

<b>Title</b>	<b>Demonstrate knowledge of the fundamentals of safety management systems for an aviation environment</b>		
<b>Level</b>	<b>4</b>	<b>Credits</b>	<b>5</b>

<b>Purpose</b>	People credited with this unit standard are, for an aviation environment, able to: outline the fundamentals of safety management system; outline the relationship between hazards and risk; and demonstrate knowledge of risk management procedures; hazard and incident reporting; safety performance monitoring; and the principles and methods for conducting safety audits.
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<b>Classification</b>	Aeronautical Engineering > Aeronautical Engineering - Core
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<b>Available grade</b>	Achieved
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### Guidance Information

- Resources may include but are not limited to – International Civil Aviation Organization. 2013. Doc 9859, *Safety Management Manual*. 3<sup>rd</sup> ed. ICAO, available at <http://www.skybrary.aero/bookshelf/books/644.pdf>; AS/NZS ISO 31000:2009 Risk management - Principles and guidelines; or SA/SNZ HB 436:2013 Risk management guidelines - Companion to AS/NZS ISO 31000:2009 which is available at <http://www.standards.co.nz>.
- All references to the CAA refer specifically to the Civil Aviation Authority of New Zealand.
- Industry standards and recommended practices are those set in place by the CAA.
- Industry texts may include but are not limited to – ICAO Safety Management Manual, AS/NZS ISO 31000:2009 Risk management – Principles and guidelines, CAA Rule Part 100 and other Rules, CAA Advisory Circulars, operator expositions.
- The term *safety health* is an indication of an organisation's resilience to unexpected conditions or acts by individuals. It reflects the systemic measures put in place by the organisation to defend against the unknown and is an indication of the organisation's ability to adapt to the unknown, effectively reflecting the safety culture of the organisation.

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### Outcomes and performance criteria

#### Outcome 1

Outline the fundamentals of a safety management system within an aviation environment.

**Performance criteria**

- 1.1 A safety management system in an aviation context is described in accordance with industry texts and standards.
- Range may include but is not limited to – core business function, systems approach, system safety.
- 1.2 The benefits of a safety management system are explained.
- Range may include but is not limited to – safety, operational, financial.
- 1.3 Safety management concepts are described in accordance with industry texts and standards.
- Range may include but is not limited to – cornerstones of safety management, strategies for safety management, key safety management activities, safety management process.

**Outcome 2**

Outline the relationship between hazards and risk.

**Performance criteria**

- 2.1 A hazard in the aviation industry is defined.
- Range may include but is not limited to – visual, hidden, emerging hazards.
- 2.2 The purpose of hazard identification is described in accordance with industry texts and standards.
- 2.3 Likelihood and consequence of hazards are assessed and ranked against established risk assessment criteria.
- 2.4 Risk in the aviation industry is defined.
- 2.5 Risk management is described in accordance with industry texts and standards.
- Range may include but is not limited to – elimination, isolation, minimisation
- 2.6 A risk matrix used to manage hazards and risk is described.
- Range consequences, likelihood, risk acceptability.

**Outcome 3**

Demonstrate knowledge of risk management procedures.

**Performance criteria**

- 3.1 Risk management process is described in accordance with industry texts and standards.
- Range context, identification, analysis, evaluation, treatment.
- 3.2 Principles of risk mitigation are described in accordance with industry texts and standards.
- Range defence analysis, risk mitigation strategies, brainstorming, evaluating risk mitigation options.
- 3.3 Risk communication procedures are described in accordance with industry texts and standards.

**Outcome 4**

Demonstrate knowledge of hazard and incident reporting for an aviation environment.

**Performance criteria**

- 4.1 Types of incident reporting systems used within aviation environments are described in accordance with industry texts and standards.
- Range mandatory, voluntary, confidential.
- 4.2 Principles for effective incident reporting systems are described in accordance with industry texts and standards.
- Range may include but is not limited to – trust, non-punitive, inclusive reporting base, independence, ease of reporting, acknowledgement, promotion.

**Outcome 5**

Demonstrate knowledge of safety performance monitoring.

**Performance criteria**

- 5.1 The requirements for feedback on safety performance to complete the safety management cycle are described in accordance with industry texts and standards.
- 5.2 Systems to identify the safety health of an organisation are described in accordance with industry texts and standards.
- 5.3 Safety oversight monitoring is described in accordance with industry texts and standards.
- Range international level, state level, organisational level, inspections, surveys, quality assurance, safety audits.

**Outcome 6**

Demonstrate knowledge of the principles and methods for conducting safety audits.

**Performance criteria**

- 6.1 The purpose of safety audits is described in accordance with industry texts and standards.
- 6.2 Safety audit information sources are described in accordance with industry texts and standards.
- 6.3 The requirements of a safety audit are outlined in accordance with industry texts and standards.

Range may include but is not limited to – pre-audit, audit, post-audit.

<b>Planned review date</b>	31 December 2024
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**Status information and last date for assessment for superseded versions**

Process	Version	Date	Last Date for Assessment
Registration	1	26 March 2020	N/A

<b>Consent and Moderation Requirements (CMR) reference</b>	0028
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This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

**Comments on this unit standard**

Please contact ServicelQ [qualifications@serviceiq.org.nz](mailto:qualifications@serviceiq.org.nz) if you wish to suggest changes to the content of this unit standard.