

## ***SAFETY INFORMATION 7/2022***

*11 March 2022*



### ***ENHANCED SAFETY, SECURITY, TRAINING AND MAINTENANCE IN PREPARATION FOR CIVIL AVIATION INDUSTRY RESTART***

#### **Introduction**

It is no surprise that the global COVID-19 pandemic has posed unprecedented challenges to global industries, and the air transport sector is with no exception. With borders closed, national lockdowns and a slump in consumer demand, it has undoubtedly been the most challenging time in Malaysia air transport's history.

As the Malaysian Government has recently announced to reopen its borders to international travellers from 1 April 2022 which have remained close for about two years due to Covid-19 pandemic, many airlines and airports are expected once again to increase the level of their activities.

In supporting the organisations in safely increasing their service provision, the Civil Aviation Authority of Malaysia (CAAM) has been working closely with Member State regulators and industry partners to identify the new or emerging safety issues. This took the form of a survey and follow-up virtual meetings with the different stakeholder groups.

Preparing to restart air operations in the wake of COVID-19 is vital for the successful revival of civil aviation. But this is no simple task. As the complex aviation system restarts, new hazards will undoubtedly emerge. Additionally, there are currently a substantial number of exemptions, extensions and eroded safety buffers. That means that the aviation system is not the same as that which was operating previously and our perception of what can safely be achieved should be challenged.

Therefore, CAAM and industry stakeholders should work together to implement restart measures, and in doing so, account for core established safety management principles to ensure a safe harmonised approach. Process points include the need for early engagement on operational and other relevant issues, regular contact between CAAM and industry, and the need to maintain a high degree of awareness of published guidance and other sources of information from a wide range of stakeholders. It is measures such as these that will help ensure that the restart and recovery in air operations in the so-called 'new normal' are thoroughly considered and implemented in a structured manner.

## **Recommendation**

### **1. Mental Health Checks**

The COVID-19 pandemic has badly impacted the livelihood of many in the aviation industry, thus, it is important to ensure the state of mental health of every employee is properly checked and taken care of. Operators should closely monitor the overall health condition of every employee, particularly those in operations, before conducting any flights. Management should acknowledge the importance of carrying out mental health checks on employees by providing a just culture, safe environment, and a platform for staff to speak up. Having more staff engagements and clear communication may further help in identifying any issues and provide the required assistance. The ultimate responsibility to safety lies within every individual and all leaders must step up to lead by example. These are very important key efforts that management must focus on for an effective safety management system in Malaysia.

In carrying out mental health checks, operators may conduct mental health awareness campaign by establishing a support group for employees to open-up, report and seek help. To have a comprehensive risk assessment and mitigation plan, the management must incorporate employee's emotional wellbeing as an input into the safety management system and create a safe zone for employees to voice out their problem. To facilitate a safety culture, a mutual trust and cooperation should be cultivated within the organisation.

In addition to that, airline operators are also encouraged to conduct pre and post flight briefing for flight, cabin, and ground crew. An additional pre-flight checklist directed at air crew's mental readiness to fly is an effective way to ensure their situational awareness is at the optimum condition. This checklist is a tool to assess the wellbeing of the crew prior to operating a flight. It will comprise questions on the amount of sleep, health status, stress, and amount of physical activities done days before the flying duty. A checklist for the pre-flight mental readiness screening will need to be validated.

### **2. Enhanced Training**

As the aviation industry increases more capacity, training is the key feature in maintaining currency. Pilots, engineers, cabin crew, air traffic controllers and all ground crew are advised to revisit operation manuals to ensure the required knowledge and information are not forgotten as there will be some form of rustiness as a result from the severe reduction in capacity. The lack of currency will result in skills erosion and slower response time, and this can be mitigated with mental preparation focusing on the technical aspects and catching up with operator manuals.

### 3. Continuing Airworthiness of Aircraft

This SI provides the guidelines from airworthiness perspective to ensure aircraft continuing airworthiness and the level of safety is maintained and also the required level of readiness of the operator in developing control measures to mitigate the associated risks and thus in ensuring a safe return to service (RTS) of all aircraft.

In view of the above, it is strongly recommended that operators take into consideration and implement the following measures:

- a) **Accountable managers and senior management** should be aware of and take their responsibilities to ensure continuous compliance with the regulations and that safety is not compromised during the organisation's RTS activities. This includes the aspect on **finance** and having adequate, qualified and trained **resources**. They should also ensure that **quality, safety policies and safety culture** continued to be implemented and actively promoted including **communication of safety issues** within the organisation.
- b) **Continuing Airworthiness Management Organisation (CAMO)** should lead the RTS activities by conducting a robust analysis and developing a dedicated RTS process and plan. The analysis supported by **safety risk assessment (SRA)** should include the identification of hazards, condition of the aircraft in their fleet and organisational aspects. In addition, it should be ensured that the existing hazards are re-assessed, and new threats are identified by taking the impact of the pandemic into consideration. Subsequently, the resulting required mitigating actions and maintenance work have to be determined and accomplished in order to ensure that the risks are properly managed.
- c) RTS activities by the CAMO should be performed in close cooperation with the contracted **Approved Maintenance Organisation (AMO)**. During the actual accomplishment of maintenance work, the AMO(s) should provide feedback to the CAMO on any defects found, to ensure in particular that the work order contains all necessary tasks. Some defects and findings may need to be communicated by CAMO to the aircraft type certificate holder (TCH) and CAAM.
- d) CAMO should ensure aircraft continuing airworthiness and the **serviceability of operational and emergency equipment**. In addition, due to prolonged storage/parking, specific inspections may also be required on items relating to contamination of fuel, contamination of air data systems that could lead to unreliable airspeed and altitude indications, lavatory fire extinguishing bottles on in- service aircraft that were parked or stored for prolonged period in a high-temperature environment, **obsolete or expired airborne software** etc.
- e) CAMO should assess the need to perform **additional maintenance tasks, supplemental physical aircraft inspections** and **ground tests** preferably with inputs from the TCH. The need to perform a **maintenance check flight** should also be assessed.

- f) **Line stations** should be re-assessed to determine their adequacy and capability to provide the required continuing airworthiness and maintenance support.
- g) Both CAMO and AMO should assess the possibility of **degradation in the level of skill and knowledge** of their technical personnel and certifying staff due to a period of reduced work or no activity during the COVID-19 crisis. Appropriate training should be provided to regain the required level of proficiency and recency.
- h) CAMO in close coordination with AMO should continuously monitor the RTS process and continuing airworthiness of the fleet via a targeted surveillance or audit. Any significant finding should be communicated to CAAM.
- i) After the aircraft is returned to service (post-RTS) and is in its normal operating environment, operators via their CAMO should submit **reliability reports** to CAAM on a monthly basis. This will enable both the operators and CAAM to identify and address any airworthiness related discrepancies at an early stage with the aim to achieve better operational performance and minimise disruption to aircraft operation.

#### 4. Air Traffic Service Provider (ATSP)

The prolonged decrease in traffic volume has impacted the way the ATSP and controllers performed their functions. To ensure that they are ready for the civil aviation industry to restart, the following measures should be implemented:

a) Management Systems;

1) Staffing

ATSP should ensure sufficient qualified and licensed air traffic controllers are available to resume normal operations of Air Traffic Control Center and Aerodrome Air Traffic Control Tower.

2) Daily briefing

The ATSP should ensure that the daily briefing shall be conducted during the hand over / take over watch and recorded in the logbook.

3) Rostering

The rostering of controllers should adhere to fatigue management requirements.

4) ATSM/CNS Systems

The ATSP should ensure the serviceability and reliability of ATSM/CNS system at controller's work positions (CWP) especially during surge of traffic volume. The ATSP should also ensure the fall back procedures and systems are workable.

b) Safety Management System

1) Safety Risk Management (SRM)

SRM should be conducted for hazard identification, safety risk assessment, safety risk mitigation and risk acceptance. ATSP should identify hazard associated with the civil aviation industry restart which may constitute to increase of workload due to higher traffic volume. The effectiveness of implemented safety risk mitigation strategies must be monitored to determine if further action is required.

2) Safety Assurance

Safety Performance monitoring and internal audit activities ATSP has to increase the Safety Performance monitoring and internal audit activities to ensure the operations are restored to a safe level and implemented in a structured manner.

3) Safety Promotion

Recurrent safety training should focus on changes to the operation policies, processes and procedures, and should highlight any specific safety issues relevant to the organisation or lessons learned. In addition, ATSP should ensure any safety information needs to be communicated internally and externally

c) Human Performance

1) ATSP should ensure air traffic controllers to regain the confidence during pre- pandemic. All ATC license holders must be mentally and physically ready for duty. In addition to the regulated requirements, enhanced training as mitigation measure which include live traffic familiarisation or simulator sessions in order to achieve the following:

- i) Regain skills and currency;
- ii) Rebuild confidence in decision making; and
- iii) Review of knowledge on recent policies/procedure changes.

d) Training, Checking and Recency;

1) There are air traffic controllers who obtained new rating during the pandemic where volume of traffic is significantly low. These air traffic controllers did not experience normal workload as per pre-pandemic environment.

2) ATSP shall ensure these controllers are trained to gain skills, confidence and competency required by pairing them with an experienced controller.

## 5. Flight Operations

To ensure operators are ready for the civil aviation industry to restart, the following elements should be reviewed and enforced as necessary:

### a) Management Systems

#### 1) Restarting operations risks spreading Covid-19

Restarting operations not only brings passengers closer together, it also brings together aviation personnel. Both of these increase the risk of further spreading the virus. Organisation need to adapt their procedures in order to minimise the risk of infection and to ensure that work areas are regularly and thoroughly cleaned.

#### 2) Reduced oversight by CAAM due to lockdown

CAAM has to increase the oversight activities to ensure the operator's operations are restored to a safe level and implemented in a structured manner.

#### 3) Reduced focus on, or prioritisation of safety

There are multiple factors that an organisation may not be providing safety and safety management with the same level of attention and resources as was previously possible. These include distractions and stress at personal level, economic pressures and the practical pressures of returning to service. Also focusing too much on returning to service and economic survival may reduce the emphasis on human and organisational factors, to the detriment of safety.

#### 4) Restarting a complex system is challenging

The aviation system is highly interconnected, sophisticated and merges people and technology, meaning that the consequences of shut down and restart are not completely predictable. Organisation will need to prepare good communications and decision making strategies, using personnel expertise, data, information and good internal and external coordination.

#### 5) Degraded management systems and loss of experienced nominated persons due to furlough and redundancies

The reduced finances of organisation means that safety staff may have been made redundant or furloughed, while there is a significant amount of work to do in maintaining and updating their safety management systems.

#### 6) During reduced operations, new SOPs may be introduced that require risk assessment

The reduced air traffic normally managed through new SOPs which require risk assessment. As air traffic increases, the previous SOPs will need to be reintroduced. Change of management principles must be applied.

7) Prevention and treatment of unruly passengers in the context of COVID-19

An increase in cases of unruly or disruptive passengers should be expected, either prior to departure or in-flight. Procedures to manage this and associated training need to be developed.

b) Human Performance

1) Personnel may not feel safe and in control about returning to work

Personnel will be returning to duty with a higher than normal psychological stress, potentially reducing staff performance and increasing safety risks. Organisation need to understand and develop strategies to mitigate against this.

2) Decreased wellbeing of aviation professionals during shutdown

The pandemic is a significant source of anxiety, stress and uncertainty for almost everyone. During the shutdown, with people working from home or those who being furloughed, the personal well-being of professionals is likely to have suffered. Therefore, organisation have a duty to care to support the wellbeing of aviation professionals.

3) Aviation personnel fatigue

With redundancy and furlough reducing the available number of personnel, those left working may have to work additional hours. The preparation for eventual return to (new) normal operations will require significant additional effort in comparison with actual normal operations. These may both contribute to rising levels of fatigue.

4) Flight crew fatigue due to unavailability of rest facilities at destination or extended duty period

At certain destinations, crews are required to stay on board the aircraft and neither hotels nor restaurants are available. Where crew can leave the airport, extended duty periods may occur due to health checks and the need for physical distancing, making leaving/re-entering the airport a longer process.

5) Reduced adherence to procedures in the new working environment

Reduced operations and underload may create a belief that the level of risk within the operating environment has substantially reduced, causing staff to become less sensitive to risk with the possibility that they are less alert or procedures are not completely followed.

6) Roster adaptations to reduce transmission of illness may create different team behaviours

To reduce the risk of virus transmission, some operator have created rostered groups of personnel who work together, with the different group

never meeting one another. There is a risk that these groups will develop their own dynamic leading to deviations from procedures.

c) Training, Checking and Recency

1) Skills and knowledge degradation due to lack of recent practice

Due to this pandemic, most aviation professionals are not performing their normal tasks, sometimes they are doing a substantially different job and sometimes not working at all. Together, this creates a reduction in the skills and knowledge of aviation professionals and with it associated safety risks.

2) Backlog in training limiting available personnel

A reduction in the availability of training facilities will lead to a backlog in training. This means that personnel will not have received necessary recurrent/refresher training with a consequent effect on performance. This issue may become a limiting factor in capacity during a return to operations or will cause fatigue or overload where there is a reduced number of personnel providing services.

3) Ground handling training programmes disruptions

In addition to the problems faced by all personnel in not receiving training, ground handling has a high staff turnover, less secure employment, seasonal staff recruitment and seasonal training. This will disrupt the operations of the organisation.

4) Long gap in flying following type rating training

The lockdown had caused situation whereby a pilot completed type rating training to be followed by a long gap in flying before commencing operational flying. Therefore, it presents a higher risk than it had previously.

5) The expiry of the validity of the licence

Due to the pandemic and crew being placed on furlough, most of the crew have not get their licence renewed due to financial constraints. As preparing to restart air operations, it is vital to get the licence valid by renewing Medical Certificates, Certificate of Test, Instrument Rating and English Proficiency.

d) Outdated Information

1) Documentation and database updates may not have been applied

Relevant updates of operational procedures and documentation, especially temporary revisions/updates may be missed. In addition, aircraft databases may not have been updated such as FMS, TAWS, charts, etc. This may have a cascading effect on the safety of operation.

2) Outdated or inconsistent information in aeronautical information and flight plans



Aeronautical Information Management (AIM) and data service providers (DAT) are likely to have suffered from a lack of staff. This reduces their ability to accomplish Aeronautical Information Service (AIS) data publication in a timely manner that meets aeronautical information update needs and to include actual updates within publications.

3) Incorrect aircraft navigation due to outdated or inconsistent information

Aircraft may deviate from their flight path, assigned flight levels or lose separation as a result of outdated and inconsistent information. This relates to the ability of ATCOs, flight operations officers and pilots to receive and absorb up to date information, both in advance and during the return to normal operations.

e) Financial Impacts on Safety

1) Missing suppliers and difficulty liaising with suppliers

The shutdown has already resulted in difficulties for organisations liaising with their suppliers. Further economic constraints may increase problems, making it difficult to maintain the supply chain.

2) Reduced available financial resources

A reduction in available financial resources may cause the loss of key personnel and corporate knowledge, increase pressure on personnel and affect decision making.

3) Shortage of operational and technical staff

Organisations' limited finances may limit the number of personnel they employ.

## 6. Aerodrome Operators

In order to facilitate a quick check on aerodromes prior to resuming operations after an extensive lockdown/reduced operations period, aerodrome operators are recommended to consider in their recovery plan the following, but not limited to:

a) Overall inspection of the paved, unpaved surfaces and surroundings, paying attention to:

- 1) general cleanliness, presence of foreign object debris (FOD) and any signs of damage to the pavement surface, which could pose a risk to the aircraft operations;
- 2) leakages and depressions due to long term parked aircraft;
- 3) presence of wildlife, which might have increased in the absence of regular operations;
- 4) condition of fences;

- 5) drainage systems;
  - 6) the state of the vegetation to ensure that lights, signs and markers are not obstructed;
  - 7) condition of movement area markings to ensure adequate visibility;
  - 8) markings and lighting of obstacles.
- b) The effective functioning of passenger loading bridges, Visual Docking Guidance System (VDGS) and apron flood light.
  - c) The proper functioning of the electrical power supply systems for air navigation facilities and lighting system, including signs.
  - d) The proper functioning of Communications, Navigation and Surveillance (CNS) equipment to be checked in coordination with Air Navigation Service Provider (ANSP).
  - e) Rescue and firefighting level of protection in accordance with the expected traffic and rescue and firefighting services vehicles and equipment are properly functioning.
  - f) Emergency access roads of rescue and firefighting vehicles to the active runway(s) are unobstructed.
  - g) Capability for removal of disabled aircraft.
  - h) The published information in Aeronautical Information Publication (AIP), AIP Supplement (AIP-SUP) and NOTAM in respect to the actual aerodrome operational situation.
  - i) Construction or maintenance work sites are appropriately marked and lighted. For ongoing changes or when resuming construction works, ensure mitigating measures are still relevant and implemented.
  - j) Vehicle/equipment readiness: Check the readiness of all the airfield vehicle and equipment which would not have been used for an extensive period of time.
  - k) To ensure that Airside Driving Permit (ADP) and Airside Vehicle Permit (AVP) are valid.
  - l) Human Resource, Competency & Training:
    - 1) Availability of human resources: Check the availability of human resources especially if aerodrome operator and/or subcontractors downsized the staff pool.
    - 2) Competency of staff : Briefing/short training to staff on their roles and responsibilities as they may be resuming work after an extensive break. Refresher training for those needed

## 7. Aviation Security

Relevant stakeholders with regards to aviation security should take note of the following guidance.

### a) Airport Pass:

It is expected that applications for airport passes will increase due to the opening of Malaysia's borders. Therefore, airport operators will need to: -

- 1) Speed up the process of issuing airport passes; and
- 2) Renew all of the lapsed background checks and/or security clearances on the existing staff. To consider a plan to recover from any backlog (if any).

### b) Security Training:

This is essential to ensure that an employee can carry out his duties properly according to the requirements and rules. During the COVID-19 pandemic, the security training centre was not actively organising training for their staffs. With the reopening of Malaysia's borders, these training centres will need to: -

- 1) Reactivate their operations by complying with COVID-19 SOPs while operating;
- 2) Increase the number of aviation security courses; and
- 3) Provide sufficient certified security instructors.

### c) Security Personnel:

Security personnel play an essential role in moving an operational activity. Without having an adequate and qualified security personnel, it will jeopardise the operator's safety and security. Therefore, airport and airline operators are to ensure: -

- 1) To withdraw and provide recurrent training to the security personnel who previously carried out non-security duties due to the closure of the border before being deployed to carry out security duties;
- 2) All security screeners on duty have valid permits; and
- 3) Security personnel conducting regular security inspections to apply COVID-19 SOPs during security inspections by minimising physical contact.

### d) Security Equipment:

During the COVID-19 pandemic, a high number of security equipment was not utilised due to the decrease in flight operations and the unfavourable cost of calibrating security equipment. Therefore, airport and airline operators shall check the readiness (calibration, maintenance, etc.) of all security equipment that were not utilised for an extensive period of time.

As the aviation industry moves towards a safe and sustainable restart, CAAM would like to remind the aviation industry the importance of maintaining high compliance to regulations and Civil Aviation Directives to ensure public safety and security. CAAM will continue to facilitate and provide the needed support to the industry and wish the industry a safe and secure restart.

This SI supersedes SI 06/2021 – Enhanced Safety, Training and Maintenance in Preparation for Civil Aviation Industry Restart, dated 24<sup>th</sup> October 2021.



**DATUK CAPTAIN CHESTER VOO CHEE SOON**

Chief Executive Officer  
*for* Civil Aviation Authority of Malaysia

11 March 2022