

Project Justification – IT40 – Business Intelligence

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Document Control

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Document Review

This document has been reviewed by the following parties prior to approval:

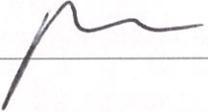
Reviewer Name	Role	Date
Mark Cooper	Gas Asset Manager	18/10/16

Document Approval

Approval of the Project Justification for the IT40 – Business Intelligence project is provided by the signatories shown below.

Changes to this document will be coordinated and approved by the undersigned or their designated representatives via project change management.

The undersigned acknowledge they have reviewed and approved this document.

Approver Name	Approver Title / Role
Basile Sepsakos	Head of Information Technology as Delivery Owner
Signature: 	Date: 27/10/16

Approver Name	Approver Title / Role
Mark Beech	General Manager, Networks (Gas) as Business Sponsor
Signature: 	Date: 26/10/2016.

Approver Name	Approver Title / Role
ITEF	IT Executive Forum
Approved by ITEF – Refer Correspondence	Date: October 2016

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1. Project Description

This project consists of a number of small Business Intelligence (BI) initiatives conducted across the 2018 - 2022 GAAR period to leverage existing data and BI tools to meet a wide range of business requirements for new and improved analysis and reporting from existing available data sources.

2. Objectives / Purpose

The objectives of this project are to:

- Consolidate existing disparate MG data sources and analytics such that a coherent, reliable, accurate and valid capability is available to the business
- Leverage the capabilities available from Multinet Gas's (MG's) existing Business Intelligence (BI) tools (including Cognos, SAP HANA and Tableau, to provide a range of critical improvements to existing data analysis, reporting processes and compliance requirements
- Allow the business to effectively address increased regulatory compliance requirements
- Deliver operational capabilities and improved data integrity in the production of a wide range of regulatory, business and contract management requirements over widely varying timeframes reports
- Improve regulatory and business compliance capabilities
- Deliver improvements in customer service through better data quality, improved access to information and the required outputs in a timely and accurate fashion.

3. Strategic Alignment

3.1. National Gas Rules Alignment

This project will be implemented in line with NGR expenditure objectives.

The program aligns to the following National Gas Rules (NER) capital expenditure criteria:

- Rule 79 (1) the capital expenditure is such that would be incurred by a prudent service operator acting efficiently in accordance with accepted good industry practice, to achieve the lowest sustainable cost of providing services;
- Rule 79 (2) (c) (iv) the capital expenditure is necessary to maintain the service provider's capacity to meet levels of demand for services existing at the time the capital expenditure is incurred.

The proposed solution for delivering this initiative has been assessed against the NGR's capital and operating expenditure criteria as follows:

Expenditure Criteria	Justification
Costs incurred by a prudent service provider acting efficiently to achieve the objectives	The proposed BI initiatives will ensure continued compliance (RIN and Gas Safety Case), business and contract management reporting and analysis; in addition, improvements in data analysis and reporting will deliver customer service efficiencies and improvements

Expenditure Criteria	Justification
Expenditure is necessary to meet levels of demand	<p>In a number of areas (e.g. Guaranteed Service Levels and providing information to regulatory bodies and consumers), inefficient manual processes and required to access and prepare relevant information. This is causing MG to struggle to meet current demand levels.</p> <p>The improved reporting and data analysis delivered by this project will eliminate a number of manual processes allowing MG to better service current and future demands for information.</p> <p>The solution will effectively address a wide range of regulatory compliance, industry, business and contract management requirements in a changing environment.</p>

3.2. Multinet Gas Strategic Themes Alignment

This project supports the key Multinet Gas business strategy to meet changing customer needs and growing expectations by:

- Improving asset planning and management through analytics and reporting; this will include the integrated capability to seamlessly utilise asset management and performance information from multiple systems (benefits including more efficient capital and strategic planning). Delivering more efficient management of unaccounted for gas calculations, and comparisons with meter reading, billing and AEMO requirements and obligations
- Ensuring readiness to achieve regulatory requirements through providing more efficient RIN, GAAR and regulatory reporting processes
- Providing increased efficiencies in capital planning via the use of visualisation of detailed asset data and maintenance history utilising multiple disparate information systems
- More efficient addressing of network objectives (e.g. GIS not configured for demonstrable compliance re: transmission assets; improved planning and mapping, increased efficiencies in dealings with Councils and related bodies)
- Providing better information to regulatory authorities, retailers and consumers regarding various services (e.g. planned outages and emergency situations).

4. Options

The following options have been considered to deliver the required solution:

- Do Nothing
- Increase Staff
- Modify Existing Systems
- Implement New Systems

4.1. Option 0 – Do Nothing

Adopting the “Do Nothing” option would mean MG not changing its systems and processes and continuing to support inefficient processes for analysing and reporting on a range of data.

Under this option the current processes would remain unchanged resulting in an increasing risk that MG will fail to meet regulatory compliance and/or fail to meet consumer expectations for timely and accurate information.

4.2. Option 1 – Leverage Existing Systems

Multinet Gas has the opportunity to leverage the BI platform implemented for United Energy (UE) to support and improve the efficiency of a range of business functions.

Under this option MG would, for each identified (and justified) business BI requirement, develop the appropriate data extract, HANA analysis view(s) and Tableau report(s). This will effectively automate work currently performed manually improving both the accuracy and efficiency of the current processes.

This solution would encompass consumer, market and metering requirements as well as relevant regulatory, performance and contract management information requirements and capabilities.

4.3. Option 2 – Implement New Systems

This option would involve the development of a new system to specifically support Multinet’s BI requirements and integrating this new system with existing customer, market and metering systems. It is envisaged that this project would be of significantly higher cost than extending existing capabilities.

5. Economic Evaluation

The Economic Evaluation table below is the result from the “Business Case Output” from the “Financial Evaluation Spreadsheet”. This is MG’s Capital Project Evaluation tool.

The tool ranks the options based on Least Cost (Net Present Value). The least cost project will have a Project Ranking of 1.

	"Status Quo" Reference Case	Option 1: Leverage Existing Systems	Option 2: Implement New Systems
Net Capex (\$)	\$0	\$1,036,965	\$4,485,156
Opex (\$)	\$0	\$198,499	\$286,153
Least Net Cost (\$) (PV)	\$0	\$1,235,465	\$4,771,309
Project Ranking		1	2

5.1. Recommendation

It is recommended that Option 1 (Leverage Existing Systems) be adopted as this is the lowest cost option that meets the requirements. This option improves MG's BI capability across a range of functions from RIN Reporting through to Customer Service. The "Status Quo" option was not selected as it fails to deliver any improvements in operational efficiency, reporting accuracy or service improvements. Option 2 was not selected as this is a significantly higher cost than Option 1.

5.2. Benefits Summary

The Project delivers the following benefits:

- Leverages existing capability to deliver operational efficiencies by automating a range of analytical and reporting activities
- Improves the accuracy and timeliness of various business reporting by ensuring that data is automatically extracted on a regular and frequent basis from multiple disparate system resources. This covers a range of regulatory and business requirements (e.g. Guaranteed Service Levels)
- Allows improved asset management (e.g. unaccounted for gas)
- Ensuring that improved business communication and compliance with the market operator is maintained (e.g. connections, metering, billing management)
- Improves customer service by providing improved intelligence relating to planned outages.
- Contributes to Multinet Gas maintaining compliance with the National Gas Rules.

6. Proposed Solution

6.1. Requirements

This project will provide a BI capability that will allow authorised users to address a range of business needs for improved analysis and reporting including:

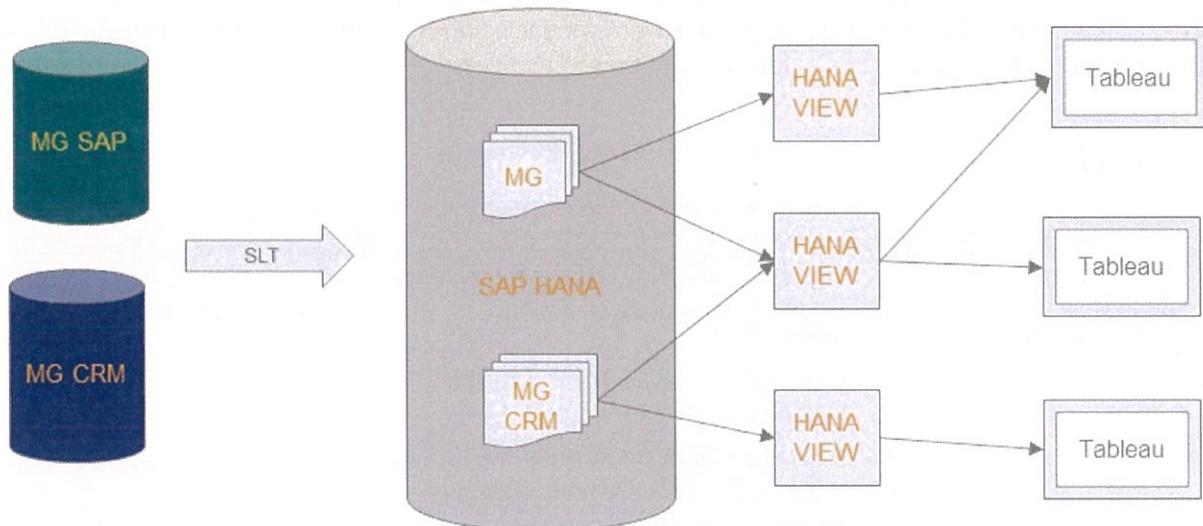
- Service Provider cost analysis – improved ability to analyse and compare service provider costs.
- Capital Works Analysis (Costs, Budgets, Dates, Projects, Equipment, etc.) – improved Capital Works reporting
- Network Faults – better reporting of Fractures, Unplanned Outages, Faults on Single Street, Pipeline Encroachments, Squeeze Off, Publicly Reported Escapes, etc.
- Scheduled Maintenance analysis – improved ability to analyse and review scheduled maintenance
- Analysis of Work Orders and Notifications occurring at the same location
- Customer Connection and Tariff analysis
- Increased automation of RIN and associated regulatory reporting.

Each requirement will be addressed individually as described in the Solution Overview below.

Improvements in predictive maintenance for assets will also be considered subject to further analysis of available asset data.

6.2. Solution Overview

The current MG Business Intelligence capability allows data to be extracted from MG's core SAP systems into both the BI Data Warehouse and/or SAP HANA, providing data repositories with a wide variety of query outputs and HANA views that can be analysed using Tableau (see diagram below) or Cognos.



MG SAP HANA / Tableau Business Intelligence environment

The proposed solution will build on the current MG SAP HANA capability and for each requirement will identify whether or not the required data is available within existing MG systems, develop extracts of that data and build HANA views / Tableau reports to meet each BI requirement. This will supersede the current Cognos driven BI capability and provide a single BI capability for Multinet Gas.

The effort and cost of developing a solution for each requirement will depend on a range of factors including:

- Availability and integrity of required source data
- Development of an appropriate HANA view of the data
- Creation of the required Tableau report(s).

6.3. Assumptions

The solution proposal assumes the following.

- The solution is based on providing a fixed level of technical resources to address business BI needs across the 2018 – 2022 GAAR period. With the total number of requirements fulfilled based on the availability of core data and complexity of the requirements.
- Detailed requirements have not been developed at this stage, but each requirement will be fulfilled through a common process involving the following:
 - Confirm detailed business need and benefits
 - Establish availability and integrity of required data
 - Develop in appropriate HANA views and Tableau reports
 - Test and deploy

- It has been assumed that requirements will be similar to those of United Energy and it will be feasible to leverage experience gained with the United Energy solution to provide a more cost effective solution for Multinet gas.

6.4. Processes and Systems Impacted

It is expected that processes supporting the production of MG Regulatory reporting reports and analysis as well as a range of other Service Delivery and Gas Network (including Asset Management) functions will be enhanced to improve the accuracy and efficiency of these functions.

6.5. Risks

Risk	Cause	Impact
Failure to deliver required capability	<ul style="list-style-type: none"> • Requirements not well defined or understood. • Core data not available in existing systems • Project scope not well understood. • Poor project delivery methodology • Project team skills not appropriate to task. 	<ul style="list-style-type: none"> • Additional cost

6.6. Constraints / Dependencies

The proposed solution leverages the BI solution provided for United Energy.

7. Outputs

The project will deliver the following:

- Changes to systems and processes that enable Multinet Gas to deliver a range of efficiencies in existing business processes.
- Improved analysis and reporting leading to improvements in Network management and customer service.

8. Project Capital Costs

This section presents a summary view of the capital and operational costs and benefits of developing, implementing and operating the Proposed Solution.

Capex Category	Cost (\$'M)	CY' 2018	CY' 2019	CY' 2020	CY' 2021	CY' 2022	Source / Explanation
Labour IT	\$0.924	\$0.185	\$0.185	\$0.186	\$0.185	\$0.185	All IT and business labour costs associated with designing, developing and implementing the project solution.
Hardware (application specific)	\$0.009	\$0.002	\$0.002	\$0.002	\$0.002	\$0.002	No new hardware is required, minor Hardware upgrades allowed for.
Software	\$0.139	\$0.028	\$0.028	\$0.028	\$0.028	\$0.028	Tableau Licences for Developers and Dashboard Consumers
Security	\$0.009	\$0.002	\$0.002	\$0.002	\$0.002	\$0.002	~1% of Labour
PMO	\$0.076	\$0.015	\$0.015	\$0.015	\$0.015	\$0.015	Project Management Office including IT Capital Overheads
TOTAL	\$1.157	\$0.231	\$0.231	\$0.232	\$0.231	\$0.231	

9. Operating Cost Impact

This project will incur an increasing IT operating cost based on software support and maintenance for Tableau licences required to support Dashboard consumers who will create and use the reports. The IT operating costs for this project will rise to an estimated \$26k p.a. by 2023. These costs will be absorbed in the 2018 – 2022 period and will not contribute to an overall IT Opex increase.

10. Timeframes

It is planned that the project will be delivered throughout the 2018 – 2022 GAAR period, with each BI requirement being investigated, justified and delivered based on a capped resourcing level over the duration of the period.

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