

Transport
for NSW

Value Creation Framework

April 2024, 2nd Edition



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Acknowledgement of Country

Transport for NSW acknowledges the traditional custodians of the land on which we work and live.

We pay our respects to Elders past and present and celebrate the diversity of Aboriginal people and their ongoing cultures and connections to the lands and waters of NSW.

Many of the transport routes we use today – from rail lines, to roads, to water crossings – follow the traditional Songlines, trade routes and ceremonial paths in Country that our nation’s First Peoples followed for tens of thousands of years.

Transport for NSW is committed to honouring Aboriginal peoples’ cultural and spiritual connections to the lands, waters and seas and their rich contribution to society.



Table of Contents

1.	Introduction	8
1.1	Purpose	8
1.2	Scope	9
1.3	Related frameworks	10
1.4	Principles	11
2.	Referenced documents	12
3.	Terms, definitions and abbreviations.....	13
4.	Context and alignment	17
4.1	Organisational context	17
4.2	Alignment.....	19
5.	Roles and responsibilities	20
5.1	Functional responsibilities.....	20
5.2	Governance.....	21
6.	Value creation principles.....	22
6.1	Value creation is relative to business as usual	22
6.2	Intended objectives shall not be compromised	23
6.3	Balancing of value with the effort of articulating value	25
6.4	Period of interest	27
6.5	Collaboration as One Transport.....	30
6.6	Whole-of-System Approach	30
6.7	Continual improvement.....	30
6.8	Transparency of value creation and loss	30
6.9	Promoting assurance and representative articulation of value	31
6.10	Due consideration for cash impacts.....	31
7.	Value creation process	32
7.1	Articulate.....	32

7.2	Endorse	33
7.3	Validate	33
7.4	Record	33
7.5	Report	33
7.6	Review	34
7.7	Audit and assurance	34
8.	Value creation across the asset lifecycle.....	34
9.	Calculation of financial value	36
9.1	Categories of financial value	36
9.2	Exercise of expert judgement	37
9.3	Methods of calculation.....	38
9.3.1	Examples by calculation method.....	38
9.3.2	Examples by financial category	42
9.4	Representation over time	43
10.	Measuring non-financial value	44
10.1	Categories of non-financial value	44
10.2	Allowance for multiple instances of non-financial value.....	46
10.3	Magnitude of non-financial value	46
10.4	Non-financial value contributing to financial value	47
10.4.1	Option 1: Assured conversion metrics.....	47
10.4.2	Option 2: Transport Enterprise Risk Management (TERM) Framework.....	47
10.4.3	Option 3: Exercise of expert judgement	47
10.4.4	Option 4: First principles.....	47
11.	Support	48
11.1	Resources.....	48
11.1.1	Guidelines.....	48
11.1.2	Claim Tool	48
11.1.3	Information library.....	48
11.1.4	Supporting Systems.....	48

11.2	Competence	49
11.3	Awareness.....	49
11.4	Communication	49
12.	Performance monitoring and improvement.....	49
12.1	Performance monitoring	49
12.2	Assurance program	49

List of Figures

Figure 1: Transport's interdependent asset management frameworks	10
Figure 2: Value Creation Toolkit supporting the Asset Management Framework	17
Figure 3: Alignment between Value Creation Framework and the Transport Outcomes	19
Figure 4: Value creation governance model	21
Figure 5: Value creation relative to BAU activities that produce positive value	22
Figure 6: Value creation relative to BAU activities that produce negative value	23
Figure 7: Objectives cannot be compromised in the pursuit of value creation	24
Figure 8: Balance of value and effort	26
Figure 9: Relationship between benefit life and asset's useful life	27
Figure 10: Examples of benefit life scenarios	29
Figure 11: Value creation process	32
Figure 12: Representation of cost savings vs avoidance.....	37
Figure 13: Value Creation Framework relationship with information & support resource.....	48

List of Tables

Table 1: Elements of the Value Creation Toolkit.....	8
Table 2: Objectives of the Value Creation Framework	9
Table 3: Value creation principles	11
Table 4: Relationship with Asset Management Framework.....	18
Table 5: Responsible roles by function across the various workstreams	20
Table 6: Eligibility for claiming value	24
Table 7: Benefit life.....	27
Table 8: Value creation across the asset lifecycle by activity	34
Table 9: Categories of financial value	36
Table 10: Example of the unit price calculation method	38
Table 11: Example of the parametric scaling calculation method.....	39
Table 12: Example of the probabilistic calculation method	40
Table 13: Example of the first principles calculation method.....	41
Table 14: Example of value creation through savings	42
Table 15: Example of value creation through cost avoidance	42
Table 16: Example of value creation through revenue growth	43
Table 17: Categories of non-financial value.....	44
Table 18: Magnitude of non-financial value	46

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Versions

Version	Amendment notes
1	Initial release
2	Updated with new structure, expanded scope, and taking into account lessons learned from version 1

Preface

Asset management is a series of coordinated activities integrated across an organisation that balance cost, risk and performance of assets to deliver customer and community outcomes throughout the lifecycle.

Transport for NSW has committed to the application of asset management in the pursuit of future sustainability. The Value Creation Framework represents the means by which Transport for NSW has standardised the approach to outcomes focussed planning, decision-making, collaboration and execution.

The Value Creation Framework provides a conduit between asset management, investment and business decisions to support Transport's long-term sustainability. It is established to provide an enterprise-wide approach on the evaluation, validation and reporting functions of benefits that deliver value back to the community.

This second edition has been updated to reflect the growth in asset management maturity across Transport for NSW.

1. Introduction

1.1 Purpose

Transport for NSW seeks to provide value to the NSW Government and its customers through the provision of transport services and infrastructure as part of its day-to-day activities and to the public by way of operating efficiently. This value may be expressed financially, non-financially or a combination of both.

This document is the Value Creation Framework and sets out the overarching principles and processes for embedding value creation as part of Transport’s asset management activities.

The Framework is part of a Value Creation Toolkit that comprises documented and system elements. The elements of the Value Creation Toolkit are described in Table 1.

Value creation is the increase in financial and/or non-financial benefit associated with an activity in the context of Transport and its customers, relative to an alternative course of action

Table 1: Elements of the Value Creation Toolkit

Element of the Toolkit	Description
Framework (this document)	Definition of overarching principles and processes for embedding value creation as part of Transport’s asset management activities
Procedures	Practical guidance for internal staff and external stakeholders on the implementation of the value creation toolkit. The procedures are documented in two separate documents, being the Internal Guideline and the External Guideline.
Claim Tool	Tool that claimants use to identify the financial and/or non-financial value associated with the activity for which value is being claimed, and may differ according to the specific activity.
Information library	Reference material to enable value creation, for example rates and unit prices, assured conversion metrics, and worked examples.
Supporting systems	Business systems that support value creation, for example Amplify, Standards Workshop, and Supplier Authorisation Portal.

Table 2 sets out the objectives of the Value Creation Framework:

Table 2: Objectives of the Value Creation Framework

	Drive maturity in applying outcome-oriented thinking, planning and execution
	Facilitate consistent articulation of value created by intelligent asset management
	Support TfNSW's Future Sustainability Strategy and Asset Management Interdependencies
	Facilitate greater collaboration between stakeholders who hold responsibility across various asset lifecycle phases
	Enable informed decision-making when considering the balance of financial and non-financial value associated with options under consideration
	Identify efficiencies by which future funding may be redistributed to invest in other business areas and offset additional funding needs

1.2 Scope

This Framework applies to all NSW Transport agencies apart from Sydney Metro.

This Framework relates to the identification, monitoring and reporting of the value created or eroded by asset management activities. Following are the asset management activities within the scope of the Framework:

- a) Granting of Concessions
- b) Issuance of non-conformances
- c) Development and application of Transport standards
- d) Delivery of asset management initiatives⁽¹⁾
- e) Supplier authorisation and audit
- f) Activities delivering increased assurance⁽²⁾

Note 1: Asset management initiatives include but are not limited to the projects delivered under the Asset Technology Program. Where the initiative involves a business case, proposal or briefing note then the scope is limited to activities outside of the NSW Treasury processes for business cases (refer TPG22-04 and TPP18-06). For benefits realisation related to business cases, refer to the Benefits Realisation Management Framework. Adoption of the Value Creation Framework for business cases subjected to the NSW Treasury processes and requirements is voluntary.

Note 2: Activities that deliver increased assurance may include the provision of advice beyond the norm, audits and reviews or other similar activity.

1.3 Related frameworks

The Framework is designed to support a series of integrated frameworks providing a consistent approach to asset management across the whole of life cycle of TfNSW's assets.

- a) The **Asset Management Framework** which aligns TfNSW to NSW Treasury Asset Management Policy;
- b) The **Configuration Management Framework** which defines the required authority to make and recommend changes to TfNSW assets and services;
- c) The **Standards Management Framework** which outlines the way TfNSW standards are developed, managed and governed;
- d) The **Technical Supplier Assurance Framework** which focuses on the supply and assurance of technical services and products to give confidence that the technical aspects of an asset or service change have been considered; and
- e) The **Technical Capability Framework** which clarifies roles within TfNSW for governance, oversight and application of technical authority.

Figure 1 depicts the relationship between the Value Creation Framework, the other frameworks, and the outcomes being delivered thereunder.













Figure 1: Transport's interdependent asset management frameworks

1.4 Principles

The key principles which serve as the foundational policies of this Framework are summarised in Table 3. For further details on the value creation principles, refer to Section 6.

Table 3: Value creation principles

	Value creation is relative to business as usual
	Intended objectives shall not be compromised
	Balancing value with effort
	Relevant periods of interest
	Collaboration as One Transport
	Whole of system approach
	Continual improvement
	Transparency of value creation and loss
	Promoting assurance and representative articulation of value
	Due consideration of cash impacts

2. Referenced documents

The following documents are cited in the text. For dated references, only the cited edition applies. For undated references, the latest edition of the referenced document applies.

Transport for NSW standards

TS 01505 Life Cycle Costing

TS 04982 Risk Criteria for Use by Organisations Providing Engineering Services

TS 00001.1 Standards Review and Development

TS 00003.1 Concessions to Transport Standards Part 1 - Concessions Process

TS 00004.1 Nonconformances to Transport Standards Part 1 – Nonconformance Process

Other referenced documents

Commonwealth of Australia, Measuring What Matters – Australia’s First Wellbeing Framework

NSW Government, Benefits Realisation Management Framework

Public Service Commission, NSW Public Service Capability Framework

TfNSW, Asset Management Framework

TfNSW, Configuration Management Framework

TfNSW, Cost-Benefit Analysis Guide

TfNSW, Economic Parameter Values

TfNSW, Enterprise Risk Management Framework

(This document is not publicly available. Parties external to TfNSW should refer to TS 04982)

TfNSW, IP Value Management Guidelines

TfNSW, Standards Management Framework

TfNSW, Technical Capability Framework

TfNSW, Technical Supplier Assurance Framework

TfNSW, Asset Technology Program Framework

TfNSW, Future Transport Strategy

TfNSW, Connecting to the Future – our 10 Year Blueprint

TfNSW, Assessing Place Benefits - Practitioners’ Manual to assess and value public realm amenity improvements in transport business cases using VASP + PERS

TPG22-04 NSW Submission of Business Cases Policy and Guidelines

TfNSW, TPP18-06 NSW Government Business Case Guidelines

3. Terms, definitions and abbreviations

The following terms, definitions and abbreviations apply in this document:

AMB is an abbreviation of Asset Management Branch.

Applicant means the organisation that has applied for assessment as a TAO, including existing TAOs seeking a scope expansion.

Asset Custodian the entity accountable for the end to end lifecycle management and performance of assets (including asset condition, risk and reporting) on behalf of the asset owner to achieve agreed customer and community outcomes. (i.e. respective TfNSW divisions). The Asset Custodian is often referred to as the Client Division.

Asset life means the period from asset creation to asset end-of-life. In the context of the Value Creation Framework where assets may comprise subcomponents, asset life is deemed to be the life of the overall system.

Asset Steward – Delivery the entity responsible for:

- Procurement of the asset from investment decision to commissioning
- Delivering the benefits
- Translating requirements from the client and managing delivery outcomes
- Selecting the most appropriate supplier/s to meet project objectives

Asset Steward – Operate or Maintain the entity responsible for day to day operations and maintenance of the asset once commissioned, may be a part of the asset custodian division or a separate entity. The operator and maintainer of the assets might be separate entities.

Assured conversion metric means a metric that converts a non-financial parameter into a financial amount. Metrics may be identified by any stakeholder across the organisation, however must be assured by AMB to enable use as part of the Value Creation Framework.

ATP is an abbreviation of Asset Technology Program.

Authorised person means a relevant Director or their delegated technical subject matter expert, who possess expertise within the relevant discipline, and who can make a reasoned judgement of value creation. Such a person may exercise their expert judgement to identify the financial value being created from an activity. Authorised persons include Standards Leads, Technical SMEs and may also include project owners, project sponsors or technical managers.

BAU is an abbreviation of business-as-usual and in the context of options development, is synonymous with the base case scenario.

BAU solution means the solution that would be adopted by progressing business-as-usual. In the context of concessions to Transport standards, the BAU solution is a compliant solution.

Benefit life means the period over which the value will be realised.

Calculation method means the approved method of assessing and analysing value creation from financial and non-financial categories as conducted by a financially literate professional.

Capex is an abbreviation of capital expenditure.

Category means financial and non-financial aspects broken down which provide context to the contribution to value creation.

Claimant means the person performing the calculation of value creation and who is responsible for the accuracy and validity of the value being claimed.

Compliant solution means outright compliance with TfNSW standards in their current state

Cost avoidance refers to strategies, processes, actions that avoid incurring costs in future or prevent the organisation from spending unnecessary money in future.

Cost savings are actions or mitigation strategies that reduce existing spending quantities, debt levels etc and are reflected within budgets and financial statements.

Digital concession tool means a TfNSW digital tool to capture, record and report on concessions capturing data attributes such as savings, cost avoidance, CAPEX, OPEX, service years, whole of life cost assessments

Divisional sponsor means the senior executive representing a TfNSW division in respect of the Value Creation Framework

FBP is an abbreviation of Finance Business Partner

Financial value means a quantifiable (i.e.: monetary) form of value creation and is able to be determined via purely financial categories (e.g.: savings, revenue etc)

Financial sustainability refers to the organisation-wide initiatives that are intended to drive improvement in cost recovery, support investment into customer outcomes and contribute to the achievement of the *Future Transport Strategy* and *10 Year Blueprint*.

Intelligent solution means the proposed solution that will provide better overall value compared to the BAU solution, without compromising on the intended objectives. In the context of concessions to Transport standards, the approved concession will generally be an intelligent solution.

NAC is an abbreviation of Network Assurance Committee, formerly Configuration Control Board.

Non-financial value means an increase or improvement in specific categories (e.g.: safety, resilience, customer etc) that can be counted as value creation or may be able to be converted to financial value by an approved and assured conversion metric.

NPV is an abbreviation of net present value which is the present value of future cashflows (positive and negative) over the benefit life.

Opex is an abbreviation of operational expenditure.

RASCI means defined roles and responsibilities for an outcome as follows:

- Responsible – performs the task
- Accountable – accountable for the outcome
- Support – assists those responsible
- Consulted – for advice and clarification
- Informed – of progress and affected by the outcome

Representation means the way value is reported over time.

Risk rating has the same meaning as defined in TERM. The risk ratings include “A – Very High”, “B – High”, “C – Medium” or “D – Low” where the ratings have been determined from the consequence and likelihood of the risk.

Service provider is a recognised individual or entity that provides a service to Transport that is considered to possess requisite levels of expertise and technical capability and which may be a TAO.

SME is an abbreviation of Subject Matter Expert.

Sponsor means the role or their delegate that confirms the need is valid and endorses the preferred option for the initiative.

Standards artefact includes the documentation listed in the primary, secondary and tertiary hierarchies of the Standards Management Framework.

Standards Workshop means the digital tool used to manage the drafting, consultation and publishing stages of standards artefacts. The Standards Workshop has a public facing portal available at <https://standards.transport.nsw.gov.au/>

TAO is an abbreviation of Technically Assured Organisation in accordance with the Technical Supplier Assurance Framework.

Technical SME has the same meaning as under the Standards Management Framework, and in the context of value creation also means a TfNSW representative who has requisite levels of skill and knowledge in a specific subject matter to aid and enable value creation identification, calculation and reporting from a technical perspective.

TERM is an abbreviation of the TfNSW Enterprise Risk Management standard. Whilst TERM is an internal document not for sharing beyond the organisation, the standard TS 04982 is aligned with TERM and contains the content that is suitable for public use.

TfNSW is an abbreviation of Transport for NSW.

Totex is an abbreviation of total expenditure and is inclusive of capex and opex

Transport Standards means the standards published and governed in accordance with the Standards Management Framework.

Value means financial and/or non-financial benefit associated with an activity in the context of the organisation and its customers, relative to an alternative course of action or non-action.

Value creation means an increase in value realised from an activity and expressed as the incremental change, rather than the absolute amount of value realised from the activity.

Value creation claim tool is the tool that claimants use to identify the financial and/or non-financial value associated with the activity for which value is being claimed. The tool may differ according to the activity, for example when articulating value creation from concessions the tool will be the digital concessions tool.

Value loss means a decrease in value realised from an activity, for example due to a non-conformance

Value Creation Toolkit means the system of value creation elements comprising the Value Creation Framework (this document), procedures, tool, information library and supporting systems.

WoL is an abbreviation of whole of life which is applicable to the total cost of an asset/system over its lifetime taking into account such factors as initial capital cost, operational cost, maintenance, utilities, disposal etc.

4. Context and alignment

4.1 Organisational context

Transport for NSW's (TfNSW) organisational objectives are outlined in the *Transport Administration Act 1988* (TAA). TfNSW's approach to delivering these objectives is defined in the Asset Management Framework.

This Value Creation Framework is complementary to the Asset Management Framework and the supporting frameworks governing the application of asset management (refer Section 1.3). The Value Creation Framework (this document) is a key enabler of the Asset Management Framework through the support and performance evaluation elements, see Figure 2.

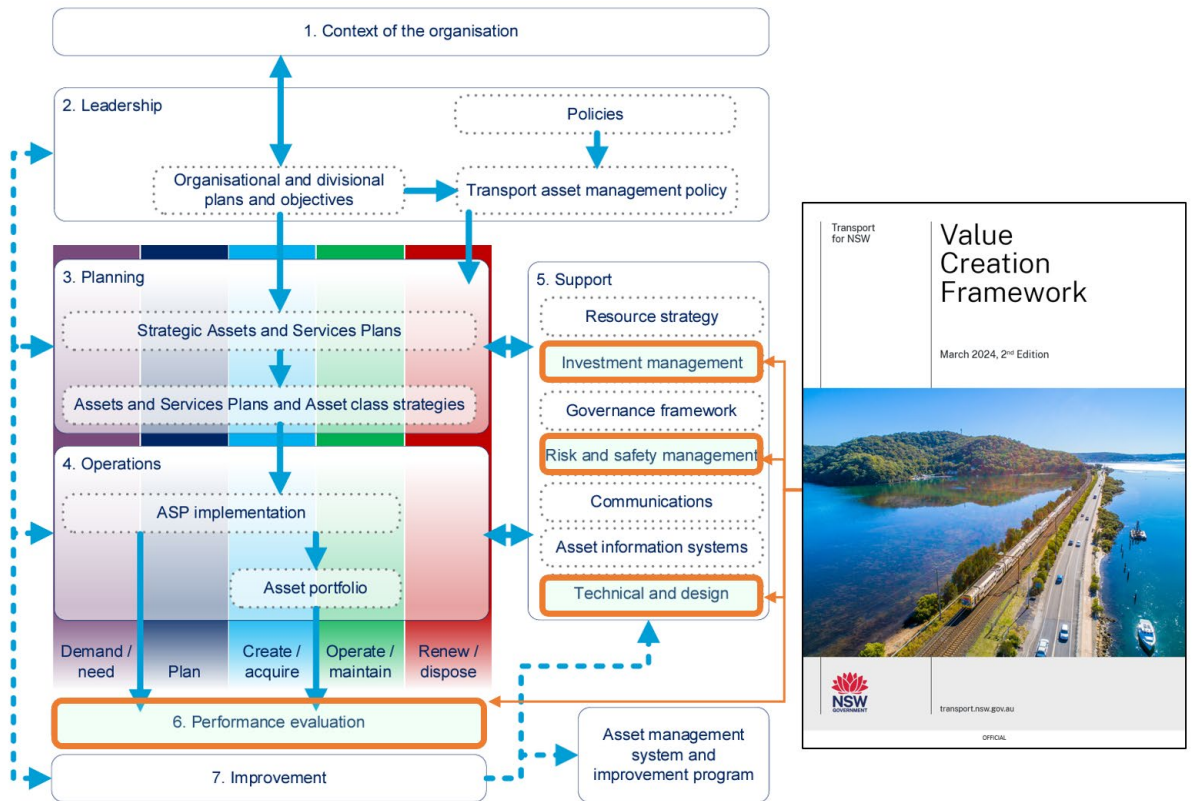


Figure 2: Value Creation Toolkit supporting the Asset Management Framework

Key relationships between value creation and the AMF are outlined in Table 4.

Table 4: Relationship with Asset Management Framework

AMF Element	Relationship
Organisational and divisional plans and objectives	→ Controls the direction and coordination of Asset Management Activities that create value
Asset Management Policy	→ Sets the requirements for a financially responsible, future-focused Transport network
Strategic Asset and Services Plans (SASPs), Asset and Services Plans (ASPs) and asset class strategies	↔ Determine the funding needs for future transport services and are informed by Value Creation improvements in capital, operational and maintenance investments
Resource strategy	→ Identifies the necessary resources and capabilities to support Value Creation solutions
Investment management	↔ Informs and is informed by the value associated with various options under consideration
Governance framework	→ Integrates management Frameworks supplemented by the Value Creation process and sets out inter-dependencies
Risk and safety management	→ Informs the benefit potential of non-financial categories contributing to financial value
Communications	→ Promote shared learning and support transparent reporting of articulated value
Asset information systems	→ Informs the articulation of value creation and/or value loss and the decisions made as a result thereof
Technical and design	↔ Enable technical decisions to establish baselines that are elevated through Value Creation maturity
Performance evaluation and improvement	↔ Improves the maturity of the Value Creation Framework and identifies opportunities for improvement

4.2 Alignment

Value creation is an outcomes-focussed approach to the assessment, planning, delivery and ongoing management of Transport solutions. Value creation complements the frameworks of the asset management interdependencies in the realisation of outcomes aligned to the Future Transport Strategy.

Figure 3 depicts the relationship between the four Transport outcomes set out in the Future Transport Strategy and TfNSW's integrated frameworks.

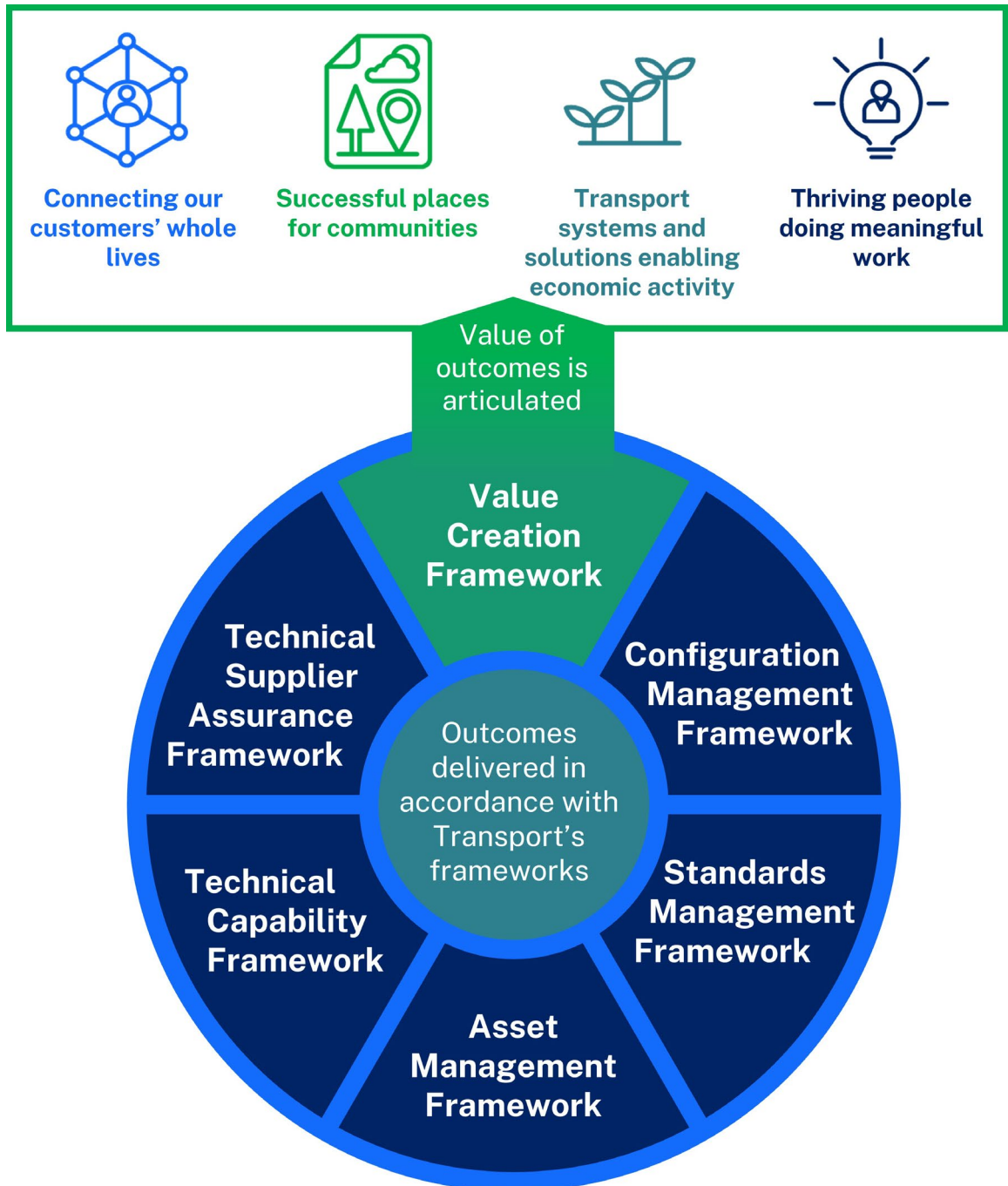


Figure 3: Alignment between Value Creation Framework and the Transport Outcomes

5. Roles and responsibilities

5.1 Functional responsibilities

The accountabilities for the various roles involved in the value creation process will differ depending on the specific workstream for which value is being articulated. Table 5 contains guidance on the various workstreams and provides guidance documentation for the accountabilities. The specific accountabilities will be detailed further in the guideline documents.

Table 5: Responsible roles by function across the various workstreams

Workstream	Guidance documentation for accountabilities	Functional role for value creation						
		Claimant	Endorser	Validator	Recorder ⁽²⁾	Reporter ⁽²⁾	Reviewer ⁽²⁾	Auditor
Granting of Concessions	TS 00003.1 and Standards Management Framework	In accordance with the RASCI defined in guidance documents			AMB	AMB	AMB	AMB
Issuance of non-conformances	TS 00004.1 and Standards Management Framework	In accordance with the RASCI defined in guidance documents			AMB	AMB	AMB	AMB
Development and application of Transport standards	TS 00001.1 and Standards Management Framework	In accordance with the RASCI defined in guidance documents			AMB	AMB	AMB	Standards Lead
Delivery of asset management initiatives ⁽¹⁾	Asset Management Framework Asset Technology Program Framework	Sponsor	Delivery partner	AMB, FBP	AMB	AMB	AMB	AMB
Supplier authorisation and audit	Technical Supplier Assurance Framework	Applicant	Delivery partner	AMB, FBP	AMB	AMB	AMB	AMB
Activities that deliver increased assurance	Asset Management Framework	Lead	Delivery partner	AMB, FBP	AMB	AMB	AMB	AMB

Note 1: Asset management initiatives include but are not limited to the projects delivered under the Asset Technology Program. Where the initiative involves a business case, proposal or briefing note then the scope is limited to activities outside of the NSW Treasury processes for business case development and submission (refer TPG22-04 and TPI18-06). Adoption of the Value Creation Framework for business cases subjected to the NSW Treasury processes and requirements is voluntary. Where the initiative involves a business case, proposal or briefing note, then the value creation claim should be made by the author.

Note 2: The FBP will also hold responsibility where the recording, reporting or reviewing functions occur within Amplify.

5.2 Governance

Governance is the process where the accountable party makes decisions, checks prescribed processes have been completed and provides a means to review and accept value creation considerations.

The Asset Management Steering Committee is the governance committee for Financial Sustainability Initiatives, including the Value Creation Framework that is the subject of this document.

AMB is the central area accountable for providing governance on value creation with input from across the organisation. AMB are the custodians of value creation reporting and will provide guidance where value creation is and is not reasonable to claim.



Figure 4: Value creation governance model

The Asset Management Advisory Panel (AMAP) is an independent panel formed on an as-needs basis to provide advice to governance bodies such as the Asset Management Steering Committee (AMSC) and the Transport Network Assurance Committee (TNAC). Membership on each AMAP may include AMB and cross-divisional representation according to the need.

6. Value creation principles

6.1 Value creation is relative to business as usual



When planning to take an action, consideration should be given to:

- whether the action will lead to value creation or value loss
- whether the action forms part of the role's expected duties

Where neither value creation nor value loss occurs, then articulation of value creation will not be required. Where actions are part of a role's expected duties, it is recognised that value is derived from these actions. However, that value is the expectation of the role and therefore should not be articulated as value creation. For example, a risk manager may implement measures to reduce risk – this provides value but is treated as business-as-usual rather than value creation.

Value creation will be represented as the change in value from a business-as-usual activity to a proposed alternative action.

Where the alternative action results in greater value than the business-as-usual case, then the change in value will be deemed to be value creation.

Where the alternative action results in less value than the business-as-usual case, then the change in value will be deemed to be value loss.

The following figure depicts the relativity of value creation or loss compared with a positively valued business-as-usual case.

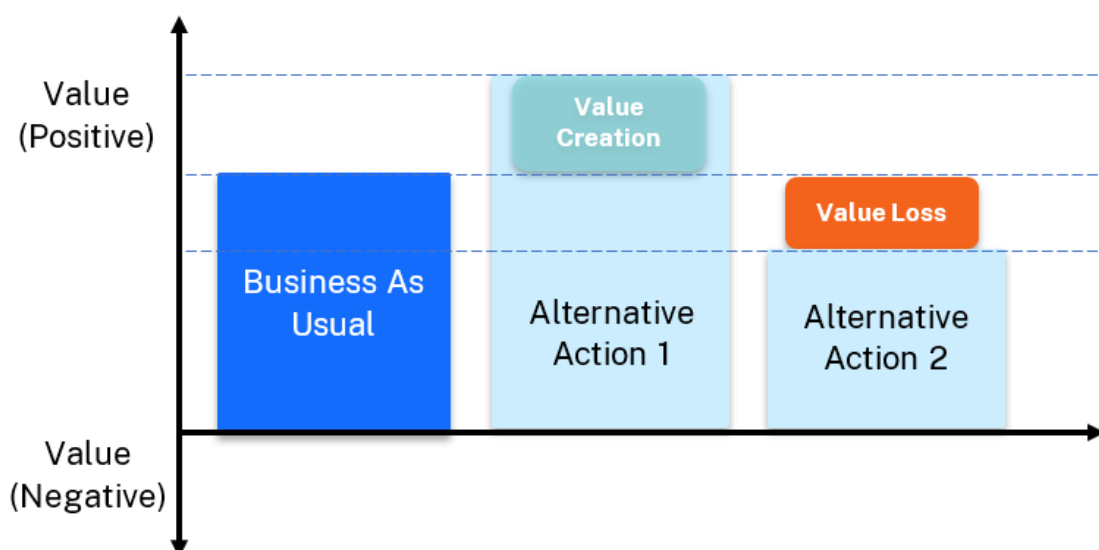


Figure 5: Value creation relative to BAU activities that produce positive value

The following figure depicts the relativity of value creation or loss relative to a negatively valued business-as-usual case.

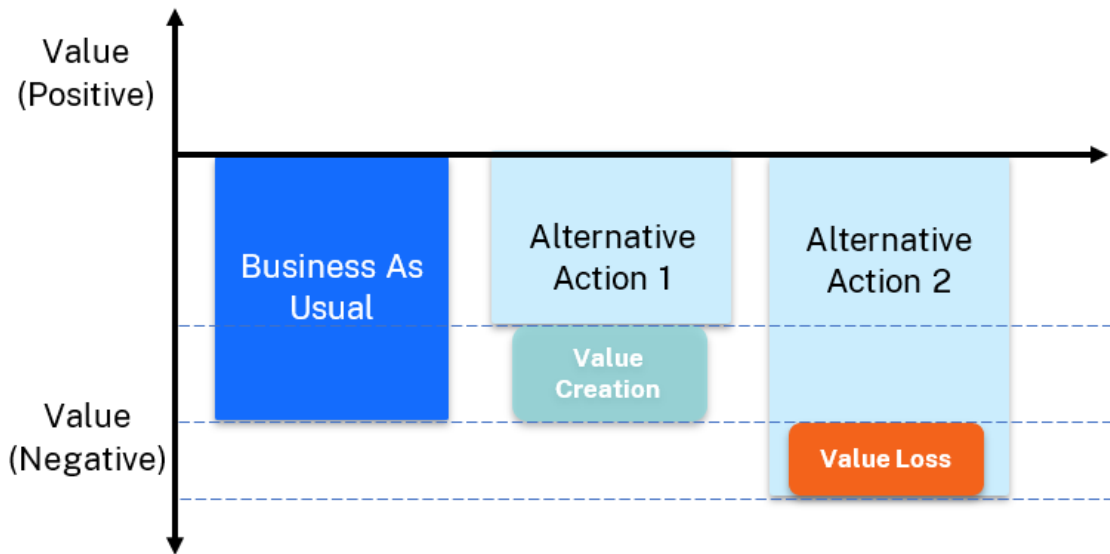


Figure 6: Value creation relative to BAU activities that produce negative value

6.2 Intended objectives shall not be compromised



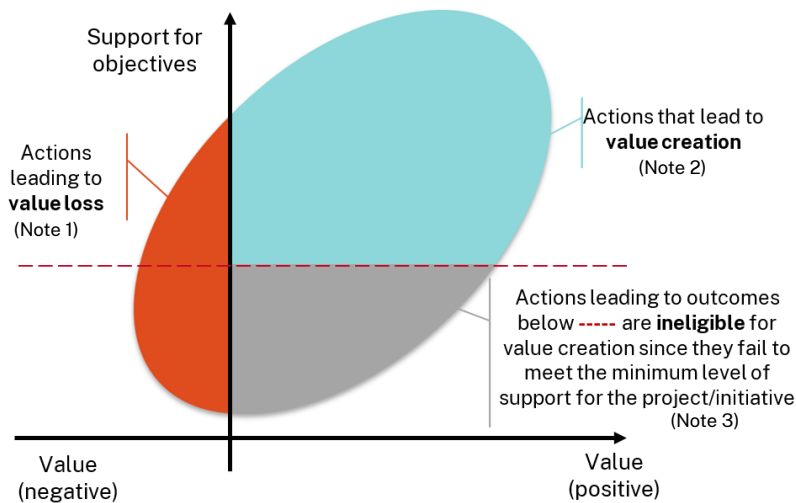
It is expected that every activity subject to the Value Creation Framework will create some value. This value will be treated as the business-as-usual amount (refer Principle 1 at Section 6.1). Whilst the specific value does not necessarily need to be articulated for every activity (refer Principle 3 at Section 6.3), the value creation process shall not diminish the achievement of the objectives.

Value creation is correlated with the level of support for achieving the activity’s objectives, such that actions which lead to greater value creation are expected to also increase the level of support for the activity’s objectives. The degree of correlation depends on how the activity’s objectives have been defined, as follows:

- Where the objectives involve financial targets and the full range of non-financial value categories, then support for the objectives is fully aligned with value creation.
- Where the objectives involve only financial targets or some of the of non-financial value categories, then support for the objectives is loosely aligned with value creation.

The objectives of the activity would typically be set out in the contract or agreement between parties involved in delivering the activity. Otherwise, the objectives would be informed by the organisational objectives as set out in legislation and operationalised by the asset owner or their delegate.

The financial and non-financial objectives of a particular activity shall not be compromised due to an action that seeks cost savings or cost avoidance. Refer to Figure 7 for a graphical depiction.



Key:
----- Minimum support for the project or initiative objectives to be eligible for claiming value creation or loss

Figure 7: Objectives cannot be compromised in the pursuit of value creation

Note 1: An example of increasing support for the objectives but at the expense of value is adjusting the scope of a revenue-generation initiative to save on establishment cost, but also introducing new safety risks

Note 2: Actions that legitimately add value are expected to also support the objectives of the activity

Note 3: The pursuit of value creation but failing to achieve the objectives of the activity is an artificial benefit and is ineligible for being claimed as value creation. An example would be redesigning road alignment to reduce cost but at the expense of sight distances, which reduces safety below the minimum requirement and is therefore ineligible for claiming value creation.

Table 6 below shows the situations where value may or may not be eligible for claiming as value creation, depending on the impact on the original objectives. Whilst a situation may result in an activity being ineligible for claiming value creation, the Value Creation Framework itself will remain applicable.

Table 6: Eligibility for claiming value

Impact on the objectives of the activity	Eligibility for claiming value creation
At or above the minimum level of support for the activity's objectives	Yes, if there is financial or non-financial value
Below the minimum level of support for the activity's objectives	No (refer to Figure 7)

Whether an activity is or is not eligible for claiming financial value creation is independent of the requirements to apply other processes. For example, a Tier 4 concession that proposes a solution which reduces safety below the minimum requirement may result in cost avoidance. This cost avoidance will not be eligible for claiming as value creation, however the whole of life cost assessment performed in calculating the cost avoidance will still be required because they are triggered by the concession process set out in TS 00003.1.

When the amount of value associated with an activity is in the process of being articulated, a determination shall be made in terms of the following:

- a) extent of support for the activity's objectives by pursuing the proposed action, giving consideration to all relevant financial and non-financial value categories across the whole of life
- b) balance of financial and non-financial value (if both apply) being created or lost
 - i. Where there is a net cost in financial terms, the expectation is that the magnitude of the non-financial value is sufficient to offset the cost impact
 - ii. Where there is significant non-financial value that can be realised, over-engineering relative to the demand and need shall be avoided.
- c) administrative effort required to articulate the value (refer section 6.3)

The proposed action shall not adversely affect the achievement of the activity's objectives.

Where the extent of support for the objectives falls below the minimum threshold, then the proposed action should not be pursued. However, this does not preclude situations where the scope or objectives of the activity are amended, in which case the proposed action may exceed the minimum required of support for the amended objectives and be considered further.

Where a proposed action is intended to provide non-financial benefits, for example by improving safety, but does not provide a financial return then a determination shall be made of the relativity between the non-financial value and the whole of life cost. Where the non-financial value is deemed by an authorised person to exceed the whole of life cost, then the proposed action should be considered further. Where the non-financial value is commensurate with the financial cost, then the determination shall be made on the strategic alignment with Transport's objectives and the objectives of the activity.

6.3 Balancing of value with the effort of articulating value



The level of effort involved with articulating value should be proportionate to the amount of value being claimed. There will be thresholds of value which influence whether the process for articulating value is worthwhile or if added due diligence is required:

Low value creation will generally not be sufficient to justify the effort required to articulate that value (represented by the orange section in Figure 8)

Potentially high magnitudes of value creation, and high risk or complex situations may require a disproportionate level of effort to articulate the value (represented by the grey section in Figure 8)

The thresholds of effort will vary according to the availability, currency and assurance of relevant information needed to support the claim. The thresholds should be judged on a case by case basis by the suitably qualified person. Where it is deemed to be simple, it shall be recorded. However, for more complex cases, it will be assessed by the responsible role whether to conduct the calculation based on the value creation being worth more than the effort to articulate it (i.e. the financial benefit is more than the cost of estimating the benefit).

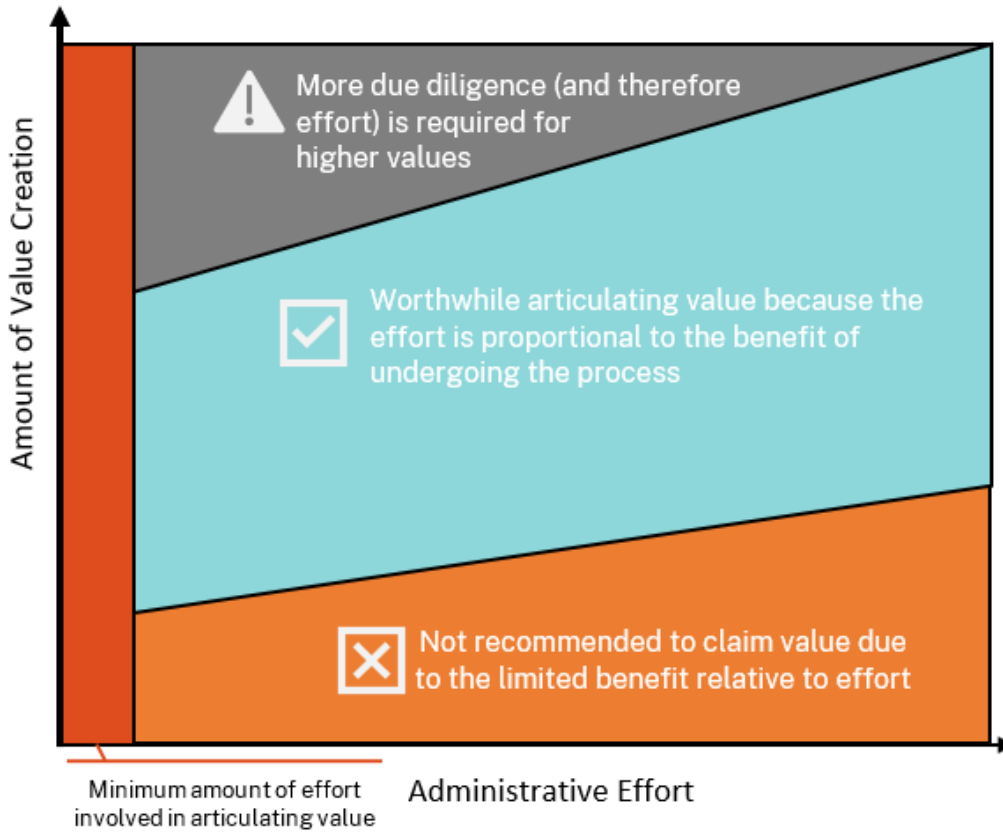


Figure 8: Balance of value and effort

6.4 Period of interest



Value creation will be represented over a relevant time period. The relevance of the time period will be determined by the benefit life. The principles of benefit life shall apply for both financial value creation and non-financial value creation.

The benefit life will depend on whether the value is being realised as a direct or indirect consequence of an asset. The key considerations when determining the appropriate period of interest over which value is represented will be the dependence on an asset or group of assets, and the period over which the benefit is realised. These considerations apply whether the value is a direct or indirect consequence of the assets.

Figure 9 provides guidance on the relativity between the benefit life and the asset's useful life depending on how the benefit is realised.

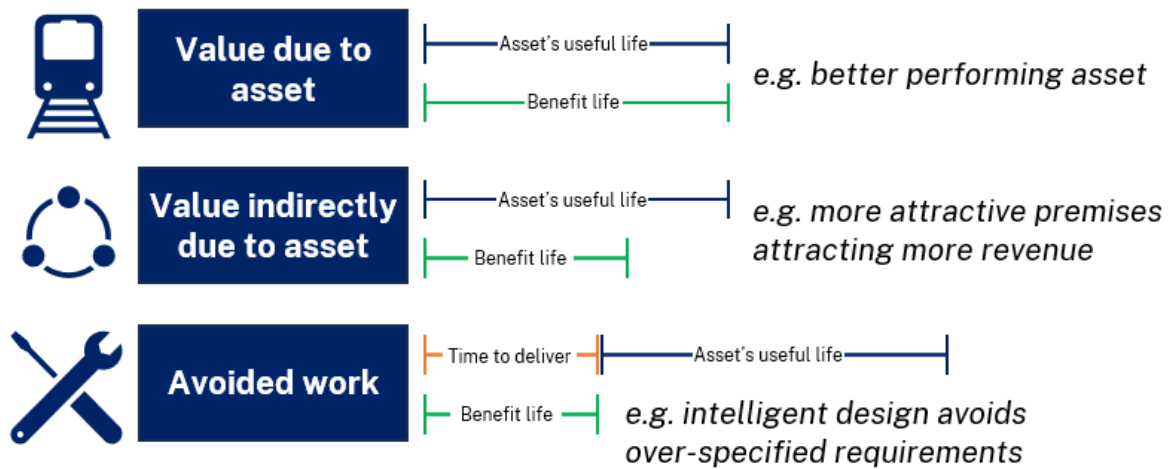


Figure 9: Relationship between benefit life and asset's useful life

Table 7 below summarises the different benefit lives by workstream and dependence on assets:

Table 7: Benefit life

Workstream	Directly caused by an asset or group of assets	Indirectly caused by an asset or group of assets	Avoidance of work
Granting of Concessions	Duration of the permanent concession, which is generally equal to or less than the assets' useful life Duration of the temporary concession	Duration of the benefit being realised	Duration of project work that would have been required if the BAU solution was adopted instead
Issuance of non-conformances	Duration of the outcomes arising from the non-conformance, which is generally equal to or greater than the assets' useful life or until a suitable control is implemented	Duration of the loss being realised	Duration of the risks created as a result of the work not being performed in a compliant manner

Workstream	Directly caused by an asset or group of assets	Indirectly caused by an asset or group of assets	Avoidance of work
Development and application of Transport standards	Useful life of the assets resulting from the new standard or the change due to an updated standard	Duration of the benefit being realised	Useful life of the assets resulting from the new standard or the change due to an updated standard
Delivery of asset management initiatives	Useful life of the assets resulting from the initiative	Duration of the benefit being realised	Duration of work that would have been required under the alternative if the initiative was not delivered
Supplier authorisation and audit	-	Duration of the benefit being realised	Duration of work that would have been serviced by the supplier if authorised
Activities that deliver increased assurance	-	Duration of the benefit being realised	Duration of project work that would have been required if the BAU solution was adopted instead

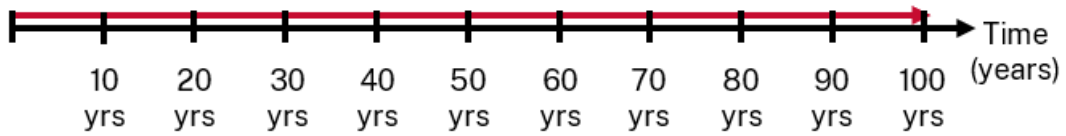
Where the life of the asset is less than 30 years, then an authorised person must determine whether the source of value is a once-off item or will be recurring:

- If the source of value is once-off, then the period of interest will be the asset life (as depicted in Figure 10 Example 5)
- If the source of value is recurring, then the period of interest will be the greater of:
 - 30 years (as depicted in Figure 10 Example 3) or
 - the lowest integer multiple of the asset life that is equal to or greater than 30 years (as depicted in Figure 10 Example 4).

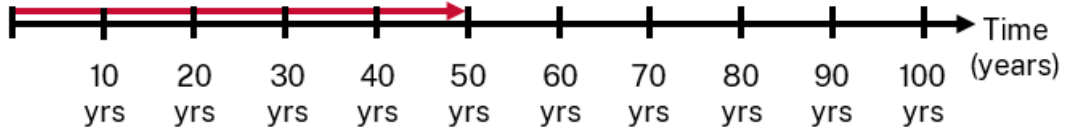
This period will include asset disposal and renewal cycles as necessary to reach a whole number multiple of the asset's life. Most standards and concessions will determine the value as a once-off period as they often require revisions and updates once the recommended time period is up (especially applicable to concessions). The renewal period may then utilise the 'revision period' as the 'asset life' and extend the life by the revised period (as depicted in Figure 10 Example 3 and Example 4).

Following are examples of the different scenarios that could apply when representing the period of interest.

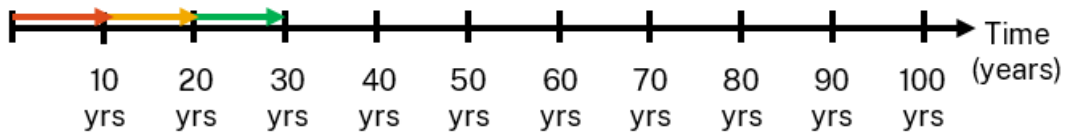
Example 1: Benefit life is equal to asset life of 100 years.



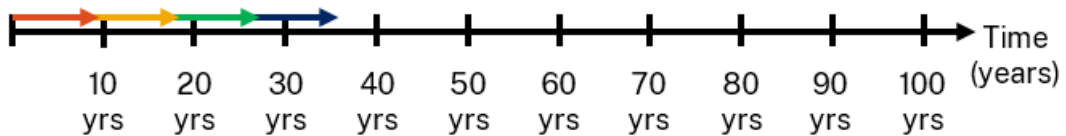
Example 2: Benefits will be realised over a period of 50 years.



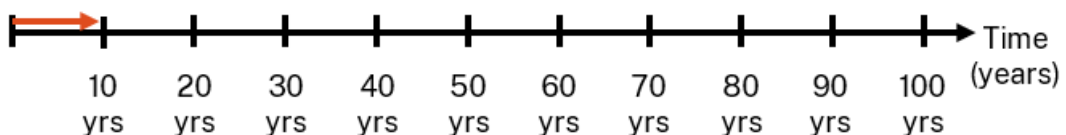
Example 3: Benefits recur over multiple asset renewals. Benefit life is lowest integer multiple of renewed asset (3x10 = 30 years).



Example 4: Benefits recur over multiple asset renewals. Benefit life is lowest integer multiple of renewed asset (4x9 = 36 years).



Example 5: Benefits occur over single asset life of 9 years. Benefit life = asset life.



Key:

- Whole of life 1
- Whole of life 2
- Whole of life 3
- Whole of life 4

Figure 10: Examples of benefit life scenarios

There may be instances where the value creation of an alternate course of action will not be immediately realised, but which is evident over the period of benefit life. When deciding on the relative benefits offered by alternate options, consideration shall be given to the whole of life impact and benefit of performing work sooner rather than later.

6.5 Collaboration as One Transport



This Framework is intended to balance the needs of each Division and be integrated into business-as-usual processes across the organisation.

Value creation may be nominated by any member of Transport staff or a supplier to a Transport agency (e.g. TAO or other contractor), however will only be recorded when passing appropriate endorsement and validation steps.

Value creation information will be managed in a consolidated repository. Access to the consolidated repository of value creation information will be available to the Divisional Sponsors, their delegates and authorised persons

The Divisional Sponsors, authorised persons and their respective teams will socialise the value management concepts documented herein and encourage other stakeholders to incorporate value creation into their thinking, documentation, planning and delivery

Value creation will be attributed to a party solely for the purpose of ensuring double counting is avoided. AMB will review claimed value as part of the value reporting process to ensure that double counting does not occur.

Where value creation is the result of two or more parties' involvement, value creation will be attributed to the party that provided the greatest input as agreed between the relevant authorised persons.

Benefit potential should not be limited to intra-divisional activities. Where cross-divisional interdependencies apply and overall value is likely to be improved across the wider business, teams should collaborate to optimise benefit potential.

6.6 Whole-of-System Approach



The articulation of value shall take into account the interdependencies between the element subject to value creation / loss, and any higher level systems or components.

Intelligent solutions will consider how they may interact with existing systems to avoid compromising value realisation. This may require engagement with relevant stakeholders and adopting alternative methods to prevent incompatible outcomes within the network.

6.7 Continual improvement



Value creation data will be continually reviewed with the aim of continual improvement, learning lessons and assisting with the prioritisation of future works. Learnings from the review, audit and assurance activities will be taken into account when planning for improvements to asset management value creation practices.

6.8 Transparency of value creation and loss



Where value loss occurs, it shall be treated with the same rigour and due diligence as instances of value creation. Occasions of value loss should not be concealed or omitted. Value creation and value loss will be identified in a fair and transparent manner. Value loss may occur due to poorly planned and delivered activities, for example where there is a non-conformance to a TfNSW standard.

6.9 Promoting assurance and representative articulation of value



Value may be articulated in the form of financial value, non-financial value, or a combination of both. Value should be articulated where it is reasonable to do so and can be substantiated.

The amount of value being created or lost will be represented in such a manner that reflects its magnitude.

Financial value will be articulated using dollar values in accordance with Section 9. Non-financial value will be represented on a sliding scale in accordance with Section 10.

Equivalent value, which has been translated from non-financial value into financial value, will be represented in dollar values. Where practicable the conversion of value from non-financial to financial should rely on evidence-based evaluation methods. In the absence of such evidence, theory-based evaluation and relevant sources may be used.

Asset Management Branch will record value creation / loss and relevant costing metrics. Users of the Value Creation Framework shall be provided with options of data types to inform any claims of value creation. The options will be based on assured data sources.

Where value cannot or has not been quantified by projects or other stakeholders, then authorised persons will have an opportunity to exercise their expert judgement. AMB will keep records of evidence supporting the quantification of financial value and measurement of non-financial value.

The workflow for the value creation process will incorporate assurance activities designed to provide confidence that claims are fair, reasonable, consistent and appropriately substantiated according to the risk of the corresponding activity and amount of value being claimed. Existing assurance processes related to endorsement, validation, review and audit will be adopted where applicable.

6.10 Due consideration for cash impacts



The impact of value creation or loss on cashflows will be taken into account. This will be reflected in the articulation and reporting of value creation.

Where the BAU solution would have caused unplanned additional spend above the budget, the avoidance of cost will not provide a cash benefit.

Where the BAU solution has been addressed in the budget, and cost savings are reallocated elsewhere then there will not be a cash benefit.

Where the BAU solution has been addressed in the budget, and cost savings are made available for reallocation, then the cash benefit should be identified and notified to the Finance Business Partner. Finance teams will track cash impacts against divisional and organisational performance to identify opportunities or challenges and make informed decisions about long-term financial sustainability.

7. Value creation process

The lifecycle of the value creation process involves a sequence of activities as represented in Figure 11.

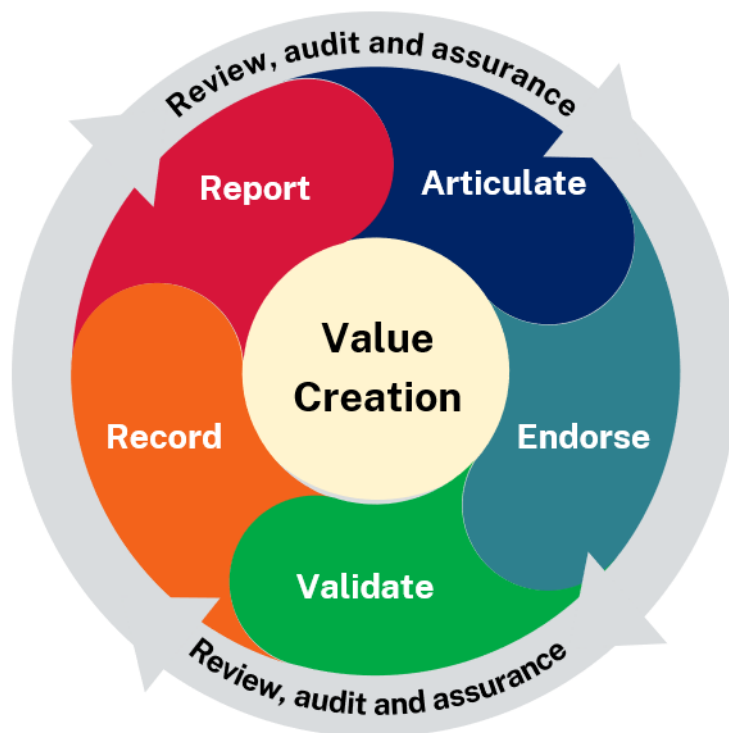


Figure 11: Value creation process

7.1 Articulate

The articulation of value takes into account the notion that value may be financial, non-financial or both financial and non-financial in nature.

Financial value is to be articulated by a technically and financially literate person within the requesting organisation/service provider. Financially literate means they possess the ability to understand and effectively use various financial skills such as financial management and analysis, budgeting and the like. In the context of the NSW Public Sector Capability Framework, financial literacy is covered under the Finance capability at a level of Intermediate or higher.

By technically literate, they are to possess a requisite amount of technical understanding of the project, concession, standard etc to be able to translate that into financial terms.

Calculations are to identify and differentiate between cost avoidance and cost savings in their development (refer to Section 9.1 for further details on savings and cost avoidance). Calculations are to be fully justified in accordance with this Value Creation Framework and may use software tools, accounting methods, and estimation guides.

The magnitude of impact of non-financial value creation shall be estimated at this stage. The magnitudes are set out in Section 10.3.

Value management activities should be consistent with the Value Management Guidelines and the related frameworks set out in Section 1.3.

Where disagreements occur between the claimant and the parties responsible for endorsement and validation, then the parties are expected to communicate with the aim of identifying the value that is most representative, fair and reasonable.

The articulation of value creation will be subject to the balance of informational value with administrative effort in accordance with Section 6.3.

7.2 Endorse

Endorsement of the articulated value is to come from within the requesting entity in the first instance (service provider or otherwise) as a matter of quality verification. This would essentially entail a quality assurance check of the articulation itself into the inputs, calculation and/or measurement methods, and the final results for assurance purposes. As such, endorsement from within the TAO (or otherwise) is to come from a more senior level than who articulated it.

Endorsement is to be complete before the application as an initial step for assurance to TfNSW. From there it is to be submitted to the relevant TfNSW stakeholders for validation and recording.

7.3 Validate

The purpose of the validation stage is to ensure that the value creation being put forth is fair and reasonable. AMB will validate the value creation being claimed and provide relevant feedback and input to the technical SMEs were required.

7.4 Record

When value creation has been endorsed and validated, it shall be recorded by AMB. The record process will be independent of the source of value creation, whether it be concessions, standards, projects etc.

Records of value creation will identify the date of value creation, benefit life and relevant financial and non-financial data to support the value being recorded.

Records of value creation shall be stored in a management system that conforms with Transport's record keeping and information management requirements.

The records will include:

- a) Documentation associated with the claim of value creation, e.g. notice of concession, whole of life cost assessment, survey report identifying the magnitude of non-financial benefits etc
- b) Documentation produced as part of the process, which may include updated costings and assessment data

The information shall be organised to enable review and auditing as part of the later processes.

7.5 Report

The reporting of value creation is intended to communicate financial and non-financial successes to the organisation, provide performance information and provide lessons that will drive better future decision making and investment.

The reporting process will be independent of the source of value creation, whether it be concessions, standards, projects etc.

AMB will maintain ownership of the reporting process, relying on the correctly assured inputs from the service provider and TfNSW technical SMEs, Standards Leads, asset steward and asset custodian.

Reporting is a continuous process running through the whole of life. Rolling time periods will be applied as value will be continually articulated over time. As such, determined value creation events are to be regularly reviewed and updated.

Reports will identify progress against the success and planning indicators for value creation.

7.6 Review

Value creation will be reviewed on an annual basis to inform analysis of the following:

- a) Trends in expenditure
- b) Trends in value management decision making
- c) Source data used in articulating value
- d) Comparison of how activities are prioritised vs strategic priorities

7.7 Audit and assurance

An audit and assurance program will be implemented. A risk based sample of value creation and loss examples will be used to perform the audit and assurance functions.

8. Value creation across the asset lifecycle

Application of the Value Creation Framework involves a series of integrated activities performed by multiple parties across the asset life cycle. The stage of the value creation process in each asset lifecycle phase depends on the specific activity to which the process is being applied.

Table 7 provides guidance on the value creation phases for each activity, with each phase denoted in **blue**.

Table 8: Value creation across the asset lifecycle by activity

Activity	Demand / Need	Planning	Create / Acquire	Operate / Maintain	Renew / Dispose
Concessions	1.1 Initial consultation 1.2 Confirm need	2.1 Develop impact assessment 2.2 Draft request Articulate 2.3 Confirm impact assessment 2.4 Endorse request Endorse	3.1 Develop concession 3.2 Review technical Validate 3.3 Review process 3.4 Final approval Record Report	Review	Trigger

Activity	Demand / Need	Planning	Create / Acquire	Operate / Maintain	Renew / Dispose
Non-conformances	Identify NC	Develop plan and justify NC Articulate Endorse plan Endorse	Review request Validate Issue notice of NC Record Report	Implement plan Review	Trigger
Standards	Trigger	Stage 1 Proposal & Planning Articulate	Stage 2 Draft & Develop N/A Stage 3 Collaboration N/A Stage 4 Governance & Approval Endorse Validate Record Stage 5 Publication Report	Stage 6 Operate & Maintain: Review	Trigger
Initiatives Note 1		Articulate	Endorse Validate Record Report	Review	Trigger
Authorisation and audit Note 1		Articulate	Endorse Validate Record Report	Review	Trigger
Assurance activities Note 1		Articulate	Endorse Validate Record Report	Review	Trigger

Note 1: The specific place within the asset lifecycle at which value creation activities are performed will be dependent on the nature of the activity. The above details are for guidance only and should be assessed on a case by case basis.

Notwithstanding the guidance provided by Table 7, the Value Creation Framework does not abrogate any responsibility for performing value management activities as required by TfNSW policies, contracts or agreements.

9. Calculation of financial value

9.1 Categories of financial value

Financial value creation may be in any one or more of the following forms:

- a) Savings
- b) Revenue
- c) Avoidance
- d) Equivalent value

Table 9: Categories of financial value

Category	Examples
Savings	Changes relative to forward projections and committed budgets, such as: <ul style="list-style-type: none"> • Reduced overheads • Reduced capital costs • Reduced maintenance costs
Revenue	Increased revenue projections Introduction of a new revenue stream
Avoidance	Changes that are unplanned and not part of forward projections, such as: <ul style="list-style-type: none"> • Identifying and performing a smaller scope of work that still meets objectives rather than a larger compliant scope of work • Reduction/elimination of backlog by bundling with capital works or accelerating backlog remediation program
Equivalent value	Any financial value derived from non-financial value (refer Section 10).

The categories above are not exhaustive but are the primary focus linking Transport's contributions to the Future Sustainability initiative. As such, they may evolve over time.

Savings represent reductions relative to the forward projections or committed budget. The benefit of reporting savings is that it allows Transport to consider using of funds for another purpose.

When assessing the value creation from savings, the interaction with contracts and project delivery should be taken into account. If the contract is varied as a result of a value creating activity, then value creation should be articulated. Conversely, if a contract is varied and cost savings are realised but the impetus was unrelated to asset management, then the value creation process will not apply.

There will be situations where savings can be calculated without knowing the forward projections, for example introducing a more efficient item of plant that consumes less electricity. Where the intelligent solution yields a saving that can be calculated, then the forward projections will not need to be known.

Other times, the calculation of savings will require knowledge of the forward projections. Where the forward projects are unknown to the claimant, then savings should be expressed qualitatively and accompanied by a comment that describes the source and implications of the saving.

Cost avoidance relates to instances where an action is taken to avoid excess expenditure which was unplanned or not already incorporated into the forward projections. Cost avoidance may result in cases where the actual cost due to adopting an intelligent solution is either above or at budget. Where a cost avoidance occurs that results in the actual cost being below the budget, then the difference will be categorised as a saving.

Revenue is inclusive of cost recovery.

Depending on how the BAU solution was budgeted, the intelligent solution may or may not impact upon the budget.

The following figure depicts the difference between cost savings and avoidance with respect to BAU and intelligent solutions:

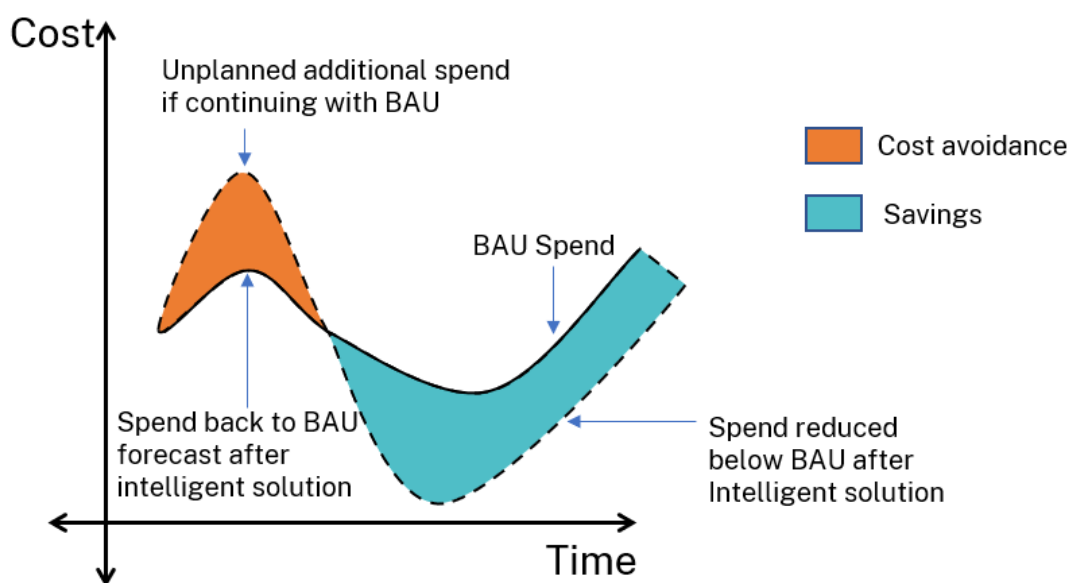


Figure 12: Representation of cost savings vs avoidance

Where an activity leads to a financial amount being identified through this process, but at the expense of compromising on the original objectives (refer Section 6.2), then that financial amount is ineligible for claiming as value creation.

9.2 Exercise of expert judgement

Where value cannot or has not been quantified by projects or other stakeholders, authorised persons shall use their expert judgement to determine value up to a \$1,000,000 threshold per instance. In order to justify this expert judgement, the authorised person shall document their reasoning and cite any calculations, assumptions and data as appropriate to allow independent verification.

The following conditions will apply:

- a) Where the estimated value exceeds the threshold, evidence / justification shall be determined in consultation with the Director Engineering, Asset Management Branch or their delegate
- b) An annual limit of \$10M value will apply for each authorised person to use their expert judgement in determining financial value

- c) Additional value beyond the annual limit may be claimed subject to endorsement by the Asset Management Branch NAC

Any value determined by authorised persons may be subjected to audit by an Asset Management Advisory Panel to ensure transparency and correct application of the value creation framework

9.3 Methods of calculation

Financial value creation will be calculated on the basis of the following expression:

$$Financial\ value\ creation = totex_{BAU\ solution} - totex_{intelligent\ solution}$$

where the totex is over the relevant period of interest as set out in Section 6.4.

In the context of concessions, the BAU solution is the solution that would be achieved if strict compliance with the standard were to be applied.

The totex of the intelligent solution and compliant solution may be determined in one of the following ways in order of precedence:

- a) unit prices
- b) parametric scaling of existing prices for a similar activity
- c) probabilistic calculation of expectation value, i.e. probability x cost
- d) first principles for labour, materials, machinery/equipment, enabling works and associated costs
- e) exercise of expert judgement

9.3.1 Examples by calculation method

This section contains examples of hypothetical situations using arbitrary numbers to demonstrate the various calculation methods. The examples are not representative of any real-world situations and should not be used as a worked example.

Unit prices

Application of the unit price method involves summing the product of quantities and unit prices.

Table 10: Example of the unit price calculation method

Item	Quantity over lifecycle	Unit Price	Total
BAU Solution			
Cost item 1	100	\$100	\$10,000
Cost item 2	200	\$20	\$4,000
Total – BAU	-	-	\$14,000
Intelligent Solution			
Cost item 1	100	\$80	\$8,000

Item	Quantity over lifecycle	Unit Price	Total
Cost item 2	150	\$20	\$3,000
Total – Intelligent	-	-	\$11,000
Value creation			+\$3,000

The above example is of a concession to a standard which defines the spacing of light fittings for facility upgrades. Compliance to the standard would require 100 fittings and 200 lamps. An assessment indicated that ambient lighting in conjunction with the new fittings would achieve the required lighting outcomes. Revised designs were generated and resulted in a total cost avoidance of \$3,000.

Parametric scaling

Application of the parametric scaling method involves scaling the relevant cost items according to the proportionality between the BAU solution and intelligent solution.

Table 11: Example of the parametric scaling calculation method

Item	Quantity of parameter over lifecycle	Adjustments	Total
BAU Solution			
Cost item 1	100	Nil	\$10,000
Cost item 2	80	Nil	\$2,000
Total – BAU	-	-	\$12,000
Intelligent Solution			
Cost item 1	50	Scale at 50:100	\$5,000
Cost item 2	180	Scale at 180:80	\$4,500
Total – Intelligent	-		\$9,500
Value creation			+\$2,500

The above example is of a new initiative requiring installation of software on devices. The software is available in two versions, a desktop version for laptop computers and an app version for tablet devices. IT installations are typically applied at \$100 per device for computer programs and \$80 for apps. Historic data is used to estimate that installation on laptops for this particular software is 50% faster on laptop computers and 225% slower on tablet devices.

Probabilistic calculation from expectation value

Application of the probabilistic calculation via expectation value method involves summing the product of relevant probabilities and prices of the individual cost items.

Table 12: Example of the probabilistic calculation method

Item	Percentage	Quantity over lifecycle	Cost	Total
BAU Solution				
Cost item 1	3%	1,000	\$2,000	\$60,000
Total – BAU	-	-		\$60,000
Intelligent Solution				
Cost item 1	1%	1,000	\$2,000	\$20,000
Total – Intelligent	-	-		\$20,000
Value creation				\$40,000

The above example is of a new CCTV standard which was published recently with improved asset performance requirements. Compliance to the standard can improve the reliability of the CCTV assets which will reduce the number of site visits required for fault rectification by 2%. For a CCTV network with 1000 assets, it can save \$40,000 per annum assuming one site visit costs \$2,000.

First principles

Application of the first principles method involves summing all relevant costs for labour, materials, machinery/equipment, enabling works and associated costs

Table 13: Example of the first principles calculation method

Item	Quantity over lifecycle	Unit Price	Total
BAU Solution			
Labour	500	\$400	\$200,000
Materials	100	\$10,000	\$1,000,000
Other costs	200	\$5,000	\$1,000,000
Total – BAU	-	-	\$2,200,000
Intelligent Solution			
Labour	400	\$400	\$160,000
Materials	80	\$10,000	\$800,000
Other costs	160	\$5,000	\$800,000
Total – Intelligent	-	-	\$1,760,000
Value creation			+\$440,000

The above example sets out a scenario of an upgrade to optic fibre cabling. The initial option forecasts a BAU scenario with labour from specialist engineers totalling 500 hours, consisting of 100 linear meters of cabling and 200 connection points. An alternative intelligent solution considers the installation of longer but cost-comparative cabling sections that reduce the total number of units installed from 100 to 80 also reducing the total labour hours to 400 hours and the number of connections points to 160. This is evaluated to result in an estimated \$440,000 financial benefit.

9.3.2 Examples by financial category

This section contains examples of hypothetical situations using arbitrary numbers to demonstrate the various calculation methods. A four year lifecycle period has been nominated for demonstration purposes only. The examples are not representative of any real-world situations and should not be used as a worked example.

Savings

Table 14: Example of value creation through savings

Item	Year 1	Year 2	Year 3	Year 4	Total
BAU solution	100	100	100	100	400
Intelligent solution	150	80	50	50	330
Value creation	-50	+20	+50	+50	+70

The above example is of a standard maintenance allowance of 100 units per year. An alternative method requiring the upgrade of 150 units in the first year found that performance can be sustained with reduced maintenance in the following years. The result would save on maintenance activities for a total of 70 units years over a 4-year benefit life.

Cost avoidance

Table 15: Example of value creation through cost avoidance

Item	Year 1	Year 2	Year 3	Year 4	Total
BAU solution	500	500	300	0	1300
Intelligent solution	400	200	0	0	600
Value creation	+100	+300	+300	-	+700

The above example represents inspection requirements with estimated whole-of-life maintenance cost of \$600 as referenced from recent data sources and modelled on industry best practice. In contrast the BAU scenario generally requires detailed inspections in the first and second year and a progress inspection in the third year, prior to its decommissioning in year four would result in an overall cost of \$1,300. A closer review of the inspection requirements however, identifies a portion of inspection elements that are not applicable. Further review concludes that a first year detailed inspection and a second year progress inspection provides sufficient validation to the performance of the asset over year 3 and year 4.

Revenue

Table 16: Example of value creation through revenue growth

Item	Year 1	Year 2	Year 3	Year 4	Total
BAU solution	100	150	200	250	700
Intelligent solution	0	200	400	800	1400
Value creation	-100	+50	+200	+550	+700

The above example is of a new technology installation where BAU functions are anticipated to incremental revenue increases of \$50 due to gradual improvement of familiarisation amongst passengers. A faster, more technologically-complex system is alternatively considered where passenger interaction is not expected to yield any revenue until the second year of installation with exponential revenue improvements for each year following. This is projected to yield a greater return in revenue by \$700 over the first 4 years.

9.4 Representation over time

Financial value creation will be represented as follows:

- a) specific values for each year based on the financial projections associated with the work (where available), or
- b) annualised values for each year based on the total value creation divided by the period of financial interest, where the financial projections are unavailable or cannot reasonably be determined in a time efficient manner.

10. Measuring non-financial value

10.1 Categories of non-financial value

Non-financial value will be measured by counting the number of times value is created in one or more of seven categories of value. The following table identifies the categories and includes examples by category.

Table 17: Categories of non-financial value

Category	Examples	Corresponding TERM Risk Category
Safety	<ul style="list-style-type: none"> Improved access in and around high-risk areas Improved visibility Improved warning systems Improved asset performance from a safety perspective Reduced risk of an adverse safety outcome 	<ul style="list-style-type: none"> Safety Technology (where improving safety outcomes)
Resilience	<ul style="list-style-type: none"> Improved maintenance regimes Higher manufacturing standards/frameworks Better materials used in manufacturing/construction Improved staff training Improved asset performance from a resilience perspective Improved alignment with the Asset Resilience Strategy Reduced risk of an adverse resilience outcome 	<ul style="list-style-type: none"> Technology (where improving resilience outcomes)
Reliability	<ul style="list-style-type: none"> TBC Improved services Reduced cancellations/shut-downs Extended asset life Improved maintenance efficiency Improved asset performance from a reliability perspective Services consistently operate to schedule Reduced risk of an adverse reliability outcome 	<ul style="list-style-type: none"> Technology (where improving reliability outcomes)
Environment	<ul style="list-style-type: none"> Reduced impact on built environment, place and public domain Improved heritage expression Improved ecological sustainability Reduced utility demand Reduced risk of an adverse environmental outcome Improved asset performance from an environmental perspective Support for TfNSW's Sustainability Focus Areas relating to the environment 	<ul style="list-style-type: none"> Environment Technology (where improving environmental outcomes)

Category	Examples	Corresponding TERM Risk Category
Customer	<ul style="list-style-type: none"> • Enabling better customer service • Improved customer sentiment • Improved interoperability • Reduced travel time • Improved aesthetic experience • Improved accessibility • Support for the community • Reduced impact on external stakeholders • Improved amenity, functionality and the like • Improved asset performance from a customer outcomes perspective • Reduced risk of an adverse customer outcome • Support for TfNSW's Sustainability Focus Areas relating to customers 	<ul style="list-style-type: none"> • Everyday Service Delivery • Integrated Planning • Technology (where improving customer outcomes)
Operations	<ul style="list-style-type: none"> • Improved efficiency and productivity (if measured in time savings, and can be converted to financial value) • Programs of work being brought forward ahead of schedule • Support for TfNSW's Sustainability Focus Areas relating to operational practices e.g. procurement • Reduced risk of an adverse operational outcome 	<ul style="list-style-type: none"> • Project Delivery (time-based) • Technology (where improving operational outcomes) • People (where improving operational outcomes)
Strategic	<ul style="list-style-type: none"> • Improved/expanded Transport branding • Protecting reputation against risks • Increased modal market share • Development of intellectual property • Reduced risk of an adverse strategic outcome • Enabling Commonwealth, State and Local Government outcomes • Alignment to for Transport State Outcome: Sustainable transport systems and solutions that enable economic activity 	<ul style="list-style-type: none"> • Reputation and Integrity • Financial Sustainability • Regulation and Compliance • Technology (where improving strategic outcomes) • People (where improving strategic outcomes) • Infrastructure Asset Management
Other	<ul style="list-style-type: none"> • Defined on an as needs basis where the activity cannot reasonably be categorised in one of the above categories 	<ul style="list-style-type: none"> •

The Measuring What Matters framework contains additional examples of non-financial outcomes which can be recognised under the Value Creation Framework.

For value creation in a placemaking context, refer to the Assessing Place Benefits Practitioner's Manual for further guidance.

10.2 Allowance for multiple instances of non-financial value

There may be instances of non-financial value creation where two or more of the above areas are improved. This is a favourable outcome under the Value Creation Framework. The process for measuring non-financial value in these cases will be the same as if there were two separate activities each having the respective areas of value creation.

10.3 Magnitude of non-financial value

The magnitude of each instance of non-financial value creation will be represented on a sliding scale corresponding to the amount of impact from the change. The purpose of using the sliding scale is to recognise that non-financial value can be realised to varying degrees and to enable such representation without causing undue administrative burden beyond a three-level indicator system.

Table 17 depicts the three levels for the magnitude of impact, with the corresponding count multiplier and example indicators.

Table 18: Magnitude of non-financial value

Magnitude of impact	Multiplier	Examples of indicators
Low	0.25	<ul style="list-style-type: none"> • Generally improves safety • Initiative is isolated in breadth • Benefits part of the transport network • Affecting a limited proportion of the customer population • Support for Government commitments • Improvement in residual risk but having the same risk rating when using Option 2, TERM (section 10.4.2)
Medium	0.50	<ul style="list-style-type: none"> • Reduces the risk of injury or death • Interdivisional initiative • Benefits a widely used asset class or multiple asset classes • Affecting a moderate proportion of the customer population • Enables Government commitments • Innovative solution • Improvement in one risk rating when using Option 2, TERM (section 10.4.2)
High	1.00	<ul style="list-style-type: none"> • Significantly reduces the risk of injury or death • Cluster wide initiative • Benefits across the transport network • Affecting a wide range of the customer population • Delivering on Government commitments • Significant innovation • Improvement in two or more risk ratings when using Option 2, TERM (section 10.4.2)

10.4 Non-financial value contributing to financial value

Where non-financial value is realised, there may also be financial value attributable to the activity. Non-financial value may be converted to financial value using one of the following methods (in order of precedence):

- a) Application of an assured conversion metric specific to the activity (refer Section 10.4.1)
- b) Conversion from change in TERM risk ratings to financial value (refer Section 10.4.2)
- c) Expert judgement by an authorised person (refer Section 10.4.3)
- d) Calculation from first principles for labour and materials specific to the activity (refer Section 10.4.4)

10.4.1 Option 1: Assured conversion metrics

Assured conversion metrics relate a non-financial measurement to a financial value. Refer to the user guidelines for details on data sources for assured conversion metrics.

Where an existing assured conversion metric is used for calculating value creation, then the source and an appropriate cross reference shall be cited as part of the value creation.

10.4.2 Option 2: Transport Enterprise Risk Management (TERM) Framework

Non-financial value can be converted to a monetary figure by measuring the change in risk rating before and after an activity is performed, where the risk rating is measured using the Transport Enterprise Risk Management (TERM) Framework as detailed in CPSt20000 TfNSW Enterprise Risk Management Standard.

For parties external to TfNSW, the measurements shall be performed in accordance with TS 04982.

The equivalent financial value can be calculated as follows:

$$\text{Equivalent financial value} = \text{Probability} \times \text{Financial sustainability impact}$$

where:

- a) probability is derived from the relevant *Quantitative Frequency* set out in the *Risk Assessment Likelihood Criteria*
- b) Financial sustainability impact is derived from the relevant *Financial Sustainability consequence* in the *Risk Assessment Consequence Criteria*

10.4.3 Option 3: Exercise of expert judgement

Where a relevant assured conversion metric is unavailable and application of the TERM risk rating method is inappropriate, expert judgement may be applied to convert non-financial value to an equivalent financial value.

10.4.4 Option 4: First principles

Value identified from first principles may be determined by persons authorised to exercise expert judgement. A first principles calculation will cover all relevant labour, materials, machinery/equipment, enabling works and associated costs. Refer to Section 9.3.1 for an example of the first principles calculation method.

11. Support

11.1 Resources

Establishment and maintenance of the Value Creation Framework will be by AMB. Implementation of the Value Creation Framework is the responsibility of all roles involved in performing asset management.

Figure 13 provides a graphical representation of the available resources supporting the Value Creation Framework.

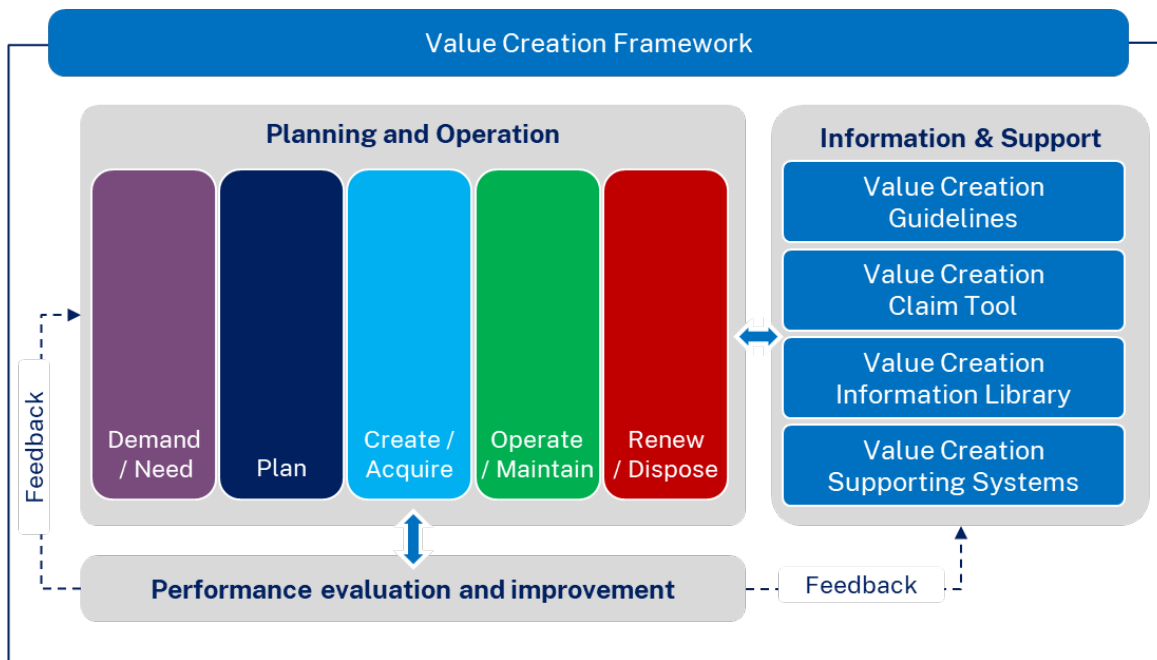


Figure 13: Value Creation Framework relationship with information & support resource

11.1.1 Guidelines

Guidelines will cover the procedural aspects of Value Creation for use by internal TfNSW roles (Internal Guideline) and external service providers and delivery partners (External Guideline).

11.1.2 Claim Tool

The claim tool is a template document that enables the input of financial values associated with Value Creation claims. This allows Value Creation solutions to be recorded and captured consistently across the different business activities.

11.1.3 Information library

The information library comprises various data sources from divisions across Transport. The custodians of the data sources will collaborate and make available the data necessary to support the value creation process.

11.1.4 Supporting Systems

Documented and computerised systems will support the value creation process. The key system for financial reporting to NSW Treasury is the Amplify system. Values for financial reporting are derived from subsidiary systems including concessions and the asset standards publishing tool.

The asset standards publishing tool is a digital tool used to manage the drafting, consultation and publishing of standards artefacts including and has been developed to implement value creation claims.

11.2 Competence

The technical competency requirements of the Value Creation Framework rely upon the Technical Capability Framework, Technical Supplier Assurance Framework and the delegated roles under the Standards Management Framework. The financial validation competencies rely upon Finance Business Partner requirements.

11.3 Awareness

The Value Creation Framework and associated elements of the toolkit are available on the internet.

11.4 Communication

Communications in relation to the Value Creation Framework will be through various channels including newsletters, briefings in relevant forums, and briefings given by asset management key roles.

Communications will generally address:

- Revisions to the Value Creation Framework and other elements of the Value Creation Toolkit
- Lessons learned
- Outcomes of significant value creation reports, reviews and audits
- Advice on the application of the value creation process

Administrative support is available from the value.creation@transport.nsw.gov.au mailbox. Technical support will be provided by the relevant roles depending on the asset management activity creating the value. For example, value created from standards and concessions will be supported by Standards Leads and Technical SMEs.

12. Performance monitoring and improvement

12.1 Performance monitoring

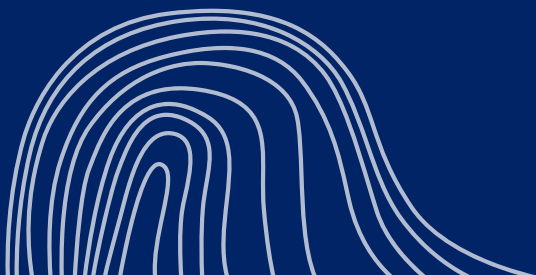
Performance indicators will be defined to enable the following:

- a) Monitoring the effectiveness of the Value Creation Toolkit
- b) Identification of trends that can inform future planning and decision making.

12.2 Assurance program

Assurance program will be implemented which provides the following:

- a) Risk-based assurance of conformance with the Value Creation Framework
- b) Monitoring the alignment between the actual value being realised and the value that was articulated
- c) Identify improvements that should be adopted to improve the effectiveness of the process.



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