Conclusion on DCC's delivery plan for SMETS1 Services
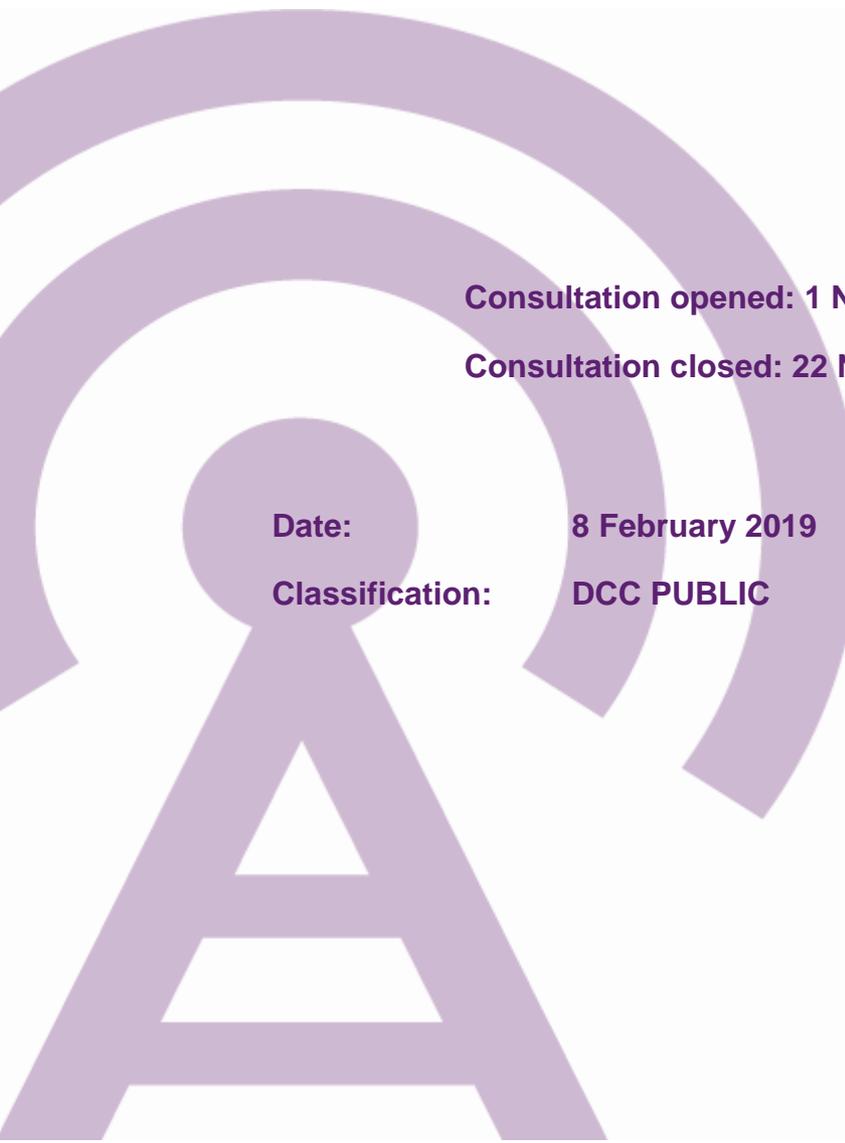
Consultation opened: 1 November 2018

Consultation closed: 22 November 2018

Date: **8 February 2019**

Classification: **DCC PUBLIC**

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1   Executive Summary

This plan has been developed by DCC as part of an update to the Licence Condition 13 (LC13) plan that was agreed by the Department for Business, Energy and Industrial Strategy (BEIS) in October 2017. On 1 November 2018 DCC consulted on changes to the plan the responses to this consultation have been reflected in the updated plan. This updated plan represents a confident position for delivery of capability in 2019 to support supplier obligations to enrol SMETS1 meters by the end of 2020

The plan provides for three SMETS1 capability releases:

- an Initial Operating Capability (IOC) on 26 May 2019 comprising the Aclara, Honeywell Elster and Itron meters currently operated by CGI IE;

- a Middle Operating Capability (MOC) on 30 September 2019, comprising the Honeywell Elster meters currently operated by MDS and, if directed by Government the Secure Meters group;

- a Final Operating Capability (FOC) on 12 December 2019 comprising Landis + Gyr meters currently operated by either BG SMSO, DXC or CGI IE and, if directed by Government, the EDMI meter group

In addition to these three releases, the migration of 'dormant' SMETS1 meters will be prioritised once the capability release supporting those meters has gone live. This is in line with a request from BEIS.

The important features of the plan which will enable migration of meters to proceed is as follows:

- Robust Testing – integration of multiple existing Smart Meter Systems Operators (SMSO) into the DCC system as well as migration of the currently installed SMETS1 meters requires a robust testing regime to prove the SMETS1 solution and ensure the required migration processes will support operation of these meters;

- User Testing – DCC will be providing user testing on the DCC User Interface Specification (DUIS) through Eligibility Testing and will allow end to end testing through Device and User System Testing (DUST) prior to go live of these operating capabilities. DCC will engage with energy suppliers on the migration solution which will provide Users with the opportunity to test their end to end systems and prepare for migration of devices. DCC will prove the DCC systems before migrating and operating meters in the new systems;

- Governance and legal framework – due to the currently installed population of SMETS2 meters the governance surrounding testing and live decisions is paramount to assuring quality of the DCC solution and that the migration of SMETS1 meters will not influence the functioning of meters already on the DCC system. As part of this a

detailed legal framework is being put in place to cover operation, testing and migration rights and obligations for both DCC and industry participants;

- Industry engagement – DCC have been actively engaging with industry on the design aspects of the SMETS1 programme. DCC has sought the active engagement of industry in the development of the content of the SEC subsidiary documents that are required to support the enrolment process. DCC will continue to seek input and support industry through the testing phases and enrolment of SMETS1 meters;

- Migration Support – DCC has developed plans that will provide the required resources for migration at scale which will allow energy suppliers to enrol both dormant and active meters in order to achieve their licence obligations relating to SMETS1 meters, whilst maintaining strict governance on quality;

- Dormant Prioritisation & Consumer focus – DCC is committed to protecting consumers and bringing their smart services back where these have been lost. As such DCC has set a wide-ranging testing regime to prove that the systems being put in place will allow users to operate SMETS1 as smart for their consumers and bring back smart services to those consumers who have lost them. DCC has set out how it will prioritise dormant meters as part of migration within the Transition and Migration Approach Document (TMAD);

- External Dependencies – DCC is cognisant of external dependencies to deliver the migration of SMETS1 meters such as, engagement on regulatory documents, provision of firmware from suppliers and migration forecasting/scheduling. DCC will be working with all users in the coming months to support industry participants in meeting their licence obligations such as completing eligibility testing, facilitating enrolment, the 12-month migration period, the 2020 enrolment deadline and operational licence conditions; and

- Security – A vital aspect of the SMETS1 programme is to continue to deliver a secure DCC system. Accordingly, security has been included in developing the system design and subsequent testing has been carefully considered to validate the system security.

DCC are confident that the above features result in a robust plan which will be delivered in the timeframes that will allow industry to meet their licence obligations. DCC has been progressing with System Integration Testing (SIT) testing for IOC which has provided numerous challenges, but these challenges are being overcome. After SIT testing there will be a period of User Testing Services (UTS) that will be available. DCC currently has five parties that have indicated that they want to start UTS when this capability becomes available after SIT is completed, and DCC is confident that UTS Interface Testing will be completed within the six-week timeframe that has been set out in this plan.

There has been good progress on finalising the commercial contracts for MOC and DCC is confident that all these contracts will be signed within the required timelines. The required service providers are already actively developing the updates to systems required for MOC

and the design of the procedures that will be required for MOC is progressing well. DCC will continue to review lessons that can be learnt through IOC testing to ensure that the enrolment of the MOC cohort is successful.

There has been good progress on finalising the commercial contracts for FOC and DCC is confident that all these contracts will be signed within required timelines. DCC service providers are already working collaboratively on the development of changes required for this capability release and the design of the procedures that will be required for FOC is progressing well. FOC will be able to benefit from the lessons learnt of both IOC and MOC and is already looking to build on the previous releases to ensure that the enrolment of the FOC cohort is successful.

DCC is confident that this plan in the form of the milestone table attached as Annex A and the Plan on a Page that is attached as Annex B are deliverable and will ensure that the milestones contained therein are managed closely in the BEIS Implementation Managers Forum (IMF) by means of the Joint Industry Plan (JIP).

2   Background

Licence Condition 13 of the Smart Meter Communication Licence provides the opportunity for the Secretary of State to direct the licence holder, being DCC, to produce plans for the purpose of trialling and testing of smart meters. Pursuant to this condition, the Secretary of State directed DCC to produce a plan to implement a SMETS1 Service for the enrolment of SMETS1 meters into DCC systems. DCC issued a consultation in response to the direction on 12 May 2017.

In October 2017 BEIS agreed the LC13 plan for DCC to implement a SMETS1 Service which would enrol SMETS1 meters into the DCC system and allow associated benefits to be realised. DCC has made good progress to date. This includes good progress in testing the integration of new and existing systems to support the first release of capability to support SMETS1 meters

In carrying out this plan a number of issues emerged that impacted when DCC can provide enrolment capability and it became apparent that DCC would not be able to meet the milestones set out in the LC13 plan that had been agreed by BEIS. This resulted in BEIS directing that DCC should reassess the LC13 plan in line with the provisions contained in LC13. On 1 November 2018 DCC published a consultation which proposed a revised delivery plan for SMETS1 services. This consultation concluded on 22 November 2018.

The consultation posed 5 questions and DCC received fourteen responses to the consultation from 6 large suppliers, 1 trade organisation, 2 Meter Asset Providers and 5 network bodies. Responses were wide ranging and helpful. DCC has summarised these responses into nine themes, some of which cut across a number of questions that were posed in the consultation.

The main proposed changes to the LC13 plan that were set out in the consultation, which have been reviewed and amended where appropriate in this response, were the following:

- Moving the Initial Operating Capability (IOC) to the end of May 2019, to allow for testing and migration preparation activities for the CGI Instant Energy meter group to complete and to complete the testing of the new Dual Control Organisation (DCO) – an internal DCC security control which provides additional security processes to SMETS1 meters populations on enrolment;

- To reflect the time required to complete technical and contractual preparatory activities for the enrolment of other meter groups, it was proposed to revise the delivery dates for enrolment capability of the Trilliant/DXC Landis + Gyr meter group to the end of October 2019, and the Secure meter group to the end of August 2019;

- The consequences of the proposed adjustments to the LC13 plan are that DCC would deliver the capability to enrol Secure meters before delivering the capability to enrol Trilliant/DXC Landis + Gyr meters. As a result, the MOC cohort would now comprise of Secure meters (subject to confirmation that they will be enrolled, following completion of commercial agreements), with Trilliant/DXC capability being

available as part of the FOC cohort (subject to dependency on Landis + Gyr meters having updated firmware); and

- The consultation also set out proposals for dormant meters on the basis that the Department of Business Energy and Industrial Strategy (BEIS) requested that DCC considers an approach whereby the migration of 'dormant' SMETS1 meters is prioritised once the capability release supporting those meters has gone live.

3   Consultation Conclusions

DCC has considered the comments that were received in response to the consultation which are attached as Annex C, as well as developments that have occurred since the consultation was issued that have the potential to influence the SMETS1 enrolment process. On the basis of this information, DCC considers it prudent to make further changes to the plan that was published for consideration in the consultation.

Go Live Dates

DCC has considered the go-live dates for IOC, MOC and FOC. DCC remains confident in the go-live date for IOC on 26 May 2019 and is committed to achieving this.

For MOC, DCC has recognised that a period of one month for Transition To Operations (TTO), which would include the required industry and BEIS governance to achieve agreement of go-live, is likely to prove insufficient. As a result, DCC considers it prudent to change the go-live date by one month to 30 September 2019. The new go live date will also ensure that the operational uplift process is complete. The governance process is important to ensure quality of delivery and an additional one month will provide greater confidence that operational acceptance is achieved and that the governance procedure through BEIS and the SEC Panel is completed prior to go-live. However, the SIT end date has not been changed and it is intended that SIT will finish by 31 July 2019.

DCC acknowledges the difficulties in achieving stable firmware upgrades for the FOC cohort. DCC has therefore decided to amend the plan to provide for an additional month for stable firmware version(s) to be provided. Early Integration Testing (EIT) has been changed to the period of June and July. SIT will run for three months from the beginning of August to the end of October. Similar to the extension of TTO for MOC, DCC has added two weeks to the TTO period with the go-live date for FOC being 12 December 2019.

Firmware Dependencies

For DCC to meet the milestones that are set out in this LC13 plan, DCC will require stable firmware versions of the Device Model Combinations (DMCs) that have been chosen to enter SIT six months prior to go-live. This six-month period comprises of EIT, SIT and Transition to Operations. DCC is therefore dependent on industry to meet the go-live date and DCC will be supporting industry in this process and in meeting their licence obligations. DCC is therefore of the opinion that provision of stable DMCs prior to the start of SIT is a prerequisite and it would accordingly be in the interests of the enrolment of SMETS1 meters and meeting this plan if this was included as a JIP milestone for both MOC and FOC.

Device and User System Testing

DCC has considered the responses to the consultation and is of the opinion that the requests to have Device and User System Test (DUST) available prior to the go-live dates for MOC and FOC, as is the case for IOC, are reasonable and it will be in the interests of suppliers and the enrolment of SMETS1 meters if this was to be done, such that they can work through any testing scenarios they require for their end to end systems before migrations ramp up. DCC will accordingly ensure that DUST is available one month prior to go-live for both MOC and FOC and this is reflected in the plan.

IOC SIT Progress

Testing for IOC is progressing and there have been some issues which have placed pressure on meeting SIT exit in the plan timelines. DCC is in the process of addressing these issues by investing resource in the form of time and additional manpower to identify solutions. SIT testing will continue and there is a risk that there could be further issues which could impact the date the SIT testing completes. However, DCC remains committed to ensuring that SIT testing will finish in the timeframes set out in the proposed LC13 plan and that it will not negatively influence the go-live date for IOC.

Migration Testing

DCC has been engaging with industry in the form of presentations and discussion at the SEC Panel's Testing Advisory Group (TAG), and at a greater level of detail with a working group of industry representatives drawn from the TAG, which has provided significant guidance on the scope of the migration testing required, which will inform the consultation position for the Migration Testing Approach Document (MTAD).

Consideration has been given to practical aspects of testing such as the quantities of DMCs required for testing. Furthermore, the MTAD Working Group explored the areas of interface testing and integration testing and their requirements for the MTAD. At time of writing the emerging scope of the MTAD is as follows:

i)   Dormant meter readiness testing, to confirm that the process for making SMETS1 dormant meters eligible for migration (a DCC responsibility) can be completed successfully;

ii)   Migration solution testing, to demonstrate that the DCC's system for migrating DMCs from their existing SMSOs to the modified DCC total system works; and

iii)   Migration Testing in DUST, whereby DCC will provision a migration capability to support users who wish their DMCs to be tested in DUST.

The above scope of migration testing is shown in the revised LC13 plan and relevant milestones will be confirmed through a consultation on the content of the MTAD which DCC aims to publish in late February 2019.

Device Model Combination Testing (DMCT)

DMCT will be the process by which DCC will ensure that DMCs installed in the field that have not been tested in SIT or have not successfully exited SIT are tested to ensure their interoperability with the DCC Total System. DCC has been developing a process for DMCT and will aim to consult with industry stakeholders on the amendments to SVTAD that cover this testing at the end of February 2019 which following incorporation of relevant updates will then be sent to BEIS on 5 April 2019 for approval and re-designation.

Initial proposals on the DMCT process include the following steps:

- Selection of relevant DMCs and scheduling of testing following appropriate consultation of stakeholders;

- DCC will run the DMCT tests within the UIT environment and report on progress appropriately, including management of testing issues. It is currently understood that test execution of each DMC will complete in five working days; and

- Following completion of testing, and once relevant Live Service Criteria have been met in respect of that DMC, DCC will request approval from BEIS that the DMC is added to the EPCL. Once on the EPCL, this DMC will be eligible for enrolment.

Testing Regulatory Documents

DCC will continue to develop the regulatory documents that are required for enrolment of SMETS1 meters into the DCC systems. Details of these documents are set out in Annex C which contains the DCC response to the industry responses to the consultation. The plan contains details of these documents and the dates that DCC aim to provide the documents to BEIS for approval and designation are as follows:

- MTAD, 5 April 2019;
- SCTAD, 12 April 2019; and
- SVTAD (updated to include DMCT), 5 April 2019

Prepayment Interface Device (PPMID) Firmware Update Capability

In line with the direction from BEIS, DCC will be uplifting the required service request variants to allow the update of firmware on SMETS1 PPMIDs as part of the MOC release. From this point, users will be able to include PPMID firmware in the previously existing service requests. It is assumed that no material changes will be required to the DUIS interface and as such no further requirement on users to re-take User Interface Testing or on DCC to provide for separate interface testing for users.

Updates to Assumptions, Dependencies and Risks

In addition to these changes to the plan, DCC proposes to amend the tables of assumptions, risks and dependencies, which is set out below. Annex C contains the DCC response to comments on the assumptions, dependencies and risks.

One of the respondents raised the question of whether DCC has considered the risk to consumers. DCC wishes to reiterate that the risk to consumers is a foremost consideration in everything that is done by DCC. There is careful consideration of all factors that might influence consumers at a programme level and therefore, as set out in our response at Annex C, DCC will not be raising this as a separate risk.

DCC proposes adding an additional dependency relating to the availability of finalised firmware versions for DMCs six months prior to go-live for MOC and FOC which has been referred to above:

ID	Proposed Capability	Description	Impact	Management Strategy
D9	MOC and FOC	DCC requires DMCs that have stable firmware six month prior to go-live to enable effective EIT and SIT	Failure to provide stable DMCs by this time will result in DCC being unable to enter SIT testing with all relevant devices, which will in turn delay migration.	DCC will continue to engage with Stakeholders to mitigate this risk. DCC proposes the addition of a JIP milestone for when suppliers need to provide stable DMCs to facilitate enrolment.

In order for MOC testing to proceed, a development testing environment will be required. DCC intends to use the UIT B testing environment that is available for IOC for MOC development testing. MOC testing is accordingly dependent on Users exiting UIT B to UIT A. DCC has added this dependency to the dependencies list as follows:

ID	Proposed Capability	Description	Impact	Management Strategy
D10	MOC	DCC is dependent on IOC users exiting UIT B and entering UIT A so DCC can use UIT B to do development testing	Failure to have this capability will cause a delay to the MOC timelines.	DCC will support Users to promote to UIT A in order to free up UIT B.

Annex C contains details of a risk that was identified in one of the responses which DCC agrees is a valid risk. DCC is accordingly adding the risk to the table of risks as follows:

ID	Proposed Capability	Description	Impact	Management Strategy
R12	All	Risk that delays to one cohort could have consequential impacts and delays on remaining cohorts.	Delays to subsequent cohorts and the migration process.	DCC will endeavour to maintain the timeframes set out in this plan and manage the interdependency between releases. DCC will report on progress via the BEIS Implementation Managers Forum on progress of this plan.

If suppliers are not efficient in the manner in which they migrate their devices, there is the potential that the majority of migrations will occur at the end of the migration period. This would place a sudden burden on the DCC system and the process as a whole. If this was to happen there is a potential that DCC would not be able to meet the migration demand requested by suppliers, as such we have added the following risk and will be managing through both system/process design and engagement with industry stakeholders:

ID	Proposed Capability	Description	Impact	Management Strategy
R13	All	Compressed migration period due to suppliers leaving their migration to the end	DCC being unable to meet demand for migrations and a consequent missing of regulatory milestones by energy suppliers	DCC will provide the capability to migrate devices. Suppliers need to ensure that they develop their systems and prepare for migration in a timely manner. DCC will engage with industry in order to provide support and avoid this from occurring.

DCC is of the opinion that the addition of the new milestones and changed milestones make this plan a viable plan that DCC will be able to adhere to. With the support of BEIS and a commitment to meeting the various licence obligations on all parties, DCC believes that they will be able to meet the milestones. DCC therefore encourages industry to continue to progress their systems and DCC will provide their support to suppliers in both the testing and the migration phases.

4 List of Assumptions, Dependencies and Risks

Assumptions

ID	Proposed Capability	Description	Impact	Management Strategy
A1	All	Energy suppliers are committing their resources to ensure their systems and deployed devices are capable of supporting the DCC SMETS1 service by the time that interface testing and migration can begin for each Capability Release.	Impact to migration schedule and the maintenance of smart services on churn.	DCC will continue and increase the stakeholder engagement sessions (bi-laterals and multi-laterals) to ensure alignment of plans. Energy suppliers will need to complete Eligibility Testing by end of May 2019 in order to operate dormant meters being enrolled in the DCC system. DCC are mindful that energy suppliers have their own regulatory obligations and BEIS will continue to manage industry stakeholders through engagement at (Implementation Managers Forum) IMF.
A2	MOC and FOC	The number of Device Model Combinations (DMCs) to be included in scope will remain constant and no late changes to firmware (either for configuration or otherwise) will impact the % of existing DMCs that are being testing through SIT.	Late change to firmware could mean the DMCs testing in SIT do not align to those in live and a reduced number of meters will be available to migrate at operating capability live. Additional effort would be required to cope with increased testing of these additional firmware versions in DMCT process.	Engagement with suppliers managing SMETS1 meters via SMSO to understand portfolio and get sight of any issues in advance.
A3	MOC and FOC	Any changes to SSDs required for MOC and FOC are achievable in project timeframes and do not require significant rework from those set out for IOC.	Additional programme effort would be needed to support large scale changes to SSDs for MOC and FOC.	SSDs have been created with all releases in mind but focussed on IOC and engagement with all stakeholders will be required to review impact

ID	Proposed Capability	Description	Impact	Management Strategy
A4	MOC and FOC	The plan assumes no material changes to the DUIS interface through MOC and FOC and as such Interface Testing is only performed for IOC.	Additional time would be required in MOC and FOC plans to account for Interface Testing if required.	Design process will minimise the need for DUIS interface changes that impact service users which are required due to agreed Service Request Variants being used in all capabilities
A5	MOC (MDS/Honeywell Elster)	The variations between CSP processes and capabilities for the Honeywell Elster meters have minimal impact on development and testing timescales.	Impact to the development and testing timelines.	Continued engagement with CGI IE and the CSPs to manage out the assumption and any associated risk before SIT entry.

Dependencies

ID	Proposed Capability	Description	Impact	Management Strategy
D1	All	Energy Suppliers will deploy the firmware upgrades required for Device Model Combinations that are undertaken in SIT, so that the maximum % of the deployed fleet is capable of migration at the earliest opportunity post-release.	Migration can only be undertaken for those devices that have successfully passed formal DCC testing.	DCC will continue the stakeholder engagement sessions (bi-laterals and multi-laterals) to ensure alignment of plans and BEIS will continue to manage industry stakeholders through engagement at IMF.
D2	All	DCC requires 2 Users in role of Import/Gas supplier to complete eligibility testing in order to exit Interface Testing phase.	Late completion of interface testing may impact operating capability Go-Live.	Stakeholder engagement and early sight of design documents to support suppliers in preparing for eligibility testing. DCC are also aware that Large Suppliers have regulatory obligations as set out in SVTAD

ID	Proposed Capability	Description	Impact	Management Strategy
D3	All	Firmware images for dormant meters will be required from the installing supplier to upgrade the meters from SMETS1 compliant to an agreed EPCL entry.	Without firmware images DCC will not be able to facilitate getting dormant meters to the correct version on the EPCL and may reduce rate of migration.	Discussion with installing suppliers to facilitate and provide firmware in accordance with the revised plans. DCC are aware that suppliers have licence obligations to facilitate enrolment.
D4	All	Detailed information will be required from energy suppliers and their existing SMSOs on dormant meters in order to plan the migration of these meters in to the DCC system.	Reduced rate of migration if dormant meter information is not available.	DCC engaging suppliers and SMSOs through migration forums and TMAD development to help understanding of requirements prior to dormant migration scheduling.
D5	All	Meters and IHDs required for testing are available to be procured in timescales of this plan.	SMETS1 E&A testing is planned on real devices and any challenges in sourcing these will impact timelines.	DCC working with meter manufacturers to source meters and relevant configuration.
D6	MOC and FOC	BEIS Consultation conclusion to proceed on Secure and EDMI cohorts.	Without BEIS approval DCC will not be able to provide a Service to users of these cohorts.	DCC to provide full detail on cost, technical, security and delivery confidence to BEIS in order to facilitate their consultation process.
D7	MOC	Secure firmware update required by start of April to support enrolment, ready for early integration testing at that point.	Impact to the development and testing timelines, and associated risk assessment. Could lead to the release moving back after that of L&G and Elster (MDS).	Continue engagement with Secure and key stakeholders.
D8	FOC (L+G)	L+G firmware upgrade required to support this meter cohort being enrolled in DCC in 2019.	Impact to the development and testing timelines, and associated risk assessment.	Continued engagement with key stakeholders.

ID	Proposed Capability	Description	Impact	Management Strategy
D9	MOC and FOC	DCC requires DMCs that have stable firmware six month prior to go-live to enable effective EIT and SIT	Failure to provide stable DMCs by this time will result in DCC being unable to enter SIT testing with all relevant devices, which will in turn delay migration.	DCC will continue to engage with Stakeholders to mitigate this risk. DCC proposes the addition of a JIP milestone for when suppliers need to provide stable DMCs to facilitate enrolment and BEIS will continue to manage industry stakeholders through engagement at IMF.
D10	MOC	DCC is dependent on IOC users exiting UIT B and entering UIT A so we can use UIT B to do development testing	Failure to have this capability will cause a delay to the MOC timelines.	DCC will support Users to promote to UIT A in order to free up UIT B and BEIS will continue to manage industry stakeholders through engagement at IMF.

Risks

ID	Proposed Capability	Description	Impact	Management Strategy
R1	All	There is a risk that other DCC live services, programmes and Energy Suppliers may impose constraints on the use of shared environments, resulting in challenge to IOC plan timelines.	Impact to testing and release timelines.	Cross-programme coordination through DCC portfolio management. Continued progress reporting and information updates to all stakeholders through SEC and BEIS transitional governance arrangements.
R2	All	There is a risk that the S1SP integration with DCO will take longer than planned due to the SIT testing yet to complete.	Impact to release timelines.	Maximise use of early integration testing prior to entry into the SIT phase.

ID	Proposed Capability	Description	Impact	Management Strategy
R3	All	Testing is in progress for DCC capabilities, as such there is a risk of unknown testing issues arising between now and completion of test phases.	Impact to release timelines.	Close management of testing issues through triage to resolution and use of subject matter experts across existing supply chain and DCC infrastructure to find and solve issues quickly.
R4	All	Documentation surrounding certain aspects of testing (UTSAD, MTAD, SCTAD) are still to be designated and engagement with industry may require changes to planned testing in order to meet requirements.	Impact to testing and release timelines.	Early engagement on testing with industry via SEC Testing Advisory Group to include requirements in both plans and documentation prior to consultation.
R5	All	Finalisation of the remaining commercial agreements are required to support capabilities and will need to be agreed in a timely manner to allow development to progress.	Impact to testing and release timelines.	Close engagement with prospective S1SP and other supply chain members and multilateral engagement on progress for key contracts, with adequate support from DCC technical and commercial resources.
R6	MOC and FOC	Prior to enrolment existing systems and firmware will take longer to be upgraded than planned for.	Impact to migration timelines and the implementation of appropriate security controls.	Work with the existing suppliers and their supply chains to ensure that there is a commitment to upgrade systems and firmware in time for the Release schedule to be achieved. Work with the SSC to ensure the risk assessment is reviewed in a timely fashion.
R7	FOC	The ESME firmware upgrade could have an unintended or unforeseen impact on the Head End System or Comms Hub.	Impact to migration and the implementation of appropriate security controls.	Maximise key stakeholder contribution to the firmware design and seek earliest opportunities for testing.

ID	Proposed Capability	Description	Impact	Management Strategy
R8	All	DCC's service providers may not be able to deliver software within the required quality and/or time requirements.	Impact to testing and release timelines.	Oversight of PIT testing and assurance of entry criteria being met before entry into regulated test environments. Use of other test environments for early integration testing. Use of commercial incentives where possible.
R9	All	Risk of delays due to coordination between large number of parties.	Impact to testing and release timelines.	Include collaboration clauses within development and enduring contracts. Establish end to end reviews of business scenarios to ensure service levels are maintained in live operations. Have robust system of integration capability for each release.
R10	All	Risk of insufficient DCC capacity.	Impact to testing and release timelines.	DCC governance arrangements to review programme structure and resource allocation. Improved reporting to BEIS and Ofgem on structural or process issues that may present risk to the programme objectives.
R11	All	Risk of insufficiently incentivised service providers.	Impact to testing and release timelines.	Review contracts to ensure supply chain is appropriately accountable for their deliverables and services

ID	Proposed Capability	Description	Impact	Management Strategy
R12	All	Risk that delays to one cohort could have consequential impacts and delays on remaining cohorts.	Delays to subsequent cohorts and the migration process.	DCC will endeavour to maintain the timeframes set out in this plan and manage the interdependency between releases. DCC will report on progress via IMF on the progress of this plan and BEIS will continue to manage industry stakeholders through engagement with IMF.
R13	All	Compressed migration period due to suppliers leaving their migration to the end	DCC being unable to meet demand for migrations and a consequent missing of regulatory milestones by energy suppliers	DCC will provide the capability to migrate devices. Suppliers need to ensure that they develop their systems and prepare for migration timeously.

# Annex A – SMETS1 delivery plan – Milestone Table

DCC proposes that the following milestones form the adjusted SMETS1 delivery plan to which it must undertake all reasonable steps to implement; in accordance with Condition 13 of the Licence (should the Secretary of State approve the plan). It is expected that these milestones are included within the Joint Industry Plan for management via the BEIS Implementation Managers Forum (IMF).

ID	Milestone/event	Description	Date
	IOC User Testing Services Start (DUST)	This milestone represents the point at which this service is available.	15 Mar 19
	IOC SIT complete	This milestone represents the point at which DCC concludes the system integration test phase for IOC.	15 Mar 19
	User Testing Services Start (Eligibility Testing)	This milestone represents the point at which UTS entry criteria has been met.	15 Mar 19
	IOC Device and User System Testing	This milestone represents the point at which this service is available.	15 Mar 19
	MTAD Submission to BEIS	DCC formally submits MTAD (Migration Test Approach Document) to BEIS post consultation.	05 April 19
	SVTAD Submission to BEIS	DCC formally submits SVTAD (SEC Variation Testing Approach Document) for SMETS1 Services encompassing amendments to facilitate DMCT to BEIS post consultation.	05 April 19
	SCTAD Submission to BEIS	DCC formally submits SCTAD (System Capacity Test Approach Document) to BEIS post consultation.	12 April 19
	IOC Migration Solution Test Completion	This milestone represents the point at which all the solution tests and end of cycle regression testing are complete and meet the criteria for the migration solution.	15 April 19
	MOC SIT start	This milestone represents the point at which DCC starts the system integration test phase for MOC.	1 May 19
	IOC User Testing Services Interface Test Completed	This milestone represents the point at which UTS Interface Testing exit criteria has been met.	3 May 19

Note: Eligibility Testing for IOC Go-Live – Enduring Eligibility Testing Service remains open.		
IOC Systems Capacity Testing Completed	This milestone represents the point at which System Capacity Testing exit criteria has been met.	3 May 19
IOC Device Model Combination Testing	This milestone represents the point at which this service is available.	6 May 19
IOC Dormant Meter Readiness Test Complete	This milestone represents the point at which DCC has tested the ability to update dormant devices to enable enrolment.	10 May 19
IOC Migration Service Testing (in DUST)	This milestone represents the point at which this service is available.	26 May 19
IOC Pending Product Combination Testing	This milestone represents the point at which this service is available.	26 May 19
IOC Live	**DCC operational readiness to provide a SMETS1 service for Aclara, Honeywell Elster and Itron meters currently operated by CGI IE**	**26-May-19**
MOC SIT complete	This milestone represents the point at which DCC concludes the system integration test phase for MOC.	31 Jul 2019
MOC Migration Solution Test Completion	This milestone represents the point at which all the solution tests and end of cycle regression testing are complete and meet the criteria for the migration solution.	31 Jul 2019
MOC Dormant Meter Readiness Test Complete	This milestone represents the point at which DCC has tested the ability to update dormant devices to enable enrolment.	31 Jul 2019
MOC Device Model Combination Testing (DMCT)	This milestone represents the point at which this service is available	31 Jul 19
FOC SIT start	This milestone represents the point at which DCC starts the system integration test phase for FOC.	1 Aug 19
MOC Systems Capacity Testing Completed	This milestone represents the point at which System Capacity Testing exit criteria has been met.	12 Aug 19
MOC Device and User System Testing	This milestone represents the point at which this service is available.	30 Aug 19

MOC Migration Service Testing (in DUST)	This milestone represents the point at which this service is available.	30 Aug 19
MOC Pending Product Combination Testing	This milestone represents the point at which this service is available	30 Sep 19
PPMID Firmware Update	Milestone represents the point at which functionality to allow update of firmware to PPMIDs will be available as a core service	30 Sep 19
MOC Live	**DCC operational readiness to provide a SMETS1 service for Honeywell Elster meters currently operated by MDS and, if directed by Government the Secure meters group**	**30 Sep 19**
FOC SIT complete	This milestone represents the point at which DCC concludes the system integration test phase for FOC.	31 Oct 19
FOC Device Model Combination Testing (DMCT)	This milestone represents the point at which this service is available.	31 Oct 19
FOC Migration Solution Test Completion	This milestone represents the point at which all the solution tests and end of cycle regression testing are complete and meet the criteria.	31 Oct 19
FOC Dormant Meter Readiness Test Complete	This milestone represents the point at which DCC has tested the ability to update dormant devices to enable enrolment.	31 Oct 2019
FOC Systems Capacity Testing Completed	This milestone represents the point at which System Capacity Testing exit criteria has been met.	15 Nov 19
FOC Device and User System Testing	This milestone represents the point at which this service is available.	15 Nov 19
FOC Migration Service Testing (in DUST)	This milestone represents the point at which this service is available.	15 Nov 19
FOC Pending Product Combination Testing	This milestone represents the point at which this service is available.	12 Dec 19
FOC Live	**DCC operational readiness to provide a SMETS1 service for Landis + Gyr meters currently operated by either BG SMSO, DXC or CGI IE and, if directed by the government the EDMI meter group**	**12 Dec 19**

Annex B – Overall Plan on a Page
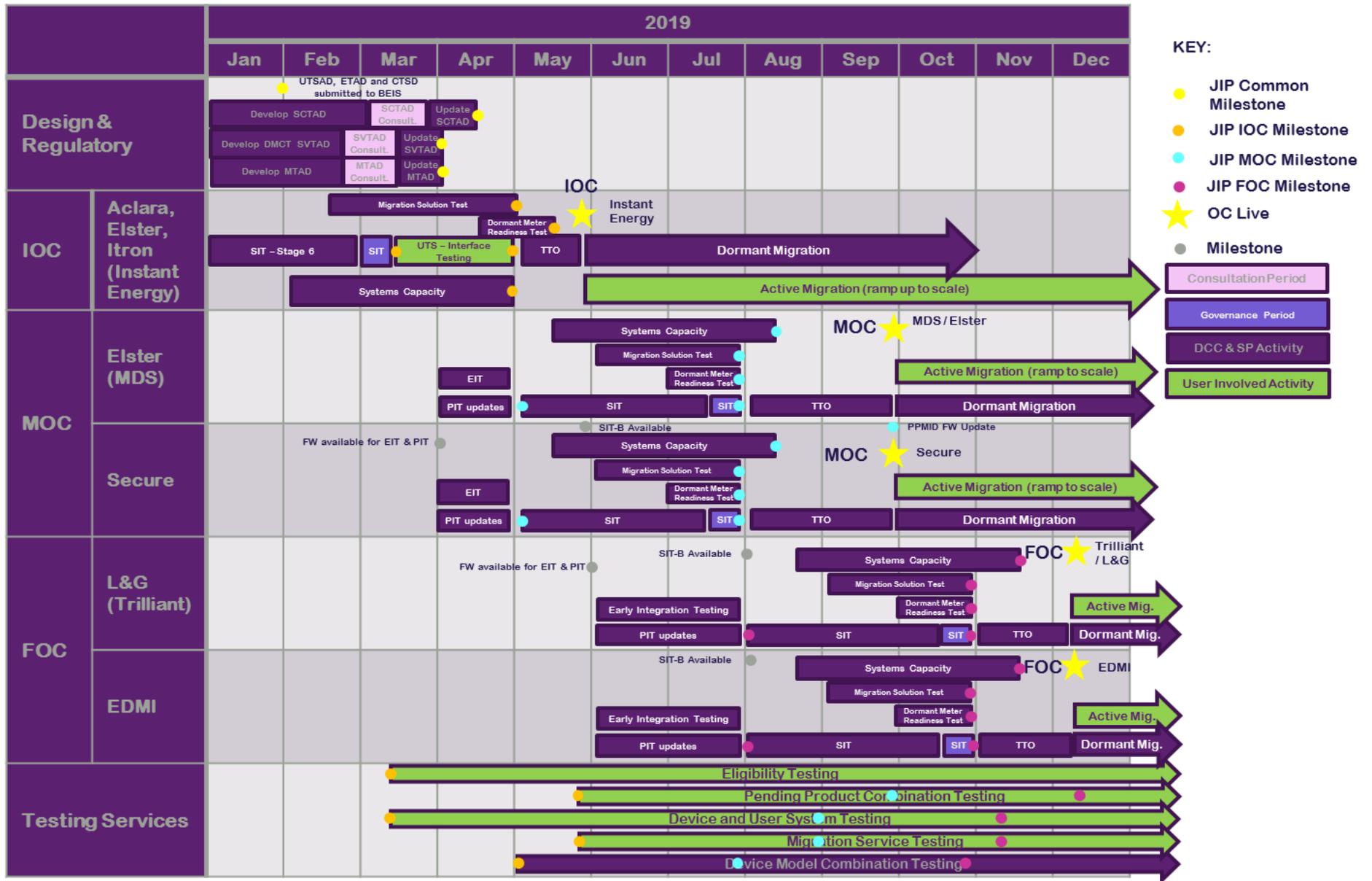
Annex C Detailed Consultation Responses

This section summarises the consultation responses and sets out the DCC response to the nine themes that DCC identified as common across all five of the questions that were posed in the LC13 plan consultation. It also serves as a response to the first two questions, which relate to the timetabling and the readiness of regulatory documentation to support SMETS1 Services.

Q1	**Please provide your overall views on the revised timetables for each of the three Operating Capabilities.**

and

Q2	**Please provide any comments you have on DCC's remaining activities to develop regulatory documents to support the SMETS1 Services. For example, whether there are dependencies on document content which impact user readiness which aren't already identified? Please provide a rationale for your views.**

Maturity and interdependency of documents required for Enrolment

Summary of Consultation Comments

Respondents raised a concern that documents, specifically the (MTAD), and the System Capacity Testing Approach Document (SCTAD) would only be approved after system integration testing and migration testing has commenced. There was also a concern that the delays in producing the Transition and Migration Approach Document (TMAD) and the potential of further changes to TMAD, would negatively impact the ability of suppliers to develop their systems as well as a concern that there will be further iterations of the TMAD document for IOC and then future cohorts. The child documents, which are the documents that the TMAD requires DCC to produce, are in the process of being developed and have not been consulted on. Concerns were raised that the absence of finalised documents would influence the ability of suppliers to develop their systems.

Respondents further raised concerns relating specifically to the SMETS1 Supporting Requirements (S1SR). The S1SR has been baselined and there have been previous iterations of the baselined version. Concerns were raised in responses that the Technical & Business Design Group (TBDG) might make further versions available which raises concerns that parties would not be ready for key testing and migration milestones. Industry further raised concerns whether the documents produced for IOC would have to be changed and adapted to make provision for MOC and FOC.

Respondents raised concerns that the S1SR would not cover all device specific behaviours and that enrolled meters would operate in a manner that is materially different.

Respondents requested details as to when the Enduring Testing Approach Document (ETAD) and Common Test Scenarios Document (CTSD) and User Testing Services Approach Document (UTSAD) would be available.

DCC Response

The DCC response has been divided into three parts, Testing Documents, Migration and Design.

Testing Documents

DCC acknowledges that the test approach documents that are required to support the enrolment of SMETS1 meters are still in production. The SVTAD for SMETS1 services has been designated into the SEC. The CTSD, ETAD and UTSAD were submitted to BEIS for re-designation and approval on 04 February 2019. We intend to submit the SCTAD for approval to BEIS on 12 April 2019. DCC has published the conclusions to the UTSAD, ETAD and CTSD as part of the report to the Secretary on the DCC website. The SVTAD will be updated to include the process for DMCT, which is set out in greater detail below in the DMCT section.

Industry and the SEC Panel have been involved in the development of these testing documents and we will continue to engage with industry to ensure that suppliers are suitably prepared to complete testing obligations and to migrate devices.

The overarching design of the DCC SMETS1 solution is for DCC Users to operate SMETS1 devices via the DCC User Interface (as defined in the DCC User Interface Specification – DUIS) in the same way that they operate SMETS 2 devices. The SMETS1 Supporting Requirements (S1SR) document is the SEC subsidiary document where operational aspects of the SMETS1 solution that require specific management via the DUIS interface are recorded. The S1SR was first baselined (via the transitional governance arrangements) in February 2018 when the fundamental and material operation requirements of the SMETS1 solution design were stable. Through the development and test phases of the IOC solution DCC, certain device specific behaviours (that is where device operation varies in some respect from the way that DUIS envisages that a Service Request will be constructed) have become apparent and these have subsequently been added to updated baselined versions of the S1SR. The final version of S1SR for IOC is due to be consulted on and baselined to support the end of SIT (when all such device behaviours will have become apparent). The same process will be followed where such device behaviours are identified for MOC and FOC.

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Migration

On 21 December, DCC submitted TMAD to BEIS for consideration on whether to designate TMAD into the SEC. A copy of TMAD as well as DCC's response to industry's response to the consultation is available here. DCC does not anticipate that there will be further amendments required to TMAD for IOC and therefore anticipates that the version that will be designated by BEIS will be the final version, subject to the outcome of the BEIS consultation and decision to designate the TMAD.

TMAD sets out that various supporting documents that will set out important information relating to TMAD will be produced by DCC. These documents commonly referred to as 'child documents' are:

- Migration Authorisation Mechanism. The Migration Authorisation Mechanism covers details for the weekly migration process whereby DCC undertakes Migrations each day based on each Responsible Supplier's Migration Authorisations;

- Migration Scaling Methodology. DCC will apply a scaling methodology if the overall energy suppliers' demand for migration (measured as SMETS1 Installation per day) exceeds planned capacity;

- Migration Reporting Regime. The Migration Reporting Regime set out the routine reporting that DCC will provide regarding TMAD related activities. There will be public reporting on overall outcomes including information on DCC's overall migration activity against its Demand Commitments made within the Migration Scheduling Methodology; and

- The Error Handling and Retry Strategy will provide guidance relating to the manner in which DCC and Users should react when an error occurs, within the DCC Total System, during the period where a SMETS1 Installation is being migrated from an existing Smart Meter System Operator (SMSO) to DCC.

On 21 December 2018 DCC consulted on the content of the Migration Approach Mechanism. DCC is in the process of finalising the consultations for the remaining child documents and published the consultation on 01 February 2019.

MTAD is required under the SVTAD to set out any supplementary rights and obligations involved in migration testing. The purpose of migration testing is to demonstrate that the individual systems and processes of the modified DCC Total system used to enrol SMETS1 systems can work together and interoperate as required with SMSO and User systems. The requirements around the actual process of migration are set out elsewhere, notably in TMAD. When IOC occurs, migration will take place using the Low Volume Tool. On 14 June the Bulk Volume Tool will become available, which will allow the ramp up to capacity.

There has been significant engagement and consultation in the preparation of all of the documents that are required for a successful migration and enrolment of SMETS1 meters. This was specifically done to ensure that industry, and especially suppliers, have confidence with the content of the document and are satisfied that the document will allow them to meet their obligations.

Testing

DCC has been engaging with industry in the form of presentations and discussion at the SEC Panel's Testing Advisory Group (TAG), and at a greater level of detail with a working group of industry representatives drawn from the TAG, which has provided significant guidance on the scope of the migration testing required, which will inform the consultation position for the MTAD.

Consideration has been given to practical aspects of testing such as the quantities of DMCs required for testing. Furthermore, the MTAD Working Group explored the areas of interface testing and integration testing and their requirements for the MTAD. At time of writing the emerging scope of the MTAD is as follows:

i) Dormant meter readiness testing, to confirm that the process for making SMETS1 dormant meters eligible for migration (a DCC responsibility) can be completed successfully;

ii) Migration solution testing, to demonstrate that the DCC's system for migrating DMCs from their existing SMSOs to the modified DCC total system works; and

iii) Migration Testing in DUST, whereby DCC will provision a migration capability to support users who wish their DMCs to be tested in DUST.

The above scope of migration testing is shown in the LC13 plan and relevant milestones will be confirmed through a consultation on the content of the MTAD which DCC aims to publish in late February.

Date of DMCT/DUST/PPCT going live

Summary of Consultation Comments

Respondents raised concerns that DMCT/DUST/PPCT was proposed to only be available for MOC at the same time as MOC goes live and this will therefore impact the ability of suppliers to undertake tests. This is different to IOC where they will be available prior to go-live. This concern will also be applicable to FOC.

DCC Response

DCC would like to point out that this does not only relate to MOC, but the same concerns would be applicable to FOC. DMCT will be the process by which DCC will ensure that DMCs installed in the field that have not been tested in SIT or have not successfully exited SIT are tested to ensure their interoperability with the DCC Total System. DCC has been developing a process for DMCT and will aim to consult with industry stakeholders on the amendments to SVTAD that cover this testing at the end of February which following incorporation of relevant updates will then be sent to BEIS for approval and re-designation at on 5 April.

Initial proposals on the DMCT process include the following steps:

- Selection of relevant DMCs and scheduling of testing following appropriate consultation of stakeholders

- DCC will run the DMCT tests within the UIT environment and report on progress appropriately, including management of testing issues. It is currently understood that test execution of each DMC will complete in five working days.

- Following completion of testing and once relevant Live Service Criteria have been met in respect of that DMC, DCC will request approval from BEIS that the DMC is added to the EPCL. Once on the EPCL, this DMC will be eligible for enrolment.

DCC plans to issue an RFI in February to inform selection of DMCs to be taken into DMCT testing and for this to commence from start of May for the DMCs within IOC and subsequent RFIs will be issued to enable DCC to agree the scope of DMCT for DMCs in MOC and FOC.

We aim to have DUST available from 4th March 2019 for IOC, however, the parameters that will dictate the manner in which DUST functions have not been finalised as this will be set out in the ETAD document. We have taken note of the desire to have DUST available one month prior to go-live for MOC and FOC and have accordingly undertaken to make DUST available for these cohorts one month prior to go-live in line with these requests. Suppliers will not be able to test with MOC

devices e.g. Secure/Honeywell via Telefonica until these DMCs have exited MOC SIT and are added to the EPCL/CPL. MOC suppliers will be able to start DUST (once they have completed Eligibility Testing) which will run alongside the IOC DMCs which have exited SIT (i.e. those DMCs which they might gain via churn). The same considerations apply to FOC.

PPCT is an enduring Testing Service provided by DCC but initiated and driven by suppliers, this will be available from 26th May 2019 for IOC and suppliers will have the opportunity to propose new firmware versions which they wish to deploy in the field. For MOC and FOC, the PPCT service will not be available until the EPCL has been approved by BEIS for each capability release. The EPCL will be a combination of what will be tested in DMCT and SIT for the relevant capability release. Any firmware update beyond this baseline will be tested in PPCT.

The commencement of DMCT for each capability release will only be possible once SIT has been completed as the purpose of DMCT is a process that will allow those devices that either do not exit SIT or that have not been selected for SIT to be added to the EPCL. Similarly to SIT, the scope of DMCT will not vary by capability release.

Programme Contingency

Summary of Consultation Comments

Respondents noted a concern that there are likely to be issues that arise which will influence the LC13 plan, but the plan does not contain any contingency for the time and consequential delay that could result from any issues. A further concern was raised that further testing might be required where problems are identified.

DCC Response

Engagement with stakeholders and prospective service providers has given DCC a greater degree of insight into the risks that could potentially jeopardise the delivery of the LC13 plan. The plan remains dependent on the continued support and engagement of SMETS1 customers and Service Providers.

At this stage it is not proposed that contingency is built into this plan. However, DCC will be monitoring progress and reporting to SMDG and IMF members on the progress of the enrolment of SMETS1 meters on a monthly basis. These forums will be used to agree minor changes to the plan such as extending a JIP milestone, or adjusting scope, where there is clear rationale to do so. Where a delay to a capability release challenges subsequent releases or the ability of DCC to deliver all releases by the end of 2019 DCC expect BEIS to ask DCC for an updated LC13 plan.

IOC System Integration Testing (SIT) testing has provided difficulties that have the potential to cause delays to the IOC cohort. However, DCC has been working hard to rectify the issues that have arisen and has been re-evaluating the SIT testing plan to ensure that the LC13 go-live milestone is achieved despite these issues. SIT will be exited when agreed by the SEC Panel and is expected to be 15 March 2019.

Commercial agreement for the various cohorts.

Summary of Consultation Comments

Responses raised concerns over the commercial agreements that would be required for cohorts. There were considerable concerns in this regard, but a common theme related specifically to a concern that the commercial arrangements with Secure and MDS are not completed and it would therefore not be possible to meet the MOC timeframe, specifically that active migration would begin in August 2019.

DCC Response

IOC

The majority of the service providers for IOC are under contract with DCC, DCC continues to engage with Vodafone and we anticipate signature of a contract in the middle of March 2019. The majority of the contract has been agreed and we do not envisage any changes that will materially impact on IOC.

MOC

DCC has been involved in significant negotiations to finalise the MOC plan for the enrolment of meters. This has led to a greater understanding of the enrolment of MOC and the process that will be undertaken to enrol this cohort.

In the plan that was consulted on by DCC, provision was made for one month of Transition to Operations (TTO). TTO includes the necessary governance to allow the go-live date to be achieved. DCC has reviewed the date and is of the opinion that a one-month period for TTO is insufficient and accordingly the go-live date has been extended by one month to the end of September to allow for this and effective industry governance process. The SIT completion date remains unchanged.

For DCC to meet the milestones that are set out in this LC13 plan, DCC will require stable firmware versions of the DMCs that have been chosen to enter SIT six months prior to go-live. This six-month period comprises of EIT, SIT and Transition to Operations. DCC is therefore dependent on industry to meet the go-live date and DCC will be supporting industry in this process.

Secure:

DCC is currently in the final stages of negotiating a contract with Secure which includes an implementation plan that supports a go-live at the end of September. DCC anticipates final contract signature on 12 February 2019 and there is high confidence that this will be achieved.

MDS/Telefonica:

DCC is currently negotiating contracts to support migration of the MDS cohort. Time and materials contracts are being put in place to progress designs ahead of negotiating full service contracts. DCC anticipate these to be complete in early 2019.

FOC

The change of go-live for MOC has a consequential impact on the go-live date for FOC as DCC has decided to ensure that there is a two-month period between the cohort go-live days. This release date also allows for the provision of DUST ahead of go-live and reflects an understanding that L+G cannot deliver the updated DCO firmware to previously assumed timescales.

Most service providers for FOC are under contract with DCC. There are contracts with some service providers that still need to be finalised, but we are confident that these contracts will be finalised. A Vodafone contract is required to be in place for FOC, and DCC are confident that this will be in place as the contract is due to be signed in the coming weeks.

In terms of technical capabilities, a significant component of the FOC plan is the availability of an updated firmware from L&G that are compliant to DCC systems. DCC will only be able to adequately proceed with SIT testing once the final version of this firmware is made available by the meter manufacturer and this plan is accordingly dependent on the availability of these firmware image. DCC will be working with service providers to ensure that firmware upgrades are made available within the required timelines and have highlighted this dependency on the plan as a milestone and we acknowledge that there is a possibility that this would impact on the October 2019 go-live date which was consulted on. DCC acknowledges that one month of TTO is insufficient for FOC for the reasons set out for MOC and DCC accordingly proposes to extend TTO by two weeks. In order to accommodate the potential impact of the availability of firmware updates and the extension of TTO, the date for go-live has been changed to 12 December 2019.

Dormant meters and DCC capacity

Summary of Consultation Comments

Respondents identified that there must be sufficient capacity to be able to communicate with and test dormant meters becoming smart again. There were also concerns on the impact of the prioritisation of these meters against the obligation to roll out the meters. This is linked to the overall capacity of DCC for the enrolment process.

DCC Response

DCC is responsible for planning, testing and scheduling the migration of dormant meters into the DCC Total System. The TMAD document that was submitted to BEIS on 21 December 2018 for designation into the SEC sets out the approach to migration.

Dormant meters are smart meters that the Responsible Suppliers are able to communicate with remotely, but the Responsible Supplier does not have a contract with a smart meter system operator for the specific smart meter. As consumers are not receiving the benefits of Smart Meters that have been installed, it is the view of BEIS that it is desirable that the enrolment of these meters is prioritised in order to restore Smart functionality as soon as possible.

DCC will begin active meter migration as soon as possible and will co-ordinate this with dormant meter migration. Dormant meter migration will be prioritised from the beginning of the migration process. If suppliers are ready to begin their meter migrations, the dormant meter migration should not impact on their ability to meet the licence condition obligations.

The SMETS1 Migration Solution is based on a planning assumption of 50,000 installations per day (a SMETS1 Installation "Means a SMETS1 CHF installed in respect of an Energy Consumer's premises, the SMETS1 GPF which is part of the same SMETS1 CH, the SMETS1 ESME with which the SMETS1 CHF can communicate, and the set of other Devices..." see TMAD SMETS1 Installation defined term for completeness). Industry has not been able to provide DCC with a projected requirement of the number of installations that will be required. This number is based on technical analysis with our service providers who are building and testing the Migration solution, based on the functional and non-functional requirements and our understanding of the wider DCC total system. Our planning assumption is reinforced through the following areas:

- The Operating at Scale programme which provides monitoring systems and load balance across the DCC Total System to ensure resilience across live operations;

- Proactive demand management, using the service request forecasts to plan and manage demand over the DCC Total System (both SMEST1 and SMETS2 meters);

- For each cohort (IOC/MOC and FOC) there will be a piloting phase following capability release live, whereby DCC will, through steady ramp up of meter numbers, prove DCC's target rate of migration; and

- DCC have commissioned a research paper which examines the migration solution for potential bottlenecks and capacity risks. DCC have considered the conclusions of this paper are addressing the risks identified in the paper. These plans will include upgrading the technical infrastructure;

A Migration Simulation Tool will further enable DCC to plan for various scenarios of how demand could materialise using scenario planning. DCC will work with energy suppliers to understand industry constraints and preferences, their plans for migration, when they intend to start and finish, their target migration rates and ramp up profiles. The primary basis for this will be through the Migration Forecast template and discussions with each energy supplier. This information will be consolidated into a master DCC Migration Profile and allow DCC to do more accurate scenario planning which will help inform views of energy supplier demand through to the end of the SMETS1 enrolment programme (2020), DCC resourcing in Operations and infrastructure scalability. We believe that once migration is proceeding, we will be able to analyse the daily migration requirements and adjust the number of daily installations that are available accordingly.

An important impact on DCC's migration capacity is the availability of resources. Without the input of supplier's Migration Forecast which set out their plans for migration and consequently will give DCC a view of demand v system and operational capacity, DCC is faced with considerable uncertainty in its ability to establish the amount of resource that it requires. If as a result of this uncertainty, DCC overestimates the demand requirements of industry, there is a risk that DCC could spend money on resources to increase its capacity beyond that which is necessary. We are of the opinion that the amount of 50 000 will be sufficient to meet initial capacity and if necessary we will be able to increase this capacity in order to ensure that there will always be sufficient capacity to enable suppliers to migrate their devices. With the migration period of 12 months, the capacity of DCC should provide the opportunity for Suppliers to migrate all of their devices.

Firmware and the development of new versions of firmware

Summary of Consultation Comments

Respondents raised concerns about the impact of future firmware upgrades and the impact that firmware upgrades will have on DMCs. There was particular concern raised by respondents that there would be a firmware update for devices within the IOC cohort shortly before enrolment commences which would be after a significant amount of testing has taken place.

DCC Response

Four DMCs have been selected for SIT following discussion with energy suppliers and meter manufacturers regarding their projected firmware update plan. DCC envisaged these 4 DMCs would equate to an EPCL baseline for enrolment covering at least 80% of DMCs deployed. However, the extension to the duration of SIT has understandably led to an increase in the likelihood of a change to suppliers projected firmware update plan. Therefore, DCC will work with suppliers to understand any variation to these plans, following the submission of DPLs, and agree it will be proposed in the changes to the SVTAD to support DMCT that additional DMCs will be tested in DMCT for each capability release.

DCC will document the DMCT process in the SVTAD, which will be re-consulted on later this year, and we are confident that a solution will be developed that will allow DMCs with additional firmware versions to be included in the EPCL prior to enrolment. Please refer to the section on DMCT above for details of DMCT. Where there are subsequent firmware upgrades, following the completion of DMCT for each capability release, suppliers will have the opportunity to test the new firmware version in PPCT. TMAD, which is currently in the process of being designated into the SEC by the Secretary of State, sets out the obligations on parties to upgrade Dormant Meters to an applicable Firmware version. DCC anticipates upgrading Dormant Meters to a firmware version which will form part of an Eligible Product Combination and meet the requirements of the SMETS1 Supporting Requirements.

User Testing

Summary of Consultation Comments

The issue of UTS testing and how will it cater for a large number of user testers was raised by respondents. A desire for a common issues forum to quickly address issues for both UTS and during Migration Testing was also raised. Respondents also would like to see more detail of the approach to testing by DCC.

DCC Response

We are currently of the view that UTS eligibility testing for SMETS1 enrolment will follow the same model as is used in UEPT for SMETS2 which will provide for the concerns raised in the responses. Details will be set out in the UTS testing guidance document to be published one month prior to the opening of the UTS test phase.

The testing documents that are being developed by DCC, will provide further clarity and details on the testing process. For DMCT, DCC will be consulting on changes to the SVTAD which will set out the process and procedures that are related to DMCT. Details of the DMCT process is set out above.

Shortened length of MOC and FOC testing

Summary of Consultation Comments

Respondents raised concerns that the length of MOC and FOC testing phases are shorter than the corresponding testing in IOC. Further concerns related to the potential that testing could be impacted by resource availability (due to school holidays) and there is no time to deal with any issues.

DCC Response

DCC is of the opinion that the experiences and information that is gained during the testing for IOC will reduce the amount of testing that will be required for later cohorts for the following reasons:

- The increased scope and quality of automation for SIT testing will reduce test execution times and increase the frequency of regression testing, meaning issues should be identified earlier and categorised more accurately. Consequently, the amount of time that is needed for testing will be reduced.

- The introduction of Early Integration Testing within the Pre-Integration Testing (PIT) timelines will reduce the configuration and connectivity issues previously experienced in SIT.

- Testing processes are being optimised through evolution and continuous improvement.

- As there is no planned change to user interface at MOC and FOC, there is no requirement on energy suppliers to retake eligibility testing and no requirement on DCC to complete a User Interface Testing phase for MOC and FOC.

EPCL

Summary of Consultation Comments

Respondents noted that the EPCL related deadlines are important as they initiate the need to enrol meters to meet their licence obligation, and some additional EPCL specific milestones were requested by some respondents. There is also concern as to how devices will be included in the EPCL, as there is a potential that firmware updates will be necessary to enable incorporation of devices onto the DCC system which might result in a bottle neck on SIT, PPCT and DMCT and a resultant bottleneck which will in turn delay enrolment of devices.

DCC Response

Devices will only be incorporated into the EPCL upon approval by BEIS, either at each capability live or through DMCT. DMCT provides the opportunity for additional DMCs to be added into the EPCL. The DMCT process is set out above.

The Pending Product Combinations Testing Service is a new enduring Testing Service provided by DCC but initiated and driven by Service Users. It enables Service Users to bring Device Model Combinations that comprise all or part of an existing entry on the EPCL. Both PPCT and DMCT will be automated processes and which will not be lengthy and DCC does not consider that this will result in bottlenecks.

Proof of interoperability

What does proof of interoperability actually entail?

DCC Response

On 27 November 2018 this milestone was achieved. DCC were able to demonstrate the interoperability between two simulated suppliers in their SIT environment in real time, this also demonstrated the use of the service request required to support prepayment top-up. As the IOC capability comes to end of SIT Stage 5 DCC have now tested the vast majority of service requests for these devices, prior to including the DCO in the final stage of SIT in early 2019.

Q3	Do you agree with the assumptions, dependencies, risks set out in the consultation? Please provide a rationale for your views. Are there others which have not been included?

Summary of Consultation Comments

Two general responses were received that related to question 3, with the remainder of the comments referring directly to the assumptions, dependencies and risks set out in the consultation. The tables below set out the responses that were received on the assumptions, dependencies and risks. Where the comment column is blank, we either did not receive a comment or the comment agreed with our stated assumption, dependency or risk. The two general comments were:

A respondent raised a concern on whether gaining responsible suppliers would be required to be ready to operate from day one in order to be compliant with their licence conditions.

A response indicated that there may be situations where the SMSO completes an OTA firmware upgrade to a device, which will result in the SMSO believing that the device is 'active', but the Registered Supplier may still believe that it is not.

DCC Response

We are not in a position to comment on whether a supplier would be required to operate from day one in order to be compliant with their licence conditions and our understanding is that it is for Ofgem to determine.

One of the child documents to TMAD is the Migration Reporting Regime which will set out the meters that have been migrated. Suppliers will be able to use these reports to determine which of their active and dormant meters have been migrated. Once the migration of a dormant meter is complete the Registered Suppliers will be able to communicate with the device and with details contained in the Migration Reporting Regime.

Assumptions

ID	Proposed Capability	Description	Comments from Responses	DCC Response
A1	All	Energy suppliers are committing their resources to ensure their systems and deployed devices are capable of supporting the DCC SMETS1 service by the time that interface testing and migration can begin for each Capability Release.	Concerns were raised that some of the parties who are not directly involved with a capability release will not have sufficient resources. There was also a concern raised that there needs to be sufficient time to test and obtain competent resources.	Supplier licences set out their obligations relating to SMETS1.
A2	All	The number of Device Model Combinations (DMCs) to be included in scope will remain constant and no late changes to firmware (either for configuration or otherwise) will impact the % of existing DMCs that are being testing through SIT.	A response indicated that they would try to minimise the number of firmware upgrades however the potential for new firmware has not been taken into consideration.	This is answered in question 1 under the firmware subheading. Those DMCs outside of SIT testing will be processed through DMCT.
A3	MOC and FOC	Any changes to SSDs required for MOC and FOC are achievable in project timeframes and do not require significant rework from those set out for IOC.	This is a risk not an assumption. It is not known what changes will be required for MOC and FOC.	Currently this is an assumption, but once there is evidence to the contrary, DCC will consider changing this to a risk.

ID	Proposed Capability	Description	Comments from Responses	DCC Response
A4	MOC and FOC	The plan assumes no changes to DUIS interface through MOC and FOC and as such Interface Testing is only performed for IOC.	Fair assumption	DCC assumes that there will be no DUIS changes as a result of the inclusion of the PPMID firmware functionality and will be engaging with industry to confirm
A5	MOC (MDS/Honeywell Elster)	The variations between CSP processes and capabilities for the Honeywell Elster meters have minimal impact on development and testing timescales	Fair assumption. May not be true for WAN coverage which is expected to be covered in service capability testing	
-	All	Installing suppliers will be completing firmware upgrades to both dormant and active meters that will bring them to a SMETS1 compliant firmware state, and it is assumed that this firmware is already listed on the proposed Eligible Product Combination List	Concerns raised that installed meters will not be at the same Firmware version and as a result it would not be possible to upgrade Firmware. There is a requirement that installing suppliers will have to upgrade the firmware for dormant meters. This appears to contradict the TMAD consultation, which stated that DCC would lead on any firmware upgrades for dormant meters firmware as an installing supplier.	In order for a meter to be enrolled on the DCC system, the meter must be on a firmware version on the EPCL. We agree with the comment that DCC will lead on the upgrading of firmware for dormant meters. This assumption was drafted to reflect the need to have the firmware of dormant meters upgraded to a version on the EPCL. The obligations are set out in TMAD and we accordingly believe that this assumption is no longer required. Accordingly, we will delete this assumption.

Additional concerns raised:

There is no mention of migration rates for winter and autumn where rates are likely to slow down.

DCC Response

The entire migration period is for an entire year and it is considered that this should be sufficient time for all meters to be enrolled.

Dependencies

ID	Proposed Capability	Description	Comments from Responses	DCC Response
D1	All	Energy Suppliers will deploy the firmware upgrades required for Device Model Combinations that are undertaken in SIT, so that the maximum % of the deployed fleet is capable of migration at the earliest opportunity post-release.	It would be sensible to ensure that device combinations that are in SIT are prioritised for any necessary firmware upgrades. This doesn't necessarily mean that SIT devices will be the maximum percentage of deployed devices. Depending on the timing and orchestration of DMCT, it may be more advantageous to select device combinations on different criteria. OTA Firmware timing has not been factored into IOC, so if needed for 'config' or other reasons, this will introduce a delay.	Device combinations chosen for SIT are done to ensure that a high proportion of the devices are capable of enrolment. DMCT provides the opportunity to allow more device combinations to be enrolled. The version of Firmware that is available is at the forefront of consideration of enrolment. DMCT and PPCT are the means by which additional devices can be added to the EPCL.
D2	All	DCC requires 2 Users in role of Import/Gas supplier to complete eligibility testing in order to exit Interface Testing phase.	A view was expressed that there should be a minimum of three users, including two active and two dormant.	This forms the current subject matter of the consultation on the UTSAD and is being considered as part of that response. Any changes will be set out in that conclusions document and we will therefore not provide a detailed response to this comment as we do not wish to constrain the development of the UTSAD and other documents.
D3	All	Firmware images for dormant meters will be required from the installing supplier to upgrade the meters from SMETS1 compliant to an agreed EPCL entry.		

ID	Proposed Capability	Description	Comments from Responses	DCC Response
D4	All	Detailed information will be required from energy suppliers and their existing SMSOs on dormant meters in order to plan the migration of these meters into DCC	Suppliers should provide all relevant data where appropriate, but likely that the SMSO will hold more accurate and up-to-date inventory data for the dormant asset.	The obligations on Suppliers and the SMSO are set out in the TMAD document.
D5	All	Meters and IHDs required for testing are available to be procured in timescales of this plan	Some, or most, SMETS1 devices are no longer in production. There is an obvious dependency on the availability of test devices and this needs to be discussed further with the relevant suppliers (or other party) for each device combination.	We are in the process of having these discussions in order to ensure that we have the correct devices for testing.
D6	MOC and FOC	BEIS Consultation conclusion to proceed on Secure and EDMI cohorts.		
D7	MOC	Secure firmware update required by start of March to support enrolment, ready for early integration testing at that point.		
D8	FOC (L+G)	L&G FW required to support L&G meter cohort being enrolled in DCC in 2019		

Respondent's New proposed dependency.

A response indicated that there was a dependency on the provider of its Meter Data Management and Smart Metering Gateway (SMG) adapter capability to allow operation of enrolled and adopted meters. The provider has in turn a dependency on final design to deliver its signed off specification for their adaptor before they start design and build. This is expected in December 2018. From then it is expected it to take 6 months to design, build and test this component based on past experience to ensure it is fully functional and assured to operate enrolled and adopted meters in volume.

DCC Response

The period for enrolment is 12 months and DCC is of the opinion that from the information provided, the User should be able to complete the enrolment of its devices within the 12-month period.

Risks

ID	Proposed Capability	Description	Comments from Responses	DCC Response
R1	All	There is a risk that other DCC live services, programmes and Energy Suppliers may impose constraints on the use of shared environments, resulting in challenge to IOC plan timelines.		
R2	All	There is a risk that the S1SP integration with DCO will take longer than planned due to the SIT testing yet to complete.		
R3	All	Testing is in progress for DCC capabilities, as such there is a risk of unknown testing issues arising between now and completion of test phases		
R4	All	Documentation surrounding certain aspects of testing (UTSAD, MTAD, SCTAD) are still to be concluded upon and engagement with industry may require changes to planned testing in order to meet requirements.	A response commented that additional focus would be required to mitigate any impact that occurred as a result of this risk.	DCC notes the concern that has been raised but is of the opinion that any changes will not be significant and will not cause any delays.
R5	MOC and FOC	Finalisation of the remaining commercial agreements are required to support capabilities and will need to be agreed in timely manner to allow development to progress		
R6	FOC	Prior to enrolment existing systems and firmware will take longer to be upgraded than planned for.		

ID	Proposed Capability	Description	Comments from Responses	DCC Response
R7	FOC	The ESME firmware upgrade could have an unintended / unforeseen impact on the Head End System or Comms Hub.		
R8	All	DCC's service providers may not be able to deliver software within the required quality and/or time requirements.		
R9	All	Risk of delays due to coordination between large number of parties		
R10	All	Risk of insufficient DCC capacity		
R11	All	Risk of insufficiently incentivised service providers		

Additional proposed Risks with DCC comment

ID	Proposed Risk	DCC Comment
-	Service Provider incentives – this should have been addressed prior to awarding contracts and signing agreements. Changing contracts after the event is always difficult unless the only incentive being considered is based upon 'reward' rather than 'penalty'. This raises concerns over the risk of cost escalation, if these contracts have not been prepared in the best interest of users and the consumer.	DCC considers the impact on users and the consumers in all of its contract negotiations and will therefore not include this is the list of risks.

ID	Proposed Risk	DCC Comment
R12	Risk that a capability release date is compromised by another release due to the two-month gap requirement in between each capability release not being achievable. With only 5 months separating the 3 capability releases there is a high possibility that a capability release will be delayed, or rescheduled, due to a delay in an earlier release.	DCC agrees that this is a valid risk and it will accordingly be included as a risk
-	Risk that suppliers are not ready to migrate meters due to lack of, or late access, to Device & User System testing. Suppliers will not want to migrate meters prior to having the confidence in the end-to-end systems.	DUST will be available to Users prior to go-live and therefore believe that that this should not be included as a risk
-	The current list of programme risks outlined by DCC makes no reference to potential impacts to end energy consumers. It is entirely possible that an unexpected outage or incident impacting specific DCC migration solutions and services could delay the migration of assets or result in the stranding of assets part way through the end-to-end migration process. Such a scenario could impact customers involved, including Prepayment and Vulnerable Customers, meaning that Suppliers would have to initiate remedial activity.	We take note of the risk to customers that has been identified in the responses. However, the risks table is risks to the LC13 plan and events/circumstances that will prevent the plan being completed on schedule. Risk to consumers is a general programme risk that forms part of the decision-making process across the entire programme and is therefore not included. This will form part of the Live Service Criteria

Q4	Please provide any comments you have on whether there are any changes DCC could make to improve in this area.

Summary of Consultation Comments

A respondent is seeking an online migration tracking capability where Users can dynamically check on the status of both dormant and active migrations by MPxN. The respondent considered that this would reduce DCC formal reporting, avoid delays in reporting, allow Users to react quickly and minimise the risk of dissatisfied consumers.

SMETS1 Migration Support, a respondent sought greater clarity on the timescales for DCC Migration Support teams being established, resourced and trained as well as the roles.

Migration Scaling: We would appreciate further detail from DCC on its plans to initiate and then ramp-up SMETS1 migration activities. For example, we anticipate that DCC will look to undertake an initial "safe launch" involving very small volumes of meter migrations to confirm systems and processes are operating as expected. The inclusion of additional migration scaling related milestones on the DCC's Plan on a Page (Annex B) would be welcomed.

Exception Management Processes: Over the course of H2 2018, DCC published a series of consultations and documents which have outlined the sequence of expected migration processes which will result in the successful migration of SMETS1 meters. Respondents have highlighted that migration exceptions could occur at various stages of DCC's processes, with many of these exceptions likely to require manual intervention to resolve. Given the range of parties involved in the migration of SMETS1 meters, parties would welcome further detail on the exception management processes that DCC proposes to operate, as these will ensure that every migration issue is identified and tracked from initial triage through to resolution.

DCC Response

There are consultations on the three child documents (as set out above under the maturity of documents) of TMAD including the Migration Reporting Regime. We believe that the information that is provided in the operational data flows and the Migration Reporting Regime will provide sufficient information to enable Users to react as necessary.

DCC is building up its resources as it deems necessary to ensure that enrolment is efficient, and we will ensure that prior to the go-live we will have sufficient resources. We will continue to engage with Users on the enrolment programme and this will include on the resourcing to ensure the programme is successful.

The plan includes a ramp up to full scale to ensure that DCC systems operate efficiently, using the bulk migration tool however we do not consider it necessary to include specific milestones as the plan is a broad overview.

During testing we anticipate discovering, analysing and solving migration issues. Using the content of the migration and testing documents we intend to cover all issues that arise. The content of the MTAD document should help Users in this regard.

Q5	Do you agree with the proposed date of 6 May 2019 for PPCT and Device and User Systems Testing to be made available from 4 March 2019? If not please provide a rationale for your views.

Summary of Consultation Comments

The comments that were received about question 5 related primarily to DUST, PPCT and other testing. Most of the comments have been addressed above.

One of the responses wanted to know what PPCT is used for as opposed to DMCT.

One response raised a concern as to how demands would be managed to ensure that all DCC Users have appropriate access during testing.

DCC Response

The Pending Product Combinations Testing Service is a new enduring Testing Service provided by DCC but initiated and driven by Service Users. It enables Service Users to bring DMCs that

comprise all or part of an existing entry on the EPCL, so that they can be tested against DCC Systems. DCC expects Service Users would use this service where they are seeking to move to a later version of a Device Model (for example if they were wishing to undertake firmware enhancements) and wish to check that the Device Model Combination is still interoperable with DCC system prior to roll-out and production. PPCT will be the mechanism to have a changed DMC added to the EPCL and if required the CPL to enable roll-out into production. Further details of this are set out in the Enduring Test Approach Document which DCC issued for consultation on 24 August 2018 and which is being submitted to BEIS for designation into the SEC.

DMCT is an activity that will be available prior to each of the cohorts going live. DMCT is a transitional activity run by DCC which will allow additional DMCs to be added to the EPCL.