

# Investment Evaluation Summary (IES)



## Project Details:

|   |   |
|---|---|
| <b>Project Name:</b>                                | Asset Management Innovation   |
| <b>Project ID:</b>                                  | 00902   |
| <b>Thread:</b>                                      | Non Network Solutions   |
| <b>CAPEX/OPEX:</b>                                  | CAPEX   |
| <b>Service Classification:</b>                      | Standard Control  |
| <b>Scope Type:</b>                                  | C   |
| <b>Work Category Code:</b>                          | NNNOC   |
| <b>Work Category Description:</b>                   | Non Network Solutions Network Optimisation Capex  |
| <b>Preferred Option Description:</b>                | Option 1 is to investigate emerging innovations, evaluate their application to TasNetworks, and develop the appropriate innovations into package capable of timely deployment in response to needs of the Asset Managers. |
| <b>Preferred Option Estimate (Nominal Dollars):</b> | \$500,000   |

|                      | 17/18    | 18/19    | 19/20    | 20/21    | 21/22    | 22/23    | 23/24    | 24/25    | 25/26    | 26/27    |
|----------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| <b>Unit (\$)</b>     | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      | N/A      |
| <b>Volume</b>        | 1        | 1        | 1        | 1        | 1        | 1        | 1        | 1        | 1        | 1        |
| <b>Estimate (\$)</b> |          |          |          |          |          |          |          |          |          |          |
| <b>Total (\$)</b>    | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 | \$50,000 |

## Governance:

|                           |               |              |            |
|---------------------------|---------------|--------------|------------|
| <b>Project Initiator:</b> | Andrew Fraser | <b>Date:</b> | 01/04/2015 |
| <b>Thread Approved:</b>   | Andrew Fraser | <b>Date:</b> | 04/11/2015 |
| <b>Project Approver:</b>  | Andrew Fraser | <b>Date:</b> | 04/11/2015 |

## Document Details:

|                        |   |
|------------------------|---|
| <b>Version Number:</b> | 1 |
|------------------------|---|

## Related Documents:

| Description | URL |
|-------------|-----|
|-------------|-----|

# Section 1 (Gated Investment Step 1)

## 1. Background

Innovation is required from all areas of TasNetworks to implement its strategy. The TasNetworks Innovation strategy aims to:

1. Facilitate Customer Choice
2. Facilitate Customer Interaction
3. Increase Network Efficiency

This includes activities such as:

- Remote monitoring, control & automation;
- Generation and storage;
- Demand side initiatives;
- Improved network utilisation;
- Applied research; and
- Intelligent new infrastructure.

The technologies trialled will allow the network to operate more efficiently, and also facilitate demand management, embedded generation and distributed generation, electric vehicles and other technologies.

The Network Innovation team identifies business needs to address network capacity, reliability or asset management issues and matches the relevant technology solution.

This work package considers projects which are not demand management initiatives covered by the Demand Management Innovation Allowance (DMIA).

### 1.1 Investment Need

TasNetworks investigates and trials innovative technology on a regular basis. The Network Innovation team identifies business needs associated with managing network assets and matches the relevant technology to these needs.

### 1.2 Customer Needs or Impact

TasNetworks continues to undertake a consumer engagement as part of business as usual and through the voice of the customer program. This engagement seeks in depth feedback on specific issues relating to:

- How it prices impact on its services
- current and future consumer energy use
- Outage experiences (frequency and duration) and expectations
- Communication expectations
- STPIS expectations (reliability standards and incentive payments)
- Understanding of the electricity industry and TasNetworks Consumers have identified safety, restoration of faults/emergencies and supply reliability as the highest performing services offered by TasNetworks.

Consumers also identified that into the future they believe that affordable, green, communicative, innovative, efficient and reliable services must be provided by TasNetworks.

This project specifically addresses the requirements of consumers in the areas of:

- Restoration of faults/emergencies and supply reliability
- Affordable, innovative, efficient and reliable services

Customers will continue to be consulted through routine TasNetworks processes, including the Voice of the customer program, the Annual Planning Review and ongoing regular customer liaison meetings.

### **1.3 Regulatory Considerations**

## **2. Project Objectives**

the aim of this project is to introduce new, efficient technology into TasNetworks business. These solutions will adopt TasNetworks 'fast follower' objective and use experiences from other industry members. This approach minimises risk while achieving optimum outcomes for the Tasmanian community.

## **3. Strategic Alignment**

### **3.1 Business Objectives**

The strategic and operational performance objectives relevant to this project are derived from the TasNetworks 2015 Corporate Plan, approved by the board in 2015. This project is relevant to the following areas of the corporate plan:

- We understand our customers by making them central to all we do.
- We enable our people to deliver value.
- We care for our assets, delivering safe and reliable networks services while transforming our business.

### **3.2 Business Initiatives**

The business initiatives that relate to this project are as follows:

- Safety of our people and the community, while reliably providing network services, is fundamental to the TasNetworks business and remains our immediate priority
- We care for our assets to ensure they deliver safe and reliable network services

We will transform our business with a focus on:

- the customer, and a strong commitment to delivering services they value
- an engaged workplace with strong cultural qualities and people who will be great ambassadors for TasNetworks
- a high performing culture with clear accountabilities for deliverables
- an appropriate approach to the management and allocation of risk
- a well run, efficient business, that delivers sustainable returns to the Tasmanian people

Tasmanian community and is resilient to future challenges. The strategic key performance indicators that will be impacted through undertaking this project are as follows:

- Customer engagement and service – customer net promoter score

- Price for customers – lowest sustainable prices
- Zero harm – significant and reportable incidents
- Network service performance – outcomes under service target performance incentive schemes
- Sustainable cost reduction – efficient operating and capital expenditure

## 4. Current Risk Evaluation

A moderate safety risk to TasNetworks staff exists when new technology is introduced. TasNetworks utilises Hazard and operability studies to minimise the risk.

### 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  | Likelihood | Consequence | Risk Rating |
|---------------------------|---|------------|-------------|-------------|
| Environment and Community | Impacts on the environment need to be factored in asset management plans that may encompass end of life disposal and site clean-up.   | Possible   | Negligible  | Low         |
| Safety and People         | Safety procedures and operational guidelines need to be developed providing adequate knowledge to operational staff. This will use the Hazard and Operability (HAZOPS) process. | Possible   | Moderate    | Medium      |

## Section 1 Approvals (Gated Investment Step 1)

|   |               |              |            |
|---|---------------|--------------|------------|
| <b>Project Initiator:</b>   | Andrew Fraser | <b>Date:</b> | 01/04/2015 |
| <b>Line Manager:</b>  |               | <b>Date:</b> |            |
| <b>Manager (Network Projects)<br/>or<br/>Group/Business Manager (Non-network projects):</b> |               | <b>Date:</b> |            |
| [Send this signed and endorsed summary to the Capital Works Program Coordinator.]           |               |              |            |

| <b>Actions</b>                                   |  |                                     |  |
|--|--|-------------------------------------|--|
| <b>CWP Project Manager commenced initiation:</b> |  | <b>Assigned CW Project Manager:</b> |  |
| <b>PI notified project initiation commenced:</b> |  | <b>Actioned by:</b>                 |  |

## Section 2 (Gated Investment Step 2)

### 5. Preferred Option:

Before a new technology can be used as a business as usual solution, the technology needs to be developed into a package containing design guidelines, technical drawings, equipment supplier contracts, installation, testing and commissioning guidelines, asset management guidelines, etc.

In general, the technology solutions arise in time, and the exact technology is difficult to forecast for more than two years in advance. Some of the technologies expected to be considered include:

- Distribution fault anticipating;
- Feeder automation;
- Dynamic transformer and feeder ratings; and
- Advanced condition monitoring technologies.

#### 5.1 Scope

The project scope includes the need identification; concept design; trial; design, testing, installation, commissioning documentation; training; benefits realisation.

#### 5.2 Expected outcomes and benefits

The preferred solution will result in efficiencies from the asset replacement and O&M budgets.

#### 5.3 Regulatory Test

No projects generated under this work package are expected to require a Regulatory Investment Test (RIT). If analysis prior to the project commencing indicates a RIT is required TasNetworks will undertake this process as per the Rules.

## 6. Options Analysis

At this stage the technology used in the next revenue period is unknown. This makes traditional option analysis difficult. Instead this analysis is done in stages:

- Identify the innovation opportunity for a problem;
- Liaise with Asset Managers on innovation technology
- Develop health, safety & environmental, training and other supporting documentation for the new technology.

#### 6.1 Option Summary

| Option description   |  |
|----------------------|--|
| Option 0             | Do Nothing - Results in continuing on the same paths for asset management, employing the traditional tools and techniques for managing this assets. This represents a lost opportunity to take advantage of innovations that continually present themselves. |
| Option 1 (preferred) | Option 1 is to investigate emerging innovations, evaluate their application to TasNetworks, and develop the appropriate innovations into package capable   |

of timely deployment in response to needs of the Asset Managers.

## 6.2 Summary of Drivers

| Option               |     |
|----------------------|-----|
| Option 0             | N/A |
| Option 1 (preferred) | N/A |

## 6.3 Summary of Costs

| Option               | Total Cost (\$) |
|----------------------|-----------------|
| Option 0             | \$0             |
| Option 1 (preferred) | \$500,000       |

## 6.4 Summary of Risk

Safety assessments such as HazOps that identify possible issues will be carried out early in the project to reduce the safety risk to TasNetworks staff.

## 6.5 Economic analysis

| Option               | Description  | NPV |
|----------------------|--|-----|
| Option 0             | Do Nothing - Results in continuing on the same paths for asset management, employing the traditional tools and techniques for managing this assets. This represents a lost opportunity to take advantage of innovations that continually present themselves. | \$0 |
| Option 1 (preferred) | Option 1 is to investigate emerging innovations, evaluate their application to TasNetworks, and develop the appropriate innovations into package capable of timely deployment in response to needs of the Asset Managers.                                    | \$0 |

### 6.5.1 Quantitative Risk Analysis

### 6.5.2 Benchmarking

### 6.5.3 Expert findings

### 6.5.4 Assumptions



## Section 2 Approvals (Gated Investment Step 2)

|                           |               |              |            |
|---------------------------|---------------|--------------|------------|
| <b>Project Initiator:</b> | Andrew Fraser | <b>Date:</b> | 01/04/2015 |
| <b>Project Manager:</b>   |               | <b>Date:</b> |            |

| <b>Actions</b>                    |  |                     |  |
|-----------------------------------|--|---------------------|--|
| <b>Submitted for CIRT review:</b> |  | <b>Actioned by:</b> |  |
| <b>CIRT outcome:</b>              |  |                     |  |