparation and the preflight procedures - Introduce a CRM training session oriented to long break period/absence from flight activity

USE OF AUTOMATION AND MANUAL FLYING SKILL

AREA	USE OF AUTOMATION AND MANUAL FLYING SKILL		
THREAT	HAZARD	CONSEQUENCES	MITIGATIONS
Reduced flight activity Explanation: Flight Crew, due to the reduced exposure to the operational environment, may lose confidence on the use of automation and/or manual flying skills.	Lapses and errors using aircraft automation	<ul style="list-style-type: none"> - Exceeding operating limits (Max flaps speed, MMO, Max extended gear speed) - Unstable approaches - Increased workload - Confusion - Wrong prioritization of tasks 	<ul style="list-style-type: none"> - Introduce a crew rostering practice avoiding the pairing of pilots both with long periods of reduced flight activity - Add an additional FSTD session for Line Training Captains and possibly for all pilots. - Increase the number of standardization meetings for instructors Flight Crew (Ground instructor, Line Training Captain, Type Rating Instructor and Type Rating Examiner) - Use of a Safety Pilot for the first few legs for any Copilot with reduced experience (i.e. Flight Crew that had their training interrupted) - Amend the OPC syllabus to focus on manual skills, raw data and use of automation - Add LIFUS sectors to pilots with limited experience
	Difficulties in maintaining the flight path in manual flight	<ul style="list-style-type: none"> - Unstable approach - ILS excessive deviation - Hard landing - Long landing - Aircraft limitation exceeded - Increase workload - Confusion 	

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