Revised Proposal

Attachment 5.13.N.4

ADMS Recommendation to Award Contract

PUBLIC

January 2019

Recommend to Award	
Sourcing project # and name	WS1111472479 Advanced Distribution Management System (ADMS
Business division/unit	Asset Management
Estimated contract value	$ [redacted]
Shortlisted bidder/s	• Schneider Electric (SE) • Open System International (OSI)

Purpose

The ADMS Program seeks COO and CEO endorsement prior to seeking Ausgrid Operator Partnership Board approval to award ADMS solution contract to Schneider Electric (Australia) Pty Ltd at a whole of life cost of [redacted] for the supply of the ADMS solution, implementation services, training, and contingency at a capital cost of [redacted] with an initial five years support and maintenance at an operational cost of [redacted]. This contract will also include an option for a subsequent five years support and maintenance at an operational cost of [redacted]

Background

Ausgrid's distribution network is managed using a group of systems where control room staff integrate various information flows and take consequent actions to maintain the security and stability of the network. The DNMS is the core operational management tool in that group of systems. It is a single vendor and in-house developed hybrid system dating from the 1990s. The product has limited support and no vendor roadmap for development. As a result of in-house development, the development of DNMS is inherently constrained and there are insufficient internal and external capable resources to appropriately maintain the code. The DNMS has been assessed as being unable to make the transition to deliver support for the core functions required by a modern distribution utility, i.e. Distributed Energy Resource Management (DERMS), Fault Location Isolation and Rectification (FLISR) and Advanced Metering Infrastructure (AMI).

Three replacement options for DNMS were considered with the preferred option being to replace current systems with an ADMS. An ADMS platform provides an integrated set of tools to remotely monitor and control the network, manage system outages, improve planned and emergency event management, optimise power-flow management, provide fault location analysis, and fault isolation and restoration capabilities. This will allow Ausgrid to provide the services expected by customers and stakeholders in the rapidly changing energy market.

From the three options, two credible options were explored in further detail:

- a like-for-like replacement of the existing DNMS; and
- a fully functioning ADMS solution.

From these two options the full ADMS solution via a preferred vendor, Schneider Electric, is recommended as it addresses existing and future system needs and risks and provides a platform that will support Ausgrid's ability to meet changing customer needs into the future.

Procurement Process and Outcome

Ausgrid supported by KPMG and DGA Consulting, conducted a requirements based sourcing process to identify the preferred ADMS Solution vendor. The key procurement activities included:

- Market scan
- Pre-Qualification Questionnaire (EOI)
- Vendor presentations
- Proof of Concept
- Initial Solution Plan and Offer (ISPO)
- Joint Solution Design (JSD)
- Final Solution Plan and Offer (FSPO) to identify the preferred vendor.
- Conduct reference and site visits with the down-selected vendors
- Conduct an independent probity review – performed by O'Connor Marsden & Associates

Overall procurement process was governed by ADMS Program's Steering committee or endorsed at each entry / exit of each stages of the procurement process. In addition, this procurement / sourcing process was endorsed at Procurement Evaluation Review (PER) on 2nd February 2018, refer to Attachment G for PER document.

Detailed vendor selection approach, plan, timeline and outcomes are specified in Attachment A: KPMG's ADMS System Selection Report dated 22nd November 2018.

To mitigate any ADMS Solution delivery risk and associated price, Ausgrid conducted four weeks of Initial Solution Design (ISD) workshops with SE post FSPO submission. As an output of ISD workshops, SE and Ausgrid established an integrated implementation timeline, which had a subsequent impact on SE's proposed timelines and required commercial negotiation to establish an agreed overall contract value.

[redacted] This recommendation is in strict alignment with Ausgrid's Licence Conditions and Critical Infrastructure license requirements. This subsequently resulted in further commercial and contractual negotiations with Schneider Electric.

List of contractual risks and associated commercial levers to mitigate or control

Risk	Risk Descriptions	Mitigation	Probability	Residual Risk
SE's inability to deliver on time	There is a risk that SE fails to deliver outcomes as per as the agreed milestone impacting Ausgrid's operations.	• Holdback Amount: 10% hold-back will be applied to each project delivery milestone cost for the life of the implementation. Total Hold-back amount for each phase will be released to SE once Operational Acceptance is achieved by SE. • [redacted] • [redacted]	Medium	Low
SE's inability to support Ausgrid post implementation period	There is a potential risk that SE's support function is not being able to provide assistance in timely manners	• [redacted] • Service Credits do not apply in the first of 30 days after service has commenced to allow for stabilisation of the service	Medium	Low

Due Diligences

Both financial health checks and reference checks were performed on the short-listed bidder, please refer to the respective attachment for details.

- Refer to Attachment B for Financial Health checks performed
- Refer to Attachment C for Reference checks performed

External Advisory Support

- KPMG was engaged to manage the procurement process. Refer to attachment A for KPMG's procurement report.

- DGA Consulting was engaged to provide ADMS subject matter expertise and insights for the procurement process. Refer to Attachment D for DGA Consulting's sign-off on the procurement process.

- O'Connor Marsden (OCM) was engaged to conduct an independent probity audit. Their report concluded that there were no probity related issues throughout the process. Refer to attachment E for OCM's probity report.

- Spark Helmore was engaged to provide legal advice and to draft bespoke Master Service Agreement. Refer to attachment F for Spark Helmore's legal sign-off report.

Note the outcomes from final negotiation or second round of bidding if relevant. Readiness of contract for execution, e.g. any material items to be resolved.

Post Preferred Vendor selection, Initial Solution Design (ISD) workshops were held with Schneider Electric over 4 week's period to align project timelines and de-risk the overall program. Outcome of the ISD, was reduction of any material issues or items prior contract execution.

To accommodate Commonwealth's verbal recommendation, SE's cost associated to meet Ausgrid's Critical License Conditions, negotiations was conducted in an 'open-book' manner. Ausgrid agreed to reimburse any non-labour cost, subject to SE providing auditable documentation. Ausgrid conducted detailed due diligence to ensure the uplift in the estimated labour cost is accurate and reasonable from Ausgrid's perspective.

Contract Terms and Value

Bespoke Master Services Agreement utilising LAT 19 and LAT 21 is constructed by Sparke Helmore, specific for contract. All clauses have been agreed with Schneider Electric.

Contract value breakdown

Please see below for the value associated with the ADMS Contract. Implementation Services price, will be invoiced accordingly as per the payment milestone plan.

Schedule #	Schedule Names	Value (in millions)
ADMS Solution		
Schedule 02	ADMS Technical Solution	
Schedule 02a	ADMS Technical Solution	
	Total ADMS Modules license Cost	
Implementation Services		
Schedule 03	ADMS Implementation Services (includes training @ $0.6m)	
Schedule 03a	Adjunct Schedule to Schedule 03 to accommodate Ausgrid's Critical Infrastructure Licence conditions	
	Total Implementation Services Cost	
Initial 5 Years Support and Maintenance Services		
Schedule 04	ADMS Support and Maintenance Services	
Schedule 04a	Adjunct Schedule to Schedule 04 to accommodate Ausgrid's Critical Infrastructure Licence conditions	
	Total Initial 5 Years Support Services Cost	
Optional 5 years Support and Maintenance Services		
Schedule 04	ADMS Support and Maintenance Services	
Schedule 04a	Adjunct Schedule to Schedule 04 to accommodate Ausgrid's Critical Infrastructure Licence conditions	
	Total Optional 5 Years Support Services Cost	
Contingency		
Total Contract (Whole-of-Life) Value		
		Does not sum due to rounding

Benefits

The benefits of the ADMS Solution include:

- Reduce the risk of non-compliance with Ausgrid's Licence Conditions
- Alignment to industry trends
- Long-term solution and supported platform
- Reduced support cost
- Improved Cyber Security posture and ability to detect and respond to threats
- Enhanced business and system capability, including the ability to detect operational issues
- Improvement of safety, reliability and quality of the network

A detailed benefits realisation plan has been developed to support the business case.

Funding

Funding will be available via the ADMS Business Case following approval by the Board. Under sub-delegation 1.1.3 (CAPEX) and 1.1.1 (OPEX) the Board has delegation over [redacted] to approve this expenditure.

Recommendation

It is recommended that CEO, Richard Gross

i. Endorses (prior to Ausgrid's Board approval) the award of ADMS solution contract to Schneider Electric (Australia) Pty Ltd at a whole of life cost of [redacted] for the supply of the ADMS solution, implementation services, and training at a capital cost of [redacted] with an initial 5 years support and maintenance at an operational cost [redacted]. This contract will also include an option for a subsequent 5 years at an operational cost of [redacted].

ii. Provides pre-approval of a Purchase Requisition(s) (in Ariba) for this contract in order to raise the corresponding Purchase Order(s)

Endorsements and Final Approval (to be completed Ariba)

Proposer	[redacted]
Endorsements	
Endorsements	
Endorsements	
Endorsements	
Endorsements	
Endorsements	
Final Approval	

List of Attachments

Attachment A	KPMG ADMS System Selection Report version 2.2, Dated 22nd November 2018 (in draft)
Attachment B	Financial Check
Attachment C	Reference Calls
Attachment D	DGA Consulting Sign-off Document, Dated
Attachment E	OCM Probity Check dated 2nd October 2018
Attachment F	Sparke Helmore, Legal Sign-off (in draft)
Attachment G	Procurement Evaluation Review

Attachment A: KPMG ADMS System Selection Report

Attachment A

KPMG

Ausgrid

ADMS Systems Selection

22 November 2018

Purpose of this document

This intent of this document is to provide the Ausgrid ADMS program stakeholders with a detailed view of the ADMS Procurement Process and the outcomes of this process. This document provides insight into each phase of the procurement process, including:

- Market Scan
- Pre-Qualification Questionnaire (PQQ)
- Product Demonstrations
- Initial Solution Plan and Offer (ISPO)
- Joint Solution Design (JSD)
- Final Solution Plan and Offer (FSPO)

For each of the above phases, a view of the following has been provided:

- The vendors engaged
- The evaluation criteria
- The outcomes of the phase, including details of the down-selected vendors where required

This information has been provided to give clarity and insight into the decisions and recommendations made as a final result of this ADMS procurement program.

KPMG Disclaimer

Inherent Limitations

This deliverable has been prepared as outlined in the Objectives, Scope and Approach section. The services provided in connection with this engagement comprise an advisory engagement, which is not subject to assurance or other standards issued by the Australian Auditing and Assurance Standards Board, and consequently, no opinions or conclusions intended to convey assurance have been expressed. Any reference to 'review' throughout this deliverable has not been used in the context of a review in accordance with assurance and other standards issued by the Australian Auditing and Assurance Standards Board.

In relation to vendor selection assistance provided by KPMG, Ausgrid acknowledges that KPMG:

- performed an internal search for potential client conflicts relating to the vendors selected for RFP distribution by Ausgrid and may be providing assurance, tax and/or advisory services to potential vendors, and has agreed that this does not impact KPMG's engagement with Ausgrid;
- acted as a contractor in providing these services and has not undertaken to perform obligations of Ausgrid, whether regulatory or contractual; and
- in carrying out our work:
  - KPMG did not act in a capacity equivalent to a member of management or as an employee of Ausgrid;
  - KPMG's services were limited to assisting with the vendor selection process; and
  - management take full responsibility for all final decisions regarding our work, the scoring of vendor responses and judgments as to the vendor's relative strengths and weaknesses in meeting the evaluation criteria, and the ultimate vendor selected.

In relation to assistance provided by KPMG relating to financial analysis using data, estimates and assumptions supplied by Ausgrid and external information, it is not possible to predict future events or anticipate all potential circumstances as market or other conditions and assumptions may change, and as such, future events may not unfold as expected and actual results achieved for the forecast periods covered will vary from the information presented and the variations may be significant.

The assistance provided by KPMG does not constitute legal assistance or advice, and is not a substitute for legal advice. Ausgrid should not undertake or refrain from any action based upon KPMG's services without seeking specific legal advice.

KPMG have indicated within this deliverable the sources of information provided. KPMG have not sought to independently verify those sources unless otherwise noted within the deliverable. No warranty of completeness, accuracy or reliability is given in relation to the statements and representations made by, and the information and documentation provided by, Ausgrid management and personnel consulted as part of the process.

KPMG are under no obligation in any circumstance to update this deliverable, in either oral or written form, for events occurring after the deliverable has been issued in final form.

The findings in this deliverable have been formed on the above basis.

Third party reliance

This deliverable has been prepared at the request of Ausgrid in accordance with the terms of KPMG's engagement letter/contract dated [] and is not to be used for any other purpose or distributed to, or relied upon by, any other party without KPMG prior written consent.

Other than our responsibility to Ausgrid, neither KPMG nor any member or employee of KPMG, undertakes responsibility arising in any way from reliance placed by a third party on this deliverable. Any reliance placed is that party's sole responsibility.

Executive Summary

Ausgrid initiated a program of work which would ultimately replace its current distribution management system (an integrated system of system with about 10 constituent applications). The current system of systems was to be replaced with a vendor provided and maintained Advanced Distribution Management System (ADMS) with the option of also replacing the Outage Management System (OMS). [redacted] was selected as the project lead to drive this ADMS procurement process whilst maintaining complete visibility of the process to the Steering Committee.

Ausgrid engaged KPMG as their independent procurement advisor to guide them through the process of selecting a preferred ADMS vendor. DGA consulting were also engaged as part of this process to act as subject matter experts and to provide insights and guidance regarding ADMS implementations to both Ausgrid and KPMG.

Concurrent to this, a core team was selected from Ausgrid to represent the various stakeholders of the business including resources from the OT, IT and Management areas of the business. This team would act as representatives of their respective areas to form the core evaluation team for the project. This team would be involved in the end to end ADMS procurement process, evaluating the vendors with inputs from DGA consulting, where appropriate, the SMEs within their teams.

The ADMS Procurement Process was ran in 5 stages, with the intent of moving from 8 potential vendors, to a preferred vendor with which to propose for board approval on June the Eighth. Concurrent to this process, KPMG would work collaboratively with Ausgrid to build a business case and plan for the ADMS implementation with the preferred vendor.

A key consideration of this procurement process was probity, and thus Ausgrid engaged OCM to independently audit and approve every stage of the procurement process.

Initially, 8 potential vendors were identified as potential candidates to be involved in the ADMS procurement process. Through discussions and advice provided by KPMG, it was decided that six vendors would be invited to participate in the Pre-Qualification Questionnaire (PQQ) and subsequent phases.

To determine which six vendors would be engaged, a Market Scan was performed of three critical capabilities; "Improve Outage Response", "Optimise Grid Operations" and "Manage DER Impacts" and the local (ANZ) market presence of each vendor. From this, Schneider Electric (SE), Oracle, General Electric (GE), Siemens, ASEA Brown Boveri (ABB) and Open Systems International (OSI) were invited to participate in the PQQ.

During the PQQ, Vendors were provided with a series of Pre-Qualification Questions to respond to as well as an invitation to present to a core-evaluation panel representing the IT, OT and Control Room functions. These responses and presentations were scored by the core evaluation team with SME inputs from DGA Consulting. These scores were performed with the intent of down-selecting to three Vendors with whom to continue through to the Proof-of-Concept (PoC) demonstrations and [redacted]

The PoC demonstrations were run over three weeks, with each Vendor being invited to demonstrate the capability of their proposed solution to the Ausgrid evaluation team and their SMEs. These capabilities were outlined by Ausgrid and were aligned to their requirements. The Ausgrid Core Team discussed their findings and areas for clarifications which were captured by KPMG to be answered and recirculated to the team by the end of the week. The PoC demonstrations were scored against a set of criteria and would make up 30% of the overall evaluation scores. S[redacted]

The Initial Solution Plan and Offer (ISPO) was shared with the vendors immediately following the PoC sessions. The ISPO was built in collaboration with Capgemini, DGA, Ausgrid and KPMG which outlined the scope of work, requirements and response formats. Each of the Vendors had 2 weeks from receipt of the ISPO to respond with their initial offers. These offers were scored by the core evaluation team, making up the other 70% of the evaluation process. The intent here was to decide which Vendors would proceed to Joint Solution Design (JSD) and, eventually, be invited to submit a Final Solution Plan and Offer (FSPO). [redacted]

The JSD phase included a week long collaborative dialogue between the two remaining Vendors and Ausgrid. These sessions allowed Ausgrid to clarify any Vendor assumptions with the intent of refining their offers whilst lowering the risks associated with these offers for both parties. The actions, clarifications and commitments in these sessions were captured by KPMG and DGA, clarified with the Vendors and input into the JSD logbook which would form part of the FSPO response.

The FSPO occurred following the JSD sessions. Both OSI and SE were given 2 weeks following their respective JSD week to re-submit their ISPO responses with updates to their pricing, scheduling, requirements compliance as well as their responses and agreement to the JSD logbook. These responses demonstrated a greater understanding of the implementation and support requirements from Ausgrid, with both Vendors From this FSPO evaluation, it was unanimously agreed among the Core-Evaluators that Schneider Electric would be chosen as the preferred Vendor with which to proceed with.

Executive Summary

8 Vendors (long-list)	6 Vendors (short-list)	3 Vendors (GE, SE & OSI)	2 Vendors (SE & OSI)	**Preferred Vendor**
28th July 2017	14th August 2017	13th Sep 2017	19th Jan 2018	**19th March 2018**

Increasing lock-in of scope and requirements

Further details in this report

	Market Scan	**Pre-Qualification Questionnaire**	**Product Demonstrations (PoC Sessions)**	**Initial Solution Plan & Offer**	**Final Solution Plan & Offer (Down-selection)**
Objective	Identify potential ADMS Vendors for consideration in the selection process using publically available information and advisor research and insights.	Determine if the potential Vendors identified in the market scan can meet the critical demands of Ausgrid's ADMS	Develop a greater understanding of each of the short-listed/qualified ADMS Vendor's solutions through interactive Vendor engagement sessions and product demonstrations.	Assess Vendors ability to meet Ausgrid's detailed ADMS requirements for functional, non-functional, implementation and support.	**Achieve a mutually agreed view of the ADMS solution and implementation and ensure it is reflected in a robust contact and commercial model.**
Selection / Evaluation Factors	• Global deployments / implementations in progress and completed and by region • High level assessment of Vendor product capability • Overview Vendor product strengths and weaknesses	• Australian Presence • Ability to provide capability (functionality) to meet the current and future needs of Ausgrid. • Proven implementation of the product at comparable scale	• Confirm how the Vendor products enable the execution of critical functional areas • Identify areas of product differentiation between the Vendors • Confirm ability to execute end-to-end functions in an efficient and streamlined manner	• Demonstrated ability for the Vendor's product to meet detailed functional and non-functional requirements • A strong system implementation and integration plan • The Vendors willingness to contract on Ausgrid legal terms	• **Overall Functional** • **Overall Non-Functional** • **Support & Maintenance** • **Associated Risks (non-system)** • **Price** • **Commercial T&Cs** • **Cyber Security and Vendor Risk Factors**
Outcome(s)	An agreed list of suitable ADMS Vendors who will be issued the PPQ	A agreed shortlist of Vendors of three Vendors who will be invited to participate in detailed product demonstrations.	• Clear understanding of the Vendor's product functionality (to inform detailed requirements) • Detailed requirements for the ISPO	• An agreed down-select to (two Vendors) • Agreed detailed requirements • Vendors conformance to Ausgrid' requirements.	• **Acceptable high level ADMS solution design.** • **Agreed legal terms and conditions in principles** • **Agreed high-level implementation plan** • **Assumptions clarified to mitigate implementation risks**

The selection process was collaboratively driven by the ADMS project team & was audited and approved by Probity Auditors of OCM.

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ADMS Program Strategy and Scope

ADMS Vision Statement

The ADMS program was established to pursue options and solutions to modernise and replace Ausgrid's legacy network management systems i.e. DNMS and SCADA and implement a contemporary and enhanced capability across the organisation. This program delivered a long-term strategic initiative to transform the control environment, systems, process and technology to enable Ausgrid to continue to be reliable and reduce operational risk to an acceptable level and address the following areas:

Network Visibility and Automation
The network will have increased penetration of monitoring, control and automation throughout all levels of the electrical network. Network operations data will be turned into actionable information available to, and used by, stakeholders throughout the business.

Increased Efficiency and Reliability of Network Operations
The network will be accurately and efficiently operated and maintained, using a unified network model. Remote switching will enable better management of assets and improve utilisation and fault response. Situational awareness will empower network automation that optimises network operations based on multiple objectives.

Asset Optimisation
Data will be more granular, providing real-time operational information, e.g. loads/switch status/ratings, to enable more efficient investment, planning, and construction of Ausgrid's assets.

Process Harmonisation and Automisation
Work can easily be shared because we all work in the same way, using the same systems and consistent source data. Automation of workflows will make sure Ausgrid isn't reliant on a specific person or knowledge.

Maximise Safety
Ausgrid will have increased capability to respond to network incidents safely. The system will embed safety logic and control to complement processes and procedures and to make sure only intended and correct operations occur. Network operations will be recorded, auditable and there will be a feedback loop to drive safety logic improvement.

Increase Customer Focus and Enablement
Ausgrid will interact directly with its customers - both providing information and receiving information. The ADMS will facilitate this by providing communications and ensuring accurate and timely information updates are provided on events affecting customers. Ausgrid will provide flexibility to customers regarding how they want to interact based on their preference.

Enabling the Evolving Network
Ausgrid will build enduring relationships with industry partners and stakeholders to lead the ADMS network evolution in Australia.
To support Ausgrid's vision to be the 'leading energy services provider', Ausgrid should have the flexibility to integrate future technologies and enable the operating model to evolve.

ADMS Strategy and Scope

Pre commencement of the ADMS program Ausgrid developed a view of what the scope and strategy would be when considering the most suitable vendor for the delivery of an ADMS solution. The table below provides a view of the objectives for ADMS.

Simplify Technology

- Ausgrid Control System (DNMS)
- Line Impendence Database
- Low Voltage Parallel Database
- DM&C Gateway
- DM&C Configuration Application
- Defective Mains and Apparatus
- [redacted]OMS
- CASS EMSo Work Despatch
- Switching Request/DAROS
- Outage Management
- Visualisation Tool (ION)
- PI Historian Data Repository
- Ratings (RIC)

Standardise Process

- Work Despatch
- Common Switching process
- Common Network Access Request
- SCADA commissioning
- ICT support for technology
- ICT Disaster Recovery
- Business Continuity
- Compliance with Critical Infrastructure Licence Conditions

Align Data

- GIS Connectivity Model
- SAP Asset attributes
- Outage Management Customer and Connectivity
- SCADA data
- Data Classification
- Data Protection Systems

Objective 1: Simplify Technology

The first objective of the ADMS Program. "Simplify Technology" aimed to refresh Ausgrid's technology environment into a rationlised product suite with a focus on reduced architectural complexity.

Simplify Technology

- Ausgrid Control System (DNMS)
- Line Impendence Database
- Low Voltage Parallel Database
- DM&C Gateway
- DM&C Configuration Application
- Defective Mains and Apparatus
- [redacted]OMS
- CASS EMSo Work Despatch
- Switching Request/DAROS
- Outage Management
- Visualisation Tool (ION)
- PI Historian Data Repository
- Ratings (RIC)

- In essence we aim to replace as many of these old systems as possible with as few new solutions as possible.
- Currently multiple systems within the OT environment, increasing complexity and cost to maintain.
- Move from multiple system to a rationalised product suite.
  - Minimise the total number of systems
  - Clarity on functionality by systems
- Leverage modern technology to simplify processes (e.g. reduced process steps, easier to use system user interface etc.)

Objective 2: Standardise Process

The second objective of the ADMS Program. "Standardise Process" aimed to unify future state processes to ensure alignment between OT and IT whilst ensuring compliance with licenses and regulation.

Align Data

- GIS Connectivity Model
- SAP Asset attributes
- Outage Management Customer and Connectivity
- SCADA data
- Data Classification
- Data Protection Systems

- Standard process across both Control Rooms supported by common systems.
  - A unified control system operating model
  - Informed by industry best practices and Vendor capabilities
- Ensure OT and IT governance and processes are aligned.
- Ability to comply with license condition and regulations
  - Procurement process needs to ensure that system acquired meets the license conditions.
  - Vendors support model compiles with the license conditions.

Objective 3: Align Data

The final objective of the ADMS Program. "Align Data" was to bring together all of Ausgrid's existing data from differing sources into one single source of truth. This source of truth could then be migrated to the future ADMS.

Simplify Technology

- Ausgrid Control System (DNMS)
- Line Impendence Database
- Low Voltage Parallel Database
- DM&C Gateway
- DM&C Configuration Application
- Defective Mains and Apparatus
- [redacted]OMS
- CASS EMSo Work Despatch
- Switching Request/DAROS
- Outage Management
- Visualisation Tool (ION)
- PI Historian Data Repository
- Ratings (RIC)

- Rationalising the sources of truth and agree master source of data.
- Data alignment by data mapping and ensuring integrity of data between systems.
- Defining asset information lifecycle and ensuring data sources remains consistent through the lifecycle.

ADMS Technology Scope

With an understanding of the scope of work and the program objectives, the core ADMS team, with support from internal stakeholders, rationalised what was in and out of scope for the ADMS Systems Selection program. Ausgrid provided further clarification, inputs and the final acceptance of these.

In Scope

Replace:
- Ausgrid Control System (DNMS)
- Defective Mains and Apparatus
- Switching Request/DAROS
- SCADA

Integrate:
- Impedance Database
- Visualisation Tool (ION)
- PI Historian Data Repository
- SAP Ratings (from RIC)

Replace or Integrate:
- DM&C Gateway
- DM&C Configuration Application
- CASS EmSO Work Despatch
- Outage Management System (OMS)
- Low Voltage Parallel Database

Rationalise:
- Impedance Databases
  - Line Impendence Database (LID)
  - FeederZ impedance repository

New:
- …..
- …..

Out of Scope

- Sincal Distribution loadflow application
- PSS/E Sub-transmission loadflow application
- Aspen loadflow application
- DARTS Protection Settings repository

Definitions:

- **Replace** means functionality provided by these current systems will be replaced by the ADMS
- **Integrate** means these current systems will continue to exist and will provide key input data or accept output data from the ADMS
- **New** means functionality not provided by any Augrid systems, however, will be provided by the ADMS

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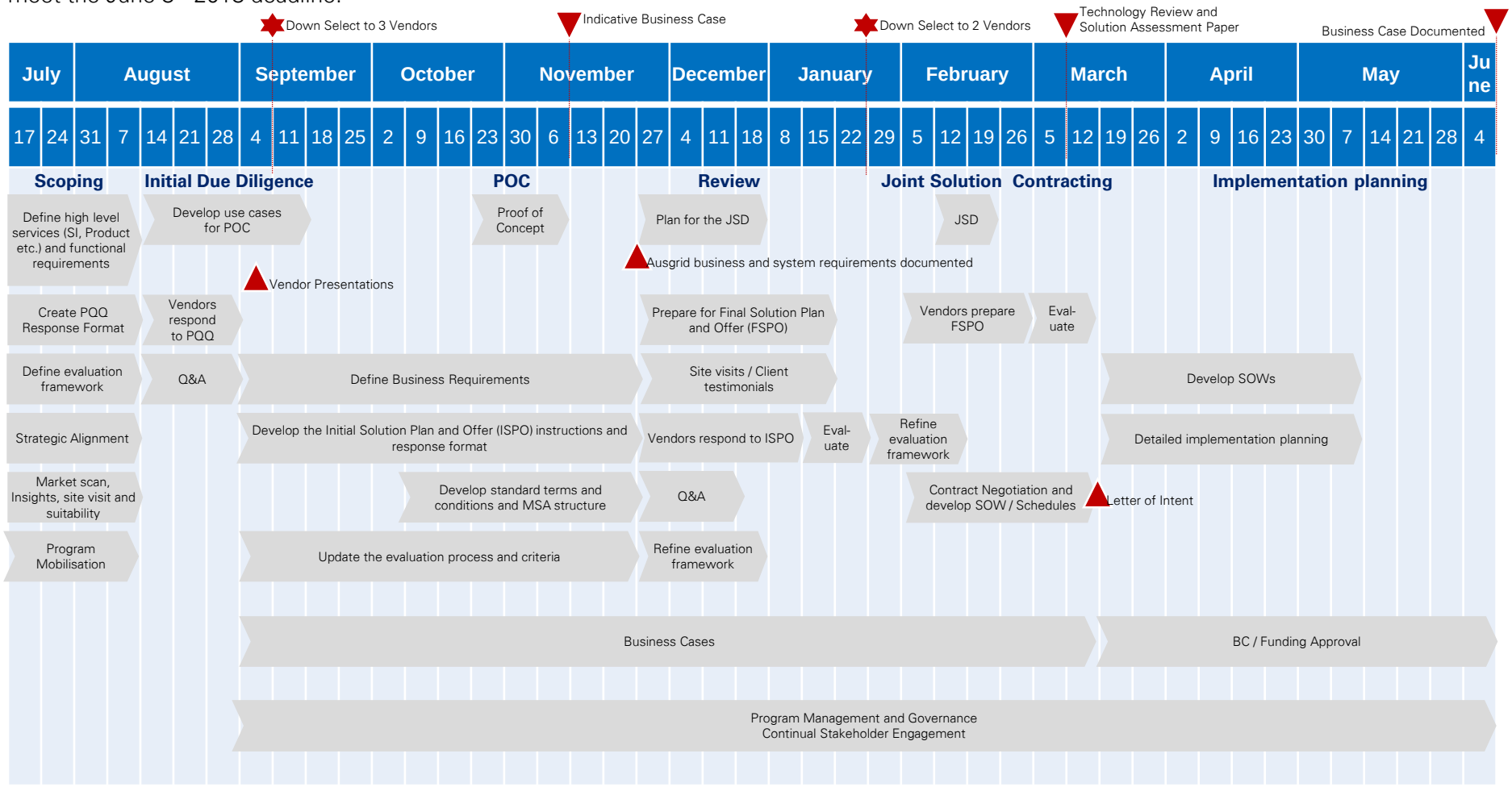
Independent Procurement Approach and Timeline

Procurement Approach Timeline

The ADMS system selection approach was structured with a firm deadline of June 8th 2018. During this time, we were required to facilitate and guide Ausgrid through the systems selection process to reach a preferred and held Vendor, with a business case supporting this recommendation. Some changes were required to this timeline during the program, which used the buffer built into the program. The program is still expected to meet the June 8th 2018 deadline.



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Vendor Market Scan and Selection

Vendor Market Scan and Selection Overview

❑ Purpose:

The Vendor Market Scan and Selection phase aimed to perform a series of activities that enabled Ausgrid to Identify potential ADMS Vendors for consideration in the selection. This decision would be based on factual and demonstrable information obtained using publically available information and advisor research and insights. Vendors would be selected on their strength in three critical capabilities as well as their proven Australian market experience. These capabilities, as well as market presence, would allow Ausgrid to continue through the process with the most appropriate vendors selected.

❑ Objective:

The Vendor Market Scan was performed with the objective of allowing Ausgrid to obtain:

- A high-level view of the ADMS solution offering within the market.
- An understanding of the critical capabilities required in an ADMS solution.
- An understanding of, on a high-level, which vendor is the market leader in ADMS solution.
- An understanding of the strength and weakness of each vendor's capabilities.

With this information, the core evaluation team would be able to leverage the market scan as an opportunity to down-select where a fact base was sufficiently established to support a decision.

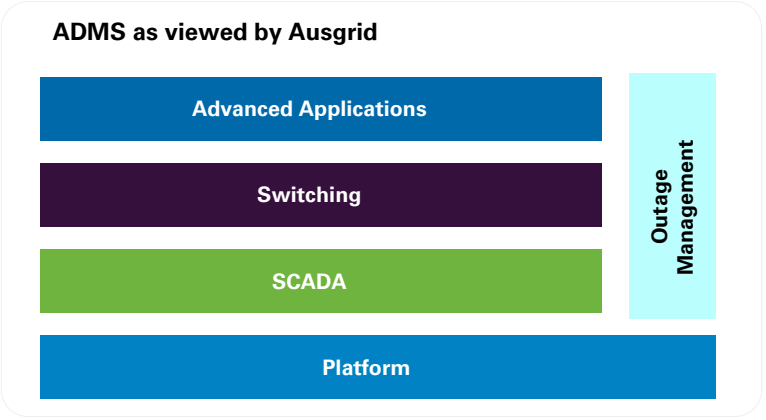
❑ Principles:

- The vendor market scan was not formally scored or evaluated
- To ensure accuracy of findings, all information would be sourced legally and referenced when used.
- A series of potential approaches would be provided to the core evaluation team. These approaches would be discussed until a consensus could be made on the preferred one.

ADMS Vendor Snapshot

Initial market scan of the Gartner ADMS report indicated that there were 8 possible Vendors available globally who are capable to provide Ausgrid an ADMS Solution. The tables below provides a view of the 8 vendors and order of ranking based on the Gartner ADMS report and was used as a basis to inform which vendors we would progress with to the Pre-Qualification phase.

Source: Gartner – April 2017



Vendor	Product
Schneider	Electric ADMS
GE	PowerOn ADMS
Oracle	NMS
Siemens	Spectrum Power ADMS
OSI	Spectra
ABB	Network Manager ADMS
Survalent	Survalent One ADMS
ACS	PRISM

Indicative Research of ADMS Global Implementations (5yr view)

A global scan, of market available information, was performed to develop an understanding of which of the 8 vendors delivered ADMS solutions or part thereof to which clients. As part of this assessments we identified global 104 implementations against the 8 identified vendors over the preceding 5 years. The diagram below provides a view of the location and the components of the ADMS implementations .

Source: KPMG Global Research – June 2017 and market insights provided by **DGA Consulting**.

Assessment of Vendors against three Critical Capability

The first critical capability assessed was the ability of the vendor to respond to outages. Outage management was a key use case from Ausgrid and it was clear that it was highly critical for the selected Vendor to have proven capability. [redacted]

1. Improve Outage Response

Capability Overview

This use case characterises utility support of business processes related to the entire outage life cycle. This starts with identifying the arrival and characteristics of weather or other major incidents (such as earthquakes). It continues with predicting the impact on the distribution network and customers, including estimates of crew and equipment requirements. Utilities must take customer calls, assess field damage, and simultaneously aggregate information from substation equipment, line sensors and smart meters to accurately infer the cause of outages. They must then dispatch crews and issue switching orders to isolate faulted line segments and restore as many customers as possible.

Source: Gartner – Ap

Assessment of Vendors against three Critical Capability

The second critical capability assessed was the ability optimise grid operations. Ausgrid provided clear operational objectives they were trying to achieve. In order to achieve this, the selected Vendors would require the ability to utilise "intelligent control" of their distribution network. [redacted]

2. Optimise Grid Operations

Capability Overview

Utilities use ADMS to tune the electric distribution system toward operational objectives, such as conserving energy, minimising costs and satisfying customer needs. Until recently, most electric distribution depended more on conservative engineering ("design to peak load conditions" and "set and forget") than on intelligent control ("build to fit" and "optimise to objective"). Smart meters, sophisticated substation systems and downstream line sensors are boosting the observability of the distribution network, while new line switches support "self-healing" capabilities. Backfitting existing distribution networks with this new equipment will be a long-term process, but these capabilities can now be deployed where the investment makes sense. A representative list of ADMS applications used in this environment include VVO, CVR, FLISR, optimum network reconfiguration (ONR), short-circuit analysis (SCA), DSE and peak demand reduction.

Source: Gartner – April 2017

Assessment of Vendors against three Critical Capability

The third critical capability assessed was the ability of the vendor to manage Distribution-Connected Energy Resources (DER) impacts. Whilst the Ausgrid use cases did not apply to all regions, the ability to analyse and manage the operational impacts of DER was seen as highly important. [redacted]

3. Manage DER Impacts

Capability Overview

Utilities use ADMS to manage the operational impacts of distribution-connected energy resources, such as solar PV and energy storage, and to influence customer demand. This use case for ADMS does not apply to all regions; however, when DER growth occurs, it disrupts conventional distribution planning and operations. Managing two-way power flow induced by equipment not owned by the utilities, which can be highly intermittent, is more technically challenging than managing traditional distribution networks (see "Utility CEOs Must Get Ready for the Digital Grid" (https://www.gartner.com/document/code/269584?ref=grbody&refval=3673017)). ADMS applications that fit in here include power quality monitoring, load profiling, short-term load forecast (STLF) and an interface with external DER management systems (grid controllers for

[redacted]

Source: Gartner – April

Outcomes / Decisions

❑ Key Call Outs

- The Vendor Market Scan was based on desktop research of publically available information and potential Vendors were not formally evaluated (structured fact) at this stage
- The intent of this activity was to leverage the market scan as an opportunity to down-select where a fact base was sufficiently established to support a decision (no formal down-select)

❑ Outcome and Recommendation

As the outcome of this process, three decision levers were proposed to the core evaluation team which, would then inform the preferred approach for the subsequent procurement process. While initially there were 5 separate decision levers, Ausgrid, with independent input from DGA consulting, were able to agree on the following 6 vendors to invite to participate in the Pre-Qualification Questionnaire:

- Schneider Electric
- Oracle
- GE
- Siemens
- ABB
- OSI

[redacted]

With the remaining six vendors, the ADMS program would take the most balanced approach, ensuring each phase of the procurement process would have adequate time to fairly evaluate each vendor before reaching a preferred vendor before the eighth of June, 2018.

KPMG

Pre-Qualification Questionnaire

Pre-Qualification Questionnaire Overview

❑ Purpose:

The Pre-Qualification Questionnaire(PQQ) was a two part phase made up of a written response and a three day series of presentations between Ausgrid and the six selected vendors. These responses and presentations, when combined, would allow Ausgrid to learn about each vendor's ADMS proven capabilities, product fit and experience. Vendors were provided with a Pre-Qualification Questionnaire and invited to attend a 3 hour session at KPMG with which to present their responses. This evaluation would then allow the Ausgrid to determine if the potential Vendors identified in the market scan could meet the critical demands of Ausgrid's ADMS.

❑ Objective:

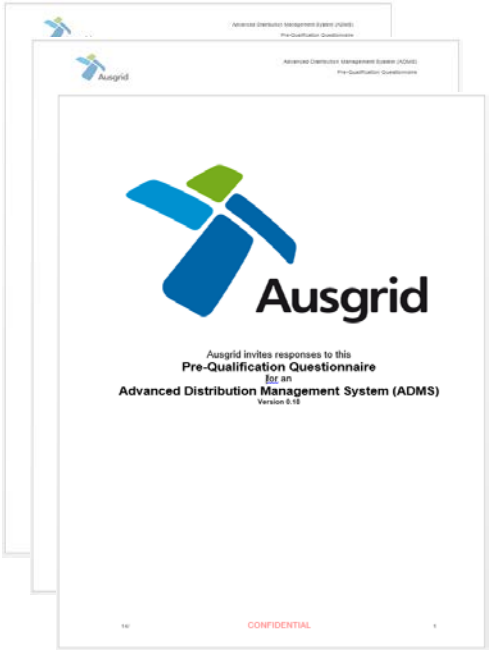
The PQQ process was structured to allow the core evaluation team to evaluate the responses, both written and presented, and provide a numerical score for each. The written responses to the PQQ (Section 3) were the primary source material used in the evaluation. The secondary source of the evaluation was the information and insights gathered from the vendor presentation. From the scores, a shortlist of three Vendors would be agreed and invited to participate in detailed product demonstrations.

❑ Principles:

- PQQ respondents were dealt with confidentially, with no discrimination or favouritism;
- The evaluation was objective, documented, auditable and quantifiable to compare the essential differences between each submission;
- The evaluation methodology (evaluation criteria and scoring mechanisms) were agreed prior to the receipt of proposals, and scored by the evaluation team;
- The evaluation was calculates as an average team-based score to develop a balanced view;
- DGA provided an independent view of the evaluation which was compared to the Ausgrid evaluation team's scores however these scores were not included in the average Ausgrid score; and
- The evaluation team was able to reach a consensus decision (via a moderation session) following independent assessments and discussions to resolve differences of opinion.

PQQ Evaluation Components

The PQQ was designed to follow a structured process and included three components, Initial Due Diligence; For information sake only and information that would be used for evaluation purpose. A Pre-Qualification Questionnaire was issued to each of the down-selected vendors and the structure of the questionnaire followed the framework below. Vendors responded to section 3 of the PQQ document and these responses were used as the basis for the evaluation and initial due diligence.



	PQQ Components* *Vendor response starts from section 3 of the PQQ document*	
Initial Due Diligence	3.1	Intent to Participate
	3.2	Responding Parties
	3.3	Nominated Point of Contact
	3.4	Current Relationship
	3.5	Mandatory Criteria
	3.6	Ownership Structure
	3.7	Key Financial Indicators
For information / Not scored	3.9	Commitment to Licence Conditions
	3.13	Training
	3.18	Customer's Resource Requirements
Evaluated	3.8	Vendor's Future Strategy
	3.8.1	ADMS Product Roadmap
	3.10	Product Fit
	3.10.1	Additional Functionality
	3.11	Solution Architecture
	3.12	Technology Platform
	3.12.1	Proven ADMS Integration Compatibility
	3.14	Case Study & References
	3.15	ADMS Contracts
	3.16	ADMS Currently Active Deployments & Support
	3.17	ADMS Resources

Pre-Qualification Evaluation Categories and Criteria

The PQQ was developed in alignment with the areas specified below. These areas informed the evaluation criteria which were developed and agreed by Ausgrid with SME support from DGA Consulting. On completion of the evaluation criteria weightings were specified which would be used as part of the Ausgrid core evaluation team's scoring process.

Commitment to ADMS (30%)

Part 1: Australian Market Presence

"A financially viable corporation with demonstrable investment in the proposed product to address emerging needs and market trends within the Australian market"

- 3yr financial trends (Revenue and Profit)
- Clear strategy for the Australian market
- Demonstrated understanding of the Australian landscape and associated risks and opportunities
- Service Delivery/Support Location
- Growth regions / target markets

Product Fit (30%)

Part 2: Product Fit for Purpose

"Ability to provide a flexible, scalable and functionally fit-for-purpose solution"

- Support for required ADMS functionality (aligned to the reference model)
- Support for future ADMS functionality that may be required by Ausgrid (aligned to the reference model)
- Demonstrable support for critical Ausgrid capabilities (i.e. top 5)
- Degree of R&D / Product investment for each of the applicable ADMS solution components (i.e. DMS, SCADA, OMS, Historian, Advanced Apps)
- Flexible and tightly integrated product architecture
  - Integrated product suite/offering (i.e. is it solution modules of a single product suite or separate but integrated products
  - common data model
- Technology platform scalability and flexibility
  - Alignment to Ausgrid enterprise architecture principles
  - Capable of operating on modern and cost effective technologies
  - Proven implementation under high availability architecture (Active-Active)
- Security

Proven Experience (40%)

Part 3: Proven Experience

"Demonstrable ability to successfully implement and build long term partnerships"

- Applicability of provided case studies (5)
- ADMS contracts won in the last 24 months (by region)
- Active deployments of ADMS solution components (i.e. DMS, SCADA, OMS, Historian, Advanced Apps) globally
- # of Australian deployments
- Proven ability to integrate with other OT systems (aligned to key Ausgrid OT systems)
- Proven implementation at scale comparable to Ausgrid
- No. of employees dedicated to ADMS development, installation, and support

A: Automatic
ARL: Automatic Relative to Leader

PQQ Individual Section Weightings

The below table provides a breakdown of the scoring areas and their weightings. Core evaluators were to score the following sections which, when having their weightings applied, would form the overall evaluation of the Vendors. Each vendor was to demonstrate their capability in each section during their sessions to be scored.

Criteria	Criteria Weighting	PQQ Section Reference	PQQ Section Reference Weighting
Part 1: Commitment to ADMS	15 %	Vendor has a clear future strategy for ADMS	15 %
		Vendor has a clear future roadmap for the ADMS products	
	15 %	Volume of new business won in the last 24 months	5 % (ARL)
		Product has a strong customer base (total no. of deployments)	5 % (ARL)
		Depth of internal capability focused on ADMS products	5 % (ARL)
Part 2: Product Fit	30 %	Breadth of the solution functionality	20% (A)
		Has a unified, modular product architecture	10%
		Operates on commodity, flexible and scalable technology	
		Proven ADMS Integration Compatibility	
Part 3: Proven Track Record Five Case Studies	40 %	Comparable size and scale	8% each
		Includes metro and rural areas	
		Deployed within the last 5 years	
		Deployment is of the same products as proposed	
		Was a full ADMS deployment (i.e. SCADA, DMS, OMS and Advanced Apps)	
		Is an Australian customer	

Evaluation Participants

The table below provides an overview of the various participants in the evaluation process and their roles. It is important to note that only the core evaluation team's scores would be considered as part of the down-select process. KPMG provided no scores and DGA Consulting and the SMEs would only provide shadow scores which would be compared to the core evaluation for guidance.

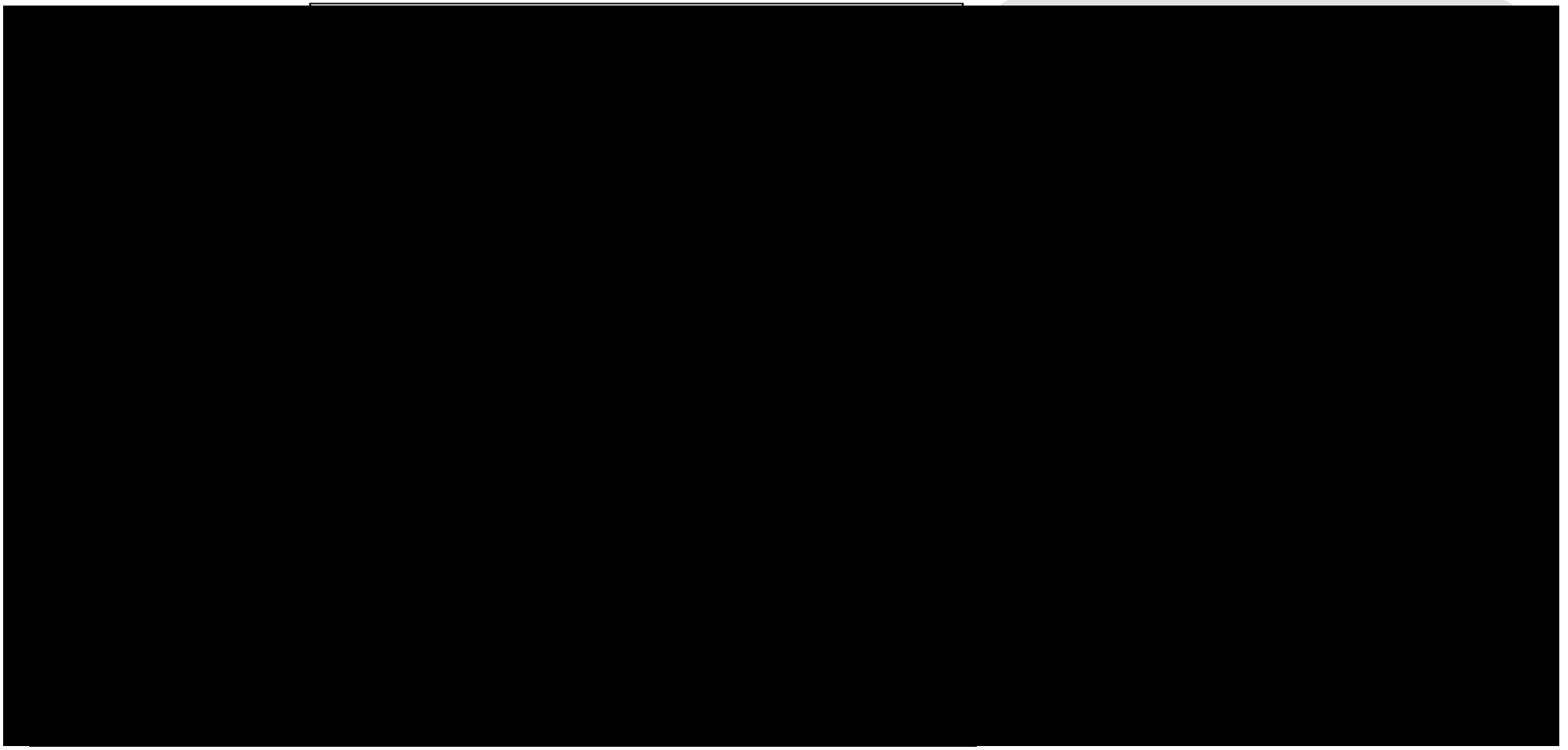
Role	Members	Responsibility
Evaluation Chair	[redacted]	• Lead the evaluation process • Chair meetings of the evaluation panel • Ensure compliance with the evaluation process • Brief the steering committee • Document matters that arise during the process
Facilitators		• Facilitate the evaluation and scoring process • Record consensus scores and commentary in the Master Evaluation Workbook • Support the evaluation chair
Core Evaluation Team		• Review and evaluate Vendor submissions • Attend Evaluation Panel meetings • Liaise with Approved SMEs where required.
Independent Advisors (DGA Consulting)		• Review and evaluate Vendor submissions as a reference point for Ausgrid team. • Attend Evaluation Panel meetings. • Provide support and insight during evaluation.
Procurement Governance		• Provide probity advice, governance and procurement assurance

PQQ Evaluation Outcome - Solution View

The PQQ was evaluated from each of the core evaluation team. Two views were output from this stage of the process, "Product Fit" and "Evaluator" scoring views. From a "Product Fit" perspective, the cores for each of the vendor's product fit across the modules of ADMS and the vendor's response for each of the modules was developed. DGA provided their view of the responses through a "shadow score". This score was not included in the formal scoring process and was instead used as a sense check for the evaluation results.

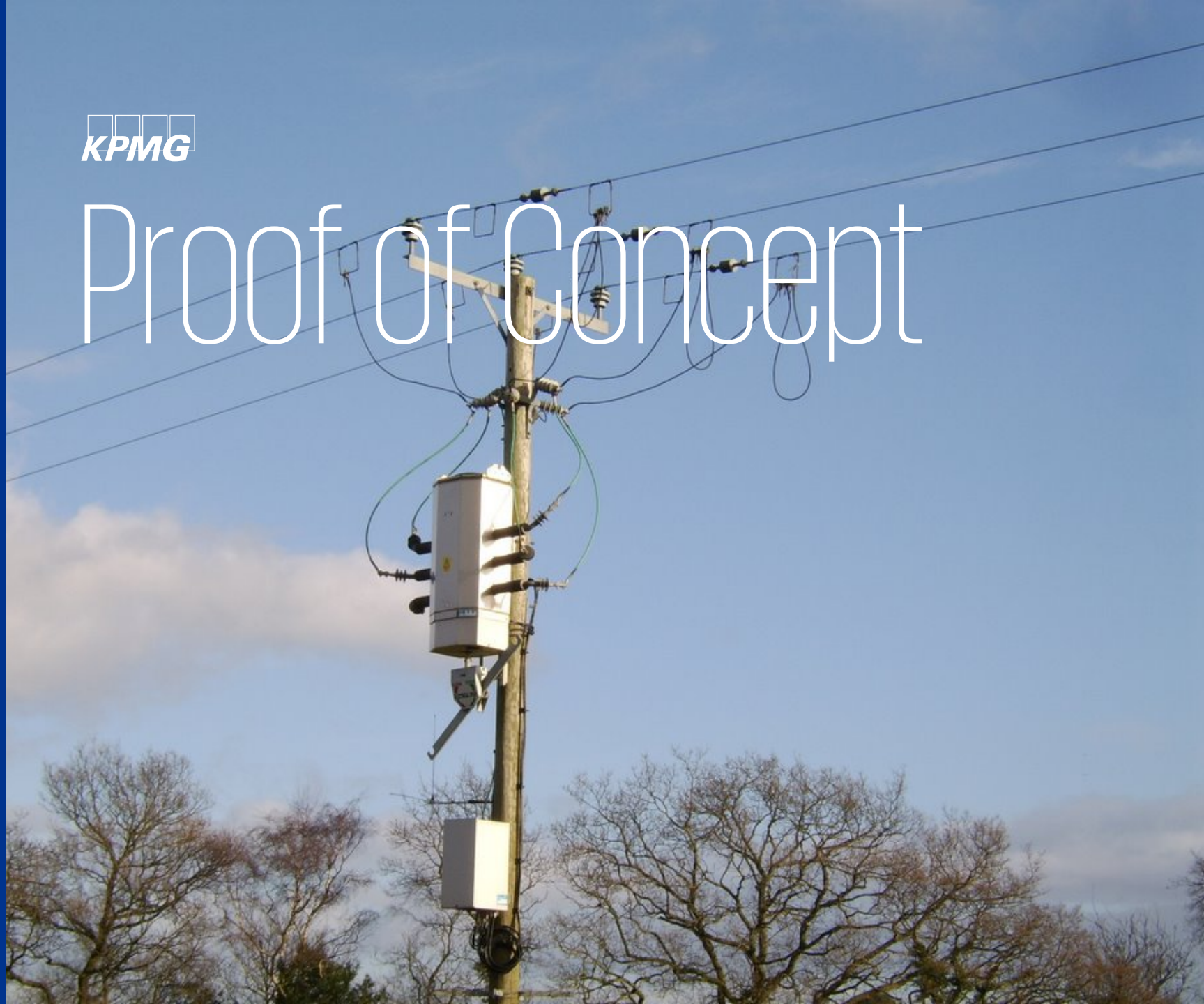
PQQ Evaluation Outcome - Evaluator View

The PQQ was evaluated from each of the core evaluation team. Two views were output from this stage of the process, "Product Fit" and "Evaluator" scoring views. From an "Evaluator" perspective, the core evaluator's scores (as a percentage) for each of the vendors and the ranking of these Vendors based on the supplied scores were developed. DGA Consulting provided their view of the responses through a "shadow score". This score was not included in the formal scoring process and was instead used as a sense check for the evaluation results.



KPMG

Proof of Concept



Proof of Concept Overview

❑ Purpose:

The Proof of Concept (PoC) sessions were a series of interactive Vendor engagement sessions and product demonstrations split across a five day period between Ausgrid and the remaining vendors. These demonstrations would to allow Ausgrid to gain first hand experience with the ADMS Vendor's solutions in order to develop a greater understanding Vendors were provided with a data set from Ausgrid with which they could model and demonstrate their system's capabilities. The demonstrated capabilities would align to a set of use cases and required capabilities provided by Ausgrid.

❑ Objective:

The intent of the PoC was to provide Ausgrid with the first hand experience required to formally evaluate each vendor on a range of capabilities and use cases. This evaluation would then be used as 30% of the overall ADMS solution scoring during the Initial Solution Plan and commercial Offer (ISPO), and Final Solution Plan and commercial Offer (FSPO).

The clear understanding of each Vendor's product functionality would then be used to inform Ausgrid's detailed requirements submitted as part of the ISPO.

❑ Principles:

- Vendors were given equal time to prepare for the PoC sessions. Communications, including invitations and Ausgrid's data set were formally made to the three vendors one week before their allocated time.
- All questions and clarifications raised during and after the sessions were captured and asked to each of the vendor's.
- All Ausgrid team members in attendance followed a set of rules for the PoC sessions to prevent all probity issues.
- Learnings and issues found during the PoC sessions would be used as inputs into the ISPO, specifically regarding Ausgrid's ADMS requirements.

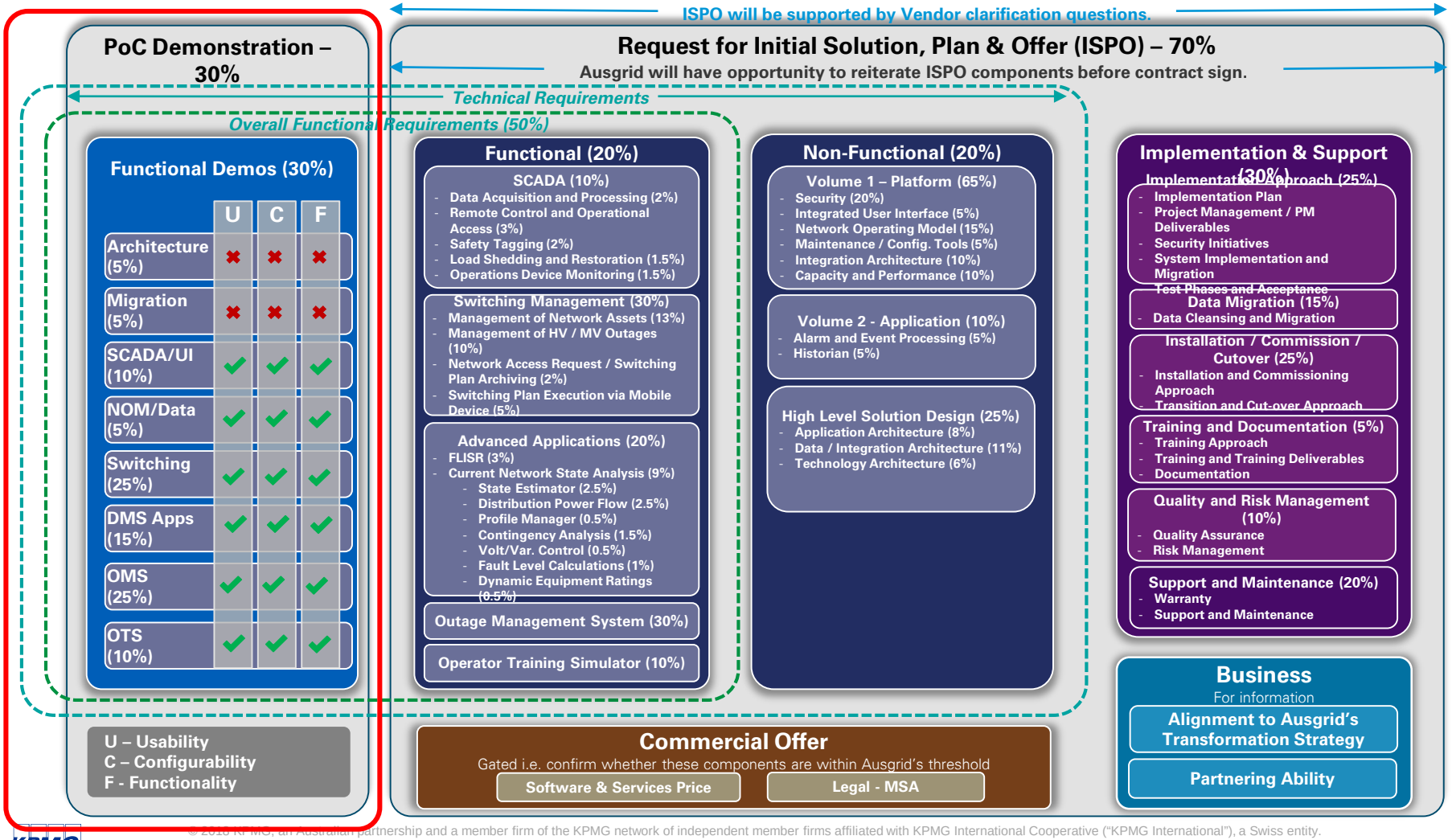
Week by Week Agenda

All 3 Vendors were provided with Ausgrid's Castle Cove distribution and sub-transmission data and were requested to demonstrate Ausgrid specific Use Cases to show product capabilities. The product capabilities were split according to the following agenda for each of the three vendors. Each vendor was able to demonstrate their solution over a 5 day period and each vendor had the same amount of time to prepare for the PoC.

Start Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat
8:30	Vendor Setup (if applicable)	**Welcome and Vendor Overview of PoC System** – Architecture, Data Sets, Simulation Tools, UI Overview	**Vendor SCADA/ADMS/OMS Product Capabilities** – Data Model(s), Data Migration/Population, Network Diagram Building/Migration	**Vendor SCADA/ADMS/OMS Product Capabilities** – ADMS Network Applications	**Ausgrid Use Case** – Ausgrid Data Set Demonstration	**Ausgrid Use Case** – Unplanned Outage – Network and Premises Faults – Call-taking, Outage Analysis, Dispatch, Rectification	Vendor pull down and pack up (if applicable)
10:30		*Morning Tea*					
10:45		**Vendor SCADA/ADMS/OMS Product Capabilities** – System Architecture, Data Architecture, User Environments	**Vendor SCADA/ADMS/OMS Product Capabilities** – Data Management and Configuration, Data Synchronisation, System Interfaces	**Vendor SCADA/ADMS/OMS Product Capabilities** – Integrated OMS	**Ausgrid Use Case** – Planned Outage – HV Switching, End-end Process	**Ausgrid Use Case** – Unplanned Outage – Storm Event with Multiple Escalating Faults	
12:45		*Lunch*					
13:30		**Vendor SCADA/ADMS/OMS Product Capabilities** – SCADA, Historical Data, Logging	**Vendor SCADA/ADMS/OMS Product Capabilities** – ADMS Switching Management	**Vendor SCADA/ADMS/OMS Product Capabilities** – ADMS Study Mode and Operator Training Simulator (OTS)	**Ausgrid Use Case** – Planned Outage – Zone Substation, De-commissioning Plant	**Potential Added-Value Capabilities & Vendor Wrap-up**	
15:30		*Afternoon Tea*					
15:45		Evaluation Team Meeting					
16:30		Unstructured Access to PoC System					

PoC Evaluation/Scoring Categories and Criteria

The Proof of Concept Demonstrations were scored by the core evaluators. These scores would represent 30% of the overall PoC + ISPO score inform the recommendation to down-select to two Vendors. Subject Matter Experts from Ausgrid and DGA Consulting also attended these sessions and provided shadow scores which, while not used in the overall evaluation, were used as a sense check to ensure alignment.



PoC Evaluation Outcome

Vendor scores across the various PoC categories.

This spider diagram below provides a quick comparison of the average score for the core evaluators across each of the components assessed during the PoC sessions. From this perspective GE only outscored OSI on one of the components assessed, i.e. Switch Management.

KPMG

Initial Solution Plan and Offer

Initial Solution Plan and Offer Overview

❑ Purpose:

The Initial Solution Plan and commercial Offer (ISPO) was a series of documents submitted to the three remaining vendors (SE, GE, OSI). These documents specified the current Ausgrid environment, their detailed ADMS requirements for functional, non-functional, implementation and support and their legal terms and conditions / Master Services Agreement (MSA). Instructions and templates for how to respond to each area were also provided to the vendors. Vendor's were given two weeks with which to assess the ISPO and respond. These responses would be scored by Ausgrid's core evaluation team with shadow scores provided by DGA Consulting. Vendors were assessed on the following areas:

- Demonstrated ability for the Vendor's product to meet detailed functional and non-functional requirements
- A strong system implementation and integration plan
- Willingness to contract on Ausgrid legal terms

❑ Objective:

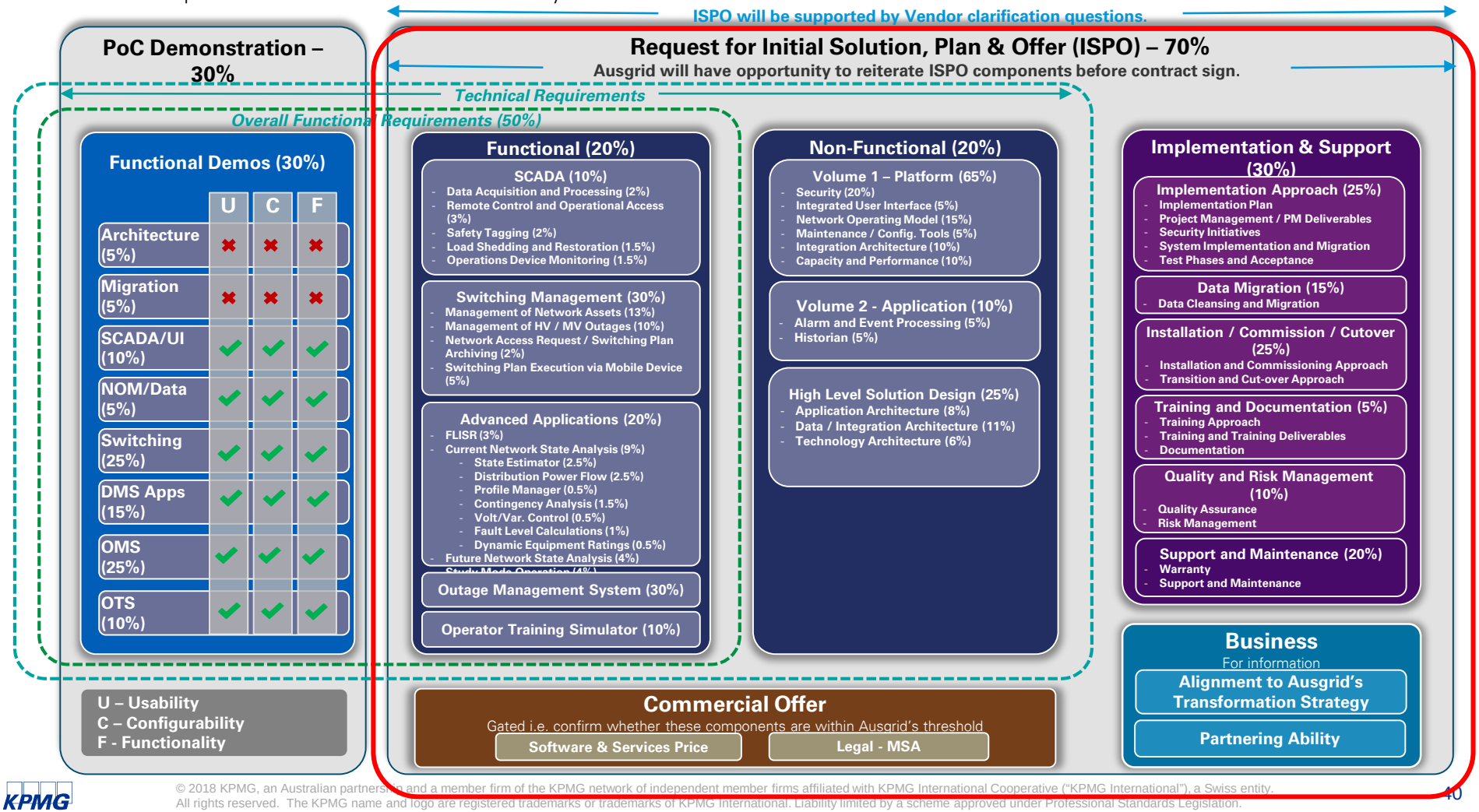
The ultimate objective of the ISPO was to formally evaluate each vendor with regard to their responses to Ausgrid's ISPO, specifically regarding their conformance to Ausgrid's detailed requirements and their proposed implementation and support. This evaluation would then allow Ausgrid to make an agreed recommendation on the two vendors to be invited to participate in the Joint Solution Design. This recommendation would then be taken to the steering committee who's approval would be required to proceed.

❑ Principles:

- KPMG and DGA were unable to influence the process of scoring. DGA Consulting did provide shadow scores but these were not included in the overall assessment of the Vendors and were used as a sense check only.
- Clarification questions could be submitted between Ausgrid and a Vendor, however, any communications from Ausgrid to one vendor would include the other two. This would ensure complete fairness in the process to remove the potential for any probity issues.
- So as to not corrupt the process, no scores or rankings were shared with the core evaluation team until after all scores had been submitted.
- Moderation sessions were to be held once all scores had been submitted so that all core evaluators could discuss, justify and agree on the scores submitted and the final outcome of the ISPO.

ISPO Evaluation/Scoring Categories and Criteria

The ISPO evaluation process was structured to cover the remaining 70% of the overall score. This score, when combined with the Proof of Concept scores, would create the overall score to inform the recommendation and decision for which vendors to proceed with. The breakdown of weightings for the three scored areas was developed in collaboration with Ausgrid and DGA Consulting and based on the perceived criticality to the success of the implementation and use of the chosen system.



Initial Solution Plan and Offer (ISPO) Structure

The ISPO Request Package was structured as per the image below. This structure provided the vendors the context of Ausgrid's current environment, their challenges and needs in order to formulate a response. The request highlighted areas to respond including requirement compliance, solution description, proposed delivery and support team and commercials. The areas to be scored have been outlined in red.

ISPO Request Package Structure

Part 1. Introductions

Part 1.A – Vendor Instructions
- Interpretation
- Introduction
- Changes to ISPO or ISPO Process
- Condition to Response
- Submission of ISPO Response
- General

Part 1.B – Ausgrid's Current Environment
- Background
- Current OT Operating Model
- Current OT/IT Architecture
- In-flight projects

Part 2. Specification

ADMS Target State
- Overview
- Background
- Scope and Objectives
- Implementation Requirements
- Future Architecture

ADMS Technical Requirement
- Technical Requirements Glossary
- Volume 1 – Platform
- Volume 2 – Applications
- Volume 3 – implementation Lifecycle
- Appendix

ADMS Commercial Requirement - Legal Agreement

Part 3. Vendor Response

Part 3.A – Vendor Response

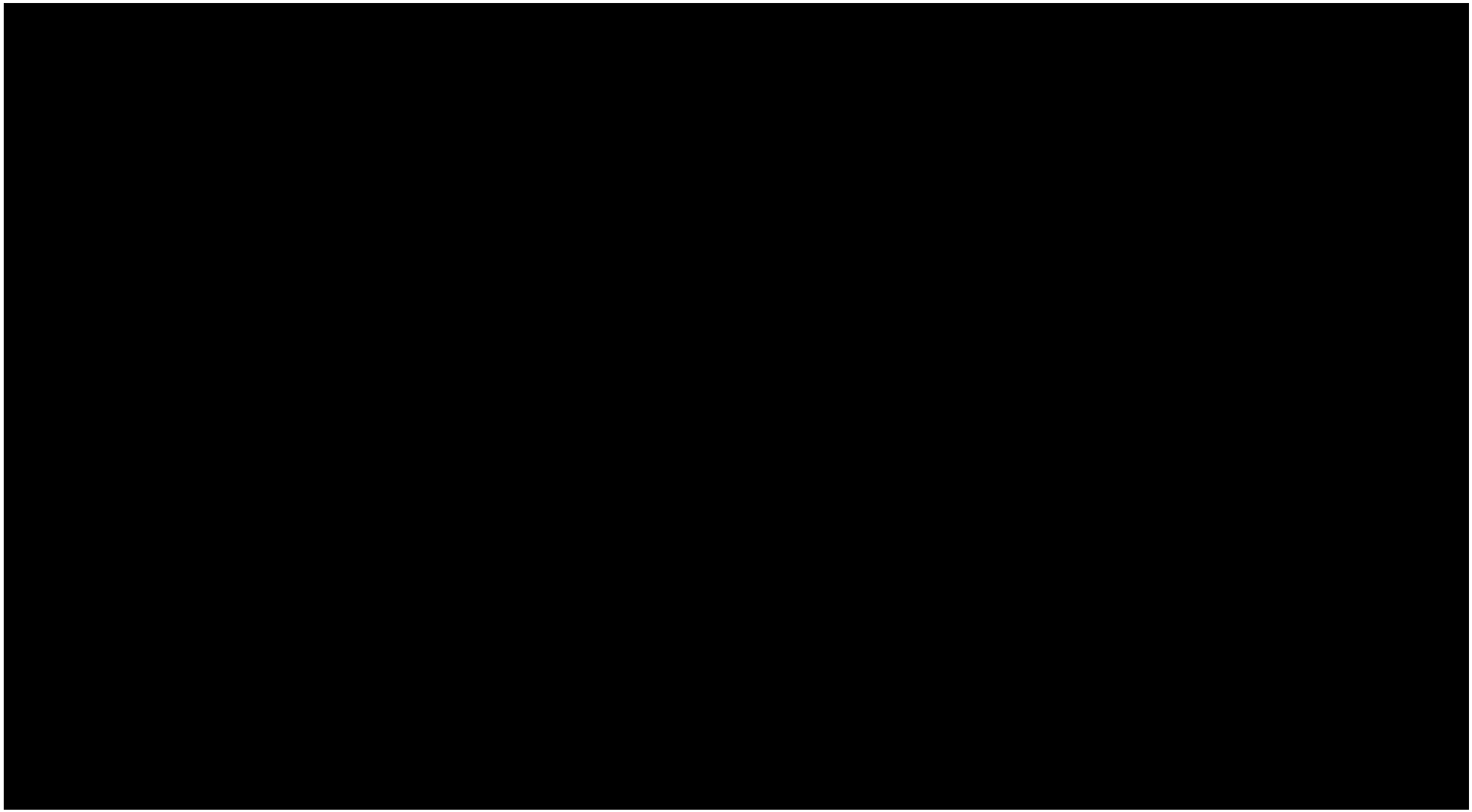
1. Requirements Compliance
- Technical Requirement Compliance Matrix - excel document capture vendors compliance

2. High-Level Solution Design
- Data architecture incl. integration
- Application architecture
- Technology / Infrastructure architecture

3. Implementation Plan
- Program / Project Methodology
- Implementation Services (with roles and responsibilities of both parties)
- Approach, Timeline and Milestones
- Project Delivery Team / Model
- Governance Model (Stage Gates / Acceptance Criteria, Reporting, etc.)
- Test Strategy (incl. migration and cut-over)
- Training Approach

4. Commercial Offer
- Agreement terms compliance
- Pricing Approach
  - *Pricing Form is provided as well*
- Service Levels
- Support Model

Evaluation Outcome – Solution View



Evaluation Outcome – Evaluator View

Overview of Implementation Phase & 10 years Support and Maintenance

KPMG

Joint Solution Design

Joint Solution Design Overview

❑ Purpose:

Joint Solution Design (JSD) sessions were a **collaborative dialogue workshop** between Ausgrid and Vendor. These were used to enable the vendor to refine their Initial Solution Plan and commercial Offer (ISPO).

❑ Objective:

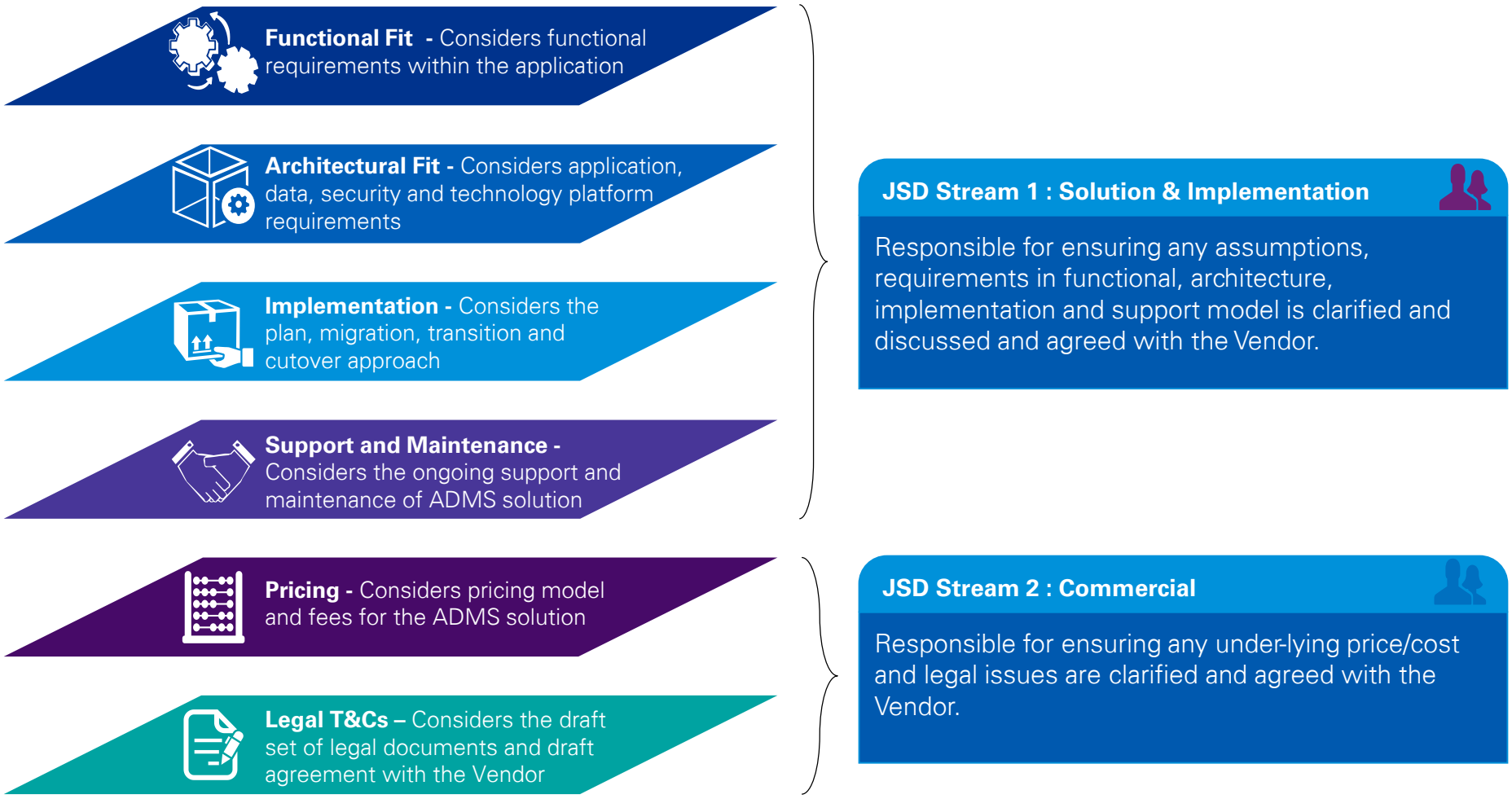
The intent of the Joint Solution Design phase was to allow Ausgrid and the Vendors to address assumptions and constraints, explore solution design and delivery options and agree the high level solution design and implementation plan. This would enable the Vendors to develop their Final Solution, Plan and commercial Offer. JSD would also provide both parties an opportunity to assess the cultural fit of the two organisations.

❑ Principles:

- **JSD sessions were not evaluated.**
- JSD workshops were based on requirements from the ISPO as well as the Vendors ISPO response.
- Ausgrid and Vendor SMEs worked collaboratively to address assumptions, refine the ISPO requirements, solution design, implementation plan and agree the commercial model / pricing approach to be proposed in the Final Solution Plan Offer (FSPO).
- Legal negotiations commenced in parallel to resolve issues raised by Vendors with respect to the MSA issued with the ISPO.
- Ausgrid and the Vendors collaboratively drafted a set of legal documents that support the defined technical solution, plan and the commercial principles and pricing model.

Joint Solution Design Overview

JSD is planned across multiple layers and supported by two work-streams as illustrated in the diagram below. These layers informed the plan for JSD, which was split across 5 days for each Vendor. This plan was populated, circulated and agreed with Ausgrid in the timeline attached in the following slide.



Joint Solution Design Insights

Roles and Responsibilities

Allocated roles and responsibilities for the ADMS Project Team during Joint Solution Design. These roles and responsibility allocations were developed collaboratively within the program.

Role	Responsibility	Allocation
Negotiation Lead*	• Set the engagement / negotiation requirements, timeframes and principles • Lead Negotiations, manage timing and call timeout for considerations as required • Coordinate work package specific input from W/S team • Provide Weekly Status Updates on progress (if applicable) • Provide insight through negotiation • Develop relationships to support post-contract signatures	Full time
Program Director*	• Provide specific solution insights that may impact the adoption of the ADMS solution • Provide operational expertise and insights relating to solution and product lifecycle	As Required
Ausgrid Legal Council*	• Provide Group Level Review and Approval of Legal Document sets • Provide Council to Ausgrid Executive Management Team as required • Provide Recommendation in support in negotiations	Full time for T&Cs
Commercial Support*	• Represents Ausgrid in unresolved commercial discussions / escalation • Recommend changes to that may have a commercial impact • Coordinates information / outcomes that may have a commercial impact	As Required
Program Manager	• Track completion of deliverables, outcomes and decisions and ensure that the decisions and outcomes reflect in the Vendors offers	As Required
SME's / Core Evaluation Team (CET)	• Support the negotiations during Joint Solution Design • Provide SME content to specific contractual provision discussion and also support legal drafting of Statement of Requirements • Provide SME input on evaluation of offers relating to solution and implementation • Recommend decisions • Provide negotiation support as requested • Drive cross-stream contractual consistency and alignment • Engage and escalate to "Contract Committee" team as required	As Required
External Council	• Provide Legal review and guidance to Legal stream lead	As Required
Insurance review	• Provide guidance and opinions on insurance related matters	As Required
Negotiation Support	• Support Leads • Provide insight through negotiation on market positions • Coordinate activities with SP's and SMEs • Consolidate commercial offers and provide comparison	Full time
Financial Support	• Review financial models / business case, payment schedules and provide advice on financial matters	As required
Procurement Evaluation Review	• Review procurement processes and provide approval for negotiations exceeding $5m	As Required

High-Level Joint Solution Design Outcomes

Summary

- The JSDs achieved their core aim; the reduction of risks to which both Ausgrid and the Vendors would have been exposed to without a face-to-face engagement prior to selection of the preferred Vendor. This assertion was supported by both Vendors and saw a consequent modification of their proposals.
- The JSD also achieved broad confidence on the Ausgrid team's behalf that both solutions can fulfil Ausgrid's functional requirements. Further, the gap between the Vendors around the non-functional aspects was narrowed, e.g. each Vendor's implementation approach and capabilities.
- The program and broader Ausgrid teams were also exposed to the culture and way-of-doing-business of each Vendor, which can only effectively be understood in a face-to-face environment. [redacted]
- The current assessment framework has performed a quantitative assessment based on ISPO responses and Proof-of-Concept demonstration sessions. The evaluation framework will now be extended to assess JSD outcomes, i.e. FSPO responses, legal MSA, partnering ability, etc.

There were two elements to the subsequent evaluation:

1. FSPO scoring
   - The core evaluation team were to assess the FSPOs related to the changes between FSPO and ISPO, and adjust their evaluation scores accordingly.
2. Vendor risk assessment
   - Assessment of the risks associated with dealing with each Vendor around contract, the Vendor technology, their implementation approach and their way-of doing-business. This assessment was based on Vendor responses, face-to-face interactions during JSD, and reference checks.
   - This assessment was performed by a subset of the core evaluation group, facilitated by KPMG and DGA Consulting, due to the requirement for implementation experience to enable valid evaluation.

KPMG

Final Solution Plan and Offer

Final Solution Plan and Offer Overview

❑ Purpose:

The Final Solution Plan and commercial Offer (FSPO) was a series of documents submitted to the two remaining vendors ([redacted] These documents specified the current Ausgrid environment, their detailed ADMS requirements for functional, non-functional, implementation and support and their legal terms and conditions / Master Services Agreement (MSA). Instructions and templates for how to respond to each area were also provided to the vendors. Vendor's were given two weeks with which to assess the ISPO and respond. The responses to this FSPO were intended to be a refined version of the vendor's ISPO response using discussions and clarifications during the Joint Solution Design sessions to remove any assumptions and further align their responses to Ausgrid's needs. These responses would be scored by Ausgrid's core evaluation team with shadow scores provided by DGA Consulting. Vendors were assessed on the following areas:

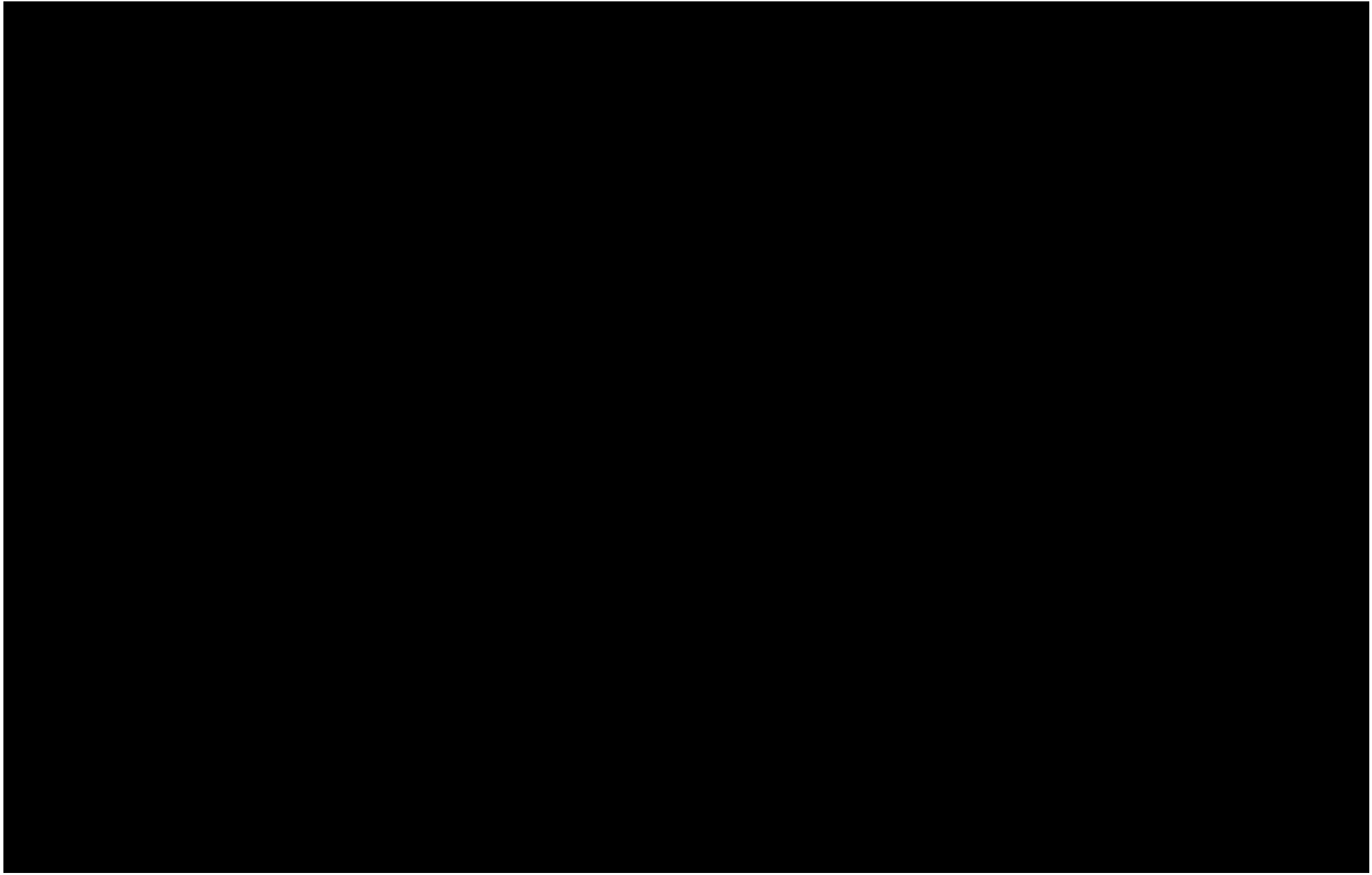
- Demonstrated ability for the Vendor's product to meet detailed functional and non-functional requirements
- A strong system implementation and integration plan
- Willingness to contract on Ausgrid legal terms

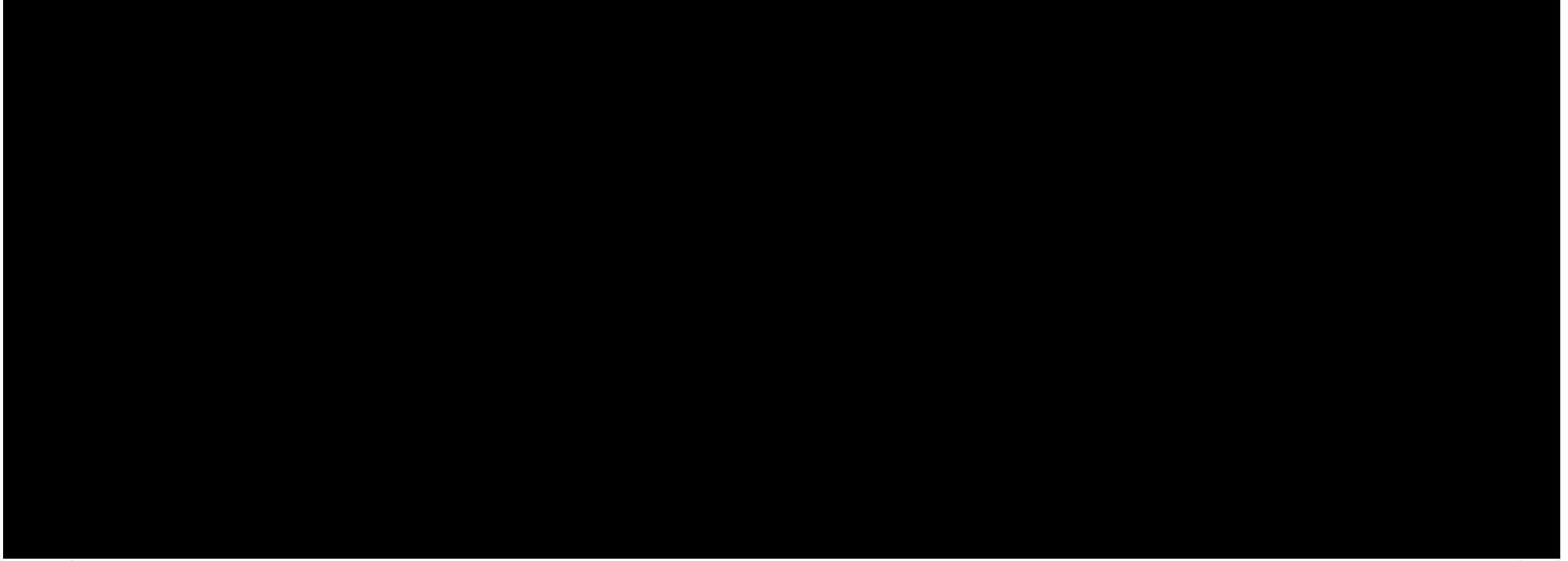
❑ Objective:

The ultimate objective of the FSPO was to formally evaluate each vendor with regard to their responses to Ausgrid's FSPO, specifically regarding their conformance to Ausgrid's detailed requirements and their proposed implementation and support. This evaluation would then allow Ausgrid to make an agreed recommendation on a preferred vendor with which to proceed to an Initial Solution Design (ISD) which would be used to reach an agreed statement of work as well as complete some early design activities between the preferred vendor and Ausgrid.

❑ Principles:

- KPMG and DGA were unable to influence the process of scoring. DGA Consulting did provide shadow scores but these were not included in the overall assessment of the Vendors and were used as a sense check only.
- Clarification questions could be submitted between Ausgrid and a Vendor, however, any communications from Ausgrid to one vendor would include the other two. This would ensure complete fairness in the process to remove the potential for any probity issues.
- So as to not corrupt the process, no scores or rankings were shared with the core evaluation team until after all scores had been submitted.
- Moderation sessions were to be held once all scores had been submitted so that all core evaluators could discuss, justify and agree on the scores submitted and the final outcome of the FSPO.





Ways of Doing Business / Legal T&Cs

As part of the ongoing Final Solution Plan and Offer work, an analysis of the Vendor's submitted T&Cs response was required. Spark Lawyers were contracted as part of this analysis to identify any risks or issues in the responses. The outcomes of this can be found below.

Vendor Price

As part of the Final Solution Plan and Offer, each Vendor was required to re-submit their proposed pricing to reflect the knowledge gained and the clarified assumptions from the Joint Solution Design sessions. This price provided a total cost of the implementation phase (excluding training cost), a warranty period of one year and 10 years of support and maintenance (5 years base with optional 5 years included). These areas were then compared and analysed in "like-for-like areas". The results of this analysis are below..

Instruction

- Vendors were requested to provide cost related to the following components:
  - Implementation Services
  - Third Party License Cost
  - Product License
  - Product Support and Maintenance

Observations

- [redacted]
- [redacted]

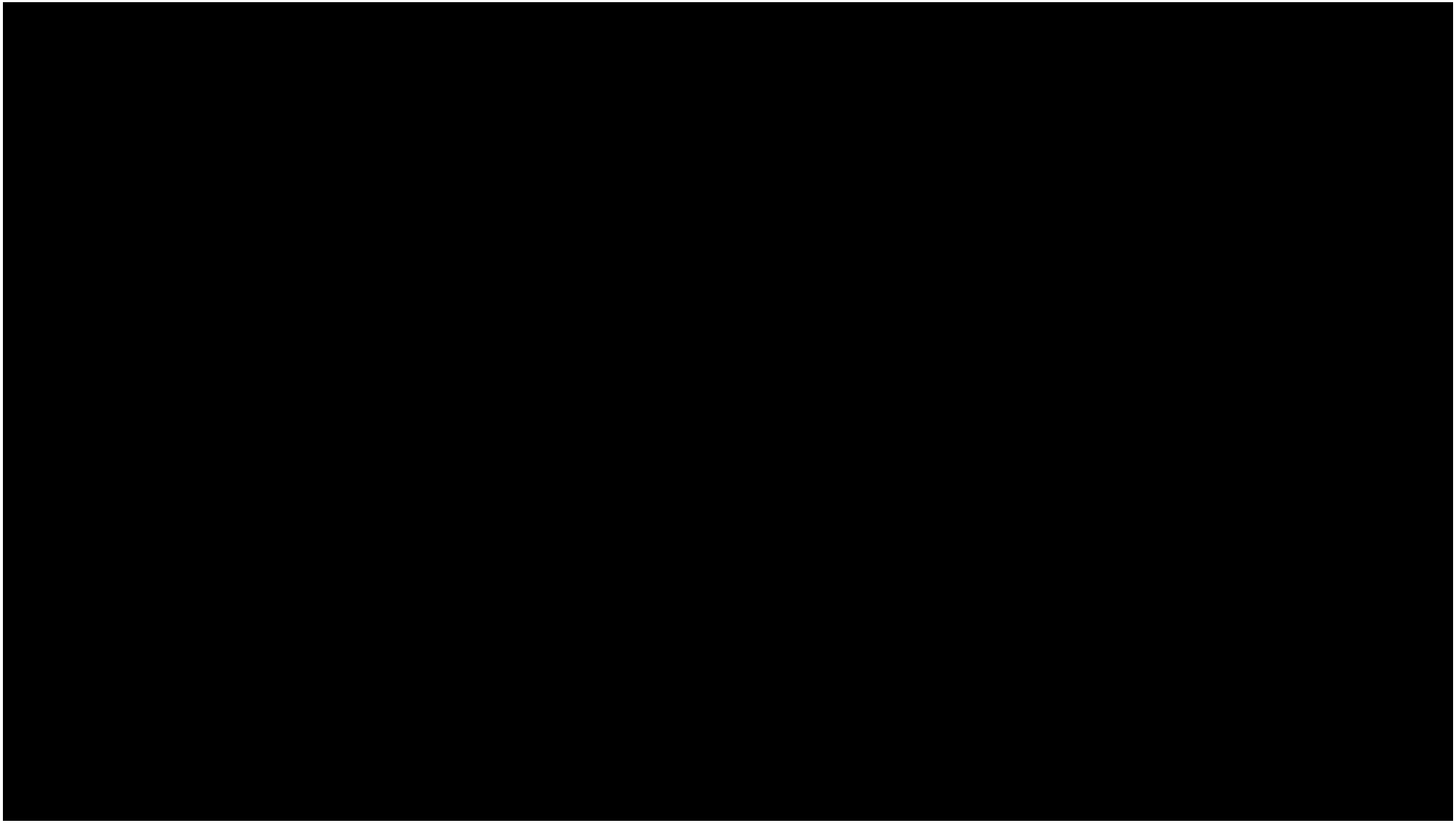
Principles

- Price was not evaluated nor scored in the down-select process.
- *Note: The cost of training is excluded from the analysis as training is not comparable between the two vendors. The level of training was to be agreed in the next phase of work

Reference Calls

[redacted]

Selection Summary



Post Preferred Vendor Selection

- [redacted]

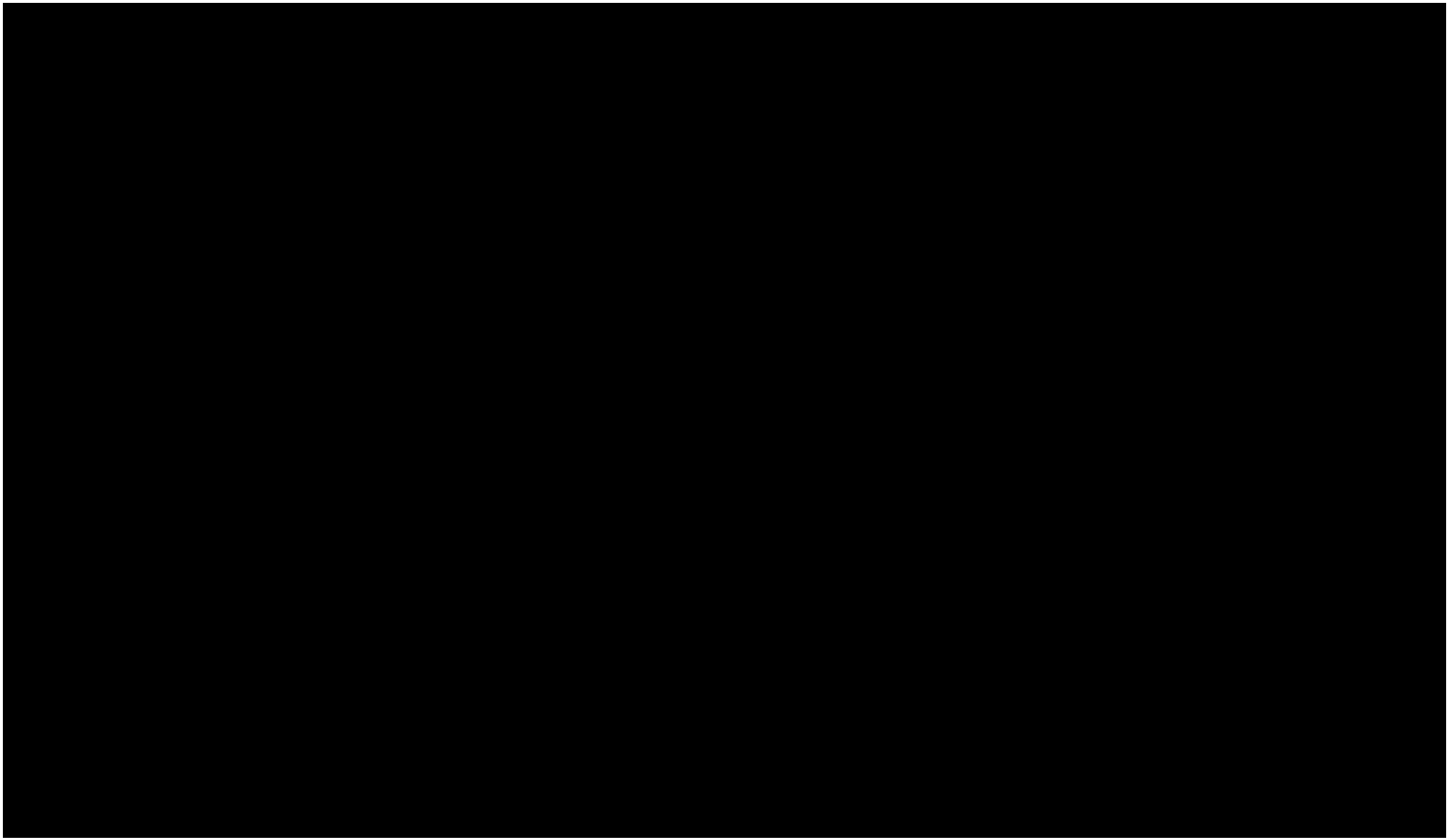
- Post ISD, KPMG provided assistance and support to help draft the Schedules for the contract between SE and Ausgrid. These Schedules were reviewed by Ausgrid, DGA Consulting and Sparke Helmore.

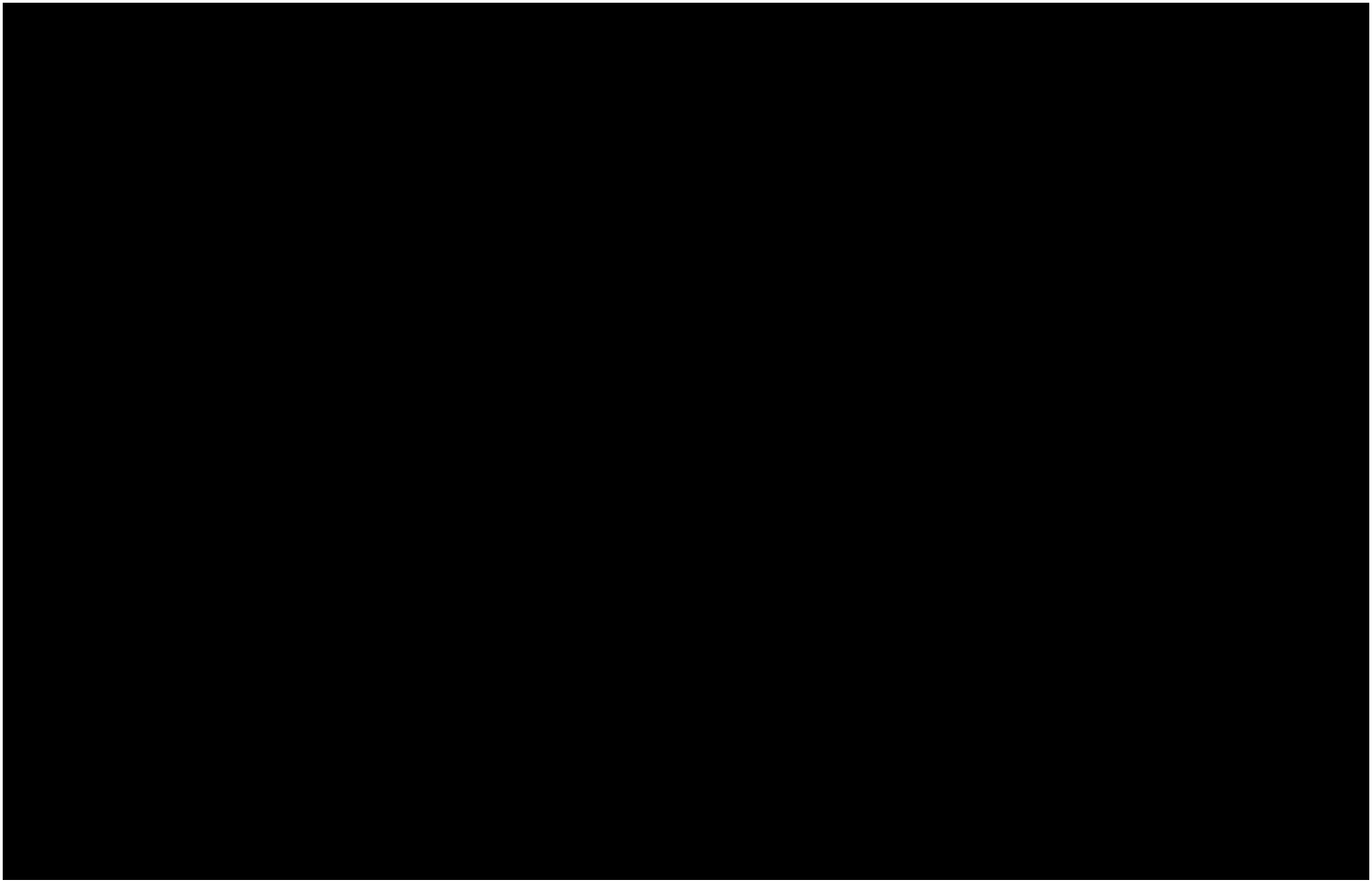
[redacted] This recommendation is in strict alignment with Ausgrid's Licence Conditions and Critical Infrastructure license requirements. [redacted]

- Ausgrid re-engaged KPMG, to provided assistance and support to help revise draft Schedules for the contract between SE and Ausgrid in alignment with this development. These Schedules were reviewed by Ausgrid and DGA Consulting.

kpmg.com.au

kpmg.com.au/app





Attachment C: Reference Checks

Attachment D: DGA Consulting Sign-off Document

Ausgrid ADMS Pre-Implementation Program Review

DGA Consulting Pty Limited (DGA) was engaged by Ausgrid between July 2017 and June 2018 to provide Advanced Distribution Management System (ADMS) Subject Matter Expertise (SME) for the ADMS Pre-Implementation Program. The engagement covered the provision of SME advice to all four streams of the program; namely the Procurement Stream, the Technical Integration Stream, the Business Integration Stream and the Program Management Stream. DGA was well qualified for this engagement with many years of accumulated consulting experience on ADMS procurement and implementation projects obtained both within Australia and overseas.

With respect to the Procurement Stream, DGA's engagement encompassed the provision of source material for business requirements, a framework for defining ADMS technical/business requirements, and an evaluation framework which was used in the selection process for a preferred Vendor and their ADMS solution. This material, and DGA's ADMS expertise, were used to assist Ausgrid and its other advisors in the following technical assessment and Vendor evaluation activities:

- an initial pre-qualification of recognised market leaders in the development and supply of ADMS systems,
- an extensive Proof-of-Concept (PoC) for three down-selected Vendors,
- an initial request for proposals (ISPO) from which further down-selection to two Vendors was made, and finally,
- a Joint Solution Design (JSD) workshop and a final request for proposals (FSPO) from the two remaining Vendors.

Following the final evaluation of Vendor offers, an Initial Solution Design (ISD) workshop was conducted with the chosen preferred Vendor to clarify outstanding details, confirm common understandings on requirements, and to finalise the implementation schedule, price and contract details.

Ausgrid's level of engagement with Vendors during the pre-implementation phase was more comprehensive than that conducted by most other utilities undertaking similar procurements. Throughout each successive stage Ausgrid maintained strict disciplines with respect to the evaluation methodology and independent scoring assessments to objectively determine the Vendor that most closely aligned with Ausgrid's weighted assessment criteria. In undertaking the assessments, Ausgrid established a significant number of evaluation artefacts that demonstrably support the integrity of its decision-making processes and associated outcomes.

Ausgrid's Procurement Advisor, Ausgrid's internal Procurement department and Ausgrid's independent legal advisors have, in consultation together, encapsulated the artefacts that they consider relevant into the Master Services Agreement and its associated Schedules to form the contract agreement with the preferred Vendor.

Ausgrid has selected a preferred Vendor that is an industry leader with a highly functional ADMS solution. This was achieved through a process of requirements definition and evaluation that was based on engagement with key stakeholders and user representatives from within the business. Ausgrid can have confidence in the comprehensive nature of its documented requirements, in the alignment between the preferred Vendor's core ADMS product capabilities and those requirements, and in the Vendor's commitment to deliver those requirements.

The Ausgrid ADMS Pre-Implementation Program has positioned the business well for the commencement of the implementation of an ADMS. Ausgrid's approach means it is better informed and better prepared than most other utilities at this stage of a program. However, ADMS implementations are inherently complex – from both a technical and a business integration perspective – and the ADMS Program will continue to be both a complex and resource-intensive project, requiring focus and commitment from the whole business.

Attachment E: OCM Probity Check Report, Date 2nd October 2018

Ausgrid

ADMS: Final Procurement Phases

October 2018

O'Connor Marsden
& Associates Pty Limited
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Level 3, 1 York Street
Sydney NSW 2000
T: 1300 882 633
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[redacted]
General Manager
Asset Management
Ausgrid
Level 18, 570 George Street
SYDNEY NSW 2 0 0 0

CC: [redacted]

Via email: [redacted]

2 October 2018

Dear Sam,

Probity Report: Final Phases for procurement of an Advanced Distribution Management System (ADMS).

O'Connor Marsden & Associates (OCM) has been engaged to provide probity services to Ausgrid in accordance with our engagement letter of 28 August 2017. In this capacity, we have set out our probity report below on Ausgrid's evaluation process associated with the final stages of the procurement process, namely:

- Initial Solution Plan and Offer (ISPO);
- Joint Solution Design; and
- Final Solution Plan and Offer (FSPO).

This probity report follows on from the Probity Reports of September 2017 on the PreQualification Questionaire and the down-selection recommendation, and the Proof of Concept phase in February 2018 for an Advanced Distribution Management System (ADMS) solution.

This Probity Report covers the period from 20 September 2018, the commencement of OCM's work on these phases, to the date of this report. Compliance with Ausgrid's applicable policies and guidelines during the conduct of procurement activities is the responsibility of Ausgrid. The objective of our role was to assist Ausgrid to identify, assess and manage probity risks arising during the procurement process such that compliance with applicable policies and guidelines is achieved in all material respects.

The advice provided in this report does not provide assurance as defined by the Australian Audit and Assurance Standards Board. We therefore have not expressed any form of audit or assurance opinion, and none should be inferred from any comments in the report.

Summary

Based on the work performed, OCM is not aware of any material probity risks which have not been identified, assessed and appropriate mitigation strategies adopted by Ausgrid to ensure ongoing compliance with the probity objectives set out in the scope .

If you require any further information or wish to clarify any matters, please contact me [redacted] on 1300 882 633.

Yours sincerely

[redacted]
Director
O'Connor Marsden & Associates

Contents

About the Services

The services described in this document are of review and internal risk management nature only and are not intended to be of a financial services nature.

Further information in relation to the extent and nature of the procedures performed is detailed in the Statement of Responsibility in Appendix B.

Confidential - this document and the information contained in it are confidential and should not be used or disclosed in any way without our prior consent.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

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[redacted]

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[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Attachment F: Sparke Helmore, Legal Sign-off

Attachment G: Ausgrid's Procurement Evaluation Review (PER)

Procurement Evaluation Review

Sourcing project name:	**Ausgrid Advanced Distribution Management System (ADMS) Program**
Sourcing project or contract number	WS1111472479
Business Sponsor:	[redacted] General Manager – Asset Management & Operations
Estimated contract value:	Third Party estimated cost [redacted] inclusive of implementation cost, licence fees and support cost) over 10 years.
Market engagement approach:	The engagement with the market was a closed tender process commencing with six vendors (all whom have had a local Australian presence). Commencing with a Pre-Qualification Questionnaire, i.e. EOI, followed by a Proof of Concept demonstration and then an Initial Solution Plan and Offer i.e. RFP. This will result in down-selection to two vendors who will conduct a joint solution design and update their initial offer with the Final Solution Plan and Offer, i.e. BAFO.
Shortlisted bidder/s:	We are currently awaiting approval of the down-select to two vendors. The final three vendors include Schneider Electric, OSI and General Electric. The recommendation is to progress with the initial two vendors.

Purpose of this paper

An update of the procurement process for the selection of the Ausgrid ADMS system in preparation for the PER. At the PER endorsement of the down-selection will be requested in order to proceed with the market engagement of the final two vendors

Background

Ausgrid is seeking to down-select an experienced and dynamic vendor, capable of working with Ausgrid as it transforms its service delivery from an internally managed Operational Technology (OT) environment, to an externally provisioned Advanced Distribution Management System (ADMS) capable of providing right-sized OT services throughout the contract term.

As a Strategic Vendor to Ausgrid, the successful vendor will replace the outdated Distribution Network Management (DNMS) solution Plus a number of other obsolete systems) and modernise our existing DMS capability, delivering a commercially viable solution that will meet Ausgrid's current ADMS needs now and into the future (+10-15 years). This requires a vendor capable of partnering with Ausgrid and adopting a proactive approach to performance management and innovation, ensuring that Ausgrid is positioned to provide modern and innovative services to its customers.

The Ausgrid ADMS encompasses the procurement of the following:

- Advanced Distribution Management System - SCADA, OMS, DMS, Advanced Applications & Operator Training System (OTS), i.e. the Product;
- Associated implementation, integration, governance and reporting services required for successful delivery of the ADMS; i.e. associated Services and
- Support and Maintenance of the implemented systems.

Business requirement

The current DNMS has limited functionality and cannot be easily developed or extended and cannot respond to technical develops due to:

- High support and development costs solely funded by Ausgrid
- Difficulty in integrating known and future applications and technologies to support the future network and evolving customer needs.

Business involvement

The list of stakeholders below have been actively involved in the development of the requirements, proof of concept and the assessment / evaluation of the Initial Solution Plan and Offer. DGA is a consulting company with strong ADMS subject matter expertise and they have been actively involved in the support of the above mentioned activities. DGA has also provided shadow scoring / evaluation which was compared with Ausgrid Core evaluators' scores but not considered as part of the final scores. DGAs scoring was highly consistent with the average scores of the core evaluators.

Name	Title/ business unit	
[redacted]	Manager – Operations Technology	Core Evaluator - marker
	ADMS System Architect	Core Evaluator - marker
	System Control Manager (Sydney)	Core Evaluator - marker
	System Control Manager (Wallsend)	Core Evaluator - marker
	Electrical Engineer	Core Evaluator - marker
	ICT - Enterprise Architect./Security Architect	Core Evaluator - marker
	Transformation Delivery Manager	Core Evaluator - marker
	Head of Systems Controls	Core Evaluator - marker
	Sydney Area Operator	Core Evaluator - marker
	SCADA Operations Engineer	SME – non-marker
	Wallsend Control Room Operator	SME– non-marker
	OMS Data Analyst	SME– non-marker
	GIS Network Manager	SME– non-marker
	Control System Engineer	SME– non-marker
	Sydney Control Room Operator	SME– non-marker
	Sydney Area Operator	SME– non-marker
	Dispatch Coordinator	SME– non-marker
	GIS Coordinator	SME– non-marker
	ICT Security Manager	SME– non-marker

Notes:

Only the nine core evaluators' scores are considered as part of the final evaluation scores and recommendations.

[redacted] delegated evaluation responsibility to [redacted]

Procurement process

The high-level procurement plan and timeline is specified in Attachment 1: ADMS Procurement Approach and Timeline. The key procurement activities included:

- Market scan
- Pre-Qualification Questionnaire (EOI)
- Vendor presentations
- Proof of Concept
- Initial Solution Plan and Offer (RFP)
- Conduct an independent probity review – performed by O'Conner Marsden & Associates
- Conduct reference and site visits with the down-selected vendors
- Joint Solution Design
- Final Solution Plan and Offer (BAFO)

Evaluation outcomes

The evaluation framework for the down-selection to the final two vendors is specified in Attachment 2: ADMS Proof of Concept (PoC) and Initial Solution Plan and Offer (ISPO) Evaluation Framework.

[redacted]

Risks

The risks considered are specified in Attachment 4: ADMS Program Risks

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Pricing and Benefits

The initial offers from the vendors varied between [redacted] (based on a 10 year forecast). These offers included the licence fees, implementation cost and the support cost, however it excludes any optional investment costs. At this point in time no commercial offer has been negotiated nor agreed. The initial offer was only provided to establish an initial pricing view. The intent is to negotiate the commercial offer as part of the Joint Solution Design and the Final Solution Plan and Offer. The Final Solution Plan and Offer is only due on the 5th and the 12th March 2018.

The benefits of the ADMS program include:

- Reduce the risk of non-compliance with Ausgrid's Licence Conditions
- Alignment to industry trends
- Long-term solution and supported platform
- Reduced support cost
- Improved Cyber Security posture and ability to detect and respond to threats
- Enhanced business and system capability, including the ability to detect operational issues
- Improvement of safety, reliability and quality of the network

A detailed benefits realisation plan will be developed to support the business case.

Contract

The negotiations with the vendors have not yet commenced. The vendors have only submitted an initial commercial offer. The commercial offer, solution and implementation plan will be validated during the Joint Solution Design Sessions

and the Final Solution, Plan and Offer will be submitted in early to mid-March 2018. (Vendors are sequenced to ensure that all parties have the same amount of time to respond to the Final Solution Plan and Offer).

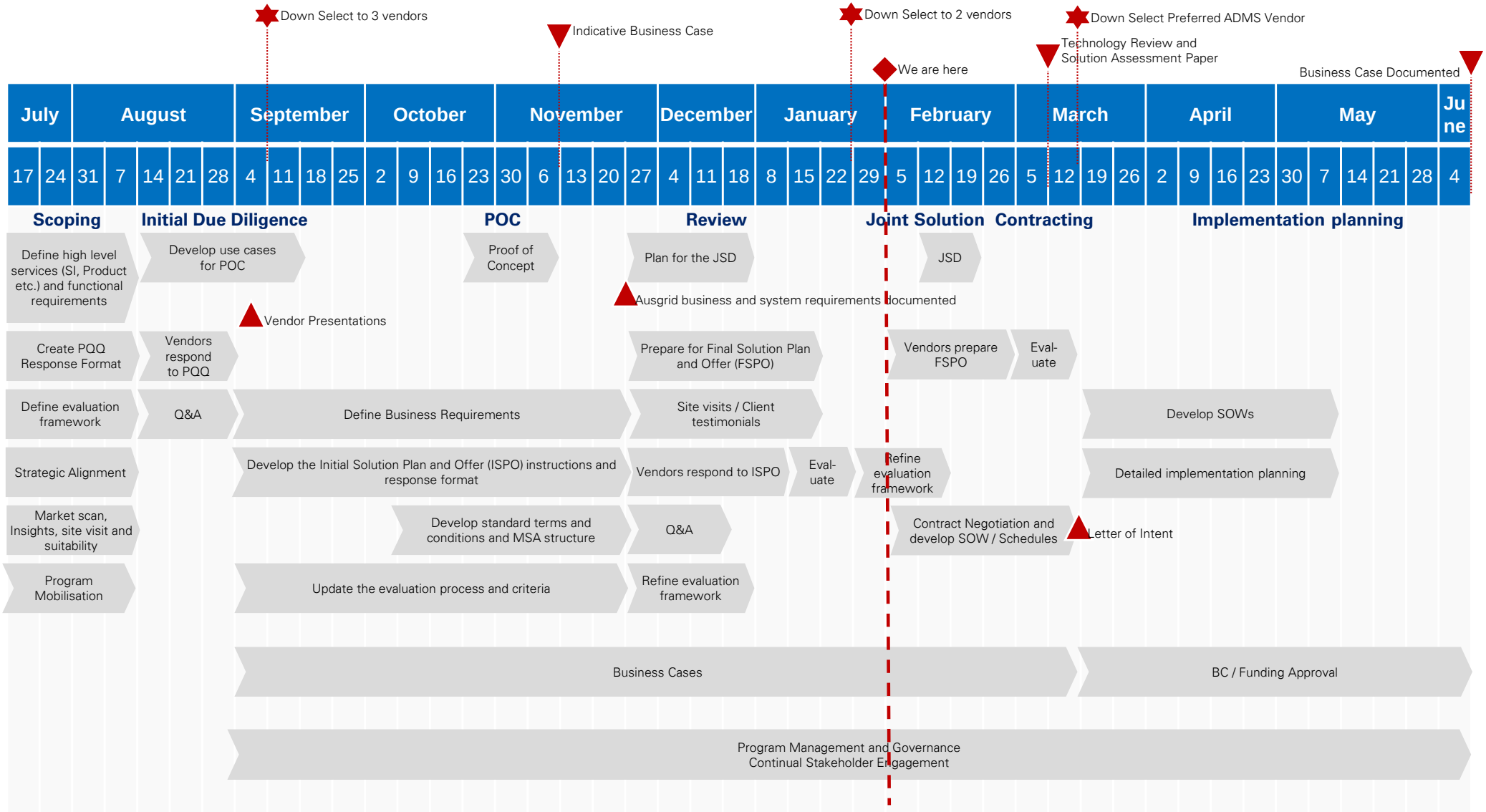
The initial commercial offer was provided on the following principles:

- Implementation period of approximately 3 years (internally estimated at 40 months)
- Warranty period of 12 months
- Initial Support period of 5 years with an optional support period of 5 years

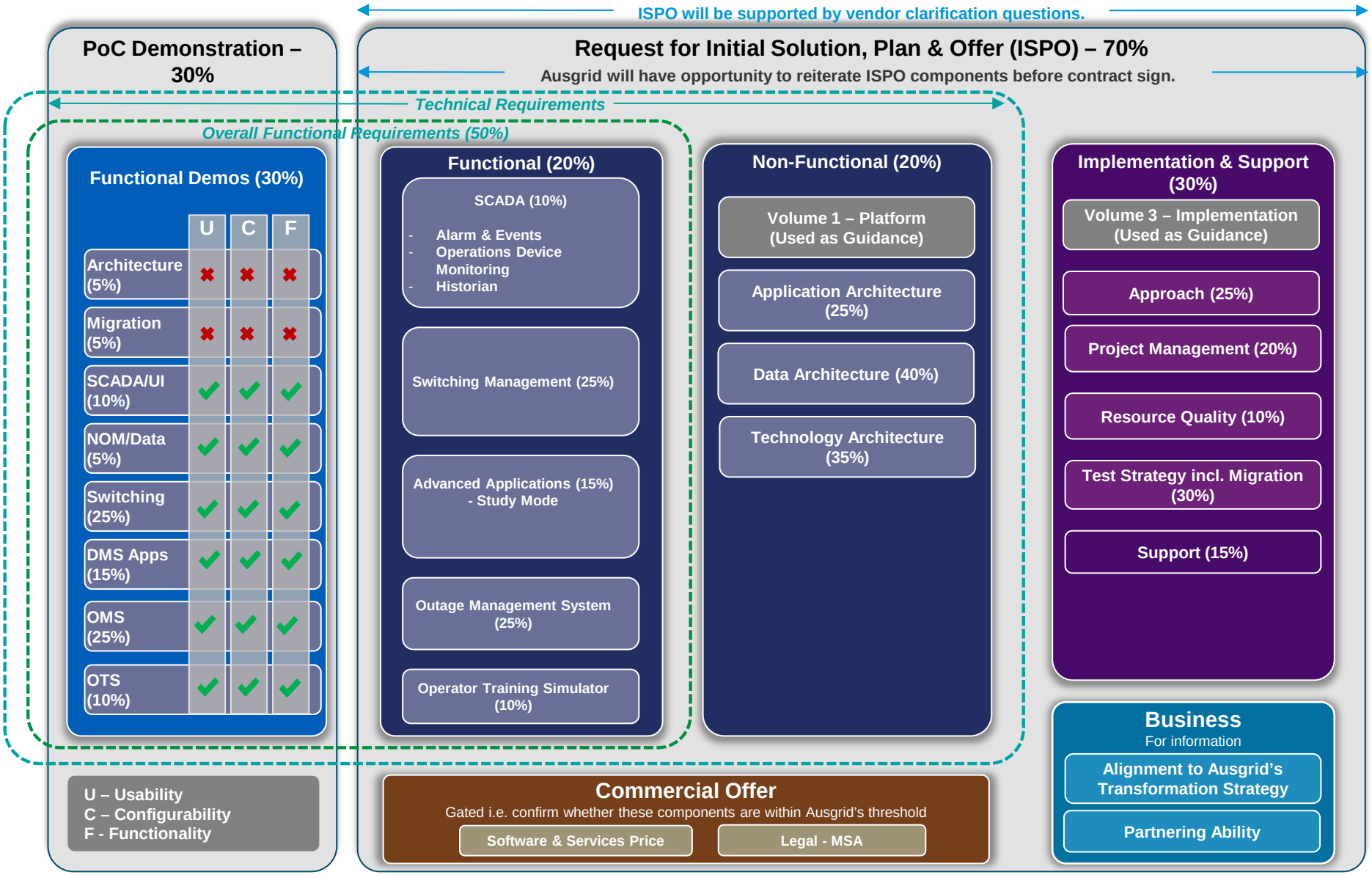
Recommendation & next steps/

The recommendation is to proceed with OSI and Schneider Electrical as the final two vendors based on the evaluation of the core evaluators and the SMEs.

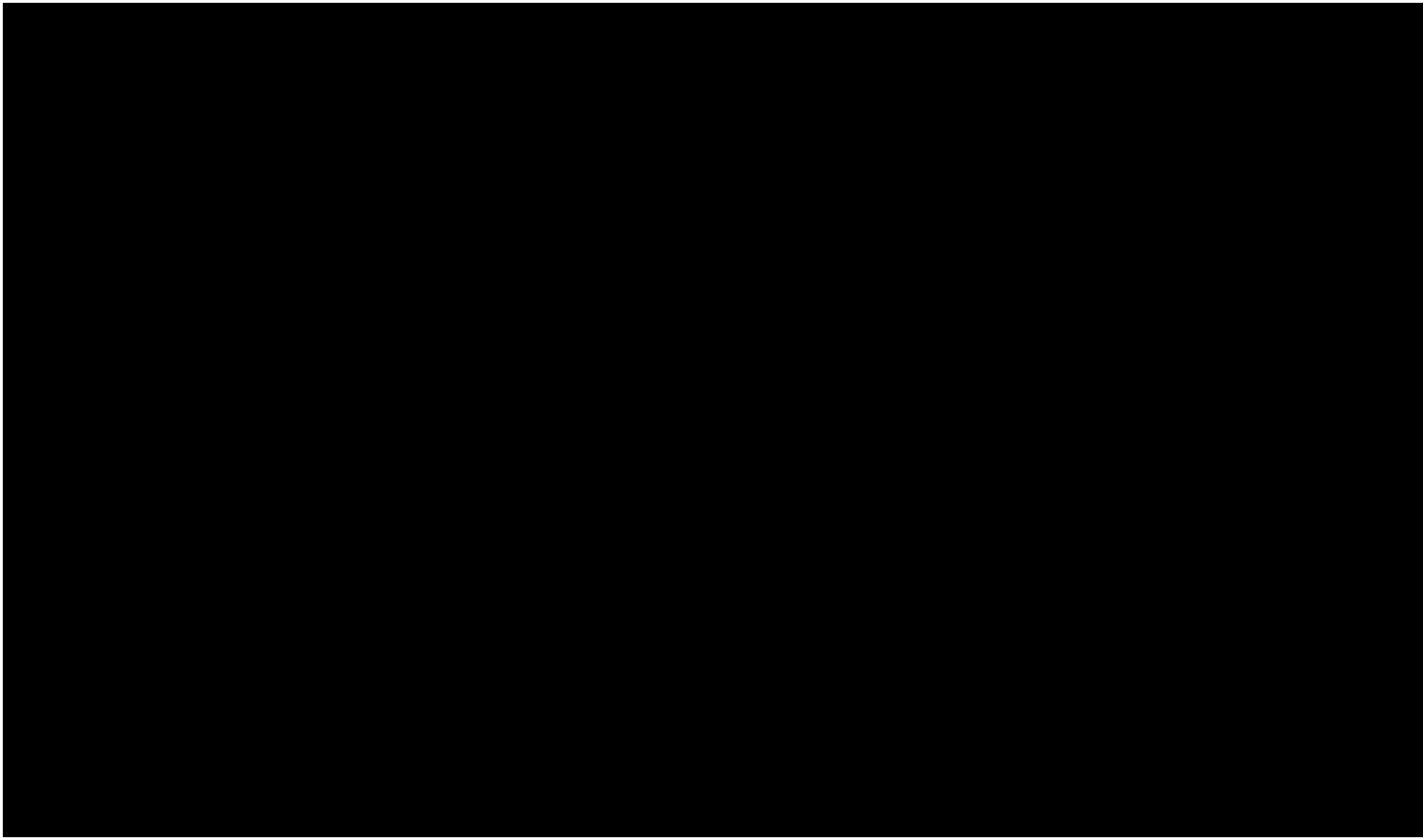
Attachment 1: ADMS Procurement Approach and Timeline

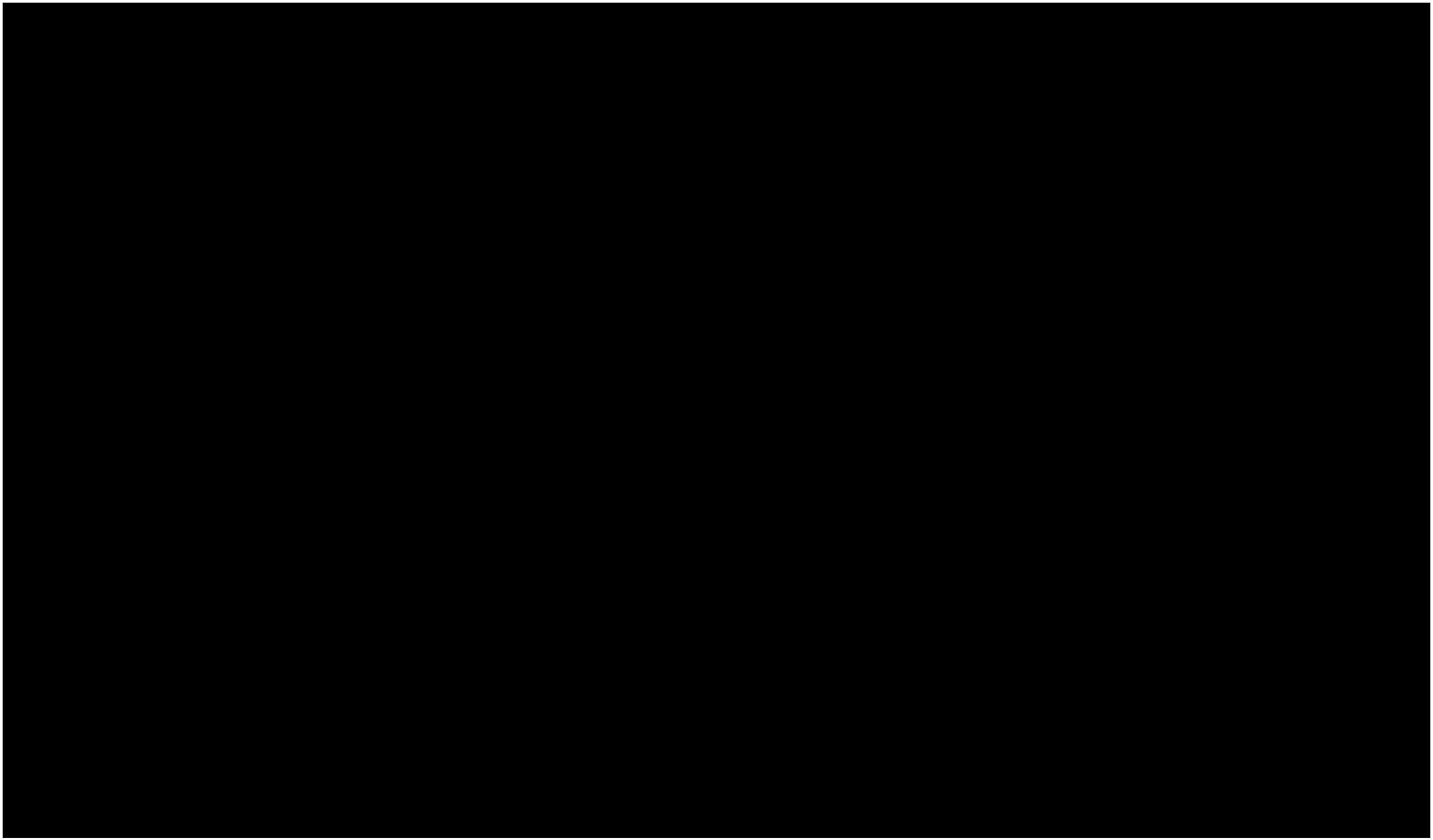


Attachment 2: ADMS Proof of Concept (PoC) and Initial Solution Plan and Offer (ISPO) Evaluation Framework



Attachment 3: Evaluation Summary





Attachment 4: ADMS Program Risks

Risk	Risk Description	Risk Mitigation	Probability Post Mitigation	Impact Post Mitigation
Implementation timeframe	The implementation timeframes recommended by the vendors are too aggressive for Ausgrid to deliver	• Ausgrid will work with the final 2 vendors to develop an implementation plan that is achievable as part of the Joint Solution Design. • The Joint solution design will consider the sequencing, resource requirements, cut-over plans and availability of data. • There will be a further opportunity to refine the implementation requirements during the Initial Solution Design in April 2018.	Low	Medium
Regulatory breach	Breach of Regulatory requirements resulting in severe fines	• [redacted] • All vendors have been informed through T&Cs that it remains their responsibility to stay across the Regulatory Requirements and the changes in the Licence Conditions. • Ausgrid has however committed in the T&Cs to inform the vendors of any changes announced by the Regulators and or changes to the Licence Conditions	Medium	Medium
OH&S	Potential of impacting safety and occupational health could lead to injuries and or human fatality	• Additional / advanced capability in the ADMS solution will make it safer for Ausgrid employees, e.g. switching instruction will be performed in a consistent way and instructions can be sent electronically to employees.	Low	Medium
Breach of data confidentiality	There is the potential for a significant breach of data confidentiality and integrity in Ausgrid's ICT and/or OT systems and databases	• Ausgrid has already commenced the assessment of data requirements and will further assess this as part of the JSD. • We further plan to conduct an Initial Detailed Solution Design in April which should further refine data requirements. This has been considered as part of the draft business case.	Low	Medium

Risk	Risk Description	Risk Mitigation	Probability Post Mitigation	Impact Post Mitigation
In flight projects	There is a risk that other in-flight projects are ongoing during the project which may impact the ability to deliver the ADMS program	• Engage with Ausgrid resources to keep track of any in-flight projects that may occur over the course of the project. • Ensure that there is visibility in Ausgrid re ADMS program and importance to deliver (Change Management)	Low	Low
Stakeholder's Underestimating Change	There is a risk that key stakeholders underestimate the scale of change that will occur with the ADMS implementation.	• Communicate change plans clearly to key stakeholders • Develop a change strategy for ADMS • Clearly define the change management plan for ADMS • Clearly define a communication plan for the ADMS program • Execute the change and communication plans	Low	Low
Ausgrid Strategic Direction Not Clear	There are many transformation initiatives and the ADMS program does not have visibility of them all. It is likely that the other initiatives have scope that overlaps or will impact the ADMS program. The prioritisation of the transformation initiatives and their scope will direct Ausgrid's strategic direction and this needs to be clear to the ADMS program.	• [redacted] the program's business representative to the transformation program • Engage with the Change Management team at Ausgrid to ensure that the ADMS program has the appropriate visibility and that the impacts are understood • Execute the change strategy, plan and communications	Low	Low