



**Australian Government**

# **AVIZ3051A Manage situation awareness in remote pilot aircraft systems (RPAS) operations**

**Release: 1**

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## **Modification History**

Not applicable.

## **Unit Descriptor**

This unit involves the skills, knowledge and attitudes required to manage situation awareness in remote pilot aircraft systems (RPAS) operations, including maintaining and managing aircraft's situation both alone and in conjunction with others, assessing situations and making appropriate decisions, setting priorities and managing tasks, and maintaining all necessary communications. Licensing, legislative, regulatory or certification requirements are applicable to this unit.

## **Application of the Unit**

Work must be carried out in compliance with the relevant licence and aircraft rating requirements of the Civil Aviation Safety Authority (CASA) and/or ADF; airspace control requirements and Day Visual Flight Rules (Day VFR); Instrument Flight Rules (IFR); and aircraft control principles, regulations, safety codes, protocols and procedures relevant when managing situation awareness in aircraft flight.

Operations are conducted as part of commercial and military aircraft activities across a variety of operational contexts within the Australian aviation industry.

Use for ADF Aviation is to be in accordance with relevant Defence Orders and Instructions and applicable CASA compliance.

Work is performed under limited supervision.

## **Licensing/Regulatory Information**

Remote Pilot Licence (RPL) Basic – Level 1

## **Pre-Requisites**

Not applicable.

## **Employability Skills Information**

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the required performance needed to demonstrate achievement of the element. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

- |  |  |
|--|--|
| 1 Maintain situation awareness         | 1.1 Continuous monitoring is demonstrated of all critical factors relevant to the safe progress of a flight  |
|  | 1.2 Situation awareness is demonstrated through application of an effective visual scan, use of radio communication, use of traffic information and use of aircraft systems where applicable |
|  | 1.3 Trends towards an unsafe situation are recognised and appropriate corrective action is employed in accordance with workplace procedures and regulatory requirements                      |
|  | 1.4 Breakdown in situation awareness is identified from errors or discrepancies and is rectified by ensuring safe operation of the aircraft and situation                                    |
| 2 Assess situations and make decisions | 2.1 Problems are identified and analysed   |
|  | 2.2 Solutions are identified and risks assessed  |
|  | 2.3 A course of action is chosen to ensure a safe outcome to a flight or manoeuvre   |
|  | 2.4 The plan of action is communicated and tasks are allocated, if appropriate   |
|  | 2.5 Actions are taken to achieve optimum outcomes  |
|  | 2.6 Progress is monitored against plan   |
|  | 2.7 The plan is re-evaluated to achieve optimum outcomes   |
|  | 2.8 Operational changes and related risks are monitored and managed to ensure a safe outcome to a flight or manoeuvre  |
| 3 Set priorities and manage tasks      | 3.1 Priorities and workload are organised to ensure completion of all tasks relevant to the safety of the flight   |
|  | 3.2 Safe and effective operation of the aircraft is prioritised  |

ahead of competing tasks

3.3 Technology is appropriately used to reduce workload and improve ability to perform mental and manipulative activities

3.4 Fixation on single actions/functions is avoided

3.5 Symptoms of fatigue are recognised and appropriate action is taken to reduce its effects

3.6 Critical events and tasks are anticipated and completed in the time available

4 Work with others in the management of situation awareness

4.1 A level of assertiveness is demonstrated which ensures the safe completion of a flight

4.2 Effective and efficient communications and interpersonal relationships are established and maintained with all stakeholders to ensure the safe outcome of the flight

4.3 Crew members are encouraged to participate in and contribute to the safe outcome of a flight

4.4 Appropriate action is taken in conjunction with others to cooperatively correct any identified unsafe situations which may develop during an aircraft flight

## Required Skills and Knowledge

This describes the essential knowledge and skills and their level required for this unit.

### Required knowledge:

- Relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders
- In Defence context, relevant Defence Orders and Instructions
- Relevant OH&S and environmental procedures and regulations
- The principles of aircraft flight
- Procedures for maintaining situation awareness
- Use of the navigational computer
- Aircraft fuel usage rates
- Traffic rules and procedures
- Air navigation techniques
- Aircraft communication procedures and protocols
- Standard radiotelephony phraseology as detailed in the Flight Radiotelephone Operator Licence (FROL) syllabus and the Aeronautical Information Publication (AIP)
- Problems that may occur when managing situation awareness and action that can be taken to overcome them
- Procedures for transferring aircraft control between crew members
- Operational hazards that may be identified when managing situation awareness and ways of controlling those hazards and associated risks

### Required skills:

- Maintain and manage an aircraft's situation both alone and in conjunction with others
- Assess situations and make appropriate decisions
- Set priorities and manage tasks
- Maintain all necessary communications
- Maintain compliance with regulatory requirements
- Select and use appropriate instruments, communications equipment and aids
- Source and interpret aviation weather forecast products appropriate to flight planning and navigation procedures
- Apply air safety practices and regulations
- Transfer aircraft control between crew members, where appropriate
- Communicate effectively with others when managing situation awareness in aircraft flight
- Read and interpret instructions, regulations, procedures and other information relevant to managing situation awareness in aircraft flight
- Interpret and follow operational instructions and prioritise work
- Complete documentation related to managing situation awareness in aircraft flight
- Operate electronic communication equipment to required protocol

- Work collaboratively with others when managing situation awareness in aircraft flight
- Adapt appropriately to cultural differences in the workplace, including modes of behaviour and interactions with others
- Promptly report and/or rectify any identified problems that may occur when managing situation awareness in aircraft flight in accordance with regulatory requirements and workplace procedures
- Implement contingency plans for unexpected events that may arise when managing situation awareness in aircraft flight
- Apply precautions and required action to minimise, control or eliminate hazards that may exist when managing situation awareness in aircraft flight
- Monitor and anticipate operational problems and hazards and take appropriate action
- Monitor work activities in terms of planned schedule
- Modify activities dependent on differing workplace contingencies, situations and environments
- Work systematically with required attention to detail without injury to self or others, or damage to goods or equipment
- Adapt to differences in equipment and operating environment in accordance with standard operating procedures
- Select and use required personal protective equipment conforming to industry and OH&S standards
- Implement OH&S procedures and relevant regulations
- Identify and correctly use equipment required when managing situation awareness in aircraft flight

## Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills, the range statement and the assessment guidelines for this Training Package.

### **Critical aspects for assessment and evidence required to demonstrate competency in this unit**

- The evidence required to demonstrate competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying:
  - the underpinning knowledge and skills
  - relevant legislation and workplace procedures
  - other relevant aspects of the range statement

### **Context of and specific resources for assessment**

- Performance is demonstrated consistently over a period of time and in a suitable range of contexts
- Resources for assessment include:
  - a range of relevant exercises, case studies and/or other simulated practical and knowledge assessment, and/or
  - access to an appropriate range of relevant operational situations in the workplace
- In both real and simulated environments, access is required to:
  - relevant and appropriate materials and equipment, and
  - applicable documentation including workplace procedures, regulations, codes of practice and operation manuals

### **Method of assessment**

- Assessment of this unit must be undertaken by a registered training organisation
- As a minimum, assessment of knowledge must be conducted through appropriate written/oral tests
- Practical assessment must occur:
  - through activities in an appropriately simulated environment at the registered training organisation, and/or
  - in an appropriate range of situations in the workplace

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance.

- Tasks may be undertaken in:
- variable weather conditions in accordance with Day Visual Flight Rules
  -
- Performance may be demonstrated in:
- single engine aircraft
  - multi engine aircraft
  - synthetic training device approved by the appropriate authority
  - variable air traffic conditions
  - variable flight situations
  - abnormal situations
  - classes of airspace as designated by the Civil Aviation Safety Authority
- Aircraft may include:
- Remotely Piloted Aircraft (RPA)/Unmanned aircraft
- Crew may include:
- Remote Pilot
  - Observers
- Instruments may be:
- fitted flight instruments
  - head up displays
- Limitations may be imposed by:
- local noise abatement requirements and curfews
  - airspace endorsements
- Classes of airspace may be:
- as designated by the regulator
  - restricted and danger areas
  - military control zones
  - Air Defence Identification Zones
- Factors that may adversely affect the safe outcome of a flight or manoeuvre may include:
- changes in the wind and weather conditions en route
  - changes in the wind and weather conditions at the destination
  - engine or equipment malfunction or failure
  - instrument malfunction or failure
  - air traffic in the vicinity of the aircraft
  - running out of fuel
  - errors in navigation
  - becoming lost
  - security threat on board aircraft
  - exceeding nominated operating parameters and tolerances for the aircraft
- Dependent on the type of organisation concerned and the
- company procedures
  - enterprise procedures



- local terminology used, workplace procedures may include:
- organisational procedures
  - established procedures
  - standard operating procedures
- Information/documents may include:
- relevant sections of Civil Aviation Safety Regulations and Civil Aviation Orders pertaining to the management of situation awareness during an aircraft flight
  - in Defence context, relevant Defence Orders and Instructions
  - Manual of Standards
  - Flight Manual/Pilot's Operating Handbook (POH)
  - Aeronautical Information Publication (AIP)
  - En Route Supplement Australia (ERSA)
  - relevant sections of the Civil Aviation Advisory Publications (CAAP)
  - performance charts
  - operations manuals
  - approved checklists
  - workplace procedures and instructions and job specification
  - induction and training materials
  - conditions of service, legislation and industrial agreements including workplace agreements and awards
- Applicable regulations and legislation may include:
- relevant Civil Aviation Safety Regulations and Civil Aviation Orders
  - in Defence context, relevant Defence Orders and Instructions
  - relevant state/territory OH&S legislation
  - relevant state/territory environmental protection legislation
  - relevant Australian Standards
- Performance includes tolerances specified in either of:
- relevant licence and aircraft rating requirements of the Civil Aviation Safety Authority (CASA) such as:
    - Manual of Standards
  - relevant Defence documentation such as:
    - Defence Orders and Instructions

## Unit Sector(s)

Not applicable.

## **Competency field**

Z - Situation Awareness