Investment Evaluation Summary (IES)

Project Details:

Project Name:	*Service Order Scheduling and Field Tool Replacement Project*
Project Id:	*IT.WSD.07*
Thread:	Information Technology
CAPEX / OPEX:	*CAPEX*
Scope Type:	C
Service Classification:	Standard Control
Work Category Code:	ITC
Work Category Description:	IT & Communications
Record Point ID:	R0000130298
Preferred Option Description:	Source and replace service order scheduling and field tool with an alternate vendor product.

	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25	25/26	26/27
Estimate ($)	[redacted]	[redacted]								
Total ($)	[redacted]									

Governance:

	IES Section 1		IES Section 2	
Business Unit Review:	[redacted]		[redacted]	
Thread Endorsed:	[redacted]	18/05/2015	[redacted]	18/05/2015
Project Approver:				

Document Details:

Version Number:	1.0

Section 1 (Gated Investment Step 1)

1. Background

[redacted] is TasNetworks' Service Order scheduling and field tool. It was initially implemented in 2005 and has since has undergone several upgrades and alterations to address regulatory, and functional issues. The [redacted] application is now at end-of-life and there is no upgrade path with the current vendor. This initiative is about finding and sourcing an alternative product.

[redacted] consists of a desktop client ([redacted]) and a field component [redacted]). Installation, Meter and Service order details are received from the NEM market system interface service order management (SOM) system. Schedulers allocate the Service Orders to work crews via the Scheduler, which are then then delivered to the field crews' tablet computers via wireless connections.

Field crews acknowledge receipt of the jobs, and progress the job through the states of the Service Order lifecycle. They will then complete the job as well as capture details of any asset data was altered. These details are then published back to [redacted] where they are then transferred back to the SOM.

1.1 Investment Need

The [redacted] application is now at end-of-life. [redacted]

The product itself is built upon dated technology and lacks any meaningful integration with other field tools that TasNetworks uses such as Webmap, RMSS or Lifesafe.

A new scheduling and field tool is required to be sourced, implemented and interfaced with TasNetworks' market and other supporting systems.

1.2 Customer Needs or Impact

Indirectly the users of the Tasmanian distribution network, i.e. our customers, will be impacted by how compliantly, efficiently and effectively our field operations team are able to operate. This system is the only field system that handles customer driven work. Customers are directly affected as connections, readings, meter tests and various other job types are handled through this system.

1.3 Regulatory Considerations

Various SLA's exist for licenced services performed on behalf of Retailers. Failure to comply can incur fines and/or complaints from market participants.

2. Project Objectives

The key objective of this project is to source and replace TasNetworks' current service order scheduling and field tool.

3. Strategic Alignment

3.1 Business Objectives

The following table highlights how the initiative will assist in achieving TasNetworks corporate vision.

Strategic Goal	How this initiative will address the strategic goals
"we understand our customers by making them central to all we do"	• [redacted] • The selected tool will maximise the efficiency of customer driven work so as to ensure sustainable predictable pricing.
"we enable our people to deliver value"	• [redacted]
"we care for our assets, delivering safe and reliable network services while transforming our business"	• A reduced fleet of field tools can result in not being able to meet SLA timeframes which can initiate adverse customer charter payments. • This initiative is an opportunity to consolidate the number of field systems in use.

3.2 Business Initiative Alignment

By supporting our Customers ability to have their service orders fulfilled as efficiently and quickly as possible, this initiative is expected to further 'TasNetworks Strategy on a Page' aims of:

- Customer net promoter score.
- Voice of the customer program.

In improving staff efficiency this initiative supports the aims of lowest sustainable pricing.

4. Current Risk Evaluation

This chapter details the risk of 'Do Nothing'.

The TasNetworks Risk Framework details the level of risk the business finds acceptable in each category (Safety, Environment, Financial, Regulatory, Legal and Compliance, Customers, Assets, Reputation and People).

This initiative addresses Financial, Regulatory Compliance and Customer risks, of which TasNetworks has [redacted]

[redacted]

4.1 Risk Matrix

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

Relevant strategic business risk factors that apply are follows:

Risk #	Risk Category	Risk	Impact	Likelihood	Consequence	Risk Rating
IT-037	Financial	[redacted]	Without automated responses to Retailers there will be a flood of telephone inquiries regarding job progress, complaints etc. - Labour will be required to process.	Possible	Minor	Low
IT-038	Financial	[redacted]	Ability to bill Retailers for services is likely to be severely compromised resulting in disputes (incurring labour to resolve) or loss of revenue.	Possible	Moderate	Medium
IT-063	Customer	[redacted]	Without field tools, field operatives will be reduced to using pen and paper, which would be a significant loss of efficiency resulting in customers without power or services.	Possible	Severe	**High**
IT-064	Financial	[redacted]	Without field tools, field operatives will be reduced to using pen and paper, which would be a	Possible	Moderate	Medium

		[redacted]	significant loss of efficiency resulting in slower work or increased workforce			
IT-073	Financial	[redacted]	TasNetworks will be in danger of defaulting on SLA's resulting in increased charter payments.	Possible	Negligible	Low
IT-074	Regulatory Compliance	[redacted]	TasNetworks will be in danger of defaulting on SLA's resulting in not meeting its regulatory obligation and perhaps being fined.	Unlikely	Minor	Low
IT-075	Customer	[redacted]	TasNetworks will be in danger of defaulting on SLA's resulting in reputational damage.	Possible	Negligible	Low

Section 1 Approvals (Gated Investment Step 1)

Business Unit Review:	[redacted]	**Date**	
IT Project Initiator:	[redacted]	**Date**	18/05/2015
IT Thread Approved:	[redacted]	**Date**	18/05/2015
Manager (Network projects) or Group/Business Manager (Non-network projects):		**Date**	
[Send this signed and endorsed Summary to the Capital Works Program Coordinator.]			

Actions			
CWP Project Manager commenced initiation:		Assigned CW Project Manager:	
PI notified project initiation commenced:		Actioned by:	

Section 2 (Gated Investment Step 2)

5. Preferred option

The preferred option is to source and replace the service order scheduling and field tool with an alternate vendor product.

This option has been selected because it best matches the investment need whilst:

- Minimising the cost.
- Minimising the negative business impacts and maximising the positive business impacts.
- Maximising the strategic alignment.
- Maximising the IT strategic alignment[1].
- Minimising the project complexity.
- Minimising the risk to the organisation.

5.1 Scope

The scope is to source and replace the service order scheduling and field tool with an alternate vendor product.

The new solution will be required to interface with other applications such as SOM, and have a high-degree of configurability with regard to Service Order templates, workflows, resource management and scheduling.

High level implementation activities

The following high level activities have been identified:

- Elicitation of requirements to replace the service order scheduling and field tool, and drafting of requirement documents sufficient for a RFI/RFQ process.
- Conduct RFI/RFP process, including solution evaluation and selection
- Review of 'As Is' business process in-context of new product capability and re-engineering of the 'To Be' process if necessary.

[1] This is a test against criteria including:

- Solutions will leverage the expertise and conformity of vendor products designed for NEM market interfaces.
- Solutions are designed for TasNetworks work practices and work processes to be as efficient and effective as possible without compromise.
- Solutions are maintainable and supported.
- Solutions are 'fit for purpose'.
- Alignment with current IT infrastructure.
- Alignment with other IT roadmap initiatives.

- Review and sign-off on vendor supplied functional specifications for implementation.
- Design and build of in-house components. There is an assumption that some in-house development maybe required around new or changed interfaces.
- Deployment and Testing of the functionality within TasNetworks' environments. Testing will include SIT (ensuring all vendor components work with each other), and UAT (ensuring the business are happy with the new functions delivered).
- Deployment to the TasNetworks Production environment.
- Training of staff in the new functionality and new 'To Be' processes where relevant, including creation/update of all documentation (administrative or end user).

5.2 Expected outcomes and benefits

The outcomes and benefits are considered from a TasNetworks' perspective and from an external stakeholder perspective, in this case the customer.

Outcomes and benefits have also been segregated into tangible (i.e. measureable) and intangible (not measureable). Tangible benefits will be used as part of the NPV calculations in chapter 6.

TasNetworks' perspective

Tangible benefits

Benefit	Benefit
With the implementation of this initiative, extra resources would not be required to account for loss of efficiency if the 'Do Nothing' option is selected and the system fails ('Do Nothing' risks IT-037, IT-038, IT-064, mitigated).	[redacted]
With the implementation of this initiative, there will be no increased risk of defaulting on SLA's and therefore increased charter payments ('Do Nothing' risks IT-073 mitigated).	[redacted]
By having a supported, contemporary product, the risk to having to resort to a paper-based process is mitigated.	[redacted]

Intangible benefits

TasNetworks will have access to a supported and current tool for field staff.

This will have many intangible benefits including:

- It will minimise the likelihood of high level of scrutiny during market audits as a result of market non-compliance.
- The ability to deliver accurate data in a timely manner.
- Increase employee confidence in market systems, leading to a reduction in stress, frustration, overtime, retention issues of employees.
- Decrease the likelihood of human error.

	• Employees will feel more valued. • Inefficiencies would be reduced. • Reduced reliance of working outside of systems and processes • Reduces the reliance on existing trained resources who understand defects and workarounds. • Enables our people to deliver value. • Adds value to our assets by enabling reliable services. • With the implementation of this initiative, there will be no increased risk of defaulting on SLA's and therefore fines ('Do Nothing' risks IT-074 mitigated). • As part of this initiative it is also the intention to target the following issues identified from the TasNetworks application health check conducted in early 2015[2]: o [BHA15] – The current support contract with the vendor is inadequate, and does not provide incentives to provide adequate level of support. o [BHA87] – [redacted] - There are numerous issues with the current functionality. o [BHA89] – [redacted] - There are numerous issues with the current functionality.
Customer's perspective	The selected tool will optimise customer driven work (i.e. connection requests, readings, meter tests etc.) TasNetworks will maintain its valuable relationships with retailers and customers where TasNetworks can be trusted to deliver. With the implementation of this initiative there will not be an increased likelihood of reputational damage ('Do Nothing' risks IT-074 mitigated). With the implementation of this initiative there will be a decreased risk of customers without power or services as a result of field tool failure ('Do Nothing' risks IT-063 mitigated).

5.3 Regulatory Test

N/A

6. Options Analysis

Three options have been considered as described in the following chapter:

[2] As sourced from 'Distribution Determination 17 - Issue Register.XSLX'.

- Option 0 - Do Nothing.
- Option 1 - source and replace service order scheduling and field tool with an alternate vendor product (preferred option).
- Option 2 – back to paper based system.

Each option is commented with regard to the following criteria:

- Solution effectiveness. Solution effectiveness is tested against the 'Investment Need' (detailed in chapter titled 'Investment Need'). In simple terms, does the option achieve the project objectives?
- Cost.
- Business impact – the selected option will consider the level of change to TasNetworks environment (including during project implementation and post implementation).
- Business Strategic alignment – does the option fulfil the business objectives and current business initiatives (detailed in chapter titled 'Strategic Alignment').
- IT strategic alignment.
- Project complexity – solutions will not be un-necessarily complex. Complexity introduces risk through combination of resource requirements, increased change etc.
- Risk profile – solutions will be risk adverse.
- Ability to achieve compliance – solutions will be fully compliant with all regulatory requirements and applicable industry standards.
- Time – ability to implement within deadline. Solutions will be implemented within a suitable timeframe to ensure compliance (where relevant), minimise disruption to the business and reduce the likelihood of project requirements becoming dated.

6.1 Option Summary

Option 0 – Do Nothing

The option of 'Do Nothing' assesses the scenario where this initiative is not approved.

The 'Do Nothing' option will eventually require something to be done. If this initiative does not progress, TasNetworks will need manual workarounds for various field processes. These workarounds will have a cost and will have a negative business impact.

Criteria	Advantages	Disadvantages
Solution effectiveness	N/A	N/A
Cost	No initial CAPEX cost to consider. However, as described under disadvantages there will be a cost!	Should the field tool completely fail and cannot be fixed in the short or long term, manual workaround will be required. These will

		be manually intensive.
Business Impact		Should the field tool completely fail and cannot be fixed in the short or long term, manual workaround will be required. These will be manually intensive.
Business strategic alignment		The business objective *'we understand our customers by making them central to all we do'* will not be fulfilled due to unpredictable pricing. The business objective, *'enable our people to deliver value'* will not be fulfilled due to potential negative business impacts. The business objectives, *'we care for our assets, delivering safe and reliable network services while transforming our business'* will not be fulfilled due to issues with compliancy, and risk.
IT strategic alignment	N/A	N/A
Project complexity	N/A	N/A
Risk profile		See chapter titled 'Current Risk Evaluation'.
Ability to achieve compliance		Vendor products for the utility market are constantly evolving to satisfy NEM regulations. Should a critical number of field tools completely fail and cannot be fixed in the short or long term, manual workarounds will be required making it harder to achieve compliance.
Time – ability to implement within a deadline	N/A	N/A

Option 1 – source and replace service order scheduling and field tool with an alternate vendor product (preferred option).

As this is the preferred option, the scope has already been covered in detail in the chapter titled 'Preferred Option'.

Criteria	Advantages	Disadvantages
Solution effectiveness	The service order scheduling and field tool will be replaced at the end of life expectancy.	
Cost	This option is the most cost effective compared with option 2.	
Business impact	This option has the least impact to the business compared with option 2. Selecting a new product may open new opportunities for process improvement.	
Strategic business alignment	It will fulfil the business objectives of *'we understand our customers by making them central to all we do', 'we care for our assets, delivering safe and reliable network services while transforming our business'* detailed in the chapter titled 'Business Objectives'. It will align with the business initiatives detailed in the chapter titled 'Business Initiative Alignment'.	
IT strategic alignment	It will be designed to suit TasNetworks work practices and work processes so as to be as efficient and effective as possible without compromise. It will be maintainable and supported. It will be 'fit for purpose'. It will align with current IT infrastructure. It will align with other IT road map initiatives.	
Project Complexity	This option has less complexity compared with Option 2.	

Risk profile	This option has a minimal risk profile compared with Option 2.	
Ability to achieve compliance	By selecting a solution that leverages the expertise and conformity of vendor products designed for NEM market interfaces, will help ensure compliance with regulatory and industry standards.	
Time – ability to implement within a deadline	This option has a predictable implementation timeframe unlike Option 2 which will require continuous improvement.	

Option 2 – back to paper based system.

This option does not cater for a formal scheduling tool, but does allow the use of standard desktop products only (i.e. excel, word etc.).

Service order work requests would have to be made accessible to the schedulers either via interfaces to the SOM or hardcopy distribution. Schedulers could manipulate the data in EXCEL for field operative consumption. This will be manually intensive. Field operatives could capture the information on hard copy. This would have to be keyed in somewhere so it could be made available to the SOM. This will be manually intensive.

The whole process will become manually intense and to ensure a robust process will be difficult.

Criteria	Advantages	Disadvantages
Solution effectiveness		Whilst a process would be put in place to replicate the service order scheduling and field tool process, there would be no integration with market products which is a significant component.
Cost		The process would become manually intensive. Numerous additional schedulers and field staff will be required. Many data entry staff would be required to enter the results of paper based jobs into backend systems.
Business impact		The process change would be dramatic. It will become manually

		intensive, slow and repetitive. It would mean a backward step with regard to staff efficiency and effectiveness.
Strategic business alignment		It will **NOT** fulfil the business objectives of *'we understand our customers by making them central to all we do', 'we care for our assets, delivering safe and reliable network services while transforming our business'* detailed in the chapter titled 'Business Objectives'. This option introduces inefficiency which will lead to unsustainable and predictable pricing. Industry compliance will be compromised.
IT strategic alignment		This option goes against all principles being considered as part of the IT strategic alignment.
Project Complexity		The attempted design of robust processes and the then fine tuning of those processes will be difficult and complex.
Risk profile		It is very likely that the manual processes will not be robust leading to inefficiency and worst case non-compliance with industry standards.
Ability to achieve compliance		It is very likely that the manual processes will not be robust leading to non-compliance with industry standards.
Time – ability to implement within a deadline		The attempted design of robust processes and the then fine tuning of those processes will be difficult and complex. It is likely that any deadline could be met.

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	Option 2
Solution effectiveness	N/A		
Cost			
Business Impact			
Business strategic alignment			
IT strategic alignment	N/A		
Project complexity	N/A		
Risk profile			
Ability to achieve compliance			
Time - ability to implement within a deadline	N/A		

Key			
Solution effectiveness	Addresses most requirements	Addresses some requirements	Addresses few requirements
Cost	Low	Medium	High
Business Impact	Low	Medium	High
Business strategic alignment	Good alignment	Partial alignment	Poor alignment
IT strategic alignment	Good alignment	Partial alignment	Poor alignment
Project complexity	Low	Medium	High
Risk profile	Low	Medium	High
Ability to achieve compliance	Easy	Moderate	Hard
Time - ability to implement within a deadline	Easy	Moderate	Hard

6.3 Summary of Costs

Option	Total Costs ($)
0 – Do Nothing	No capital expenditure
[redacted]	[redacted]
[redacted]	[redacted]

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
Unit ($)	[redacted]	[redacted]								
Total ($)	[redacted]									

6.5 Summary of Risk

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

Risk Category	Risk	Impact	Mitigation	Risk Rating
Financial	[redacted]	Without automated responses to Retailers there will be a flood of telephone inquiries regarding job progress, complaints etc. - Labour will be required to process.	Replacing this system maintains our ability to perform services Retailers and customers rely on.	Low
Financial	[redacted]	Ability to bill Retailers for services is likely to be severely compromised resulting in disputes (incurring labour to resolve) or loss of revenue.	Replacing this system maintains our ability to perform services retailers and customers rely on.	Low
Customer	[redacted]	Without field tools, field operatives will be reduced to using pen and paper, which would be a significant loss of efficiency resulting in customers without power or services.	Replacing this system maintains our ability to perform services Retailers and customers rely on.	Low

Financial	[redacted]	Without field tools, field operatives will be reduced to using pen and paper, which would be a significant loss of efficiency resulting in slower work or increased workforce	Replacing this system maintains our ability to perform services Retailers and customers rely on.	Low
Financial	[redacted]	TasNetworks will be in danger of defaulting on SLA's resulting in increased charter payments.	Initiative results in SLA's being met.	Low
Regulatory Compliance	[redacted]	TasNetworks will be in danger of defaulting on SLA's resulting in not meeting its regulatory obligation.	Initiative results in SLA's being met.	Low
Customer	[redacted]	TasNetworks will be in danger of defaulting on SLA's resulting in reputational damage.	Initiative results in SLA's being met.	Low

6.6 Economic analysis

Option No.	Option description	NPV	Reason got selection/rejection
0	Do Nothing	$0	Risks are too great
1	Replace [redacted]	-$2,080,470	Greatest benefit for lowest risk
2	Revert to paper-based process	-$13,714,541	Highest cost and risk profile

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-048	It is assumed that the requirements for service order scheduling and field tool replacement will also be captured as part of capturing requirements for [redacted] replacement under the umbrella of the [redacted] project. It is assumed that via the [redacted] implementation, a product will be selected to fulfil both the [redacted] and service order scheduling and field tool replacement needs. It is assumed that replacement hardware and ongoing software licencing will be covered by [redacted] but the implementation costs for the service order scheduling and field tool will be part of this initiative.
ITA-049	Vendor costs for service order scheduling and field tool replacement will be in the order of [redacted] (no vendor quotes could be received in the timeframe for DD17)
ITA-050	It is assumed that service order scheduling and field tool will not be replaced before the [redacted] project commences, and it is unlikely we could conduct a replacement durin [redacted] and so is scheduled for after [redacted] ompletes.
ITA-059	Reverting back to a paper-based Service Order process for the field staff would result in an estimated minimum of [redacted] required to handle: - The preparation of paper work packs - The manual entry of completed work packs - Follow up of bad data capture - Job tracking
ITA-060	Reverting back to a paper-based Service Order process for the field staff would result in an increase in the number of field FTE resources required due to: - Delays in executing jobs - Needing to revisit sites to recapture data - Lack of efficiencies in data capture - Manual Scheduling This is estimated to be [redacted]
ITA-061	Reverting back to a paper-based Service Order process for the field staff would result in savings of [redacted] in software licence and support costs.
ITA-062	Reverting back to a paper-based Service Order process for the field staff would result in an increase in GSD Payments made to customers due to not meeting delivery timeframes. We have assumed a [redacted] increase to the current [redacted]
ITA-064	Replacing the service order scheduling and field tool with a more contemporary product will have no impact on the licence and support costs that we currently pay.
ITA-094	It is assumed that if the processes currently in TVD CSC were paper-based, 1% of the 7000 de-energisation undertaken per annum would be make incorrectly, i.e. the wrong premise gets de-energised, resulting in fines of [redacted]
ITA-095	Replacing the service order scheduling and field tool with a more contemporary application will reduce the likelihood that the process will have to revert to a paper-based process. In the first year of implementation, the 20% risk of having to revert to paper is mitigated increasing by 10% annually (based on subjective experience). This is represented as a benefit
ITA-096	Replacing the service order scheduling and field tool with a more contemporary application may reduce the volume of GSD payments made each year by having a more reliable and efficient systems and processes. This is assumed to be about [redacted] per annum.

ITA-097	Replacing the service order scheduling and field tool with a more contemporary application will make the scheduling and reallocation of work process more efficient [redacted] and the capture of data in the field more efficient [redacted]

Section 2 Approvals (Gated Investment Step 2)

Business Unit Review:	[redacted]	**Date**	
IT Project Initiator:	[redacted]	**Date**	18/05/2015
IT Thread Approved:	[redacted]	**Date**	18/05/2015
Manager (Network projects) or Group/Business Manager (Non-network projects):		**Date**	
[Send this signed and endorsed Summary to the Capital Works Program Coordinator.]			

Project Initiator:		**Date:**	
Project Manager:		**Date:**	

Actions			
Submitted for CIRT review:		**Actioned by:**	
CIRT outcome:			