

Determining Effectiveness of Controls

RSK-WI-003

Applicability

ARTC Network Wide	SMS
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1.3	19 February 2018	1.3	Change of title for document owner. Change Division/ Business Unit.

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Table of Contents

Table of Contents	2
1 INTRODUCTION	3
1.1 Purpose	3
1.2 Scope	3
1.3 Document Owner	3
1.4 Responsibilities	3
1.5 Parent Procedure	3
1.6 Subordinate Documents.....	4
1.7 Reference Documents	4
1.8 Definitions.....	4
2 CONTROL EFFECTIVENESS	6
2.1 Adequacy of the Control.....	6
2.2 Human Fallibility.....	6
3 CONTROL EFFECTIVENESS CRITERIA	7
4 METHODS OF VALIDATION	8

1 INTRODUCTION

1.1 Purpose

This work instruction provides guidance in determining the effectiveness of controls, consistent with ISO 31000:2009 Risk Management – Principles and guidance.

1.2 Scope

This work instruction is applicable to all ARTC employees.

This work instruction is applicable to risks identified and assessed utilising corporate risk procedure *RSK-PR-001 Risk Management* and work instruction *RSK-WI-005 Project Risk Management*.

1.3 Document Owner

The ARTC Corporate Risk Manager is the coordinator of this work instruction and is the initial point of contact for all enquiries relating to its application across the organisation.

The ARTC Group Executive Corporate Services & Safety is the owner of this work instruction and accepts the responsibility for its accuracy and currency.

1.4 Responsibilities

ARTC Corporate Risk Manager is responsible for:

- Providing advice and reasonable assistance to Risk Owners, Nominated Risk Managers and Control Owners on their risk management obligations;
- Documenting and communicating this work instruction to all relevant internal and external stakeholders; and
- Monitoring and managing information in the Central Risk Register to ensure information is current and relevant.

Nominated Risk Manager is responsible for:

- Ensuring risks and controls are entered into an appropriate Risk Register and that these risks and the effectiveness of their controls are periodically reviewed; and
- Providing the Corporate Risk Manager with updates for risks and controls managed in the Central Risk Register.

Risk Facilitator is responsible for:

- Ensuring risk and control information collected during risk assessment includes consideration of control effectiveness, consistent with this work instruction; and
- Providing finalised risk assessment documentation to the Corporate Risk Manager.

1.5 Parent Procedure

RSK-PR-001 Risk Management is the Parent Procedure for this work instruction.

This work instruction is also applicable to risks assessed in accordance with *RSK-WI-005 Project Risk Management*.

1.6 Subordinate Documents

The following tools and templates, whilst not mandatory, may assist with meeting the requirements of this and related work instructions:

- RSK-FM-001 Risk Assessment Template
- RSK-FM-003 Risk Review Template
- Guideline 001 ARTC Risk Assessment Template

1.7 Reference Documents

The following documents were referenced in this work instruction:

- COR-PO-006 Risk Management Policy
- RSK-WI-004 Conducting a Risk Review
- AS/NZS ISO 31000:2009 Risk Management – Principles and guidelines
- SA/SNZ HB 436:2013 Risk management guidelines – Companion to ISO 31000:2009

1.8 Definitions

The following terms and acronyms are used within this document:

Term or acronym	Description
Consequence	Outcome of an event affecting objectives. <ul style="list-style-type: none"> • An event can lead to a range of consequences. • A consequence can be certain or uncertain and can have positive or negative effects on objectives. • Consequences can be expressed qualitatively or quantitatively.
Central Risk Register	A consolidation of non-project risks into a single ARTC risk register that is managed by the Corporate Risk Manager.
Control	A measure that modifies risk by either preventing the risk or reducing (mitigating) the consequences of the risk. Controls may include any process, policy, device, practice or other action which modifies risk.
Control Effectiveness	A term that addresses the question of whether the controls are adequate and operating as intended.
Control Effectiveness Criteria	Specific criteria that describes the attributes for each of the levels of Control Effectiveness.

Control Objective	The goal or intent of a control in relation to the risk. The objective of a control may be to: <ul style="list-style-type: none"> • Avoid the risk • Remove the risk source • Change the likelihood • Change the consequence • Share the risk • Accept the risk
Control Owner	The person with the responsibility, authority and accountability to manage a control of a specific risk/s.
Critical Control	Means that if the control was absent or failed, the risk would eventuate.
Current Residual Risk Level	The risk level, given the current effectiveness of controls that are in place.
Inherent Risk Level	The risk level without any controls in place, also known as "untreated risk".
Level of Risk	Magnitude of a risk or combination of risks, expressed in terms of the combination of consequences and their likelihood.
Likelihood	A qualitative description of the chance of something happening.
Objectives	Organisational and/or project deliverables.
Review	Activity undertaken to determine the suitability, adequacy and effectiveness of the subject matter to achieve established objectives. Review can be applied to a risk management framework, risk management process, risk or control.
Risk Owner	Person or entity with the accountability and authority to manage a risk.
SFAIRP	So Far As Is Reasonably Practicable –The likelihood and consequences of a risk must be weighed against the availability, effectiveness and cost of measures to eliminate or reduce the risk. Further information on SFAIRP is provided in <i>RSK-WI-002 Determining if Risk is Reduced So Far As Is Reasonably Practicable (SFAIRP)</i>

2 CONTROL EFFECTIVENESS

It is essential to determine the effectiveness of controls in order to:

- Determine whether the control (or combination of controls) adequately reduces the risk level
- Identify whether additional control(s) are required
- Determine whether remedial action is needed to increase effectiveness
- Determine if any mechanisms for monitoring need to be put in place.

There are two key factors to consider when determining the effectiveness of the control:

1. Whether the control is adequate
2. How susceptible the control is to human error or non-compliance

2.1 Adequacy of the Control

Adequacy of the control relates to whether the control is appropriate for the related causal or contributory factor(s) that it is intended to address, and how effective it is in meeting the intended objective in addressing the risk.

Questions that may be appropriate to consider when determining adequacy of the control include:

- Is the control appropriate for the causal or contributory factors?
- Does the control operate as intended? (i.e. does the control meet the identified Control Objective)
- Are there any circumstances or scenarios where the control may be deficient?
- Is the control implemented in all applicable areas?
- Are there other controls that this control is reliant on, or interacts with in combination? If so, are they in place and considered adequate?
- Are there any known issues?

2.2 Human Fallibility

Controls that are dependent on human actions or behaviours can be susceptible to unintended errors or deliberate non-compliance. Where this occurs, the control cannot be considered to be fully effective.

Questions that may be appropriate to consider when considering if the control is susceptible to human fallibility include:

- Can errors be made? For example:
 - Omission of the control completely, or omission of a step in a process
 - Undertaking steps in a process in the wrong order
 - Incorrect / substandard technique
- If error(s) can occur, will the error be able to be identified and rectified before any adverse outcome occurs?
- Can the control be deliberately bypassed or ignored?

3 CONTROL EFFECTIVENESS CRITERIA

There are five levels of control effectiveness:

- (5) Fully Effective
- (4) Substantially Effective
- (3) Partially Effective
- (2) Minimally Effective
- (1) Not yet assessed.

Specific Criteria for each of the levels of Control Effectiveness are described in Table 1 below.

LEVEL OF EFFECTIVENESS		EFFECTIVENESS CRITERIA
5	Control is fully effective	<ul style="list-style-type: none"> • The control is not susceptible to human error; • No further improvements are considered required for this control; • The control is considered to be appropriate in addressing the related causal / contributory factors; • Appropriate barriers are in place, tested, and not able to be bypassed; • Control verified in use in all applicable areas with no (current) Non-Conformances or issues identified. <p><i>NOTE: (Administrative controls and Personal Protective Equipment cannot be considered fully effective due to the possibility of human error or non-compliance)</i></p>
4	Control is substantially effective	<ul style="list-style-type: none"> • Control could potentially be impacted by human error, however error would usually be able to be detected and situation recovered; • No further improvements are considered required for this control; • The control is considered to be appropriate in addressing the related causal / contributory factors; • Appropriate barriers are in place, however could potentially be removed or overridden; • Control verified in use in all applicable areas with no (current) Non-Conformances or issues identified.
3	Control is partially effective	<ul style="list-style-type: none"> • Control is susceptible to human error, which may or may not be able to be detected and situation recovered; • The control partially addresses the related causal / contributory factors; • Barriers are in place, however may not be effective in all situations; • Anecdotal evidence that control is in use in all applicable areas <p>OR</p> <p>Control verified in use in all applicable areas with low risk Non-Conformance(s) or issues identified;</p> <p>OR</p> <p>Control implemented in some areas with no (current) Non-Conformances or issues identified.</p>
2	Control is minimally effective	<ul style="list-style-type: none"> • Control is vulnerable to significant or undetectable human error; • The control is not currently implemented in a manner that satisfactorily addresses the related causal / contributory factors; • Regulatory intervention is in place that is directly related to the control; • Current medium or high risk Non-Conformance(s) or issues have been identified that are directly related to the control.
1	Control effectiveness is not yet assessed	<ul style="list-style-type: none"> • Level of implementation and effectiveness has not yet been assessed or verified.

Table 1: Control Effectiveness Criteria

4 METHODS OF VALIDATION

The effectiveness of controls can be validated by a number of different methods. This includes:

- Formal audit
- Investigation
- Data monitoring
- Inspection
- Observation of activities
- Anecdotal evidence

The method utilised to validate the effectiveness of the control is to be appropriate for the associated risk, risk level, and the level of criticality of the control.

For some controls, it may be appropriate to use a combination of methods to provide assurance of the ongoing effectiveness of the control.

Guidance on undertaking formal reviews of controls is provided in *RSK-WI-004 Conducting a Risk Review*.