

## 41065 Apply aeronautical decision-making processes in an aviation enterprise

<b>Kaupae   Level</b>	5
<b>Whiwhinga   Credit</b>	5
<b>Whāinga   Purpose</b>	<p>This skill standard is for those working in an aviation enterprise.</p> <p>People credited with this skill standard are able to apply aeronautical decision-making processes to an aviation workplace situation.</p> <p>This skill standard can be used in programmes leading to a range of aviation qualifications and micro-credentials that require application of aeronautical decision-making.</p>

### Hua o te ako me Paearu aromatawai | Learning outcomes and assessment criteria

<b>Hua o te ako   Learning outcomes</b>	<b>Paearu aromatawai   Assessment criteria</b>
1. Apply aeronautical decision-making processes in an aviation enterprise.	a. Outline methods of information processing that contribute to and that compromise effective decision-making.
	b. Analyse the effects of barriers on effective decision-making and how to manage these for a selected aviation workplace.
	c. Evaluate an aeronautical decision-making process to a specific aviation workplace situation.

### Pārongo aromatawai me te taumata paearu | Assessment information and grade criteria

#### *Assessment specifications:*

Assessments must be conducted in an active or simulated aviation environment to ensure practical application to reflect the standards of an aviation workplace.

#### *Definitions:*

*Aeronautical Decision-Making (ADM)* examines how people actually make decisions and guides rational processes of decision-making in aviation environments that are systematic and take into account relevant mental processes and human factors. The decision maker prioritises objectives, considers the environment in which the decision will be made (situation), generates alternatives, evaluates and compares the related risks, makes and then implements the decision while continuing to monitor and review the situation and options.

*Aviation enterprise* means any organisation involved in aviation activities or support activities.

*D.E.C.I.D.E* (Detect, Estimate, Choose, Identify, Do, Evaluate) is a model of decision-making that can be applied to an aviation workplace.

*Hazardous attitudes* are risk-taking behaviours that can interfere with decision-making. These include anti-authority, invulnerability, impulsivity, macho, resignation, and the fear of appearing incompetent.

*Naturalistic Decision Making (NDM)* is a style of intuitive decision making. Naturalistic decision making describes how experienced people make decisions in dynamic, naturalistic environments, under conditions of time pressure, shifting goals, unclear information, and high risk.

*PILOT* refers to the decision-making model that involves Pool of facts, Identify the problem, Look for solutions, Operate, Take stock.

The *5-P model* refers to the structured framework for decision-making and risk management in flight operations that involves Plan, Plane, Pilot, Passengers, and Programming.

### ***Ngā momo whiwhinga | Grades available***

Achieved

### **Ihirangi waitohu | Indicative content**

Information processing

- Sensory register.
- Working short-term memory.
- Long-term memory.
- Factors that have a negative impact on information processing:
  - alcohol and drug impairment
  - poor communication
  - distraction
  - fatigue and stress
  - illness
  - medication
  - poor nutrition
  - cognitive biases
  - startle response
  - workload
  - time pressure.

Barriers to effective decision making

- Confirmation bias.
- Entrapment.
- Heuristics.
- Limitations of attention.
- Cue salience.
- Mindset.
- Satisficing.
- Hazardous attitudes.
- Aviation accident reports.

## Aeronautical decision-making processes

- ADM.
- NDM.
- D.E.C.I.D.E.
- 5-P model.
- PILOT model.

## Rauemi | Resources

- Civil Aviation Authority of New Zealand (CAA)'s Decision-making resources ([www.aviation.govt.nz/safety/safety-education-and-advice/human-factors/non-technical-skills/decision-making/](http://www.aviation.govt.nz/safety/safety-education-and-advice/human-factors/non-technical-skills/decision-making/)).
- Civil Aviation Safety Authority of Australia, *Aviation decision-making*, [www.casa.gov.au/sites/default/files/2024-07/avsafety-aviation-decision-making-card.pdf](http://www.casa.gov.au/sites/default/files/2024-07/avsafety-aviation-decision-making-card.pdf).
- Certified Flight Instructor Notebook, *Aeronautical Decision-Making (ADM)* ([www.cfynotebook.net/notebook/aeromedical-and-human-factors/aeronautical-decision-making](http://www.cfynotebook.net/notebook/aeromedical-and-human-factors/aeronautical-decision-making)).
- Flight Safety Foundation, *Operator's Guide to Human Factors in Aviation*, ([skybrary.aero/articles/decision-making-oghfa-bn](http://skybrary.aero/articles/decision-making-oghfa-bn)).

## Pārongo Whakaū Kounga | Quality assurance information

<b>Ngā rōpū whakatau-paerewa   Standard Setting Body</b>	Transport Industry Skills Board
<b>Whakaritenga Rārangi Paetae Aromatawai   DASS classification</b>	Service Sector > Aviation > Aviation - Core
<b>Ko te tohutoro ki ngā Whakaritenga i te Whakamanatanga me te Whakaōritenga   CMR</b>	0112

<b>Hātepe   Process</b>	<b>Putanga   Version</b>	<b>Rā whakaputa   Review Date</b>	<b>Rā whakamutunga mō te aromatawai   Last date for assessment</b>
<b>Rēhitatanga   Registration</b>	1	26 February 2026	N/A
<b>Kōrero whakakapinga   Replacement information</b>	N/A		
<b>Rā arotake   Planned review date</b>	31 December 2030		

Please contact Transport Industry Skills Board at [qualifications@transportisb.nz](mailto:qualifications@transportisb.nz) to suggest changes to the content of this skill standard.