

PROJECT NEXUS

Development of Requirements

PROJECT BRIEF

FINAL DRAFT

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Project Nexus Development of Requirements Project Brief

About this document

xoserve is planning a major systems investment programme, and has consulted to define the scope of service requirements, which is expected to feed into design work. The consultation documentation to define the scope, including all responses and the Conclusions document, is available at www.xoserve.com. The Consultation Conclusions, published on 5th March 2009, included proposals for a Requirements Definition Phase (RDP) comprising 'preparation' and 'development of requirements' stages.

The Conclusions document stated:

"The implications of future decisions on smart metering market models for the scope of agency services are unknown at present. As and when these implications become clear, it may be appropriate to review our planning assumption. We will work closely with the industry to keep abreast of developments to ensure that Project Nexus is appropriately positioned and to minimise the risk of rework."

Through the preparation stage of the RDP, our work with the industry, in particular advice from the Project Nexus Advisory Group, has led to greater definition of how the 'data management' topics should be progressed and a review of the originally agreed plan for the series of UNC Topic Work Groups, recognising that a range of topics or aspects thereof may be within the scope of the anticipated Smart metering programme under the auspices of DECC.

This document describes the proposed revised approach to the Requirements Development stage, which has been supported by PNAG, and sets out the resulting proposed timetable. This proposed timetable is to be discussed at the Project Nexus UNC Workstream (PNUNC) on 30th October 2009. The presentation at PNUNC will be based on the contents of this document.

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1 Purpose of Document

The purpose of this document is to describe the proposed planning approach to be adopted in the 'Development Stage' of the Requirements Definition Phase of Project Nexus, taking into consideration the industry discussions during the Preparation Stage, in particular discussions in the Project Nexus Advisory Group regarding the potential interaction with the anticipated Smart metering programme under the auspices of DECC.

This document forms the basis of a proposal to be submitted to the Project Nexus UNC Workstream on 30th October 2009.

2 Background and Summary

The planning options for requirements definition available to the industry were discussed at the Project Nexus Advisory Group (PNAG) on the 5th October 2009. (The planning options were described in the Project Nexus Planning Options paper and Hybrid Option presentation which can be found on the website http://www.xoserve.co.uk/nexus_home.asp).

At that meeting PNAG supported adoption of the hybrid approach. This approach is described in more detail in section 5. In summary, the approach would involve development under UNC governance of:

- detailed requirements for sites expected to be fitted with AMR equipment and
- for all supply points, principles for topics that primarily relate to consumption and reconciliation (including AQ, Allocation and Reconciliation)

These activities will not consider detailed Smart metering process requirements; however, the resulting principles would be available to the anticipated Smart metering programme, which may take some activities off that programme's critical path.

The development of requirements other than those identified above would not be progressed under the UNC governance pending a clear understanding of the scope of the anticipated Smart metering programme, on the basis that development of these other requirements may well be within the scope of, or heavily dependent upon, the Smart programme.

DECC's work and plans with respect to the Smart programme would continue to be closely monitored and following the definition of scope of that programme, the scope of work and plans for requirements definition under UNC governance would be reviewed.

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The current working assumption is that the outputs from the UNC Topic Work Groups and the Smart metering programme will together enable the full definition of xoserve services requirements.

The contents of this paper are the basis for the xoserve presentation at the Project Nexus UNC Workstream (PNUNC) meeting on the 30th October 2009, in particular the proposed timeline and Topic Workgroup timetable. Subject to the PNUNC ratifying the proposal with a commencement of the Topic Workgroups in mid-November 2009, the draft plan would give a completion date of September 2011 for the requirements definition phase. Final completion of requirements definition would be subject to the assumptions around the scope and timing of the Smart metering programme holding true, hence the importance of closely monitoring these matters.

3 Project Nexus Requirements Development Stage Objectives

3.1 Drivers

The age of the UK-Link systems is the main driver for Project Nexus, as referenced in the initial Consultation http://www.xoserve.co.uk/nexus_home.asp. The anticipated investment in UK Link has presented the opportunity for the industry to review business rules including the rationalisation of processes where relevant and to consider future customer-driven developments/new services.

3.2 Objectives

The objective of Project Nexus overall is to define industry requirements for xoserve's services and realisation of the vision:

- Delivery of services sustained at required levels and standards for period from 2013 on fully supported systems
- Costs to deliver services lower than they would have been without the investment
- Value of the investment maximised (balance of costs and benefits)
- xoserve processes and systems rationalised and streamlined resulting in reduced risk and improved service quality
- Future change anticipated and incorporated, allowed for or at least not precluded
- Improved lifecycle for implementing subsequent change
- Stakeholder requirements addressed
- Expected benefits of funding parties realised

The Requirements Development Stage of the project is a vital step in developing an understanding of the services for which xoserve will need a capability to deliver.

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4 Project Nexus Requirements Definition Phase Scope

The table below sets out the key topics that were identified from the Project Nexus Scoping Phase Consultation together with likely industry governance frameworks as included in the Consultation Conclusions published in March 2009.

Category	Topic	Industry Framework
Within prevailing scope of agency services	<ul style="list-style-type: none"> • Supplier Switching (Dual Fuel, Bulk Transfer) • Market Differentiation • Connection & Registration • Increased Reads for Energy Allocation, Balancing and Transportation Charging • Reconciliation • AQ Management • Volume Capture • Invoicing Rules • Treatment of Retrospective Updates 	Uniform Network Code
Outside prevailing scope of agency services	• iGT Services	iGT Uniform Network Code and potentially iGT / GT licence
	• Data Management	No formal framework at present

Initial requirements associated with these topics as identified in industry participants' Consultation responses were included in an Initial Requirements Register (http://www.xoserve.co.uk/nexus_home.asp).

It has subsequently been suggested by PNAG and agreed by the xoserve Board that subject to the outcome of iGT UNC modification proposal iGTRP008 (Single Gas Transporter Agency), SPA business rules and processes for iGT Services may be impact assessed under Project Nexus. As yet the iGT UNC modification has not progressed.

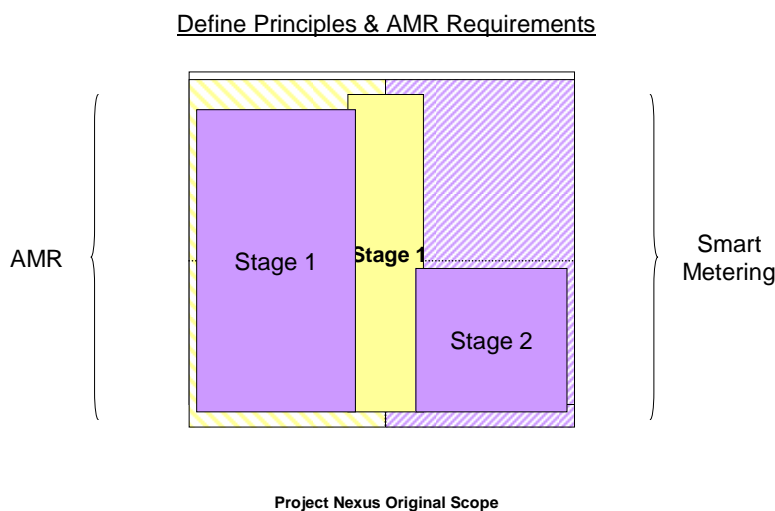
It was proposed in the Consultation Conclusions that the initial data management workshops would include a consideration of how the scope and nature of a Central Data Store for Smart Meters might impact supply point data management arrangements. Following PNAG discussions in the Preparation Stage it has been agreed that there is a high likelihood that these considerations will be within the scope of the anticipated Smart metering programme. In drafting the proposed approach and plans for the Requirements Development Stage it has therefore been assumed that the anticipated Smart metering programme will be key to defining data management arrangements. As a result it has been assumed that analysis only of relevant data management activities outside the scope of the Smart metering programme ('residual data management activities') will need to be considered and developed under UNC governance. The proposed approach includes how these activities could be progressed, recognising the importance of ongoing interaction between the programmes.

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5 Approach for topics to be progressed under UNC governance

The proposed approach for those topics to be further discussed under UNC governance is the ‘hybrid’ approach, which was supported by PNAG. The hybrid approach is a combination of planning options (a) and (b) as described in the PNAG Planning Options Paper, September 2009 (http://www.xoserve.co.uk/nexus_home.asp). The hybrid approach is based on defining a range of principles associated primarily with consumption and reconciliation related topics for all supply points and in parallel defining the detailed business rules and processes associated only with sites that will have AMR equipment.

The initial work conducted under the auspices of UNC governance would be ‘stage 1’, with any work following the Smart metering programme being ‘stage 2’. The following diagram illustrates the two stages of collating requirements:



Please note that the above diagram has not been drawn to scale.

Stage 1 of the Development of Requirements would be to define the detailed requirements to satisfy an AMR regime and in parallel define the principles on a range of topics relating to all supply points. A list of the initial topic areas is discussed in more detail under section 8.1. The first discussions with the industry would be UNC Workstream meetings to agree the scope and provisional timetable for topic work groups. These meetings would include a gap analysis between the recently approved Daily Metered Elective Regime UNC modification (224) and the Project Nexus Initial Requirements Register. They would also agree the scope of the topics for which principles will be developed (see section 8.1). Both of these initial scoping meetings would form the basis of the PNUNC Topic Workgroup Terms of Reference.

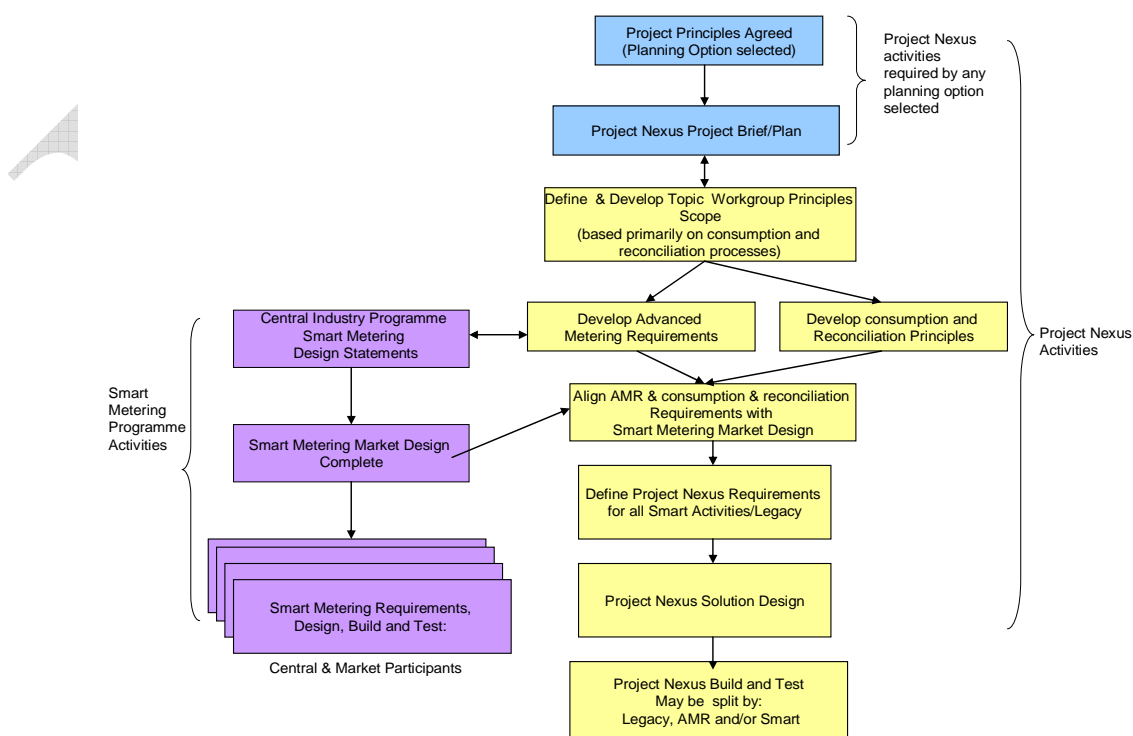
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There would be several checkpoints throughout the stage to ensure alignment, no gaps or duplication with or between the deliverables from the Smart metering programme. The approach supported by PNAG and illustrated below shows that there would be a continual interaction between the Smart metering programme and Project Nexus UNC Workstream developments. This is because both projects could provide input to the each other. However, as described in the Project Principles (section 6) it is intended that the development work conducted under UNC governance would not cover areas that it is currently assumed may be within the scope of the anticipated Smart metering programme nor seek to anticipate the outcome of or fetter the discretion of that programme.

The plan presented in this Brief reflects the activities based on the analysis that has been carried out by xoserve, i.e. those activities that could be progressed under UNC governance (primarily the 'green and amber buckets' discussed at PNAG – see 'Smart Scenario Planning Analysis Updated', as presented on September 7th).

To complete the Requirements Definition Phase, Stage 2 would be conducted following decisions regarding Smart metering market design.

The following diagram presented at PNAG on 5th October 2009 illustrates the assumed relationship between the anticipated Smart metering programme and Project Nexus UNC Workstream and Topic Work Groups.



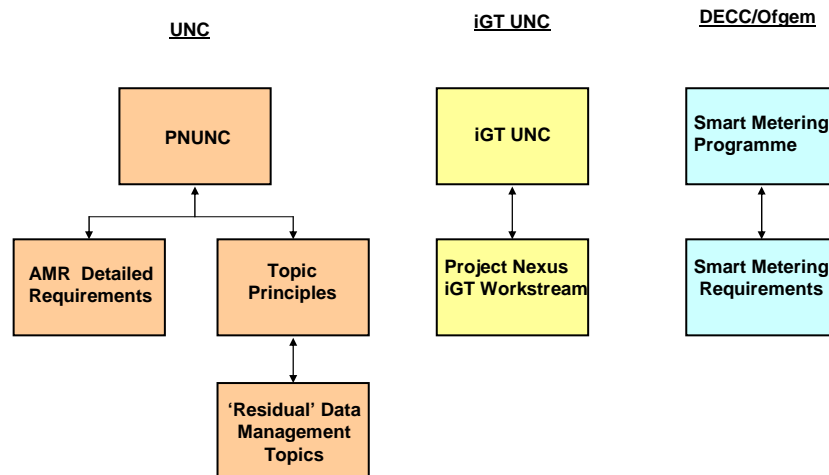
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6 Project Principles

The following are project principles that Project Nexus will adhere to:

- The primary purpose of the Development of Requirements Stage is to minimise the risk of xoserve and the industry making inefficient investments in systems; either building in unnecessary flexibility or scalability and/or developing inadequately flexible systems.
- Any drivers for investment in UK Link separate to new business requirements will be monitored by xoserve on an ongoing basis. The objective is to have concluded Requirements Definition in sufficient time to minimise the need for 'tactical' investments that do not demonstrably align to future service requirements.
- The definition of requirements should be informed by an understanding of requirements for the market as a whole to minimise the risk of xoserve's and the industry's investments being inefficient and to enable the overall impact on systems to be assessed for design, build and test.
- The proposed activity to be undertaken to assimilate AMR requirements in parallel with the development of high level principles for consumption and reconciliation activities, should be combined with a consolidated market view before design, build and test.
- Requirements development work is expected to be dependent on the anticipated Smart metering programme. It is expected that interim central industry milestones will deliver incremental certainty on Smart metering market design, allowing progress to be made in the full development of requirements
- Development work within the UNC framework will not foreclose any option for the Smart Metering design work being conducted under the Smart metering programme expected to be mobilised by DECC/Ofgem.
- The scope of the anticipated Smart metering programme should be closely monitored to understand the interdependencies between it and the work being conducted under UNC governance, to determine if, for example, Project Nexus should be one of the market readiness streams of the Smart metering programme or if there are Project Nexus dependencies upon that programme.
- If the anticipated Smart metering programme identifies dependencies on Project Nexus, there may need to be an assessment of the appropriateness and feasibility of phased design work to de-risk the overall risk of market readiness for Smart metering.
- Investment of industry effort, in the development and capture of requirements and principles, should be optimised.

7 Governance



NB 'Residual' Data Management Topics are those Data Management topics that are not considered within the Smart metering programme

The definition of requirements is expected to be conducted under three governance frameworks, as shown above; the UNC Modification governance process, under the Project Nexus UNC Workstream (PNUNC), the iGT UNC (for iGT SPA) and the Smart metering programme under the auspices of DECC.

The Project Nexus Advisory Group consisting of representatives from a cross section of the gas industry is expected to continue to meet, providing support and advice to xoserve in the management of the Requirements Definition activities.

It is assumed that governance arrangements for the anticipated Smart metering programme will enable a two-way interaction between the UNC and iGT UNC frameworks and the Smart Metering Programme. This interaction will allow information to flow between the two projects in respect of:

- Alignment of relevant Project Nexus requirements with appropriate Smart Metering Requirements as and when the information becomes available from each governance framework;
- Relevant UNC conclusions to be passed to the Smart metering programme. This may assist the Smart metering programme activities and remove some of them from their critical path.

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8 Proposed Terms of Reference (PNUNC & Topic Workgroups)

8.1 Scope

As described in the approach above the proposal, supported by PNAG, is that a range of principles for all supply points and detailed requirements for AMR supply points be developed in parallel.

PNUNC is asked to:

- Agree the proposed scope and approach
- Agree the proposed initial Project Plan and workshop timetable; this will be subject to change after the initial scoping meetings.

Sections 8.1.1 and 8.1.2 provide the input to the initial scoping workshops which will then form the basis of the individual Topic Workgroup Terms of Reference.

8.1.1 Topics for which principles should be developed

The table below shows the topics where principles could be progressed under UNC governance with a low risk of a significant amount of rework being required under a Smart metering market design process. The table includes the rationale for why the identified area of work is unlikely to require significant rework under the Smart metering programme.

Initial meetings have been proposed in the plan to agree the scope of the Topic Workgroups.

Work Area, Description	Rationale for inclusion
<p>Market Differentiation Set principles for whether the services to the gas market are differentiated, and if so, how (which attributes). Sets guidance for future Topic discussions. NB Initial meetings of the Market Differentiation Topic Workgroup have taken place. A Topic Workgroup report has been drawn up for ratification by PNUNC.</p>	<p>Principles not affected by Smart metering market model. A large number of consultation responses suggest a considerable interest in review in this area.</p>
<p>New connections for Advanced Metering sites Define the principles for the connection and first registration. The objective being to reduce the number and duration of Shipperless sites.</p>	<p>This will probably diverge for AMR and DM sites away from Smart Metered sites, due to the different industry players and technologies. The principles could be progressed for AMR and DM sites.</p>
<p>Supply Point Administration - Switching Timescales. Understand any constraints/issues surrounding the ability to change the current supplier switching timescales which would assist in defining the principles. Understand the appetite for change of switching timescales.</p>	<p>Understanding the constraints will assist the Smart Metering Programme in its ability to align/reduce the existing timescales. The output from the discussion could be fed into the Smart Metering design process.</p>

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Work Area, Description	Rationale for inclusion
‘Annual Quantity’ Review principles Review principles for setting Annual Quantity (or alternative data item).	Rules around the determination of AQ can be defined irrespective of whether the associated Meter Point has AMR or Smart Metering equipment installed.
Allocation Review high-level principles for utilising daily demand data. Review the feasibility and desirability of daily or within day balancing for sites which are currently NDM, but which are expected to have ‘DM’ capability in future.	The industry needs to take an early view of its intentions, regardless of responsibilities for data management.
Reconciliation of Smaller Supply Points Dependent on the outcome of the allocation discussion, review the reconciliation treatment of smaller supply points	Whilst detailed data flows cannot be determined, this decision is not dependent on market design, and may actually expedite future discussions, by helping to clarify the uses of reads from smart meters.
Reconciliation of consumption data from AMR equipment to metered consumption (AMR Drift) Review the process for dealing with drift between AMR and the physical meter.	This is not an issue for integrated smart meters, therefore needs to be progressed separately for the AMR population.
Retrospective updates Review principles for amending historic data items and whether this triggers transportation / energy balancing billing adjustments, and what validations are applied to those amendments.	This principle can then be applied to all markets regardless of metering market design or data flow arrangements
‘Residual’ Data Management Topics These are the data management issues that have not been considered in Smart metering programme. Review those key data-related themes which were identified during the consultation phase, and which other principle or topic workgroups will not logically cover. Dependent on the smart metering programme scope, examples may include ownership and custodianship of critical industry data, as well as quality assurance of data.	There were a large number of similar consultation responses in this area, and the AMR community may naturally diverge from Smart, due to the different industry models and business relationships. The scope definition is dependent on the smart metering programme scope.

In the ‘Project Nexus Planning Options Paper’ iGT Services had been included in the list above, however, the subject does not fit under the PNUNC governance and has therefore been moved from this section and placed under section 9.

‘Residual’ Data Management areas were not included in the ‘Project Planning Options Paper’ but were discussed briefly at PNAG as an activity that needs to be considered. It has therefore been included here for completeness.

8.1.2 Initial AMR Subject Areas

The following list is based on the consultation responses which formed the Initial Requirements Register (IRR). The original plan presented to PNUNC in April 2009 was also based on the IRR.

- Volume Capture

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- New Connections
- Meter Readings
- Retrospective Adjustments
- AQ & Allocation
- SPA
- Invoicing
- Market Differentiation (Sweep Up)
- Non-functional

These areas are subject to change after the initial scoping workshop, particularly after alignment with the recently approved DM Elective Modification.

Legacy and transitional arrangements would also be considered under these topic work areas.

8.2 Out of Scope

The following are considered as out of scope for the UNC Workstream:

- The definition of processes and responsibilities for the management of data associated with sites with Smart metering;
- The legacy and transitional data management arrangements that would fall under the Smart Metering category;
- Any rules which are covered under iGT UNC governance.

9 iGT SPA

9.1 Scope

A PNAG proposal supported by xoserve's Board is that the scope of Project Nexus should include an impact assessment of incorporating iGT SPA processes.

The principles for iGT SPA processes need to be developed under the auspices of the iGT UNC. The provision of the iGT SPA services is also potentially impacted by the anticipated Smart metering programme.

It is anticipated that the Project Nexus iGT SPA impact assessment would be conducted once the iGT SPA principles and relevant aspects of the Smart metering market design are defined. It has therefore not been included in the proposed project timeline.

10 Proposed Project Plan

This section sets out the proposed high-level plan to progress requirements definition for the within-scope topics. It also identifies dependencies and tables a straw man of a detailed workshop timetable. Sections 10.5 and 10.6 explain the rationale for the number of workshops and the effort required by the industry to achieve the relevant output.

Section 10.1 shows the Development of Requirements Stage, covering Stages 1 and 2. It also describes the dependencies and interactions between the topic workgroups and across the principle setting and AMR detailed requirement groups. Also included are the expected Smart Metering Programme dependencies as described in section 10.2.

10.1 Proposed Gantt Chart/Timeline (Development of Requirements)

The proposed high-level plan includes the Smart metering programme milestone assumptions as described in section 10.2 and shows the dependencies on the relevant Project Nexus activities. This proposed plan indicates the following high-level milestones:

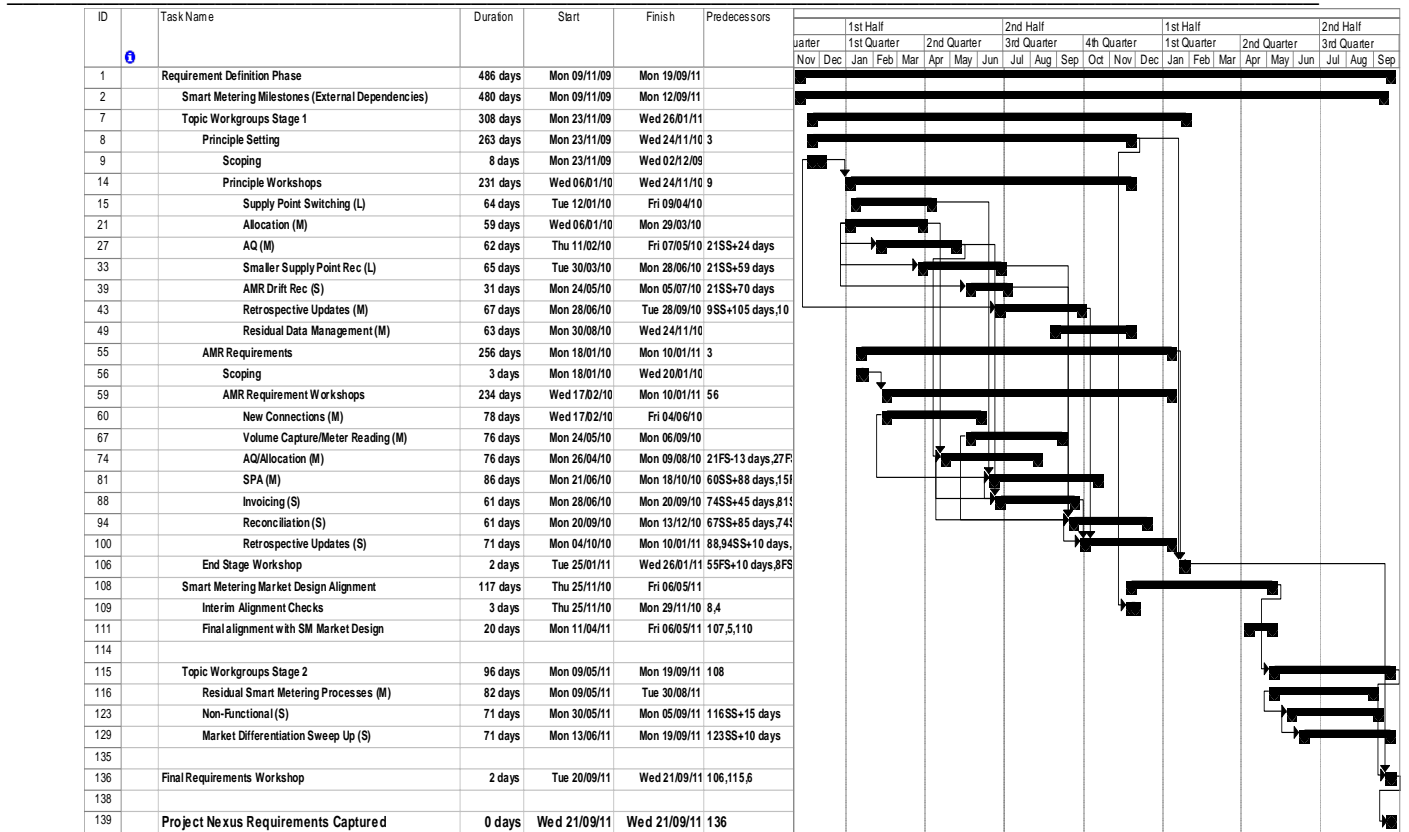
- | | |
|---|----------|
| • End Stage 1 (Principles defined & Detailed AMR Requirements) | 26/01/11 |
| • Alignment with Smart metering final design | 06/05/11 |
| • All Project Nexus Requirements Captured and aligned with Smart metering | 21/09/11 |

The Gantt chart shows the interdependencies between the topic areas. This includes expected dependencies between principle topics and AMR detailed requirement topics.

The Project Nexus activities post receipt of the detailed Smart metering market design have been based on the working assumption that 'Model C' will be the CCP model selected. Should this assumption not be valid, then the plan will need to be amended.

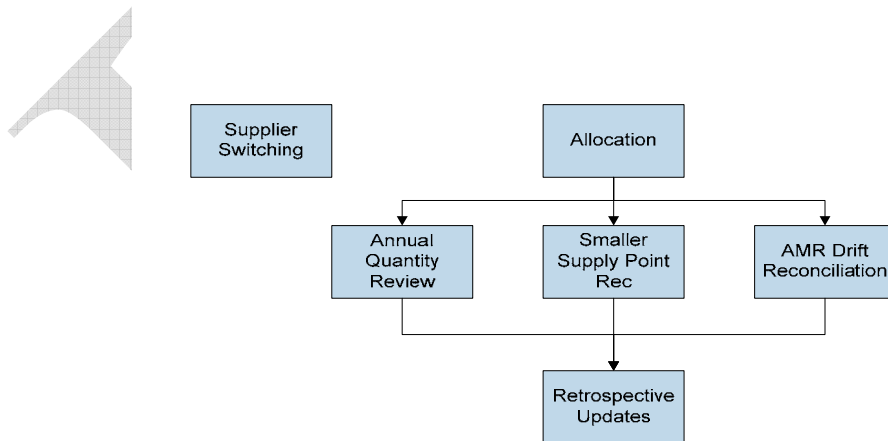
Please note that this proposed plan is subject to change after the initial scoping workshops.

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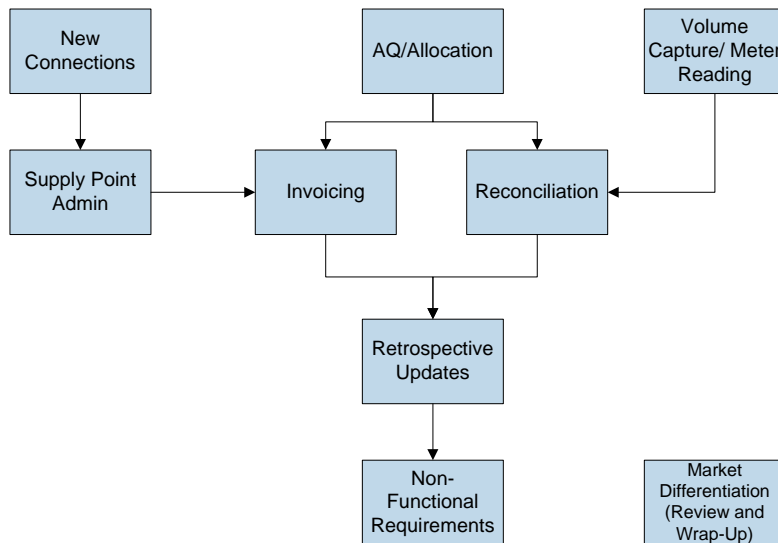
The following schematics shows in more detail the relationships between the topic workgroups:

Proposed Principle Workgroup Dependencies



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Proposed AMR Topic Dependencies



10.2 External Dependencies

It is assumed that as part of the rollout of Smart metering a programme will be established under DECC or Ofgem to plan and manage the work.

No announcements have yet been made regarding the scope or timing of this programme, so the following milestones are current planning assumptions which need to be reviewed on an ongoing basis.

These are assumed dependencies on the Smart metering programme which are separate to the UNC work.

Smart Metering Milestones	Description	Ratification by whom?	Date of Ratification	Impact on Project Nexus
DECC's Consultation Conclusions – Market Structure	High-level market structure defining roles and responsibilities for communications, MAM,MAP and roll-out. High-level functional requirements for Smart Metering. The intention for SME Market Smart/AMR arrangements. An Ofgem/DECC programme of work to progress market design over the following 6 months.	DECC	Nov 2009	A feed into UNC workshops, but not a 'hard' dependency, i.e. Project Nexus work can commence on the proposed approach without this input. Alignment of any relevant plans.

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High-level Smart Metering Market Design	Conclusion to the first mobilisation Phase of Ofgem/DECC Programme. High-level market design for Smart Metering including the scope and definition of each market role. High-level interfaces. A procurement and governance structure to deliver Smart Metering	DECC/ Ofgem	June 2010	A feed into UNC workshops as an interim milestone to assist in the alignment to Smart Metering. Not a 'hard' dependency. Project Nexus work can progress without this dependency. Project Nexus activity to be reviewed in light of smart metering programme scope and timelines.
Detailed Market Design	Interim design baseline. A detailed market design for Smart Metering, including business processes and interface definitions	DECC/ Ofgem	April 2011	Expected to be the input to the Smart Metering alignment at the end of Stage 2. It will be the main driver for the scoping definition of Stage 2 i.e. residual non-AMR requirements. This is a 'hard' dependency for matters that are within the Smart metering programme scope.
Code/SI definition	Final drafting of the new Smart Metering Code, licence conditions and legal framework.	DECC/ Ofgem	Sept 2011	Final checkpoint before entering into design. This is a 'hard' dependency.

10.3 Assumptions

The following is not necessarily a comprehensive list.

Assumption Description	Ratification		
	Who	What	When
Smart Metering Milestones are as stated in above.	DECC/Ofgem	Plan	Nov 2009
All industry interested parties fully engage in the process of capturing and agreeing high-level principles.	PNAG/PNUNC	Agreement to this approach	Oct 2009
High-level principles will be fed into the Smart Metering Market Design Process.	PNAG/PNUNC	Agreement to this approach	Oct 2009
	Smart Metering Programme	Agreement to this approach	Mar 2010
Smart metering programme will 'drip feed' into Project Nexus appropriate deliverables/information to assist the Stage 1 process as and when this information becomes available.	Smart Metering Programme	Scope of Smart Metering Programme	Jan 2010
Industry will be able to support Project Nexus and Smart Metering initiative simultaneously.	PNAG/PNUNC	Agreement to participation	Nov 2009
AMR 'population' is not included in the first phases of Smart Metering Market Design, making it viable to pursue AMR business rules and processes.	Smart Metering Programme	Scope of Smart Metering Programme	June 2010
The meter population will classified as Smart, AMR or DM.	Smart Metering Programme	Scope of Smart Metering Programme	June 2010
Smart Metering market Design will be available before the end of the Requirement Definition Phase allowing alignment/consistency check to take place.	Smart Metering Programme	Design of Smart Metering	April 2011
Note: The Stage 2 Project activities have been based on the planning assumption that the anticipated CCP model is based on Model C.	Smart Metering Programme	Design of Smart Metering Market Design	April 2011

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10.4 Risks

The following is not necessarily a comprehensive list.

	Description
1	There is a risk that the assumed Smart Metering Milestones are not valid which will mean that the dependent plans will need to realign which may cause a delay to any end-dates.
2	The assumption that all meters cannot be classified as Smart, AMR or DM. This could lead to confusion and rework.
3	Not all AMR Shipper/Supplier community contribute to workshops leading to an incomplete set of requirements and the added risk that alternate modifications are raised.
4	The first phases of Smart Metering Design could include the AMR population thus creating rework within the industry.
5	There is a risk that the dependencies outside the control of the project may put at risk the ability to deliver AMR required solutions for 2014.
6	There is a risk that the Smart Metering Design will not be available before the end of the Requirements Definition Phase which will either cause a delay in the development of AMR services or lead to an inconsistent approach to AMR and Smart Metering.
7	There is a risk that whilst capturing requirements for AMR only, the discussion may start to encroach on Smart Metering Programme.
8	The industry will not be able to support simultaneously both UNC work groups and Smart Metering Market Design leading to either an incomplete set of requirements or a delay in the collation of the AMR requirements and high-level principles.
9	There is a risk that the Smart metering programme is unable to 'drip-feed' deliverables/information into the Project Nexus Stage 1 process which could lead to a lengthier alignment to Smart metering design at the end of the stage. This could also lead to rework.
10	The lead time between reaching agreement and commencement of Smart Metering Design could be extended causing potential rework as the industry has moved on.
11	There is a risk that the approach adopted may lead to a position of non-delivery of requirements because of the dependency with the Smart Metering Programme, leading to inefficient use of expenditure and non-delivery of customer requirements.
12	There is a risk that the approach may not fully engage with all interested parties leading to a number of alternate UNC Modifications being raised which could cause rework and/or delay to the finalisation of the principles and requirements.
13	There is a risk that any delay in either Smart Metering Programme activities and/or any dependant Project Nexus could have a delay in the commencement of the roll-out of Smart Meter presently planned for 2013. This in turn will put at risk the Smart Metering roll-out completion of 2020).
14	The Stage 2 activities, the non-AMR requirements that have not been included under the Smart Metering Programme, have a planning assumption that this is based on the Model C CCP definition. If this assumption changes then there may be additional work under Project Nexus which could cause rework and a delay in implementation.

10.5 Proposed Topic Workshop Timetable

Appendix A shows the dates of the proposed workshops up to the end of 2010. Wherever possible dates already allocated to Project Nexus have been reallocated to the relevant Topic Workgroups. In addition consideration has been made to try to avoid days that have already been allocated to other industry meetings.

Please note that this timetable will be subject to change after the various scoping workshops.

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10.6 Industry Effort

The proposed timetable above takes the workshops to the end of Project Requirements Definition Phase. The following effort is based on the number of workshops that will be required to reach the end of Stage 1, i.e. to the point where the requirements and principles can be aligned with the final detailed Smart metering market design. The assumption is that the Smart metering design will be available in April 2011.

Wherever possible the proposed plan has been developed to ensure efficiencies. As discussed in the sections above there are several dependencies across the topic workgroups have been identified so that rework is kept to a minimum. Where it is appropriate multiple-day workshops have been proposed so that efficient use of resources can be made.

In developing the proposed plan each topic has been described as a small (S), medium (M) or large (L) work area. This is the principle that was adopted in developing the original proposed plan in April 2009.

The number of workshops for each category has been proposed as:

	Principle Workshops			AMR Detailed Requirements		
	No. of Workshops	No. of Topic Workgroups	Sub-Total No. of Workshops	No. of Workshops	No. of Topic Workgroups	Sub-Total No. of Workshops
Small	3	1	3	5	3	15
Medium	5	4	20	8	4	32
Large	7	2	14	n/r	0	0
Scoping	3		3	2		2
Sub-Total			40			49
End Stage			2			0
TOTAL No. of Workshops						91

The breakdown of the individual workshops expected to be required for different topic workgroups, depending on scale ('small' to 'large') is as follows:

Principle Workshops	Small	Medium	Large
As-is (Current Principles)	1	1	1
Present all Options		1	2
Discuss and Select Preferred Outcomes	1	2	3
Discuss and Approve Final Report	1	1	1
Total No. of Workshops	3	5	7

AMR Detailed Requirements	Small	Medium	Large
Initial Meeting	1	1	n/r
As-is	1	2	n/r
To-be	1	3	n/r
Penultimate	1	1	n/r
Final	1	1	n/r
Total No. of Workshops	5	8	n/r

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The above proposal has been based on past experience, including the recent PNUNC Market Differentiation Topic Workgroup. The number of AMR Requirements workshops is considerably fewer than the original April Topic Workgroup plan, this is because the earlier workshops will have established the principles which will form the basis of the AMR Detailed Requirement Topic workshops.

11 Project Nexus Requirements Definition Phase Deliverables & Pre-requisites

The scope of Project Nexus Requirements Definition Phase is the collation of industry requirements as discussed in the above sections. The table below shows the outputs of the Phase and indicates the currently assumed dependency on the Smart Metering Market Design (Rules, processes, data, changes in obligations, changes in contractual relationships, relevant changes in legislation) before the commencement of logical design.

Phase	Deliverable(s)	Industry Pre-requisites
Requirement Definition Phase	Business Requirements Document <ul style="list-style-type: none"> • Level 3 'To be processes' • Business Rules • Drafted UNC Modifications • Logical Data Model 	<ul style="list-style-type: none"> • Initial Requirements Register • Current Level 3 Process Maps
Design	Logical & Physical Design	<ul style="list-style-type: none"> • Business Requirements Document aligned with Smart metering market design • Industry Business Readiness Plan (this includes Smart metering)

12 Stakeholders

This section will contain detail in respect of stakeholders and their involvement in this stage of Project Nexus. The section will be completed in the next version of the Development of Requirements – Project Brief.

13 Recommendation

PNUNC on the 30th October 2009 is asked to approve, appropriate to their governance jurisdiction, the approach described in this paper. Subject to this approval, the Topic Workgroups would recommence in mid-November to consider the topic principles and detailed AMR requirements. The initial workgroups would consider the scope of each, to be reflected in the ToR and further workshop timeline.

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14 Appendix A

As of 23rd October 2009. Please note that this is subject to change after the initial scoping workshops.

Provisional/suggested dates for 2009/10 only. Timetable to be confirmed following Scoping Workshops.

* = adopts existing Project Nexus workshop date

<i>week commencing</i>	<i>Planned meetings, no date selected</i>	<i>Monday</i>	<i>Tuesday</i>	<i>Wednesday</i>	<i>Thursday</i>	<i>Friday</i>
16/11/2009		16	17	18	19	20
23/11/2009		23 * Principles scoping workshop @ PN UNC Workstream	24	25	26	27 Principles scoping workshop
30/11/2009		30	31 * Principles scoping workshop	1	2	3
07/12/2009		7	8	9	10	11
14/12/2009		14	15	16	17	18
21/12/2009		21	22	23	24	25 Bank Holiday
28/12/2009		28 Bank Holiday	29	30	31	1 Bank Holiday
04/01/2010		4	5	6 * Allocation Principles As-Is	7	8
11/01/2010		11	12 * Supply Point Switching Principles As-Is	13	14	15
18/01/2010		18 * AMR Requirements Scoping Workshop 1	19 * AMR Requirements Scoping Workshop 2	20	21	22
25/01/2010		25	26 * Allocation Principles Options 1	27	28	29
01/02/2010		1	2 Supply Point Switching Principles Options 1 & 2	3 * Supply Point Switching Principles Options 2	4	5

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08/02/2010		8	9	10	11 * AQ Principles As-Is	12
15/02/2010		15	16 Allocation Principles Preferred 1	17 New Connections AMR Topic ToR t-con	18	19
22/02/2010		22 Supply Point Switching Principles Preferred 1	23 Supply Point Switching Principles Preferred 2	24	25	26
01/03/2010		1	2	3 * AQ Principles Options	4	5
08/03/2010		8	9 * Allocation Principles Preferred 2	10 New Connections AMR Topic As-Is 1	11 New Connections AMR Topic As-Is 2	12
15/03/2010		15	16 Supply Point Switching Principles Preferred 3	17	18	19
22/03/2010		22	23 * AQ Principles Preferred 1	24	25	26
29/03/2010		29 Allocation Principles Final	30 Smaller Supply Point Rec Principles As- Is	31	1	2 Bank Holiday
05/04/2010		5 Bank Holiday	6	7 New Connections AMR Topic To-Be 1	8 New Connections AMR Topic To-Be 2	9 Supply Point Switching Principles Final
12/04/2010		12	13 * AQ Principles Preferred 2	14	15	16
19/04/2010		19	20	21	22 * New Connections AMR Topic To-Be 3	23
26/04/2010	AQ/Allocation AMR Topic ToR t-con	26 Smaller Supply Point Rec Principles Options 1	27 Smaller Supply Point Rec Principles Options 2	28	29	30

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03/05/2010		3 Bank Holiday	4	5	6	7 AQ Principles Final
10/05/2010		10	11 New Connections AMR Topic Penultimate	12	13	14
17/05/2010	AQ/Allocation AMR Topic As- Is 1&2	17	18 * Smaller Supply Point Rec Principles Preferred 1	19 * Smaller Supply Point Rec Principles Preferred 2	20	21
24/05/2010	Volume Capture/Meter Reading AMR Topic ToR t- con	24 AMR Rec Principles As- Is and Options	25	26	27	28
31/05/2010		31 Bank Holiday	1	2	3	4 New Connections AMR Topic Final
07/06/2010	AQ/Allocation AMR Topic To- Be 1&2	7 Smaller Supply Point Rec Principles Preferred 3	8	9	10	11
14/06/2010	Volume Capture/Meter Reading AMR Topic As-Is 1&2	14	15 * AMR Rec Principles Preferred 1	16	17	18
21/06/2010	SPA AMR Topic ToR t- con	21	22	23	24	25
28/06/2010	Retrospective Updates Principles As- Is; AQ/ Allocation AMR Topic To-Be 3; Invoicing AMR Topic ToR t- con	28 Smaller Supply Point Rec Principles Final	29	30	31	1
05/07/2010	Volume Capture/Meter Reading AMR Topic To-Be 1&2	5	6 AMR Rec Principles Final	7	8	9
12/07/2010	SPA AMR Topic As-Is 1&2	12	13	14	15	16

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19/07/2010	AQ/ Allocation AMR Topic Penultimate; Invoicing AMR Topic As-Is	19	20	21	22	23
26/07/2010	Retrospective Updates Principles Options; Volume Capture/Meter Reading AMR Topic To-Be 3	26	27	28	29	30
02/08/2010	SPA AMR Topic To-Be 1&2	2	3	4	5	6
09/08/2010	AQ/Allocation AMR Topic Final; Invoicing AMR Topic To- Be;	9	10	11	12	13
16/08/2010	Volume Capture/Meter Reading AMR Topic Penultimate; Retrospective Update Principles Preferred 1	16	17	18	19	20
23/08/2010		23	24	25	26	27
30/08/2010	Invoicing AMR Topic Penultimate	30 Bank Holiday	31	1	2	2
06/09/2010	Retrospective Updates Principles Preferred 2; Volume Capture/Meter Reading AMR Topic Final; SPA AMR Topic To-Be 3	6	7	8	9	10
13/09/2010		13	14	15	16	17
20/09/2010	Invoicing AMR Topic Final; Reconciliation AMR Topic ToR t-con; Residual Data Management Principles As-Is	20	21	22	23	24

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27/09/2010	SPA AMR Topic Penultimate; Retrospective Updates Principles Final	27	28	29	30	1
04/10/2010	Retrospective Updates AMR Topic ToR t- con	4	5	6	7	8
11/10/2010	Reconciliation AMR Topic As- Is	11	12	13	14	15
18/10/2010	SPA AMR Topic Final; Residual Data Management Principles Options	18	19	20	21	22
25/10/2010	Retrospective Updates AMR Topic As-Is	25	26	27	28	29
01/11/2010	Reconciliation AMR Topic To- Be; Residual Data Management Principles Preferred 1	1	2	3	4	5
08/11/2010		8	9	10	11	12
15/11/2010	Retrospective Updates AMR Topic To-Be	15	16	17	18	19
22/11/2010	Reconciliation AMR Topic Penultimate; Residual Data Management Principles Preferred 2	22	23	24	25	26
29/11/2010		29	30	1	2	2
06/12/2010	Retrospective Updates AMR Topic Penultimate	6	7	8	9	10
13/12/2010	Reconciliation AMR Topic Final	13	14	15	16	17
20/12/2010	Residual Data Management Principles Final	20	21	22	23	24
27/12/2010		27 Bank Holiday	28 Bank Holiday	29	30	31

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