

UNC Request Workgroup Report		At what stage is this document in the process?
<h1>UNC 0624R:</h1> <h2>Review of arrangements for Retrospective Adjustment of Meter Information, Meter Point/Supply Point and Address data</h2>		<div style="display: flex; flex-direction: column; gap: 5px;"> <div style="border: 1px solid #ccc; padding: 2px; display: flex; align-items: center; gap: 5px;"> <span style="border: 1px solid #ccc; border-radius: 50%; padding: 2px 5px;">01</span> Request         </div> <div style="border: 1px solid #ccc; padding: 2px; display: flex; align-items: center; gap: 5px;"> <span style="border: 1px solid #ccc; border-radius: 50%; padding: 2px 5px;">02</span> Workgroup Report         </div> <div style="border: 1px solid #ccc; padding: 2px; display: flex; align-items: center; gap: 5px;"> <span style="border: 1px solid #ccc; border-radius: 50%; padding: 2px 5px;">03</span> Final Modification Report         </div> <div style="border: 1px solid #ccc; width: 30px; height: 30px; margin-top: 5px;"></div> </div>
<p><b>Purpose of Request:</b></p> <p>To conduct a review of the elements of UNC Modification 0434 'Project Nexus – Retrospective Adjustment' relating to the retrospective adjustment of Meter Information, Meter Point/Supply Point and Address data. This will be informed by undertaking a cost benefit assessment of the elements of the Modification which have not been implemented</p>		
	<p>The Workgroup recommends that Panel:</p> <ul style="list-style-type: none"> <li>Consider the report recommendations</li> <li>Close the Workgroup</li> </ul>	
	<p>High Impact:</p> <p>None</p>	
	<p>Medium Impact:</p> <p>Gas Transporters, Shipper Users and the CDSP.</p>	
	<p>Low Impact:</p> <p>None</p>	

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<b>3 Terms of Reference</b>	<b>10</b>	 <b>0121 288 2107</b>
<b>4 Modification(s)</b>	<b>11</b>	Proposer: <b>Chris Warner</b>
<b>5 Recommendation</b>	<b>11</b>	 <b>chris.warner@cadentgas.com</b>
<b>6 Request for Information</b>	<b>12</b>	 <b>07778150668</b>
<b>About this document:</b>		Transporter: <b>Cadent</b>
This report will be presented to the panel on 15 February 2018.		Systems Provider: <b>Xoserve</b>
The panel will consider whether the Request should proceed in line with the recommendations in the report or returned to the workgroup for further assessment.		 <b><u>commercial.enquiries@xoserve.com</u></b>

## 1 Request Summary

### Why is the Request being made?

UNC Modification 0434 'Project Nexus – Retrospective Adjustment' relating to the replacement of Meter Information, Meter Point/Supply Point and Address data was approved by Ofgem on 21<sup>st</sup> February 2014. The Modification contained 4 specific elements being:

1. Replacement of Meter Readings;
2. Update of Meter Information (asset data);
3. Retrospective update to the Supply Point;
4. Address amendments.

For the purposes of this Request, elements 2, 3 and 4 are collectively and informally identified by the acronym RAASP (Retrospective Adjustment of Asset, Address and Supply Point).

The first element was implemented on the Project Nexus Implementation Date (PNID). It was previously agreed by the industry at the January 2016 Project Nexus Steering Group (PNSG) that the remaining elements should be implemented at a later date. This deferral was facilitated by Urgent UNC Modification 0573 'Project Nexus – deferral of implementation of elements of Retrospective Adjustment arrangements' (approved by Ofgem on 26 February 2016 and implemented on PNID) which de-scoped retrospective data updates by inserting the following paragraph in UNC TD IIC:

23.1 A User may not submit a Retrospective Data Update in accordance with TPD Section M4.3 on a Day prior to 1 October 2017.

Note: 'Retrospective Data Update' is the collective UNC defined term for elements 2, 3 and 4.

Notwithstanding that Modification 0434 has been approved for implementation, Transporters believe that given the elapsed time between Authority approval and PNID it is prudent and good project management practice that a reassessment of the cost benefit previously undertaken for Modification 0434 be conducted, to evaluate and inform whether the industry should proceed to develop a systems based solution for the remaining elements of Modification 0434.

This in turn could be expected to enable parties to consider options including:

1. Instructing the CDSP to implement a full systems solution (Requiring Code Modification to re-set the date identified within UNC TD IIC 23.1);
2. Instructing the CDSP to implement a manual based solution;
3. Seek to remove through Code Modification the relevant provisions of Modification 0434 (excluding Read Replacement).

The cost benefit assessment would not include the element of Modification 0434 which has been implemented i.e. Replacement of Meter Readings.

### Scope

To conduct a cost benefit assessment for the RAASP elements of UNC Modification 0434 i.e. elements 2, 3 and 4 described above.

### Impacts & Costs

Costs associated with the Review are expected to be limited to those incurred by the Central Data Services Provider (CDSP) in the course of conducting the systems impact assessment. It is anticipated

that the DSC Change Management Committee/technical sub-group may need to evaluate the system solution and provide relevant feedback to the Workgroup.

### Recommendations

The principal objective of the Request is to inform whether or not to proceed with the development of a solution to facilitate implementation of the RAASP elements of Modification 0434, and if it is decided to proceed, to determine the preferred form of solution (system or manual).

It is intended that the review would be conducted within a Workgroup to encourage participation from industry parties.

Note: Given that it is clearly no longer possible for UNC parties to meet the full terms of Modification 0434 i.e. that it will not be possible to submit Retrospective Data Updates by the date identified within UNC TD IIC 23.1, Cadent intends at an early stage and independently of this review to seek to defer the relevant date further through a GT Licence 'Consent to Modify' request.

### Additional Information

It is expected that an industry consultation/request for information exercise would be conducted as part of the overall review.

## 2 Impacts and Costs

The Workgroup reviewed potential impacts and have provided a report on the RAASP implementation options below.

### Consideration of Wider Industry Impacts

The conducting of a review under this Request Proposal is not expected to have any wider industry impacts.

### Impacts

Impact on Transporters' Systems and Process	
Transporters' System/Process	Potential impact
UK Link	<ul style="list-style-type: none"><li>No impacts identified as part of this review.</li></ul>
Operational Processes	<ul style="list-style-type: none"><li>No impacts identified as part of this review.</li></ul>

Impact on Users	
Area of Users' business	Potential impact
Administrative and operational	<ul style="list-style-type: none"><li>None expected</li></ul>
Development, capital and operating costs	<ul style="list-style-type: none"><li>None expected</li></ul>
Contractual risks	<ul style="list-style-type: none"><li>None expected</li></ul>
Legislative, regulatory and contractual obligations and relationships	<ul style="list-style-type: none"><li>None expected</li></ul>

Impact on Transporters	
Area of Transporters' business	Potential impact
System operation	<ul style="list-style-type: none"> <li>None</li> </ul>
Development, capital and operating costs	<ul style="list-style-type: none"> <li>None</li> </ul>
Recovery of costs	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
Price regulation	<ul style="list-style-type: none"> <li>None</li> </ul>
Contractual risks	<ul style="list-style-type: none"> <li>None</li> </ul>
Legislative, regulatory and contractual obligations and relationships	<ul style="list-style-type: none"> <li>None</li> </ul>
Standards of service	<ul style="list-style-type: none"> <li>None</li> </ul>

Impact on Code Administration	
Area of Code Administration	Potential impact
Modification Rules	<ul style="list-style-type: none"> <li>None</li> </ul>
UNC Committees	<ul style="list-style-type: none"> <li>None</li> </ul>
General administration	<ul style="list-style-type: none"> <li>None</li> </ul>

Impact on Code	
Code section	Potential impact
Transportation Principal Document	<ul style="list-style-type: none"> <li>No impacts identified as part of this review.</li> </ul>

Impact on UNC Related Documents and Other Referenced Documents	
Related Document	Potential impact
Network Entry Agreement (TPD I1.3)	<ul style="list-style-type: none"> <li>None</li> </ul>
Network Exit Agreement (Including Connected System Exit Points) (TPD J1.5.4)	<ul style="list-style-type: none"> <li>None</li> </ul>
Storage Connection Agreement (TPD R1.3.1)	<ul style="list-style-type: none"> <li>None</li> </ul>
UK Link Manual (TPD U1.4)	<ul style="list-style-type: none"> <li>None</li> </ul>
Network Code Operations Reporting Manual (TPD V12)	<ul style="list-style-type: none"> <li>None</li> </ul>
Network Code Validation Rules (TPD V12)	<ul style="list-style-type: none"> <li>None</li> </ul>
ECQ Methodology (TPD V12)	<ul style="list-style-type: none"> <li>None</li> </ul>

Impact on UNC Related Documents and Other Referenced Documents	
Measurement Error Notification Guidelines (TPD V12)	<ul style="list-style-type: none"> <li>• None</li> </ul>
Energy Balancing Credit Rules (TPD X2.1)	<ul style="list-style-type: none"> <li>• None</li> </ul>
Uniform Network Code Standards of Service (Various)	<ul style="list-style-type: none"> <li>• None</li> </ul>

Impact on Core Industry Documents and other documents	
Document	Potential impact
Safety Case or other document under Gas Safety (Management) Regulations	<ul style="list-style-type: none"> <li>• None</li> </ul>
Gas Transporter Licence	<ul style="list-style-type: none"> <li>• None</li> </ul>

Other Impacts	
Item impacted	Potential impact
Security of Supply	<ul style="list-style-type: none"> <li>• None</li> </ul>
Operation of the Total System	<ul style="list-style-type: none"> <li>• None</li> </ul>
Industry fragmentation	<ul style="list-style-type: none"> <li>• None</li> </ul>
Terminal operators, consumers, connected system operators, suppliers, producers and other non code parties	<ul style="list-style-type: none"> <li>• None</li> </ul>

## Workgroup Consideration of RAASP Implementation Options

The Workgroup notes that Xoserve identified a number of potential implementation options by which RAASP might be delivered to varying levels of complexity and automation.

To get a clearer view of the industry's views on the RAASP implementation options, the Workgroup requested Xoserve to undertake a Request for Information (RFI) exercise on its behalf.

The Workgroup identified the scope and questions for the RFI to support the identification of costs and impacts of the various options for RAASP implementation. Responses were collated and anonymised by Xoserve prior to a summary report being presented to the Workgroup to support its conclusions.

### Summary of RAASP Implementation Options

#### Option 1 – Timestamp Asset Data

- Increases accuracy of data held in central systems
- Least complex solution enabling the quickest implementation timescales
- Avoids conflict with other industry changes such as Faster Switching

- Where volumes of errors are quantified, enables an opportunity to resolve issues earlier than other options
- Benefits of RAASP may diminish over time therefore this option is viable solution whilst RAASP errors are being resolved.

#### Option 2 – Unravel Data to Agreed Date

- Similar benefits to Option 1, though recognised as more robust solution
- 2<sup>nd</sup> largest volume of systematised features
- Partially reduce the Billing to Settlement gap for Suppliers
- Less complex to deliver and implement than Option 3
- Utilises existing processes as well as new – existing Shippers should have capability to implement

#### Option 3 – Original RAASP Design

- Lower overall cost to the industry as changes delivered centrally
- Reduced operational resource costs as little need for manual processing
- Most accurate solution
- Automated mechanism to correct financial position
- Shippers not unfairly impacted by performance of other Shippers
- Future proof, capable of managing demands of consumer switching behaviour, which is expected to increase following Ofgem Switching Programme implementation

#### Option 4 – Data Cleansing Activity + Timestamp Asset Data

- Least costly to implement central solution
- Joint quickest implementation timescales
- Proactive, data cleansing could be undertaken in the near term
- Avoids conflict with other industry changes
- Enables a cleanse of any existing data issues ahead of an enduring solution, decreasing the justification for a fully automated solution
- Likely to reduce the starting point for future corrective activities
- Can utilise lessons learned from Project Nexus Data Cleansing initiatives

#### Option 5 – Remain with (post-Nexus) 'Business As Usual' solution

- Certain degree of RAASP functionality has already been delivered as part of Nexus
- No additional costs will be incurred by users
- No delivery timescales or impacts to other industry changes
- Original decision to agree to de-scope RAASP from Nexus should also be considered

#### Alternate option noted in responses received - 'Data Cleansing' exercise

- Merit in performing a data cleansing exercise in its own right as this offers an opportunity to resolve majority of existing issues.

For further information on the RFI exercise, see the Summary of Responses in **Section 6 below**.

The following table was produced by Xoserve and identifies the RAASP Implementation options and estimated CDSP costs for the options listed above:

Solution	Complexity	Timeline (excl. Market Trials)	Approximate Cost (£)
Option 1	Low to Medium	~ 6 Months	510K to 560K
Option 2	Medium	~ 9 Months	1 million to 1.10 million
Option 3	High	~ 12 Months	1.50 million to 1.60 million
Option 4	Low	~ 3 Months Bulk Cleansing Activity	Bulk Cleansing Activity 60K to 65K
		~ 6 Months (Option 1)	Enduring Option 1 400K to 450K  (Total – 460k – 515k )

In total, 16 organisations provided a response to the RFI consultation exercise. This consisted of 11 Shipper organisations, 4 Gas Transporters and 1 independent Gas Transporter (iGT).

The Workgroup consider the RFI responses and provided the following views, although it should be noted there was no overall consensus on these views:

1. Shipper responses to the RFI have stated that a fully automated, systematised solution best delivers the industry requirements. Whilst CDSP delivery costs increment as the solution option becomes more automated and centrally delivered, Shipper costs decrease due to the reduction in operational resource overheads. In addition, as the solution option becomes more systematised the constant rate of materiality reduces, owing to Shippers ability to resolve issues in a more timely fashion and mitigating a build-up of errors identified.
2. Gas Transporters provided the greatest support for a solution which could be implemented sooner rather than later, noting an industry wide data cleansing initiative is likely to add near term benefits, minimising concerns Shippers have raised regarding potential impacts on gas Settlement and Unidentified Gas (UIG). Gas Transporters were of a view that an industry data cleansing exercise may negate the need to implement a RAASP solution if this activity was participated and managed in an appropriate way, and noted any solution should be shaped based on the error volumes evidenced by Shippers.
3. Some Gas Transporters expressed a view that the system solutions proposed need to be considered against the SMART Metering program, which will result in the majority of meters being exchanged, cleaning substantial amounts of data and as a result, they believe there is no enduring benefit to support implementation.
4. Some participants noted that a major implementation programme such as SMART Metering programme is likely to identify a number of data and data quality issues and RAASP will provide a solution to correct Shipper positions which in turn would indirectly support the SMART programme.

5. Some participants believe that an enduring solution will still be needed even in a SMART Metering environment because even in a fully automated environment, there is always a risk of data capture or data processing failures.
6. Some Transporters believe that a fully automated system to retrospectively correct data may not provide the correct incentives to get data right first time, however, others felt that strong incentives already exist for parties to get the data right first time.
7. Transporters have a view that the landscape for change is significantly different to that in early 2014 when “Modification 0434 - Project Nexus – Retrospective Adjustment” was approved by Ofgem. Currently there are competing change priorities requiring Xoserve change resource and therefore other options for delivery may need to be explored. Some Shippers do not see a difference in the importance of the requirement for a robust RAASP solution as it would support the delivery of other industry change programmes.

#### **Conclusions:**

The Workgroup notes that there is uncertainty in the industry as to when RAASP is to be delivered and how delivery is to be prioritised against other industry changes.

The Workgroup was unable to achieve a consensus on a specific recommendation for a change to the current proposals, therefore, unless there is a change to the UNC, “Modification 0434 - Project Nexus – Retrospective Adjustment” will need to be implemented in its full form. However, the Workgroup notes the following possible ways forward:

1. Implementation of Modification “Modification 0434 - Project Nexus – Retrospective Adjustment” on a date to be determined by the DSC Change Management Committee.
2. A Modification be raised to implement an alternative solution based on the options set out in this report.

## 3 Terms of Reference

### Background

To conduct a review of the elements of UNC Modification 0434 'Project Nexus – Retrospective Adjustment' relating to the retrospective adjustment of Meter Information, Meter Point/Supply Point and Address data and to produce a cost benefit analysis.

### Topics for Discussion

- Understanding the objective;
- Assessment of alternative means to achieve objective;
- Assessment of potential impacts of the Review;
- Assessment of potential benefits of any solution identified during the Review;
- Assessment of implementation costs of any solution identified during the Review.

### Outputs

Produce a Workgroup Report for submission to the UNC Modification Panel, containing the assessment and recommendations of the Workgroup including a draft Modification Proposal where appropriate.

Produce a cost benefit analysis.

### Composition of Workgroup

The Workgroup is open to any party that wishes to attend or participate.

A Workgroup meeting will be quorate provided at least two Transporter and two User representatives are present.

### Meeting Arrangements

Meetings will be administered by the Joint Office and conducted in accordance with the Code Administration Code of Practice.

## Topics for Discussion

- Understanding the objective
- Assessment of alternative means to achieve objective
- Development of Solution (including business rules if appropriate)
- Assessment of potential impacts of the Request
- Assessment of implementation costs of any solution identified during the Request
- Assessment of legal text.

## Outputs

Produce a Workgroup Report for submission to the Modification Panel, containing the assessment and recommendations of the Workgroup including a draft modification where appropriate.

## Composition of Workgroup

The Workgroup is open to any party that wishes to attend or participate.

A Workgroup meeting will be quorate provided at least two Transporter and two User representatives are present.

## Meeting Arrangements

Meetings will be administered by the Joint Office and conducted in accordance with the Code Administration Code of Practice.

## 4 Modification(s)

No Draft Modifications were put forward for Workgroup consideration.

## 5 Recommendation

The Workgroup invites the Panel to:

- Consider the recommendations in the report:
- DETERMINE that Request 0624R should be closed.

### Conclusions:

The Workgroup notes that there is uncertainty in the industry as to when RAASP is to be delivered and how delivery is to be prioritised against other industry changes.

The Workgroup was unable to achieve a consensus on a specific recommendation for a change to the current proposals, therefore, unless there is a change to the UNC, “Modification 0434 – Project Nexus – Retrospective Adjustment” will need to be implemented in its full form. However, the Workgroup notes the following possible ways forward:

1. Implementation of Modification “Modification 0434 – Project Nexus – Retrospective Adjustment” on a date to be determined by the DSC Change Management Committee.
2. A Modification be raised to implement an alternative solution based on the options set out in this report.

## 6 Request for Information

At the request of the Workgroup, Xoserve undertook a Request for Information consultation process and a copy of the final report is attached below.



**Summary of consultation responses  
received to**

**UNC 0624R**

**Request for Information consultation  
exercise**

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## Document Purpose

This summary document has been compiled to outline the costs and associated benefits that have been described by industry parties in response to a Request for Information (RFI) consultation exercise. The information contained within this document aims to inform parties of those responses received to the consultation. This is envisaged to support UNC 0642R Workgroup to progress with the objective of producing a recommendations paper to UNC Panel in January 2018.

The document has been framed to detail qualitative and quantitative responses Xoserve have received to the RFI consultation exercise. Qualitative responses have been determined as those described by organisations in response to the consultation questions. Quantitative information has been taken from numeric values which were supplied by organisations in their responses. When quantifying information, monetary values have been added to provide an overall figure for each solution option. Alternatively, a range from the lowest to highest figures received has been presented where this has been deemed more appropriate to do so. To further support quantification of responses, mode and median averages have also been included to certain questions.

### **1) Background on UNC 0624R Request for Information consultation exercise**

UNC Request Proposal 0624R '*Review of arrangements for Retrospective Adjustment of Meter Information, Meter Point/Supply Point and Address data*' was raised in July 2017. It has been requested that a cost benefit assessment of the elements of Retrospective Adjustments of Assets and Supply Points, which have not yet been implemented, is undertaken. This

functionality is informally identified by the acronym RAASP (Retrospective Adjustment of Assets and Supply Points).

To support the development of the Request Proposal, Xoserve were asked to perform an impact assessment on RAASP requirements. Xoserve identified a number of viable options which deliver RAASP functionality to varying levels of system automation and complexity (with the exception of Option 5 which doesn't deliver a RAASP solution).

These solution options were shared and discussed at 0624R Workgroup on 24<sup>th</sup> October 2017 and are listed below;

Option 1) Timestamp Asset Data

Option 2) Unravel Data to Agreed Date

Option 3) Original RAASP Design

Option 4) Data Cleansing Activity + Timestamp Asset Data

Option 5) Remain with (post-Nexus) 'Business As Usual' solution

To assist the Workgroup in determining the cost benefit cases for each RAASP solution option, members of the Workgroup created a RFI consultation document. This document was reviewed and approved by the Workgroup on 24<sup>th</sup> October 2017 and agreed that questions contained within the consultation document should be used by parties to describe their respective cost benefit assessments of each solution option. Subsequently, a consultation exercise was conducted between 3<sup>rd</sup> November 2017 and 1<sup>st</sup> December 2017.

Xoserve were requested to support the Workgroup by co-ordinating the consultation exercise, sending out communications containing the RFI consultation document, receiving responses from industry parties and presenting a summary of the responses in an anonymised and consolidated format.

## **2) General summary of RFI consultation responses received**

In total, 16 organisations provided a response to the RFI consultation exercise. This consisted of 11 Shipper organisations, 4 Gas Transporters and 1 independent Gas Transporter (iGT).

All Shipper responses to the RFI have stated that a fully automated, systematised solution best delivers the industry requirements. Whilst CDSP delivery costs increment as the solution option becomes more automated and centrally delivered, Shipper costs decrease due to the reduction in operational resource overheads. In addition, as the solution option becomes more

systematised the constant rate of materiality reduces, owing to Shippers ability to resolve issues in a more timely fashion and mitigating a build-up of errors identified.

Gas Transporters provided greatest support for a solution which could be implemented sooner rather than later, noting an industry wide data cleansing initiative is likely to add near term benefits, minimising concerns Shippers have raised regarding potential impacts on gas Settlement and Unidentified Gas (UIG). Gas Transporters stated an industry data cleansing exercise may negate the need to implement a RAASP solution if this activity was participated and managed in an appropriate way, and noted any solution should be shaped based on the error volumes evidenced by Shippers.

A summary of common themes which presented themselves throughout the responses received by organisations have been provided below;

### **Rate of data errors and absence of RAASP functionality**

Concerns were raised regarding the current lack of an ability to retrospectively correct misaligned data. As detailed by parties, this issue is expected to increase over the coming years due to an increase of metering activity due to Smart Meter roll out, and likely increase in consumer switching behaviour due to industry initiatives such as the Ofgem Switching Programme. It is recognised further development, design and testing activities will need to be performed in order for an industry agreed RAASP solution to be implemented. Whilst this is taking place, misaligned data issues will continue to be identified and will need to be managed by industry parties. Some Shipper parties noted that the absence of an automated solution to resolve such data issues is likely to lead to a backlog of errors building up over time, which will be unresolved until an enduring solution is implemented.

### **Utilisation of RAASP functionality**

This theme presented itself on a number of occasions, with Gas Transporters raising concerns that the principle and responsibility of getting data right first time will be diluted with RAASP being available to fix issues at a later stage, whilst Shipper parties describing a need to monitor and assure RAASP utilisation and industry performance. Shippers explained utilisation of RAASP functionality will be linked to volumes of metering activity and consumer switching, both of which are expected to increase over the coming years as a result of Smart Meter roll out and the Ofgem Switching Programme.

### **Change delivery timescales and conflicts with other change programmes**

A prevalent topic stated by respondents was delivery timescales and the potential conflict these have with other significant programmes of change. Parties recognised a need to ensure that robust design, build and testing phases are undertaken as part of any change delivery. Several parties raised concerns on the ability of the industry to manage the delivery of a more complex RAASP solution during a period where UIG changes are expected to take priority, as well as the Ofgem Switching Programme scheduled to be delivered in a similar timeframe.

### 3) Responses to UNC 0624R Request for Information consultation questions

Please see below, headed questions and the associated qualitative responses received from industry participants in reply to the RFI consultation exercise;

**Historic Rate of Corrective Updates.** Please indicate here the rate of corrective updates that you have encountered prior to the implementation of Project Nexus.

7 responses directly received for this question.

Parties noted volumes had not changed as a result of Project Nexus Implementation, with one response pointing to metering activity (i.e. Smart Meter Roll Out) as being the key activity impacting errors they're encountering. One party noted figures had been extrapolated based on Large Supply Point statistics, as figures relating to Small Supply Points were unknown pre Project Nexus. Another party stating due to a number of initiatives and process improvements, assumptions have been made that a lower rate of errors will be encountered post Project Nexus Implementation.

**Post-Nexus Corrective Update Rates.** Can you advise what corrective update rates you have seen post-Nexus and whether or not there is any indication there is a greater or lesser error rate since the new Nexus functionality was implemented. Please also advise if you have been storing error corrections awaiting the introduction of the RAASP solution and if possible also advise the number of error instances and the anticipated value of the error that you will be seeking to correct should the full functionality become available.

9 responses directly received for this question.

Gas Transporters noted the responses provided by Xoserve at UNC 0624R Workgroup, with Request for Adjustment volumes (RFA) being slightly higher than pre-Nexus figures.

Of the 7 Shipper responses received, all parties described that no corrective updates are being withheld, although one organisation stated a 'backlog' of updates had built up over time, equating to approximately 30000 Meter Point Reference Numbers (MPRNs). Similar to responses received to question 1, all parties broadly supported the view that implementation of Project Nexus hadn't in itself created an increase in errors being encountered, with the meter read validation rules now in place creating higher RGMA rejections which are being corrected in a fix-forward' capacity. 1 party provided an alternative view, stating they have experienced uplift in errors from 1% in 1000 to 26% in 1000 (MPRNs) post Project Nexus Implementation. It was again noted that the roll out of Smart Meters over the coming years is likely to create greater level of exceptions, due to issues inherent in the flow of data across industry interfaces. 2 parties described a possible detrimental impact on Settlement due to the current corrective approach being applied by Shippers, potential exposure due to AQ accuracy and the additional work this presents to their organisations to identify and correct discrepancies.

Given the responses received, the overall view expressed was that volumes of errors are likely to stay largely similar to current volumes, with the potential to increase as a result of discrepancies encountered during the ramp up of Smart Meter roll out through to 2020.

**Impact of Nexus RAASP development.** As UNC Modification 0434 does mandate the implementation of a RAASP solution, please provide as much detail as possible on the work done by your organisation to prepare for RAASP implementation. If possible please quantify the costs incurred.

13 responses directly received for this question.

4 Gas Transporters replied that no functional changes to their relevant solutions are assumed as a result of RAASP delivery, with RAASP being a CDSP - Shipper transactional activity. However, 2 organisations noted changes to data and the proposed 'Data Cleansing' exercise may impact operational activities such as Site Visits, which would need to be appropriately resourced. It was also noted impacts to Transportation invoicing and reconciliation of charges as a result of insertion of historic reading data has not been clarified.

Of the 9 Shipper responses received, 2 organisations described that their solutions have been developed to incorporate the original RAASP functionality, utilising the RTO and RTR file types. All other parties explained that decisions had been made to pause or cease RAASP development activities (including detailed design and testing) due to the decision to de-scope RAASP delivery from Project Nexus Implementation. Few parties also noted costs had been incurred in regulatory forums when supporting the development of UNC modification 0434, associated Business Requirements Documents and additional working groups looking at RAASP scenarios.

**Implementation timescales.** Could you advise what timescales you would see as optimum for the options outlined in UNC Request 0624R? In addition could you advise of any conflicting industry or system developments that could impact on your/the industry's timeline for delivery?

13 responses directly received for this question.

3 parties described that should a significant benefits case for RAASP be identified, a solution should be implemented as soon as possible in order for those benefits to be realised. Several parties noted the lead time required in order to accommodate changes ranging from 4 to 12 months, with one organisation explaining changes could not be supported before November 2018 due to internal system change activities. This sentiment was echoed by another party who stated an optimal implementation date of 1<sup>st</sup> April 2019 for solution option 3 'Full RAASP'. 2 organisations requested a minimum 9 month window to implement changes, which would commence from sign off of detailed design.

Responses also raised concerns regarding the current scale of changes on industry plans, with one respondent describing that all Solution Options other than Option 1 'Timestamp', have the potential to overlap with the Ofgem Switching Programme, which is likely to take priority over many other industry changes. This view was reaffirmed with another respondent, who challenged whether a RAASP solution may become redundant before it is implemented, given the obligations placed on parties to submit monthly meter readings and the roll out of smart meters concluding in 2020. It was noted that Shippers will have to take action to resolve issues identified with asset data in order to ensure meter readings can be accepted for Settlement purposes. One party also flagged other changes being proposed by the industry to resolve matters relating to Unidentified Gas (UIG), with these having the potential to significantly change processes. In addition, multiple parties also confirmed industry testing would need to be performed ahead of the agreed solution option being implemented, the scale of which will need to be defined.

**Benefits.** Please provide information on what you believe are the benefits of each option, differentiating between the five options, if possible.

13 responses were received to this question. These have been summarised against each Solution Option presented by Xoserve to UNC 0624R Workgroup;

Option 1 – Timestamp Asset Data

- Increases accuracy of data held in central systems
- Least complex solution enabling the quickest implementation timescales
- Avoids conflict with other industry changes such as Faster Switching
- Where volumes of errors are quantified, enables an opportunity to resolve issues earlier than other options
- Benefits of RAASP may diminish over time therefore this option is viable solution whilst RAASP errors are being resolved.

Option 2 – Unravel Data to Agreed Date

- Similar benefits to Option 1, though recognised as more robust solution
- 2<sup>nd</sup> largest volume of systematised features
- Partially reduce the Billing to Settlement gap for Suppliers
- Less complex to deliver and implement than Option 3
- Utilises existing processes as well as new – existing Shippers should have capability to implement

Option 3 – Original RAASP Design

- Lower overall cost to the industry as changes delivered centrally
- Reduced operational resource costs as little need for manual processing
- Most accurate solution
- Automated mechanism to correct financial position
- Shippers not unfairly impacted by performance of other Shippers
- Future proof, capable of managing demands of consumer switching behaviour, which is expected to increase following Ofgem Switching Programme implementation

Option 4 – Data Cleansing Activity + Timestamp Asset Data

- Least costly to implement central solution
- Joint quickest implementation timescales
- Proactive, data cleansing could be undertaken in the near term
- Avoids conflict with other industry changes
- Enables a cleanse of any existing data issues ahead of an enduring solution, decreasing the justification for a fully automated solution
- Likely to reduce the starting point for future corrective activities
- Can utilise lessons learned from Project Nexus Data Cleansing initiatives

Option 5 – Remain with (post-Nexus) 'Business As Usual' solution

- Certain degree of RAASP functionality has already been delivered as part of Nexus
- No additional costs will be incurred by users
- No delivery timescales or impacts to other industry changes
- Original decision to agree to de-scope RAASP from Nexus should also be considered

Alternate option noted in responses received - 'Data Cleansing' exercise

- Merit in performing a data cleansing exercise in its own right as this offers an opportunity to resolve majority of existing issues.

**Concerns.** Please provide any information of any concerns that you have with any or all of the options.

The following concerns were raised in response to this question;

- Lack of clarity of costs, with Market Trials not being included within estimates provided.
- Conflict of priorities, with pending UIG modifications, existing backlog of CDSP changes, significant industry changes such as Ofgem Switching and internal change programmes being delivered by organisations.
- Timescales with any RAASP solution needing to be appropriately designed, approved and tested. Concerns were raised that problems will grow as Smart Meter roll out will be at an unprecedented level, with errors expected to increase. There were also concerns stated that timescales of a RAASP solution have potential to clash with those areas identified within the previous bullet point.
- Impact that any RAASP solution may have on UIG, given the volumes of adjustments potentially being made via the retrospective route.
- Conflicting principles regarding back billing, with Ofgem's recent consultation to prevent Suppliers charging customers historically (greater than 12 months previous). Parties noted it needs to be understood how charges re-allocated to Shippers would be recovered.
- Supplier to Supplier interactions and how these are to be managed where an update has been made relating to a previous Suppliers ownership.
- Concerns that RAASP solution will detract from industry principles and obligations to get data right first time, and in a timely manner. Some parties mentioned a need to have performance monitored to assure RAASP was being used appropriately.
- Issues were raised that Options 1,2,4,5 have an element of manual processing from a Shipper perspective which for some parties has been described as an unmanageable outlay of costs.
- Concern of RAASP being rolled back or withdrawn. One party stated current BAU solution is not acceptable, with other parties supporting this view, confirming that the rationale for RAASP remains valid, and it is appropriate for the industry to have mechanism to manage these errors where they are identified.
- 1 iGT also raised a request for clarification as to expectations of Shippers regarding iGT charges, which have a direct relationship with effective dates associated to the Meter Asset. There was also a request for RAASP updates to be flagged in some way to iGTs, in order for these updates to be reconciled against iGT records.

**Additional Information provided**

9 Shippers provided information in this section, clarifying their preferred Solution - Option 3.

The following points were explained as justification;

- Least labour intensive, saving time and cost outlay
- Brings gas in line with functionality in place within electricity systems
- Supports the objective of accurate settlement for individual supply points
- Part of the original requirements for Project Nexus, which remain valid to industry

It was noted Smart Meter roll out will lead to challenges in managing data, with a RAASP solution assisting the industry to swiftly resolve issues that are likely to be encountered. 1 Shipper further added improving data quality is likely to alleviate some of the issues the industry will need to resolve in the future for the Ofgem Switching Programme.

The above responses have been quantified by respondents using the tables included within the UNC 0624R RFI consultation document. Parties were requested to provide annual costs that will be saved (as a positive) or incurred (negative), by the implementation of the various options, using the current processes operated as of 1<sup>st</sup> June 2017 (post-Nexus) as the baseline. These were requested as costs for implementation (**Table 1**) and enduring costs (**Table 2**) of each solution option. The RFI consultation document did not specify how enduring costs were to be provided (i.e. annual or consolidated). CDSP estimated costs for design and build activities for each solution option have been included in the penultimate row of Table 1.

In total 9 Shipper and 1 Gas Transporter provided responses to questions within this section. All costs contained in these tables reflect cost incurred by organisations to implement and operate the relevant solution option, and have been rounded to the nearest thousand (£).

**Table 1**

Implementation Costs (in £'s)					
Costing Area	Option 1	Option 2	Option 3	Option 4	Option 5
Operational Resource	207,000	207,000	129,000	535,000	152,000
Other Costs	5,000	5,000	23,000	10,000	
System Costs - Operational	1,000	1,000	1,000	1,000	5,000
System Costs - Development	1,753,000 - 2,003,000	2,093,000 - 2,343,000	2,277,000	2,325,000	
CDSP estimate - Design & Build costs (Excluding MT)	510,000 - 560,000	1,000,000 - 1,100,000	1,500,000 - 1,600,000	460,000 - 515,000	N/A
CDSP 12 week indicative MT costs	350,000 - 400,000	350,000 - 400,000	350,000 - 400,000	350,000 - 400,000	N/A
Total Implementation Costs - Excluding MT (£)	<b>2,826,000 - 3,176,000</b>	<b>3,656,000 - 4,056,000</b>	<b>4,280,000 - 4,430,000</b>	<b>3,681,000 - 3,786,000</b>	<b>157,000</b>

**Table 2**

Enduring Costs (in £'s)					
Costing Area	Option 1	Option 2	Option 3	Option 4	Option 5
Operational Resource (FTE Cost)	2,328,000	2,273,000	1,389,000	2,393,000	2,266,000
Other Costs					
System Costs - Operational (£)	220,000 - 270,000	29,000	272,000 - 322,000	220,000 - 270,000	
System Costs - Development (£)	50,000	250,000 - 300,000	50,000	50,000	
<b>Total Enduring Costs (£)</b>	<b>2,598,000 - 2,648,000</b>	<b>2,552,000 - 2,602,000</b>	<b>1,711,000 - 1,761,000</b>	<b>2,663,000 - 2,713,000</b>	<b>2,266,000</b>

A consolidated view of the implementation and enduring costs provided in response to the consultation exercise and contained below in **Table 3**;

**Table 3**

Overall Costs (in £'s)					
	Option 1	Option 2	Option 3	Option 4	Option 5
<b>Total Implementation Costs</b> (*including 12 week indicative MT costs)	2,826,000 - 3,176,000	3,656,000 - 4,056,000	4,280,000 - 4,430,000	3,681,000 - 3,786,000	157,000
<b>Enduring Costs</b>	2,598,000 - 2,648,000	2,552,000 - 3,052,000	1,711,000 - 1,761,000	2,663,000 - 2,713,000	2,266,000
<b>Overall Costs</b>	<b>5,424,000 - 5,824,000</b>	<b>6,208,000 - 7,108,000</b>	<b>5,991,000 - 6,191,000</b>	<b>6,344,000 - 6,499,000</b>	<b>2,423,000</b>

Enduring costs reflect a total of the costs described by respondents. These may be incurred on an annual basis. Please note the detail above is not an indication of the entire industry's costs associated to each solution option, only costs to those organisations that provided a response to the RFI consultation exercise.

In addition to the costs described in the tables above, respondents were asked to provide information on the projected volume of errors, timeliness to resolve data issues and constant rate of materiality (£) for each solution option.

In total 8 Shipper responses were received to these questions. Of the responses received, 7 of the 8 respondents had interpreted 'Expected Constant Materiality of Errors' as the cost incurred by their respective organisations to manage identified errors under each solution option, with the remaining respondent alternatively detailing the expected financial benefit in terms of costs saved to their organisation.

This information is illustrated for both a 'Year 1' and 'enduring perspective' within **Table 4** below;

**Table 4**

<b>Materiality &amp; Prevalence of RAASP Use (Year 1)</b>					
<i>Question</i>	<i>Option 1</i>	<i>Option 2</i>	<i>Option 3</i>	<i>Option 4</i>	<i>Option 5</i>
Expected Rate of Errors per Year (/1000 sites)	Range from 4.5 / 1000 to 400 / 1000. 25 / 1000 appeared most often in responses, with Median average calculated at 18.75 / 1000 (1.88%)	Range from 4.5 / 1000 to 400 / 1000. 10 / 1000 appeared most often in responses, with Median average calculated at 16.75 / 1000 (1.68%)	Range from 3 / 1000 to 400 / 1000. Median average calculated at 13 / 1000 (1.30%)	Range from 4.5 / 1000 to 400 / 1000. 25 / 1000 appeared most often in responses, with Median average calculated at 18 / 1000 (1.80%)	Range from 4.5 / 1000 to 400 / 1000. 25 / 1000 appeared most often in responses, with Median average calculated at 18.75 / 1000 (1.88%)
Expected Constant Materiality of Errors (£)	Materiality ranged from 1,165,000 - 2,000,000 cost to Shippers of errors identified. Implementation of this solution was described as having a cost saving of 3,000,000 within year 1.	Materiality ranged from 1,165,000 - 2,000,000 cost to Shippers of errors identified. Implementation of this solution was described as having a cost saving of 3,000,000 in year 1	Materiality ranged from 1,165,000 - 2,000,000 cost to Shippers of errors identified. Implementation of this solution was described as having a cost saving of 6,000,000 in year 1	Materiality ranged from 1,000,000 - 2,000,000 cost to Shippers of errors identified. Implementation of this solution was described as having a cost saving of 3,000,000 in year 1	Materiality ranged from 1,165,000 - 3,125,000 cost to Shippers of errors identified. Remaining with the current industry solution was described as having a cost saving of 3,000,000 in year 1
Expected Typical Resolution rate (in Days)	Resolution rate ranged between 1 to 120 days, with a median average of 7 days. Some parties provided a response on total resolved within day, with this ranging from 12 - 250 per day	Resolution rate ranged between 1 to 120 days, with a median average of 8 days. Some parties provided a response on total resolved within a day, with this ranging from 12 - 250 per day	Resolution rate ranged between 1 to 60 days, with a median average of 8 days. Some parties provided a response on total resolved within day, with this ranging from 88.8 - 500 per day	Resolution rate ranged between 7 to 120 days, with a median average of 20 days. Some parties provided a response on total errors resolved within day, with this ranging from 12 - 250 per day	Resolution rate ranged between 7 to 120 days, with a median average of 20 days. Some parties provided a response on total errors resolved within day, with this ranging from 12 - 500 per day
<b>Materiality &amp; Prevalence of RAASP Use (Year 2+)</b>					
Expected Rate of Errors per Year (/1000 sites)	Range slightly increases to 5.5 / 1000 - 400 / 1000. Median average remains equal to Year 1 Rate of Errors	Range slightly increases to 5.5 / 1000 - 400 / 1000. Median average increased to 18 per 1000 (1.80%)	Range remains equal to Year 1 Rate of Errors. Median average increased to 15.5 per 1000 (1.55%)	Range slightly increases to 5 / 1000 - 400 / 1000. Median average remains equal to Year 1 Rate of Errors	Range slightly increases to 5.5 / 1000 - 400 / 1000. Median average remains equal to Year 1 Rate of Errors
Expected Constant Materiality of Errors (£)	Materiality ranged from 1,250,000 - 2,000,000 cost to Shippers of errors identified. Implementation of this solution was described as having a cost saving of 4,000,000 on an enduring basis.	Materiality ranged from 1,250,000 - 2,000,000 cost to Shippers of errors identified. Implementation of this solution was described as having a cost saving of 4,000,000 on an enduring basis	Materiality ranged from 1,598,000 - 2,000,000 cost to Shippers of errors identified. Implementation of this solution was described as having a cost saving of 7,000,000 on an enduring basis	Materiality ranged from 1,000,000 - 2,000,000 cost to Shippers of errors identified. Implementation of this solution was described as having a cost saving of 4,000,000 on an enduring basis	Materiality ranged from 2,000,000 - 3,125,000 cost to Shippers of errors identified. Remaining with the current industry solution was described as having a cost saving of 4,000,000 on an enduring basis
Expected Typical Resolution rate (in Days)	Remains equal to Year 1 Resolution rate	Remains equal to Year 1 Resolution rate	Remains equal to Year 1 Resolution rate	Remains equal to Year 1 Resolution rate	Remains equal to Year 1 Resolution rate

## 4) Appendices

### a) UNC Modification 0624R

[UNC0624R and associated documents.](#)

### b) RFI Consultation Document Template

**UNC 0624 Review: Review of arrangements for Retrospective Adjustment of Meter Information, Meter Point/Supply Point and Address data (UNC 0624R)**

**Please send responses to:**

[uklink@xoserve.com](mailto:uklink@xoserve.com)

*All information provided under this request will be held by Xoserve in confidence and will only be shared, in aggregate, anonymised form to the UNC 0624R Workgroup*

**Response deadline: 1 December 2017**

<b>Name</b>	
<b>Organisation</b>	
<b>Role/Job Title</b>	
<b>E-mail Address</b>	
<b>Telephone number</b>	

## **Background**

Under UNC Modification 0434 Ofgem approved the introduction of Project Nexus, the re-development of the gas central systems. Included within the scope of the new systems was the ability to retrospectively amend asset and supply point data (RAASP functionality) in the settlement process. However as Project Nexus was developed and the design and delivery was worked through, Xoserve advised that the functionality required for the introduction of RAASP could not be delivered at the same time as the mainstream Nexus solution. Therefore Modification 0573 was raised by National Grid Distribution (Cadent) in February 2016 to defer the introduction of the RAASP functionality.

Ofgem accepted the proposal for RAASP deferral, resetting the implementation date of RAASP delivery.

Since the successful introduction of the mainstream functionality of Project Nexus on 1<sup>st</sup> June 2017, UNC Request 0624R was raised by Cadent with the following objective:

## Joint Office of Gas Transporters

*“To conduct a review of the elements of UNC Modification 0434 ‘Project Nexus –Retrospective Adjustment’ relating to the retrospective adjustment of Meter Information, Meter Point/Supply Point and Address data. This will be informed by undertaking a cost benefit assessment of the elements of the Modification which have not been implemented.”*

In order to aid consideration of UNC Request 0624R this RFI has been issued to inform the discussion of the costs and benefits of each of the options developed by Xoserve and will be presented to the UNC 0624R Workgroup on 19<sup>th</sup> December 2017.

### Relevant documents

UNC documents:

- [UNC0624R and associated documents.](#)

### Implementation Options

Under UNC Request 0624R the CDSP (Xoserve) has proposed that there are five options, which could be used to deliver the RAASP functionality. These are:

1. Timestamp Asset Data
2. Unravel Data to an Agreed Date
3. Original RAASP Design
4. Data Cleansing Activity + Timestamp Asset Data
5. Remain with (post-Nexus) Business as Usual Solution

To provide clarification on the options listed above, it has been confirmed each option (excluding option 5) affords a file based mechanism for Shippers to update asset data recorded within the Supply Point Register, and enables an automatic process to adjust charges attributed to the retrospective amendment. Options 1, 2 and 3 have assumed the re-use of the RTO file format, which was created during the original Project Nexus design phase, with Option 4 envisaged utilising a simplified version of this file.

Detail on each option is available within the attachments below;



RAASP Options  
Detail Comparison

In addition, Xoserve has performed an impact assessment to provide associated costs and build timescales for each option. These are included within the table below;

Solution	Complexity	Timeline (excl. Market Trials)	Approximate Cost (£)
Option 1	Low to Medium	~ 6 Months	510K to 560K
Option 2	Medium	~ 9 Months	1 million to 1.10 million
Option 3	High	~ 12 Months	1.50 million to 1.60 million
Option 4	Low	~ 3 Months Bulk Cleansing Activity	Bulk Cleansing Activity 60K to 65K
		----- ~ 6 Months (Option 1)	----- Enduring Option 1 400K to 450K  (Total – 460k – 515k )

The costs illustrated in the above table relate to design, build and implementation phases of each option, and do not include any costs associated to external industry testing (i.e. Market Trials). In addition, enduring costs attributed to each option are not identified, as these will be incorporated within the relevant Service Area of CDSP charges for inclusion within the CDSP Annual Charging Statement.

If stakeholders require additional information on the options listed, Xoserve have advised that this can be facilitated via submitting enquiries to the [UKLINK@Xoserve.com](mailto:UKLINK@Xoserve.com) account.

### Information Requested

The tables below set out the information, which is being requested of UNC Parties, in order that the UNC Request 0624R workgroup can consider the costs and benefits of each of the options put forward by the CDSP and take into account any other information that is relevant.

## Cost (up to 31 December 2023)

Please include here all annual costs that will be saved (as a positive) or incurred (negative) by the implementation of the various options, using the current processes operated as of 1 June 2017 (post-Nexus) as the baseline. Please annualise the costs and provide data on both implementation costs and enduring costs in the two tables below.

### Implementation costs

Please include here all annual costs that will be incurred	Option1 – Timestamp Asset Data	Option2 – Unravel Data to Agreed Date	Option3 – Original RAASP Design	Option4 – Data Cleansing Activity + Timestamp Asset Data	Option5 – Remain with (post-Nexus) BAU Solution
Operational Resource(FTE cost)					
<i>Exp Notes</i>					
Other Costs (£)					
<i>Exp Notes</i>					
System Costs – operational (£)					
<i>Exp Notes</i>					
System Costs – development (£)					
<i>Exp Notes</i>					

Enduring costs

Please include here all annual costs that will be incurred	Option1 – Timestamp Asset Data	Option2 – Unravel Data to Agreed Date	Option3 – Original RAASP Design	Option4 – Data Cleansing Activity + Timestamp Asset Data	Option5 – Remain with (post-Nexus) BAU Solution
Operational Resource(FTE cost)					
<i>Exp Notes</i>					
Other Costs (£)					
<i>Exp Notes</i>					
System Costs – operational (£)					
<i>Exp Notes</i>					
System Costs – development (£)					
<i>Exp Notes</i>					

- **Operational Resource.** The cost of staff (FTE) that you believe will be required to engage directly with resolving RAASP requests, if using the proposed option. Incidental staff costs for dealing with customer queries, etc should also be covered here, but not IT support FTE costs, which should be covered under system operational costs.
- **System costs - operational.** The daily system upkeep costs of any system programme that would be used to support each option (please include expected IT staff resource costs). Please quantify in £/yr.
- **System costs - development.** Any one-off costs that would be incurred to develop a system solution for each option. Please spread this cost over the five-year period as an annual cost.

**Materiality and prevalence of RAASP use**

In this section please provide information on the amount of usage that you expect to make of the functionality and how long you would expect the process to take under the various options presented. Please provide this for year one and then for year two onwards.

Year 1

Option	Option1 – Timestamp Asset Data	Option2 - Unravel Data to Agreed Date	Option3 - Original RAASP Design	Option4 – Data cleansing Activity + Timestamp Asset Data	Option5 – Remain with (post-Nexus) BAU Solution
Expected Rate of Error per year (/1000 sites)					
<i>Exp Notes</i>					
Expected constant materiality of errors (£)					
<i>Exp Notes</i>					
Expected typical resolution rate (in day)					
<i>Exp Notes</i>					

Year 2+

Option	Option1 – Timestamp Asset Data	Option2 - Unravel Data to Agreed Date	Option3 - Original RAASP Design	Option4 – Data cleansing Activity + Timestamp Asset Data	Option5 – Remain with (post-Nexus) BAU Solution
Expected Rate of Error per year (/1000 sites)					
<i>Exp Notes</i>					
Expected constant materiality of errors (£)					
<i>Exp Notes</i>					
Expected typical resolution rate (in day)					
<i>Exp Notes</i>					

In addition can you please provide details on the following:

**Historic Rate of Corrective Updates.** Please indicate here the rate of corrective updates that you

have encountered prior to the implementation of Project Nexus.

**Post-Nexus Corrective Update Rates.** Can you advise what corrective update rates you have seen post-Nexus and whether or not there is any indication there is a greater or lesser error rate since the new Nexus functionality was implemented. Please also advise if you have been storing error corrections awaiting the introduction of the RAASP solution and if possible also advise the number of error instances and the anticipated value of the error that you will be seeking to correct should the full functionality become available.

**Other implications and considerations**

There are a number of other aspects that workgroup believe that it would be beneficial to consider in relation to evaluating the options. These are around what organisations have already done around preparing for a RAASP solution and when is the optimum time to deliver RAASP functionality, be that through an automated solution or a manual process.

**Impact of Nexus RAASP development.** As UNC Modification 0434 does mandate the implementation of a RAASP solution, please provide as much detail as possible on the work done by your organisation to prepare for RAASP implementation. If possible please quantify the costs incurred.

**Implementation timescales.** Could you advise what timescales you would see as optimum for the options outlined in UNC Request 0624R? In addition could you advise of any conflicting industry or system developments that could impact on your/the industry's timeline for delivery?

**Benefits.** Please provide information on what you believe are the benefits of each option,

differentiating between the five options, if possible.

<b>Concerns.</b> Please provide any information of any concerns that you have with any or all of the options.

**Other relevant information**

Please provide any other information that you believe that the workgroup should consider.

<b>Additional Information</b>