Investment Evaluation Summary (IES) IT.INF.04

Project Details:

Project Name:	WAN Services
Project Id:	IT.INF.04
Thread:	IT Infrastructure
CAPEX / OPEX:	OPEX
Scope Type:	C
Service Classification:	Standard Control
Work Category Code:	AMITS
Work Category Description:	IT Software General – Standard Control
Project File Location:	DD17 Infrastructure
Preferred Option Description:	Continue with existing service provider pending periodic review as described. Upgrade link bandwidth as required by the business.

	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27
Estimate ($000)	■	■	■	■	■	■	■	■	■	■
Total ($) 2017-2019	■									
Total ($) 2017-2027	**7,114,000**									

Governance:

Project Initiator:	■		
Thread Approved:	■		
Project Approver:	■	**Date:**	< APPROVALTIMESTAMP>

Document Details:

Version Number:	1.0

Section 1 (Gated Investment Step 1)

1.   Background

This Investment Evaluation Summary (IES) documents planned expenditures for the determination period for Wide Area Network (WAN) services. The document is one of eight planned documents covering anticipated activities as described in the IT Infrastructure Asset Management Plan.

TasNetworks data communications and connectivity requirements are served by WAN links from multiple telecommunications providers connecting:

- ███████████████
- █ major offices and/or depots
- █ medium remote sites
- █ small remote sites
- █ partner organisations

The TasNetworks WAN is designed, constructed and operated as far as possible to ensure the reliability and performance of business application services throughout the areas of business operations. As a result, the WAN is an important enabler for the business since it provides access for many our people to the tools they need to do their work.

The initiative scope is documented in detail below in Scope, at a high level the document scope extends to:

- WAN links connecting office and remote site locations to the TasNetworks LAN
- TasNetworks internet links
- Dedicated point-to-point links to other corporations and organisations
- Services associated with the items above

1.1 Investment Need

Investment drivers fall into the following categories:

1. Reliable and effective delivery of IT services to the TasNetworks business and external customers.
2. Compliance with state and federal legislative and regulatory requirements, including:
   a. Industry-specific requirements
   b. State and federal privacy legislation
   c. Occupational Health and Safety requirements
3. The need to maximise the efficiency and cost-effectiveness of service delivery.

Activities and requirements driving this IES are:
- Continued provision, maintenance and support of WAN communications links
- Regular reviews of WAN capacity against current and anticipated demand increases
- Review of WAN architecture and service providers

1.2 Customer Needs or Impact

TasNetworks network infrastructure is critical to the reliable, timely and effective delivery of business application and data services to the field work force, operational and administrative staff. These services are directly related to TasNetworks ability to deliver efficient and effective services to our internal and external customers.

The Corporate IT department is strongly focussed on service delivery to internal and external customers. These services are delivered in a manner that aligns with TasNetworks mission, commitments and values. The customer consultation program for the Infrastructure Program of Work documented in this IES reflects an approach of constant and direct engagement with business customers through:

1. Regular direct meetings with management teams from all business units at least every six months. These meetings are broadly scoped and cover all services provided by Corporate IT as well as discussing current and emerging requirements from the business.
2. A formal project prioritisation process that includes full transparency, extensive customer consultation and business-determined priorities.
3. A fully consultative project management methodology that embeds Corporate IT customers and business stakeholders in every stage of the project.

1.3 Regulatory Considerations

As the infrastructure documented in this Investment Evaluation Summary constitutes a supporting platform for TasNetworks business operations, there are no identified direct regulatory considerations.

However, the platforms supported by activity proposed in this Investment Evaluation Summary deliver access to applications and data used by TasNetworks staff in day-to-day operational and administrative processes. These processes are critical to ensuring business compliance with regulatory requirements.

2.   Project Objectives

The primary objective of this initiative is to ensure TasNetworks ability to deliver prescribed, negotiated and non-prescribed services to customers. This objective is achieved through meeting the following initiative objectives:

1. Provide sufficient capacity for the following resources in order to meet IT service level requirements through the determination period:
   a. WAN connectivity
   b. Internet connectivity
   c. Peer connectivity to partner organisations, TasNetworks corporate customers and statutory agencies
2. Provide sufficient capacity over the period for:
   a. Growth in existing business services and activities
   b. Anticipated new business services and activities
3. Ensure that the availability of WAN links meets or exceeds IT service level targets through appropriate configuration and procurement of suitable support agreements.
4. Guarantee the ability of TasNetworks to recover IT business services and data in accordance with TasNetworks Disaster Recovery/Business Continuity requirements.
5. Ensure that WAN services are operated securely to meet TasNetworks compliance requirements for data privacy and data retention and that TasNetworks systems and data are protected appropriately

The objectives will be met through the execution of maintenance, upgrade and replacement activities as described below.

3.   Strategic Alignment

3.1   Business Objectives

The following table highlights the problems that the initiative will solve.

Strategic Goal	Problems this initiative will address
"we enable our people to deliver value"	• The activities proposed in this initiative help to ensure appropriate connectivity to IT systems for users
"we care for our assets, delivering safe and reliable network services while transforming our business"	• There is substantial risk of doing nothing (see chapter titled 'Current Risk Evaluation'). • 'Do nothing' means TasNetworks IT may fail its remit to provide effective and efficient business systems solutions.

3.2   Business Initiatives

The activity proposed in this initiative supports other IT activity as it provides connectivity to IT systems.

4. Current Risk Evaluation

The TasNetworks Risk Framework details the level of risk the business finds acceptable in each category (Safety & People, Financial, Customer, Regulatory Compliance, Network Performance, Reputation and Environment & Community).

This initiative addresses Financial risk, of which TasNetworks has a **Moderate** appetite.

Not maintaining TasNetworks network infrastructure increases the risk of failure which could lead to internal productivity issues, increasing TasNetworks cost to operate.

4.1 5x5 Risk Matrix

TasNetworks business risks are analysed utilising the 5x5 corporate risk matrix, as outlined in TasNetworks Risk Management Framework.

Relevant strategic business risk factors that apply are follows:

Risk Category	Risk	Impact	Likelihood	Consequence
Financial	Insufficient network bandwidth to remote sites	Degraded performance which adversely impacts normal operations or productivity which will have a flow on effect to customers	Possible	Negligible

Section 1 Approvals (Gated Investment Step 1)

Project Initiator:	[Enter name]	Date	
Line Manager:	[Enter name]	Date	
Manager (Network projects) or Group/Business Manager (Non-network projects):	[Enter name]	Date	
[Send this signed and endorsed Summary to the Capital Works Program Coordinator.]			

Actions			
CWP Project Manager commenced initiation:	[Enter date here]	Assigned CW Project Manager:	[Enter name here]

PI notified project initiation commenced:	[Enter date here]	Actioned by:	[Enter name here]

Section 2 (Gated Investment Step 2)

5. Preferred Option

The preferred option is for TasNetworks to continue to source WAN communication infrastructure and services from multiple providers as required to meet availability and performance objectives.

Demand for WAN bandwidth can be reasonably expected to continue increasing as both existing and new applications increase the amount of data transmitted and stored by TasNetworks. The proliferation of endpoint devices and increasing demand for "always-on" access will also continue to drive increased demand for network bandwidth and coverage.

The program of work documented below is the preferred option for continued delivery of data networking services in support of business activities and initiatives.

5.1 Scope

The scope of this initiative encompasses the following items:

Item	Description/Notes
Datacentre links	Communications links to and between TasNetworks datacentres
Site links	Communications links servicing TasNetworks office and remote site locations
Internet links	TasNetworks internet connections, but not including firewall or filtering infrastructure (see INF.IT.10)
Peer Links	Links to other organisations, including providers, partners, customers and government agencies

WAN services will be provisioned and maintained through the following activities (for the purposes of this table, WAN links can be interpreted to include internet and peer links):

Project Activity	Schedule	Description
WAN Capacity Review	Annually	Review WAN links against measured and expected demand and upgrade as/when necessary
WAN Provider and Architecture Review	2019	Review the provision of WAN services, selection of providers and infrastructure architecture with potential changes to all three
Operational Provision of WAN Services	Ongoing	Ongoing service, access and support charges for WAN links

5.2 Expected outcomes and benefits

Implementation of the recommended option will ensure that appropriate data network connectivity and sufficient bandwidth capacity is provided to all locations.

Risks associated with not proceeding with this option include:

- Increased risk of service disruption due to:
    - Inability to meet increasing capacity requirements for WAN services
    - Reduced reliability of WAN service delivery if alternative architecture options are pursued
- Degradation of TasNetworks ability to meet Disaster Recovery and Business Continuity objectives in the event of a disaster
- Reduced ability to respond to changing business conditions and imperatives in a timely manner

Potential business impacts associated with these risks include:

- Potential disruption of TasNetworks transmission and distribution services due to failure of network infrastructure supporting control systems
- Delays to business operations arising from interruptions to or degraded performance of business applications
- Degraded performance across all application services used by business and operations teams arising from capacity constraints
- Reduced ability to restore business application services in the event of a disaster

5.3   Regulatory Test

N/A

6. Options Analysis

6.1 Option Summary

Option description	
Option 0 - Do Nothing	Maintain current WAN capacity
Option 1 - Recommended	Upgrade WAN capacity as discussed in this document

Option 0 – Do Nothing

Maintain current WAN capacity

Criteria	Advantages	Disadvantages
Solution effectiveness		Unable to meet growing demand
Cost	Minimal change in OPEX	
Business impact		Possible degraded user experience due to insufficient network speed
Business strategic alignment		Does not align with strategy
IT strategic alignment		Does not align with strategy
Project complexity	N/A	
Risk profile		Some risk of degraded user experience
Ability to achieve compliance	N/A	
Time - ability to implement within a deadline	N/A	

Option 1 – Recommended Option

Upgrade WAN capacity as discussed in this document

Criteria	Advantages	Disadvantages
Solution effectiveness	Provides capacity to meet future demand growth	
Cost		Gradual increase in OPEX over time
Business impact	Helps to ensure satisfactory user experience of IT systems	
Business strategic alignment	Aligns with strategy	
IT strategic alignment	Aligns with strategy	
Project complexity	Low	
Risk profile	Low technical risk associated with the activity Improved risk profile compared to Do Nothing	
Ability to achieve compliance	N/A	
Time - ability to implement within a deadline	Known implementation processes, all required skills exist in-house	

6.2   Summary of Drivers

The following table compares the options presented with regard to the criteria assessed in the previous chapter.

Criteria	Option 0	Option 1
Solution effectiveness	🔴	🟢
Cost	🟢	🟠
Business Impact	🔴	🟢
Business strategic alignment	🟠	🟢
IT strategic alignment	🟠	🟢
Project complexity	N/A	🟢
Risk profile	🟠	🟢
Ability to achieve compliance	N/A	N/A
Time - ability to implement within a deadline	N/A	🟢

6.3   Summary of Costs

Option	Total Costs ($)
Option 0 – Do Nothing	$5,250,000 (OPEX)
Option 1 - Recommended	$7,114,000 (OPEX)

6.4   Preferred Option Cost Breakdown

	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27
Estimate ($000)	■	■	■	■	■	■	■	■	■	■
Total ($) 2017-2019	■									
Total ($) 2017-2027	7,114,000									

6.5   Summary of Risk

The preferred option addresses Financial risks, as analysed utilising the 5x5 corporate risk matrix, as outlined in TasNetworks Risk Management Framework.

Risk Category	Risk	Impact	Likelihood	Consequence
Financial	Insufficient network bandwidth to remote sites - mitigated by budgeted allowance for increasing site bandwidth	Degraded performance which adversely impacts normal operations or productivity which will have a flow on effect to customers	Unlikely	Negligible

This initiative introduces no specific risks.

6.6   Economic analysis

Option No.	Option description	NPV	Reason got selection/rejection
0	Maintain current bandwidth	-$3.55M	Does not address risks
1	Increase bandwidth as appropriate	-$4.72M	Best fit to business requirements

Further details of the NPV calculations can be found here:

IT.INF.04 NPV Calculations.xls

6.6.1   Quantitative Risk Analysis

N/A

6.6.2   Benchmarking

N/A

6.6.3   Expert findings

N/A

6.6.4   Assumptions

ITA-026	No plans to change comms provider before 2017

Section 2 Approvals (Gated Investment Step 2)

Project Initiator:	[Enter name]	**Date:**	
Project Manager:	[Enter name]	**Date:**	

Actions			
Submitted for CIRT review:	[Enter date of CIRT here]	**Actioned by:**	[Enter name]
CIRT outcome:	[Enter details here] [Reference any minutes as appropriate.]		