

Project Name: GIS Refresh – IT19

Description:

The Geographical Information System (GIS) is the core system used by Multinet Gas (MG) to spatially manage asset information relating to the distribution network. The GIS is based on the General Electric (GE) Smallworld GIS platform.

GIS maintains the geographic location of each asset, details of the asset as well as a geographic and geo-schematic representation of the Gas transmission, High, Medium and low pressure distribution pipelines and services network connectivity. The GIS is the source of geographic asset information for SAP ERP ISU and is a key enabler for core asset and network management business processes including Asset Planning, Design, Inspection and Maintenance and Network Monitoring and Control and Fault Management.

The project purpose is to perform a life cycle refresh of the GIS hardware and software platform in accordance with MG's "IT Asset Management Policy 2.0".

Strategic Alignment:

This project supports the following key MG strategic themes :

- Ensure ongoing performance, resilience and safety of the changing distribution network
- Maintain the quality, reliability and security of the distribution system to achieve operating targets and supply quality standards
- Maintain systems to industry standard to reduce risk of disruption to customers and retain levels of efficiency- Avoiding unsupported or end-of-life systems that cannot be modified to meet new business requirements

The capital expenditure for this project is justified as it is:

- Prudent and efficient in line with accepted good industry practice: and
- Necessary to maintain the integrity and safety of MG's services.

Options:

All credible options to meet the key drivers of this project have been assessed:

1. Do Nothing
2. Replace GIS platform with alternative solution
3. **Refresh current GIS**
4. Delay refresh of current GIS

Rationale:

The recommended option is:

- **Refresh current GIS**

This recommended option provides the least-cost approach to maintain vendor support for GIS and ensure the continued reliable and safe operation of the gas distribution network and gas transmission system.

The current version of GE Smallworld installed at MG is v4.3. This version was installed in 2015. The current release available from the vendor is v5.0. The vendor's product road-map indicates that significant new versions of the product are released approximately every 2 years. Mainstream product support is provided by the vendor for the current and previous release.

The GIS has been upgraded to the current Smallworld release v4.3 during 2015/16 as part of MG's 2013 – 2017 Gas Access Arrangement Review (GAAR) commitment.

Consistent with MG's IT Asset Management Policy, MG plans to next refresh the GIS platform after 2 releases from the vendor. This will ensure the support for the GIS platform is maintained.

The project assumes that a number of minor enhancements will be required in addition to the technical refresh to incorporate existing integrated systems.

This project is proposed for 2020 which is 5 years after the 2015 refresh.

This is considered the optimum timeframe based on the balance of project cost versus business risk. If the GIS refresh was delayed beyond 2020 the upgrade project would increase in cost and complexity and, based on MG's Risk Management Framework and Policy, expose the business to an unacceptably high risk.

The risk is associated with the likelihood and consequence of downstream impact on core asset and network management systems and processes caused by operating outdated / unsupported hardware and software.

The Do Nothing option fails to meet the key business drivers and exposes MG to unacceptable risk in managing the distribution network and maintaining current reliability and security of supply, power quality and safety standards.

GE Smallworld is one of the leading GIS products available in the market and there is no business driver to incur the additional cost (estimated at approx. \$10M) to change to another Vendor's GIS product as proposed by Option 2.

Option 4 has been dismissed as delaying the refresh will introduce an unacceptable level of risk and breach MG's IT Asset Management Policy 2.0

Timing: 2020

Cost: \$1.9m

No impact on ongoing IT operating cost is expected.

The SmallWorld product technology refresh and improvements to the user experience in the next major release will require additional implementation and testing effort when compared with the previous upgrade in 2015/16 hence a higher cost than the actual \$1.2M (2015 dollars).

Notes: Cost estimates are based on previous MG GIS upgrade projects which were undertaken in 2009 and for 2015/16. All costs provided are MG-only, however the refresh project is to be run jointly with United Energy, maximising overall efficiency.

GIS Upgrade 2009

Scope: Technical version upgrade (v4.0 – v4.1), No new Hardware, No new functionality, Run by IT Support with limited business involvement

Duration: Approx 6 months

Approx. Cost: Approx \$2M (2015 dollars)

GIS Upgrade 2015/16 (2013-2017 GAAR Period)

Scope: Version Upgrade, Hardware Refresh, Minimal new functionality

Duration: 7 months

Cost: \$1.2M