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**COVID – 19 PANDEMIC**  
**GUIDANCE FOR COMPILING A SAFETY CASE**

**1. Purpose**

To provide guidance on how to compile a safety case in order to demonstrate the alternate means by which an air operator will comply with the requirements as contained in section 6.5 of the General Exemption dated 05 July 2020.

**2. Applicability**

Air Operating Certificate holders who are not able to comply with the published General Exemption dated 05 July 2020, Section 6.5 as referenced.

**3. Background**

On 15 March 2020, the President of the Republic of South Africa declared a national state of disaster regarding the COVID-19 outbreak. In this regard, the President also put in place several measures to limit exposure and the potential spread of the virus.

The President announced the easing of restrictions of the lockdown from Level 4 to Level 3 from 1 June 2020, which would allow businesses to open the workplaces for a limited number of employees returning to work and to resume certain operations. The objective under Level 3 is to take extreme precautions to limit transmission and outbreaks of COVID-19, while allowing some activities to resume.

Further directions were published by the Minister of Transport on 30 May 2020 in Government Gazette No. 43375, and subsequently Government Gazette No. 43476, Vol. 660, dated 25 June 2020 and Government Gazette No. 43493, Vol. 661 dated 2 July 2020.

In the harmonization of aspects that the Authority considers at different stages of the pandemic, it still focuses on:

- assessment and prioritization of risks based on collection and analysis of data;
- application of safety management principles to support risk-based decision-making; and
- management and monitoring of CAA approvals in light of the flexibility needed across the aviation system to continue safe operations.

The successful management of the COVID-19 pandemic requires the assessment and management of risks that extend beyond the boundaries of managing aviation safety risks as defined in Annex 19 — Safety Management. The CAA keeps in mind how their decisions may impact the risks being managed by other State authorities and that efforts by other State authorities to manage the risks that fall under their responsibility will have an impact on aviation.

As encouraged and mandated by ICAO the decision-making process involves assessing the COVID-19 situation and the collection and analysis of available data and information within the State and related stakeholders. The following provides a safety risk management approach using the plan–do–check–act (PDCA) cycle for managing aviation safety risks during the pandemic. A systematic approach to the safety risk

Safety risk management is a continuous activity, making the PDCA cycle useful throughout an infectious disease outbreak. During the evolution of this pandemic, risks will change, and the initial plans and actions will need to be monitored to ensure that they remain current and appropriate. This may be as a result of new safety data and information becoming available. This could lead to adapting what is being monitored and result in different actions being taken. This also enables the lessons learned to be fed back into the safety risk management processes and activities.

#### 4. General

The management of change should be a formal process that identifies external and internal change that may affect established cultures, processes and services. It utilises the organisation's existing risk management process to identify potential hazards that could impact safety. Change can also introduce new hazards that could impact the appropriateness and effectiveness of existing risk mitigations. Organisations should define the types of changes that would require a formal management of change process. This should also include who makes the decision to start the process and who has the authority to sign it off.

**Safety Case definition:** A document which provides substantial evidence that the system to which it pertains meets its safety objectives. (extracted from ICAO Guidance Material on Building A Safety Case for Delivery of An ADS-B Separation Service, Version 1.0 – September 2011)

#### 5. Process and Conditions

##### 5.1. Conditions to be understood and followed:

Safety Case is a tool for accomplishing safety assurance. When applied correctly it breeds clear and amazing benefits to the organisation, such as reducing costs, reducing injuries, improve staff satisfaction etc. One main advantage of safety cases, is that it produces at your own time whilst developing the system, providing an opportunity for predictive SMS.

Safety case is nothing more than collection of supportive evidence towards a conclusion, including facts, arguments and possibilities. As a structured document, it is targeting a compelling, comprehensive and valid conclusion regarding safety for a given application, system, or process in a given operating environment. The most important part of a safety case is ensuring that the process in question meets all applicable legislation and regulation. It should not however remain limited to only this. Hazard identification and risk management should be part of the safety case, including an assessment, information and guidance on the integration process of the element into the overall system. Further to this, it has to provide clear lines of communicating the process, the relevant (and residual risks) and furthermore define the tracking mechanisms for monitoring. In simpler terms, it describes what needs to be managed.

The referenced Safety Case understanding should be taken in the context as:

- (a) A Safety Case is the documented assurance that includes a structured argument, supported by evidence, intended to justify that an operation is acceptably safe. A safety case aims to show that specific safety claims are substantiated and can be maintained.
- (b) The development of a Safety Case is not an alternative to carrying out a Safety Assessment. It is a means of structuring and documenting a summary of the results of a Safety Assessment, and other activities (e.g. simulations, surveys etc.), in a way that a reader can readily follow the logical reasoning as to why a change (or ongoing service) can be considered safe.
- (c) Such an evidence-based approach can be contrasted with a prescriptive approach to safety certification, typically used by the Authority(s), which require safety to be justified using a stipulated process. Prescribed standards typically do not require an explicit argument for safety and instead rest on the assumption that following the process will generate the required standard for safety.
- (d) A safety case regime is an objective-based regime whereby legislation sets broad safety objectives and the operator, who accepts direct responsibility for the ongoing management of safety, develops the most appropriate methods to achieve those objectives. Essentially, the operator must make a 'case' demonstrating to the Authority how it is going to effectively manage safety in its operations.
- (e) The thinking behind a safety case regime is that safety is best managed through positive measures rather than a prescriptive 'one size fits all' mentality — that is, safety is best managed if organisations anticipate possible risks instead of merely complying with prescribed technical rules. Whilst the Authority must ultimately accept or reject the safety case; it is up to the operator to be proactive rather than simply compliant in the safety management of its operations.
- (f) Systematic analysis of risks, such as proposed changes to equipment or procedures, can identify and mitigate weaknesses before they combine with other factors to result in undesired costly outcomes. Rather than focusing solely on the level of risk, this

approach creates a structured appraisal of how the risk can be managed effectively and efficiently.

(g) A good Safety Case should include, at least:

- (i) What the Safety Case is trying to demonstrate - this should be directly related to the Claim that the subject of the Safety Case is acceptably safe;
- (ii) Why is the Safety Case being written and for whom;
- (iii) A description of the system/change and its operational/physical environment, sufficient only to explain what the Safety Case addresses and for the reader to understand the remainder of the Safety Case;
- (iv) For any Safety Case, the justification for introducing the change (and therefore potentially for incurring some risk);
- (v) A reasoned and well-structured Safety Argument, showing how the Aim is satisfied;
- (vi) Supporting safety evidence to substantiate the Safety Argument;
- (vii) All assumptions, outstanding safety issues, and any limitations or restrictions on the operation of the system;
- (viii) A simple statement to the effect that the safety objective has been satisfied, subject to the stated caveats.

## **5.2. Process to be followed:**

Each Air Operator will be required to submit an alternative means to demonstrate how they will comply in the form of a Safety Case, to the Flight Operations Department for acceptance. The submission must consider following a risk-based approach process that shall also focus on the applicable situations through management of change as outlined in SA CATS 140.01.3(2) (2.6) (2). Each affected operator will contact their responsible CAA Principal Operations Inspector (POI) to commence an acceptance process.

Furthermore, this Authority also encourages consideration of human factors (HF) risk assessment as part of integrated safety mitigation approach.

The safety case should include at least the following subjects as:

- Executive summary
- Introduction
- System description
- Assumptions used
- Progress in integration
- Safety requirements meet
- Emergency and contingency arrangements
- Operational information
- Independent safety audit/ review

- Conclusions and recommendations
- References
- Safety arguments
- Safety evidences
- Issues arisen
- Limitation
- Hazard identification and risk assessment

Safety cases must be reviewed and updated periodically.

## 6. Adherence to general COVID – 19 regulations

At all times, the measures outlined by the South African Government to reduce the risk of the spread of COVID-19, such as social distancing, personal hygiene and minimising travel remain applicable, and pilots and operators undertaking flights on the basis permitted here must observe these.

## 7. Compliance with the Civil Aviation Regulations 2011

In line with SA CATS 140.01.3 (2)(2.6)(2)(xii) and (xiii), this Authority shall consider the submitted Safety Case in the form of Management of Change evaluation for acceptance where, the following steps shall be intensely considered as:

- **Step 1 – Assessment of the nature, scope and impact of the change**  
Review the submitted documentation to understand the change has been adequately described, included the context and its impact internally and externally.
- **Step 2 – Assessing hazard and consequence identification**  
Ensure that an appropriate hazard identification process has been carried and the range of consequences have been identified and documented.
- **Step 3 – Evaluation of the way that the risk has been assessed and accepted**  
Review and evaluate that probability and severity classifications are appropriate, justified and applied consistently to manage risks to an acceptable level.
- **Step 4 – Assessing the risk mitigation actions**  
Evaluate the risk mitigations to determine the effectiveness of the actions taken to control the risk.

- **Step 5 – Assessing the justification and supporting evidence.**

Assessment of any supporting evidence and arguments used to justify that the change is valid and does not have an adverse effect on safety.

- **Step 6 – Assessing the assurance plan to manage the residual risk**

Review how the organisation plans to monitor the change implementation and verify that risks mitigations are effectively managed after the change has been completed.

**8. Non-compliance to the Civil Aviation Regulations, 2011 have the following consequences:**

- (a) 185.01.1(1) Any person who commits an offence, or contravenes these Regulations, may be subjected to administrative or criminal action in terms of this Part.
- (b) 185.01.2 A person commits an offence if that person—hinders or obstructs an authorised officer, inspector or authorised person in the exercise of his or her powers or the performance of his or her duties;
- (c) contravenes any provision of the [Civil Aviation] Act and these Regulations and related Technical Standards.

**9. References**

SA CAR Part 93; 121, 127, 135, 185 and 140

ICAO Guidance Material on Building A Safety Case for Delivery of an ADS-B Separation Service, Version 1.0 – September 2011

ICAO Doc. 10144

<b>Issued by the South African Civil Aviation Authority (SACAA)</b>		
	<b>MARY STEPHENS</b>	<b>10 JULY 2020</b>
<b>SENIOR MANAGER: CONSISTENCY AND STANDARDISATION</b>	<b>NAME IN BLOCK LETTERS</b>	<b>DATE</b>