



APPENDIX 1

Transport for the North

Risk Management Strategy

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1. Risk Management Strategy

Purpose

- 1.1 The Risk Management Strategy (RMS) aims to support the strategic objectives of the business, and sets out Transport for the North's (TfN) approach to risk management, and provides guidance in its application for the management of risk by TfN
 - The Risk Management Process; and
 - Issues Management.
- 1.2 The document is intended to act as a communication and management tool to ensure TfN's Programmes and Directorates have clarity regarding:
 - The Risk Management Processes to be adopted;
 - Scales of probability and impact and the tools to be used; and
 - Reporting of risk and the timing of risk management activity.
- 1.3 Not all risks can be eliminated, but staff and senior management should be aware of the risks affecting TfN's Programmes and Directorates in order for the risks to be understood and where possible managed and mitigated.
- 1.4 The RMS supports key principles in the following ways:
 - **Building trust and respect:** by being open about our risks we can build trust and respect.
 - **Delivering our promises:** by managing risk we can deliver our commitments.

2. Introduction to Risk Management

- 2.1 TfN faces a wide range of risks (both threats and opportunities) at all levels across the organisation. The nature of TfN's activity means that not only is risk management central to the achievement of its strategic objectives, but the process by which it addresses risk (related to its activity) has the potential to achieve sustained benefits across the full portfolio of projects and programmes.
- 2.2 The focus of good risk management is the identification and management of risk. Management of risk involves the systematic application of methods and practices to the tasks of identifying, estimating and evaluating risks. This in turn allows mitigation measures to be identified and implemented. This provides a disciplined environment for proactive decision-making.
- 2.3 The Risk Management Strategy will provide the framework for managing risk in a consistent manner and raises awareness of the need for effective risk management. Adopting the RMS will support the aim of integrating risk management into working arrangements so that risks are proactively identified and managed.
- 2.4 Furthermore, the approach to Risk Management will involve identifying and realising potential opportunities. This process is designed to encourage the consideration of opportunities and the communication of these within TfN.

Benefits to Risk Management

- 2.5 Proactive Risk Management provides a number of primary and secondary benefits including:
 - Reduced exposure to the negative impacts of uncertainties;
 - Confidence in achieving targets and maximising outputs and outcomes through improved understanding of uncertainties;
 - Risks owned by parties and/ or individuals best able to manage them; and
 - Facilitation of effective communication across the organisation.

Common Process Barriers

- 2.6 It is recognised that there are barriers and constraints common to the implementation and embedding of risk management.
- 2.7 The most common barriers to successful risk management are:
 - Lack of time or resources allocated to risk management;
 - Lack of risk strategy, process or plans;
 - Lack of a senior risk champion;
 - Lack of training, knowledge or formal risk tools or techniques;
 - Lack of 'buy-in' from the teams;
 - Lack of clear guidance for managers or staff.

2.8 It is the responsibility of managers, assisted by the Risk Manager, to reduce the likelihood of encountering these barriers whenever possible. Where obstacles arise that are beyond the ability of the manager to address, it is important to escalate it to the Risk Manager who will work with the Programme Manager to take appropriate action.

Key Terminology

2.9 The key risk management terminology referred to in this document are as follows:

- Risk: Defined as an uncertain event or set of events that, should it occur, will have an effect on the achievement of objectives. Such an event that potentially creates a benefit for the organisation is termed as an opportunity (+ve risk) while an event with a potentially negative impact is viewed as a threat (-ve risk).
- Risk Management: The identification, evaluation, analysis, treatment and reporting of uncertainties, threats and opportunities associated with Project, Programme, Directorate and Portfolio objectives.
- Risk Culture: Refers to an organisation's set of attitudes, values and knowledge of risk management. An effective risk culture rewards individuals for taking the right risks in an informed manner.
- Risk Cause: A description of the source of the risk, i.e. the event or situation that gives rise to the risk.
- Risk Impact: The extent of the adverse or positive effect on objectives.
- Risk Probability/ Likelihood: The possibility of a risk event occurring.
- Risk Score / Profile: A comparative indication of how serious the risk is likely to be.
- Inherent Risk: Refers to the (gross) risk position. That is, before any mitigation measures/ controls are in place (pre-mitigation).
- Residual Risk: Refers to the managed level of risk. That is, the current status of the level of risk based on the current controls/mitigation measures put in place.
- Mitigation: Measures/ actions taken to reduce the possibility of the risk event occurring.
- Secondary Risk: Risk that arises as a result of implementing a particular risk mitigation measure.
- RAG: Refers to a traffic light system (For example - Red, Amber and Green) used in denoting the severity of a risk.
- Risk Register: The document which holds specific information regarding each risk associated with individual programmes/directorates.
- Risk Reference: The unique number given to each risk on the risk register.
- Risk Owner: The relevant individual with responsibility for ensuring identified risks are managed effectively in accordance with the RMS.
- Risk Transfer: The movement from a risk owner to another appointed owner who is better placed to manage the risk.
- Risk Closeout: Where a risk/ potential risk event is no longer valid and has been formally shutdown.
- Early Warning: An advanced indication that a potential risk is about to materialise, allowing appropriate measures to be adopted.

- Qualitative Risk Report (QRR): Refers to a detailed qualitative evaluation of risks on a programme. The report highlights the current risk position taking into account the spread of risks on a Probability and Impact Matrix.
- Issue: A risk that has materialised and which is affecting the programme, requiring immediate resolution through a management response.
- Assumption: A “logical belief” rather than a matter of proof. Assumptions may include exclusions from programme scope, estimates or budgets.
- SWOT refers to Strengths, Weaknesses, Opportunities and Threats – A strategic planning or evaluation technique.
- PESTLE refers to Political, Economic, Social, Technological, Legal and Environmental – An analytical technique useful for decision making.

3. Risk Management Process (RMS)

- 3.1 The primary purpose of the Risk Management Process (RMP) is to identify the effect of uncertainty on programme and business objectives and to formulate and implement measures to reduce or optimise the effects. In addition, an appropriately functioning RMS is a key driver for fostering effective communication and decision-making.
- 3.2 Risk Management is an iterative process through which risks are continually identified, assessed and managed. The process will be facilitated by the Risk Manager. The process is not dependent upon the Risk Manager’s presence, and members of staff are encouraged to consider risk management throughout the delivery of their activities.
- 3.3 Adopting industry best practice, the Risk Management Process is subdivided into six key steps listed below:
 - Contextual Analysis;
 - Identification of Risk;
 - Risk Evaluation;
 - Risk Analysis;
 - Risk Treatment; and
 - Monitor & Control
- 3.4 Collectively, these steps form a logical sequence, necessary for the adoption of a robust approach to the implementation of risk management. As represented below, the steps are represented as an iterative process, as it will be common for the entire process to be completed a number of times during the life of a business activity.

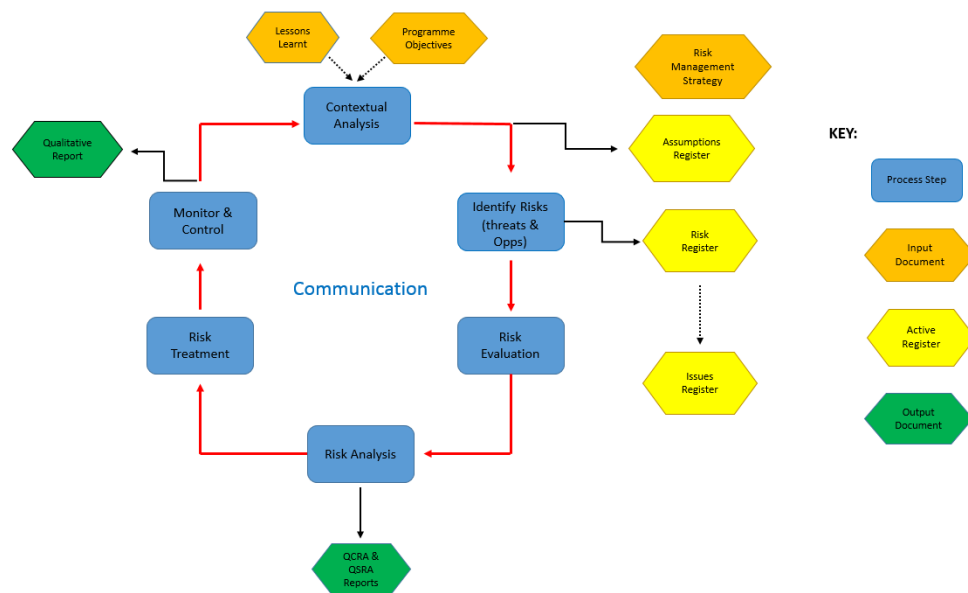


Figure 1: TfN’s Risk Management Process

Step 1 – Contextual Analysis

3.5 This step requires the manager to collate the maximum amount of information with regard to the scope of the activity, thus enabling the identification of risks that may have an impact upon TfN’s objectives. Information collated will assist in defining appropriate probability and impact scoring.

Step 2 – Identify Risks (Threats & Opportunities)

3.6 Risk identification sets out to identify the exposure to uncertainty. This process should identify sources of risk (upside and downside) where these are deemed to have an effect. Risks will be identified against the explicit activity objectives identified during Contextual Analysis. As such, a comprehensive list of risks, known as a risk register, will be developed.

3.7 Opportunities need to be identified along with threats. Each item will be identified by category and given a distinct risk reference.

3.8 It is important that risk identification is conducted as a group activity that considers the opinions of relevant team members and, where appropriate, Subject Matter Experts (SME). This process should be facilitated by the Risk Manager (unless otherwise agreed with the Risk Manager).

Risk Categories

3.9 The categorisation of risks in the table below will enable those identifying risks to classify risks consistently across the organisation.

3.10 The following categories should be considered when assessing risks:

Item	Risk Category	Description / Risks associated with
1	Corporate Objectives	<ul style="list-style-type: none"> • Corporate objectives relate to possible risks (threats and opportunities) that may either hinder or enhance the chances of successfully achieving TfN’s business plan. • Risks such as funding / delivery management, integrated transport strategy and transport solutions • Reputation and political environments are also to be considered.
2	Resources	<ul style="list-style-type: none"> • Resources concentrate on the availability and engagement of appropriately skilled people (internal and external) and their ability to collaborate in the successful delivery of programmes. • Skills and experience, knowledge and talent development of the existing workforce are considered. • Tools including equipment, office space, IT, etc., are risks that also falls under this category.
3	Commissioning, Commercial and Financial/ Funding	<ul style="list-style-type: none"> • Commissioning risks, include the ability to develop effective procurement and contracting strategies, and secure appropriate commercial agreements. • Commercial risks include an understanding of market or industry factors affecting the delivery and operations, and the contractual arrangements necessary to deliver successful outcomes.

Item	Risk Category	Description / Risks associated with
		<ul style="list-style-type: none"> Financial/ Funding risks include effective costing, budget estimating and cost control. Affordability and value for money are also a key considerations, as well as the associated risks of the funding of projects and programmes.
4	Technical Performance	<ul style="list-style-type: none"> Risks include the specification, design, build, commissioning and testing of project/ programme deliverables (e.g., new assets, processes, etc.) Technical performance also includes how well the solutions are performing and delivering expected benefits.
5	Public, Media and Stakeholders	<ul style="list-style-type: none"> Public, Media and Stakeholder related risks encompass the requirements and influences of Partners, Customers, Campaigners and associated reputational risks.
6	Legislation and Regulation	<ul style="list-style-type: none"> These risks relate parliamentary/ legislative processes, and the requirements of central government and transport regulators that may possibly impact on TfN's objectives. This category also includes the risk of changes in political policy, support and regulations.
7	Governance	<ul style="list-style-type: none"> The Governance category looks at the risks in relation to effective and efficient decision making, particularly in respect of TfN's responsibility as an STB for determining investment priorities across the North of England.
8	Delivery Partners	<ul style="list-style-type: none"> This category includes for commissioning related risks in respect of TfN's relationships with its third party delivery Partners, including Network Rail, Highways England, and HS2. Interdependencies between the separate organisations' objectives and timescales are also considered.
9	Service Delivery	<ul style="list-style-type: none"> Service delivery – or operational – risks include those factors that may hinder and/ or enhance TfN's current operations and future services. In addition, service functionality and the opportunity to add value to customers and the wider public is also a consideration.

Table 1: Risk Categories

3.11 Further risk categories may be established at any time upon consultation with the Risk Manager.

Risk Description

3.12 An accurate risk description (i.e. describing a risk in a structured manner) should be formed of three parts as follows:

- **The Risk:** Defined as an uncertain event or set of events that, should it occur, will have an effect on the achievement of objectives;
- **Risk Cause:** A description of the source of the risk, i.e. the event or situation giving rise to the risk;
- **Risk Impact:** The extent of the adverse or positive effect on objectives.

Step 3 – Risk Evaluation

- 3.13 Risk evaluation is the process of assessing the probability and impact of individual risks. The exercise enables the risk identifier to prioritise risks in order to establish a most-to-least-severity ranking.
- 3.14 When a risk is identified, an estimate of the probability of the risk occurring and the likely impact needs to be determined.
- 3.15 Probability is the evaluated likelihood of the identified risk occurring.
- 3.16 Impact is the evaluated effect or result of a particular risk occurring. Impact should ideally be considered under the elements of:
 - Time.
 - Financial.
 - Reputation.
 - Quality.
 - Benefit.
 - People/ Resource.
- 3.17 For example, there may be a “Very Low” probability of damage to a relationship with a key delivery partner, but enormous reputation impact may result if the risk occurs. Conversely, a “High” probability risk of a systems failure may not have a major impact on the business.
- 3.18 A Probability Impact Matrix (PIM), as illustrated below, is a tool that allows risk severity to be calculated. Risks are plotted according to the probability of occurrence and the impact upon an activity should the risk happen.
- 3.19 The qualitative risk ranking (risk score) will be generated by multiplying the probability with the maximum of the impacts for each risk. The risks with the highest risk scores will be reported for review and decision-making.

		THREATS				
Probability	80 - 100%	4 Very High (VH)	4	8	16	32
	51 - 80%	3 High (H)	3	6	12	24
	21 - 50%	2 Medium (M)	2	4	8	16
	<=20%	1 Low (L)	1	2	4	8
			Low (L) 1	Medium (M) 2	High (H) 4	Very High (VH) 8
			IMPACT			

Figure 3: Probability Impact Matrix (PIM) for Threats

OPPORTUNITIES

Probability	80 - 100%	4 Very High	-4	-8	-16	-32
	51 - 80%	3 High	-3	-6	-12	-24
	21 - 50%	2 Medium	-2	-4	-8	-16
	<=20%	1 Low	-1	-2	-4	-8
			Low (L)	Medium (M)	High (H)	Very High (VH)
			-1	-2	-4	-8

IMPACT

Figure 4: Probability Impact Matrix (PIM) for Opportunities

Step 4 – Risk Analysis

- 3.20 As the organisation matures in its approach to Risk Management, further risk analysis will be undertaken to determine the aggregated effect of the threats and opportunities on an activity. This will include consideration of any interdependencies or mutual exclusivity between risks.
- 3.21 Detailed analysis will be conducted by way of a quantified risk assessment (QRA), using recognised risk tools and software with the capability to build probabilistic risk models to produce risk analysis and allow greater confidence in the assessment of risks. These analyses will be facilitated by the Risk Manager who will produce the QRA results.

Step 5 – Risk Treatment (also referred to as Mitigation Actions)

- 3.22 This is the process of selecting the most suitable response strategy to the management of individual or groups of risks. These are applied to both threats and opportunities. Appropriate ownership will be identified in the risk register for all risks, together with the associated mitigating actions.
- 3.23 A mitigation response strategy is a key stage in the management of risks. It is the process by which a programme decides how and by whom risks will be managed. For example, programme teams may agree to transfer a particular risk from one team to another.

Treatment Response Strategy (TRS) for Threats

TRS	Description
Mitigate	Choose a different option to completely eliminate the threat.
Manage	An action taken to minimise both the probability and impact of risk.
Transfer	Place the risk/impact to another programme / party.
Accept	Accept the threat and move on.
Share	Share the risk with another programme / third party.

Table 2: Treatment Response Strategy (Threats)

Treatment Response Strategy (TRS) for Opportunities

TRS	Description
Enhance	Action taken to increase the probability or impact of the opportunity occurring.
Exploit	Take action to ensure the opportunity happens, and if so, the outcome is optimised.
Share	Share the opportunity with another programme / third party.
Accept	Accept the opportunity and move on.

Table 3: Treatment Response Strategy (Opportunities)

Step 6 – Monitor and Control

3.24 This is the process by which the risk planning measures are monitored and controlled. Usually conducted as part of regular risk reviews, the monitoring activity will enable the generation of Action Reports and an updated Qualitative Risk Report. The output of this process step will allow for corrective action to be taken should the risk planning measures be judged as not working effectively and thus further actions may be required.

Risk Communication

3.25 In support of the six steps outlined above, the effective communication of risk is the process whereby risk information is shared amongst relevant parties in a consistent manner, thus promoting and enhancing a coordinated approach to Risk Management.

3.26 Any programme's exposure to risk evolves over its lifecycle, and therefore, continuous effective communication is critical to the identification of new threats and opportunities or changes within the programme. In particular, the identification of new risks depends upon the maintenance of good communication networks. It is imperative that management engages with staff across the programme and ensures stakeholders have:

- Clearly defined roles and responsibilities;
- Clear and precise understanding of the risk escalation channels; and
- Good knowledge of transferred lessons learned.

4. Risk Reporting

- 4.1 An efficient and effective risk reporting process allows management to be informed regarding key threats and opportunities that requires attention at a higher level, and the results of the risk assessments may be presented in a variety of formats depending on the stakeholder audience and reporting needs. Generally, key risks are presented in the form of graphs and tables with the most probable outcome plotted for a range of values and probabilities.
- 4.2 The reporting structure shown below outlines the different reporting audiences for the reporting of risks.
- 4.3 For governance and transparency reasons, programme risks will be managed and reported within programmes. In addition to key risks, critical issues which may require the attention of senior executives will be escalated to Senior Management Team (SMT).
- 4.4 Conversely, it is imperative for strategic risks identified at the corporate level to be shared across programmes to ensure a “bottom up” and “top down” risk awareness prevails.

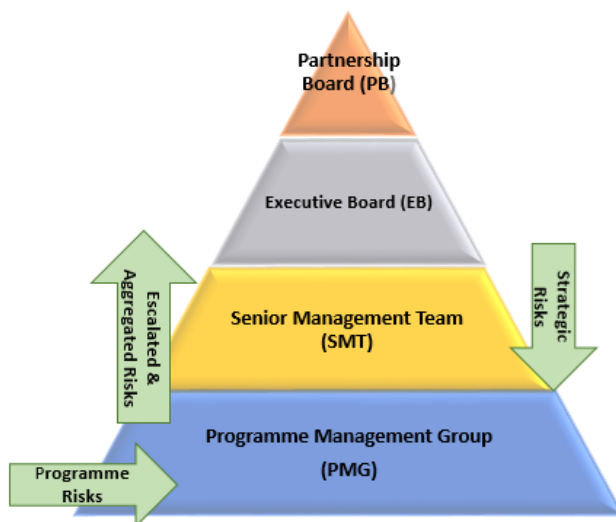


Figure 4: TfN’s Reporting Structure

- **Programme Management Group.** Based on an agreed tolerance, the programme team must report high severity risks to the PMG.
 - **Senior Management Team.** On a monthly basis, key risks across all programmes will be reported to SMT to have visibility of programme risk exposures and if required make informed decisions to mitigate reported risks.
 - **Executive Board (EB) and Partnership Board (PB).** The EB and PB are responsible in overseeing work of individual programmes and providing oversight/scrutiny of programmes respectively. TfN’s strategic risks will be shared with EB and PB.
- 4.5 Qualitative risk management reporting will be produced after each risk assessment/ review.
 - 4.6 The guiding principles are that reporting will be:

- Understandable;
- Recognisable;
- Concise;
- Logical; and
- Consistent.

4.7 The below table outlines how risks will be reported internally. It summaries the key risk documents, the target audience and the responsible owner(s) to ensure they are disseminated in a timely manner.

Document	Target Audience	Schedule	Author/Responsible
Risk Register	Programme Teams and SMT	Ongoing	Risk Manager
Risk Dashboard and Key Risks	Programme Teams/ EB/ PB	Monthly	Risk Manager
Programme Key Risks	SMT	Monthly	Risk Manager
Qualitative Risk Report (QRR)	SMT	Quarterly	Risk Manager

Table 4: TfN's Internal Risk Reporting

4.8 The following Responsible, Accountable, Consulted and Informed (RACI) chart shows the distribution of responsibilities and sets out who should be notified when one of the following risk reports is to be generated.

Risk Document	Responsible	Accountable	Consulted	Informed
Programme Risk Monthly Report	RM	PD	PT	PD
Risk Register	PM / RM	PM	PT	PD
Risk Mitigation	PM	PM	PT	PT
Early Warning	PM	PM / PT	RM	RM
New Risk	PM	PM / PT	PT	PT
Risk Transfer	PM	PM	PT	PD
Risk Dashboard / Key Risks	RM	RM	PM	EB / PB / SMT
Quarterly Qualitative Risk Report	RM	RM	PT	SMT

Table 5: Risk RACI Chart

Key:

- RM** *Risk Manager*
- PM** *Project Manager*
- PT** *Programme Team*
- PD** *Programme Director*
- SMT** *Senior Management Team*

5. Issue Management

- 5.1 Issue management plays an important part in TfN’s risk management approach. An issue arises when a risk has crystallised or materialised and the actual event is known and currently occurring or has a 100% probability of happening unless action is taken immediately.
- 5.2 When a group of high severity risks are judged as issues, it is a requirement for the programme team to report the issues to TfN’s Senior Management Team.

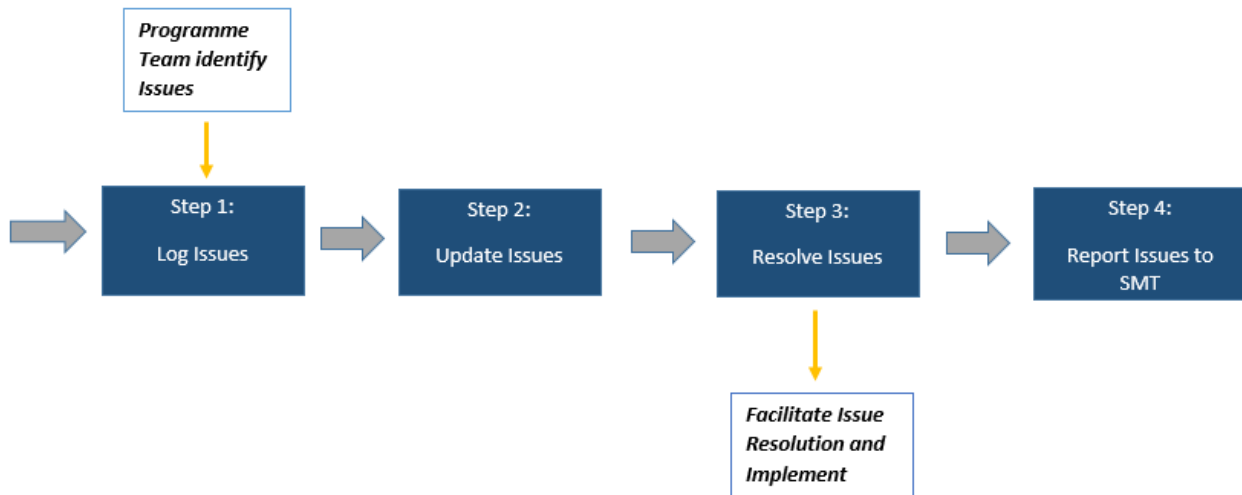


Figure 5: Issues Reporting

- 5.3 The following Responsible, Accountable, Consulted and Informed (RACI) chart shows the distribution of responsibilities with the following issues reporting.

Issue Document	Responsible	Accountable	Consulted	Informed
Issue Register	PM / RM	PM	PT	PD
Issue Resolution	PD	PD	PT	PM / PT
Issue Reporting	RM	PM / RM	PT	SMT
Issue Report (for lessons learned purposes)	RM	RM	PT	PT / SMT

Table 6: Issues RACI Chart

Key:

- RM** Risk Manager
- PM** Project Manager
- PT** Programme Team
- PD** Programme Director
- SMT** Senior Management Team

Issue Management Process

- 5.4 As depicted below, the Issues Management process diagram depicted below follows a cyclical process with five discrete steps. The results from these steps are stored in the Programme Issues Register. The Programme Management Group will monitor the effectiveness of the issues process as a whole and will modify this procedure as appropriate as the organisation develops.
- 5.5 The Issues Management process will focus on critical issues, also known “showstoppers”. A showstopper is an event that is serious enough to halt an activity or a programme.
- 5.6 Unlike risk ranking, all critical issues will be treated as very significant (i.e. Very High) including those requiring external interface and internal resolution. Individual reviews will be held on a regular basis with issue owners to update the status of the issues.

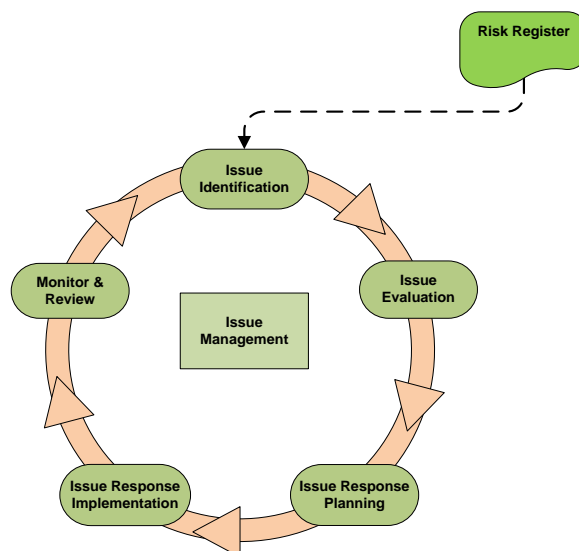


Figure 6: Issue Management Process

- **Issue Identification:** the process by which issues are identified and recorded in an issues register. An event can either be identified originally as an issue or as a form of crystallised risk.
- **Issue Evaluation:** the process by which identified issues are analysed based on the information known. The output of this evaluation greatly assists in determining the appropriate management response strategy.
- **Issue Response Planning:** the creation of appropriate management response to the issues evaluated.
- **Issue Response Implementation:** the process by which management puts a response strategy in place to tackle the identified issues. Including the dissemination of mitigation strategies and the allocation/ implementation of required responses.
- **Monitoring and Review:** This component enables the management team to evaluate the effect of the response strategy implemented. That is, the effectiveness of the mitigation strategies and actions is monitored.

6. Reference

Figures:

Figure 1: TfN's Risk Management Process

Figure 2: Probability Impact Matrix (Threats)

Figure 3: Probability Impact Matrix (Opportunities)

Figure 4: TfN's Reporting Structure

Figure 5: TfN's Issues Reporting

Figure 6: Issue Management Process

Tables:

Table 1: Risk Categories

Table 2: Treatment Response Strategy (Threats)

Table 3: Treatment Response Strategy (Opportunities)

Table 4: TfN's Internal Risk Reporting

Table 5: Risk RACI Chart

Table 6: Issues RACI Chart