Compliance & Risk Program

Generic Overview Manual

for

Construction Projects

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Compliance & Risk Program
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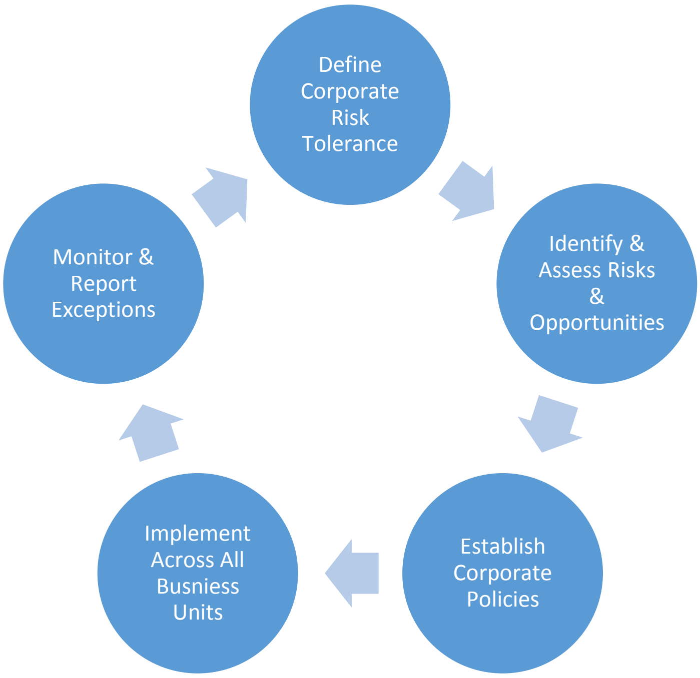
1. OVERVIEW

The Compliance and Risk Program is designed to create a company wide system which, when correctly implemented, will become established as an inherent part of the governance policies and culture and result in a continuous cycle of improvement across all levels of operations and personnel.

At its widest view the Compliance and Risk Program consist of 5 key elements, as seen below.



Each of the elements together with its constituent parts will be discussed in detail under the relevant heading below.

2. OBJECTIVES

The objective of the Compliance and Risk Program is to assist the company to establish an approach to managing opportunity and risk which is:

- company wide;
- practical;
- integrated;
- structured;
- systematic.

3. BENEFITS

The benefits of implementing a companywide Compliance and Risk Program include:

- improve corporate governance;
- improve profit margins;
- improve compliance with relevant legislation;
- proactive rather than reactive management;
- efficiently identify opportunities and threats;
- leverage from uncertainty and variability;
- allocate resources more effectively;
- reduce the cost of risk, including commercial insurance premiums;
- reduce cost of capital;
- improve stakeholder confidence and trust.

4. TOP DOWN IMPLEMENTATION – THE ROLE OF THE OWNERS/BOARD

The Owners and or Board of Directors (together called the "Board" for convenience) have three roles to play at the appropriate times and must take the lead in defining the overall context of the Compliance and Risk Program for the company.

4.1 Define

- The overall Objectives of the company.
- The company's "Risk Tolerance" — i.e. the boundaries or "envelope" within which the organisation is to operate in pursuing those objectives.
- Company Policies to be followed in pursuing those objectives.

4.2 Guide

- The introduction of the policies, plans and procedures necessary to implement the overall Risk & Opportunity Management strategy.
- Employees at all levels to embed the importance of Risk and Opportunity Management into the "corporate culture".

4.3 Monitor

- The implementation of agreed policies, plans and procedures within agreed timeframes.
- Exception reports.
- Ongoing appropriateness of the Risk Envelope in the face of changing corporate objectives and market conditions.

5. DEFINING THE COMPANY'S OBJECTIVES

It is essential that the Board defines clear objectives or goals for the company.

While these objectives are often set out in a Business Plan, it is important to recognise that for the Compliance and Risk Program to be effective it must be adopted from the "bottom up" and it may not be appropriate to provide the Business Plan to all levels of employees.

Whether by extraction from the Business Plan or identification in isolation, the first step is to identify the company's overall objectives for short, medium and longer term operations and development.

At this time it is also recommended that the Objectives be further subdivided into individual objectives for each of the relevant business units.

6. DEFINING THE COMPANY'S RISK TOLERANCE

Once the "Objectives" have been established as part of overall Corporate Planning, the critical first step in establishing a successful Compliance and Risk Program is for the Board, in collaboration with senior management, to define the "Risk Tolerance", (often also called "Risk Envelope" or "Risk Appetite") which states clearly:

- risks or events which are not acceptable under any circumstances;
- risks or events which may be or are acceptable within a defined range; and
- risk or events which are welcome as an opportunity.

While the concept of "risk management" is (unfortunately) generally considered to involve dealing with negative events, it is important to understand that a "risk event" can be either positive or negative in terms of its impact on an objective, whether at company or project level.

- A positive risk event is an opportunity for the company to benefit, whether financially or otherwise, by deploying its particular skill, experience or expertise.
- A negative risk is an event with the potential to cause damage to the company's KPI's and balance sheet.

While it is necessary for the Risk Envelope to eventually deal with and incorporate all types of risk events which might be encountered, for the purposes of the current document we will restrict consideration to "Construction Project Risk".

While the risk events vary from project to project, the objective in creating a Risk Envelope is to consider and identify all events that the company may possibly encounter across all of the different types of construction projects it undertakes across all of its departments, divisions and State or regional offices.

On that basis the managers of all "business units" (e.g. State Managers) need to prepare and contribute the risks that may possibly impact their individual business units, and more particularly their ability to produce financial results to achieve the Return on Investment rate(s) required by the company's Business Plan.

While that will normally result in "duplication" of the more "generic" types of risks encountered in the construction industry it is important at this stage of the exercise NOT to attempt to filter or grade the risks - that comes at a later stage.

6.1 Identify Risk Events

It is important that ALL possible risk events are identified at this stage however unlikely or improbable it may be that a particular event will ever actually occur and/or result in a measurable impact. Some of the types of "risks" commonly encountered during a construction project are listed below.

<u>General Risk</u>

Principal's Expectations don't match Design Principal's Estimated Project Cost unrealistic Principal's Financial Capacity

Principals Payment History/Record

Architect & Consultants - poor design – don't respond timely

Superintendent - Biased and/or incompetent Quantity Surveyor - unrealistic theoretical values Estimated margin uneconomical

Preliminary Program "too tight"

Preliminary Design inadequate

Design Drawings uncoordinated

Specifications onerous

Specifications include additional "terms & conditions"

Specifications/Drawings "not recent"

Geotech Report & other Site Information not recent

"Approvals" not in place

Previous Usage of Site - hazardous material Neighbours

Traffic

<u>Contractual Risks</u>

Method of Security - must allow guarantees & bonds

Amount of Security

Recourse to Security - "claim" v "debt due" & notice required

Discrepancies & Ambiguities

Site/Latent Conditions

Subcontracting - permission required Subcontracting - form of warranties required/obtained

Separate & Other Contractors

Coordination

Programming & Scheduling - cost for change of schedule

Programming - what is the "construction program"?

Programming - updating & reporting obligations Insurance Requirements - "excessive" values Insurance - "unusual or special" endorsements to policy required/obtainable

Indemnity

Consequential Loss

Delays - "qualifying causes" - Weather? Variations? Site Conditions?

Delay Notification & Claim - simple or onerous with time bars

Delay Costs - “compensable causes”

Site Access

Existing Structure on Site

Legislative Change

Variations - process simple or onerous with time bars

Payment Terms

Practical Completion - pre-conditions simple or onerous

Practical Completion / “Completion” to allow operation of the facility

Breach & Default - notice requirements
Termination for Convenience

Environmental obligations

Dispute Processes

WHS Obligations

Since each Business Unit (e.g. State Office) within the company is likely to be faced with different risks, it is important to understand that the list above is by no means exclusive or exhaustive and many of the items identified may or may not be applicable to a particular unit.

It is recommended that all Business Unit Leaders participate in a joint “workshop” or “brainstorming session” to identify ALL potential risks, no matter how unlikely.

6.2 Assessing the Risks Identified

Following closely on from the process of identifying all possible risk events, it is also necessary to assess or estimate the chance that the particular event will happen, and the impact on the company’s operations if it does.

At this stage of the process the assessment required is purely subjective (or qualitative to use one of the “buzz words” from the risk management industry).

Each of the business unit managers (or indeed any other contributors) should either use the pro-forma spreadsheet provided or prepare a simple spreadsheet with three columns (and as many rows as needed). The left-hand column should contain the description of the individual risk event.

The second Column should be headed “Chance”.

The third Column should be headed “Impact”.

(a) Chance

That “chance” should be “scored” with a number between 1 and 5 as seen in the table below.

1.	Rare	will happen rarely, if ever.
2.	Unlikely	will happen occasionally but not often.
3.	Possible	will happen sometimes
4.	Likely	will probably happen
5.	Certain	will almost certainly happen on every project

Don’t be overly concerned or try to “split hairs” between whether an event is “possible” or “likely” – this is purely a subjective assessment of the chance that a particular event may happen.

(b) Impact

The impact of an event, which may be either positive (opportunity) or negative (risk), should also be scored using a number between 1 and 5 as seen below.

1.	Negligible	negligible effect on the company’s KPI’s – insignificant financial affect
2.	Small	small effect on KPI’s and small financial impact
3.	Medium	significant effect on KPI’s and moderate financial impact
4.	Major	major effect on KPI’s and serious financial impact
5.	Extraordinary	disastrous effect on KPI’s – large financial impact

6.3 Analysing the Assessed Risks

The next step in the process is to analyse;

- the magnitude of the risk if it does occur;
- the priority for addressing individual risks
- the resources likely to be needed to deal with the risks.

The magnitude of a risk event is simply its “chance” multiplied by its “impact”

In the first stage of developing the Risk Envelope it is sufficient to rate the magnitude as Low, Medium or High according to the matrix below.

Impact / Chance	Negligible	Small	Medium	Major	Extraordinary
Rare	Low	Low	Low	Low	Low
Unlikely	Low	Low	Low	Medium	High
Possible	Low	Medium	Medium	High	High
Likely	Low	Medium	Medium	High	High
Certain	Low	Medium	High	High	High

High	Requires immediate close attention by senior management for inclusion in the Risk Envelop. Should only be accepted at tender stage, subject to a formal risk action plan for the particular project allocating responsibilities and a timeline for dealing with the issue.
Medium	Requires prompt attention by management to determine "conditions" to be reviewed and approved by Senior Management included in the Risk Envelope. Acceptance at tender stage subject to formal risk action plan
Low	Acceptable in normal activities and managed by routine administrative procedures.

To assist in the tasks of identifying, assessing and analysing relevant risks it is useful to use a "spreadsheet". As part of the Workshops held as part of implementing the Compliance and Risk Program, participants are provided with a "pro-forma" or "template" containing the risks identified under item 5.1 above with "random" values for chance and impact.

The first page of the sample pro-forma spreadsheet is included on the next page and the spreadsheet will be provided in electronic form and updated by the participants during the Implementation Workshops.

Once the Spreadsheets have been completed the risk events are easily sorted by Magnitude to allow the efficient development of policies to maximise those opportunities identified and control or mitigate the individual risks.

Event #	Risk Event	Chance	Impact	Magnitude
6.	Principal's Expectations don't match Design	1	8	MEDIUM
7.	Principal's Estimated Project Cost unrealistic	5	2	MEDIUM
8.	Principal's Financial Capacity	4	1	LOW
9.	Principals Payment History/Record	1	4	LOW

10.	Architect & Consultants - poor design – don’t respond timely	5	5	HIGH
11.	Superintendent - Biased and/or incompetent	4	5	HIGH
12.	Quantity Surveyor - unrealistic theoretical values	2	2	LOW
13.	Estimated margin uneconomical	2	3	LOW
14.	Preliminary Program “too tight”	2	4	MEDIUM
15.	Preliminary Design inadequate	4	4	HIGH
16.	Design Drawings uncoordinated	3	2	LOW
17.	Specifications onerous	4	4	HIGH
18.	Specifications include additional “terms & conditions”	4	4	HIGH
19.	Specifications/Drawings “not recent”	5	5	HIGH
20.	Geotech Report & other Site Information not recent	4	4	HIGH
21.	"Approvals" not in place	4	4	HIGH
22.	Previous Usage of Site - hazardous material	4	4	HIGH
23.	Neighbours	2	2	LOW
24.	Traffic	3	3	MEDIUM
25.	Site Access	3	3	MEDIUM
26.	Existing Structure on Site	1	1	LOW
27.	Legislative Change	3	3	MEDIUM
	Contractual Risks			
28.	Method of Security “guarantees & bonds”			LOW
29.	Amount of Security -			LOW
30.	Recourse to Security – “claim” v “debt due” & notice required	3	4	MEIDUM
31.	Discrepancies & Ambiguities	4	3	MEDIUM
32.	Site/Latent Conditions			LOW
33.	Subcontracting – permission required			LOW

34.	Subcontracting – form of warranties required/obtained	3	3	MEDIUM
35.	Separate & Other Contractors			LOW
36.	Coordination			LOW
37.	Programming & Scheduling – cost for change of schedule			LOW

6.4 Policies

The next step involves taking the ranked list of risks and opportunities and creating (or refining) the policies necessary to mitigate risk and maximise opportunities.

Clearly those risk events with a "high" magnitude will require more immediate attention and a more detailed policy containing specific "controls" or "mitigants" than items with "low" magnitude.

However, while to this point the focus has been on a "top down" approach, it is important to remember when creating policies that their ultimate success depends on them being implemented from the "bottom up".

On that basis the policies must be both practical and able to be readily integrated into the company's day to day activities at all levels.

As a practical example at its simplest level in the Construction field, it is widely accepted that it is necessary to maintain a "site diary" for each Project. It should be also recognised that failure to complete the site diary in an appropriate manner will be a "risk event" should it become necessary to establish the occurrence of a particular event on site- for example in pursuing a disputed claim for an extension of time.

While the overall "risk magnitude" of failing to record a verbal direction from the Superintendent into the site diary would generally be considered "low" that failure can become high magnitude in particular circumstances.

On that basis the "site Diary Policy" needs to have sufficient specific detail about the nature and extent of "recordable events" so there is no room for the Site Manager or Foreman to make their own (often uninformed) decisions about what might be important enough to need recording.

6.5 Action plan

Once the Policies have been developed and approved by senior management and/or the Board it is necessary to establish an "action plan" for implementing the policies as practical strategies across the various business units and the different "divisions" within each business unit.

Any such action plan must define the person or persons responsible for each particular strategy area and the timeline for its implementation.

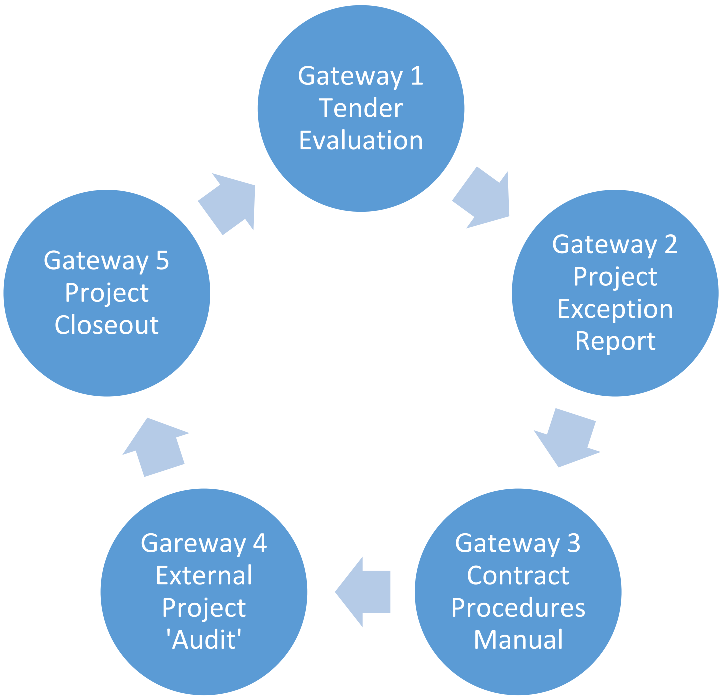
If required, at a further level of development, the impact of different combinations of strategies can be compared graphically using a variety of tools to see what the impact on initial risk and opportunity profile is of putting in place different combinations of strategies.

Residual risks and opportunities which currently fall outside the risk appetite of the organisation can be further analysed, where appropriate, using more sophisticated probabilistic risk analysis and modelling techniques such as Monte Carlo simulation.

7. IMPLEMENTING THE COMPLIANCE AND RISK PROGRAM FOR CONSTRUCITON PROJECTS

The practical implementation of the Compliance & Risk Program into the day to day construction activities is, like the development of the program discussed above, designed to create a continuous cycle of improved performance in project delivery.

The implementation consists of establishing and monitoring five "gateways" throughout the normal construction cycle as shown graphically below and discussed in further detail under the relevant headings following.



7.1 Tender Evaluation – Gateway 1

The Tender evaluation phase involves:

- Identification and Assessment of Construction Risks - by the company's "Bid Team" in collaboration with the company's proposed "Project Team";
- Identification and Assessment of Contractual Risks - by Crisp;

- Preparation of Project Risk Register after Evaluation of Identified Risks against the company Risk Envelope;
- Preliminary "Stop/Go" Decision - to prepare tender proposal or not;
- Preparation of Exception Report;
- Commercial Decision on Project Acceptability;
- Prepare Tender Proposal;
- Negotiate Terms and Conditions to minimise and mitigate against "exceptions"; and
- Execute Contract & Handover to Project Construction Team.

It is common for the estimating or bidding teams in construction companies to use a "checklist" as a means of identifying particular elements of a tender.

While the typical tender checklist shown provides a good "general" descriptive overview of the tender, as a part of implementing the Compliance and Risk Program existing forms will need to be revised in collaboration with the company's Estimating Manager to:

- include a more detailed listing of the "technical" aspect of the specifications;
- encompass issues about design consultants performance/design development to date
- allow for incorporation of a separate review by Crisp of "contractual risks"; and
- make provision for a numerical rating for each element identified, resulting in a preliminary "project score" which will provide a relatively quick indication of whether is worth allocating the resources to further evaluate and pursue the project.

A subjective "rating" of each element as it is identified and the resulting "project score" will allow for a preliminary "Stop/Go" decision to be made quickly, based on the overall "fit" between the proposed project and the company's Risk Envelope.

The aim of the project score is to:

- avoid allocating company resources to projects which do not pass the preliminary "project score" test; and
- make the company's tendering process more effective in generating tender proposals that comply with both the company's Risk Tolerance and the expectations of the targeted industry segments.