SEC Modification Proposal, SECMP0122A

Operational Metrics

Resubmitted Full Impact Assessment (FIA), "February 2021 Release"

Version:	**0.3**
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Author:	**DCC**
Classification:	**DCC Public**

Data Communications Company

Contents

1 Document History

1.1 Revision History

Revision Date	Revision	Summary of Changes
30/09/2020	0.1	Initial draft version, internal DCC review
01/10/2020	0.2	Added solution options
02/10/2020	0.3	Reviewed option content, cost and durations

1.2 Associated Documents

This document is associated with the following documents:

Ref	Title and Originator's Reference	Source	Issue Date
1	MP122 Business Requirements v1.2 (draft6)	SECAS	24/07/2020
2	MP122 Preliminary Assessment Request	SECAS	14/05/2020
3	OPSG OMR Report Final	OPSG	12/05/2020`
4	MP122 DCC Preliminary Assessment v0.5	DCC	25/06/2020
5	SECMP0122 PIA August 2021 Release	DCC	04/09/2020
6	SECMP0122A Initial FIA	DCC	10/09/2020

References are shown in this format, [1].

1.3 Document Information

The Proposer for this Modification is Gemma Slaney from Western Power Distribution. The original proposal was submitted on 24th March 2020.

The first Preliminary Impact Assessment (PIA) for this Modification was requested of DCC on 18th May 2020 and was submitted on 28th May 2020.

It should be noted that the Preliminary Impact Assessment was written against an earlier version of the Business Requirements. In the interests of expediency, SECAS and the DCC agreed to go straight to the Full Impact Assessment once the Change Board gave approval, and the final versions of the Business Requirements were delivered on 16th July, 2020.

Both the Business Requirements and specific measures and indicators are included from document [1] to allow a direct comparison with the proposed solution.

The Full Impact Assessment was requested on 16th July, 2020. An initial version was supplied on 5th August, 2020. Information relating to external data sources requiring contractual negotiation has been separated out into a separate document. A second version was submitted on 10th September.

2 SEC Modification Context and Proposal

This paper has been produced in response to the outcome of the Change Board on Wednesday, 23rd September. Supporting information and potential alternative solution options are presented in the following sections.

The original FIA is available as document [6], which contains the history of the Modification with the complete set of requirements and proposed division of the Modification into two for 122A and 122B.

2.1 Context

A review of the Operational Performance Regime (OPR) has been carried out due to concern that the current metrics may not be providing the best DCC incentives. Based on the Operational Metrics Review (OMR), outcome-based measures have been drawn from the OMR and consist of updated metrics for the OPR to target four areas specifically:

- Install and Commission
- Prepayment
- Firmware management
- Service Availability

Where relevant performance will be broken down by meter type and Region.

SECMP0122A requires that the DCC facilitate the necessary changes to the DCC System in order to implement and report on the metrics outlined in the OMR and further requirements provided by the Working Group to better understand the DCC's performance.

The FIA report for SECMP0122A included the total costs to implement and report on the full range of metrics from the existing data held in the DCC Technical Operations Centre (TOC), i.e., excluding any new data currently held outside the TOC, and any Service Provider contractual changes – this is included in MP122b). Note that the changes associated with MP122A do not contain any required changes to the DCC Smart Metering System (SMS), while some of the changes in 122B do additionally impact the SMS.

To develop and implement SECMP0122A incorporated the following tasks:

- Building data model algorithms
- Monitoring and validating data to support live 'spike' reporting (24/7)
- Building and consulting on new reports
- Updating interfaces between systems and databases
- Creating and documenting new reporting processes
- Building in automation to simplify reporting processes.

Annual application support costs were proposed to be between £725,000 and £845,000 with an initial implementation cost of £210,000.

The Change Board sought more detail on the application support costs over the first five years, to help members make an informed decision on the total costs of the change when casting their votes. This scrutiny of the costs included:

1. DCC's justification for the proposed costs
2. An analysis of proposed cost savings over 5 years of operation, and

3. Any further options DCC believe could reduce the total costs to demonstrate better value for money.

3 Solution Report Pages and Graphs

DCC have been requested to give an idea of the number of pages in the reporting, which while not directly impacting costs for development and support, do give an idea of the complexity and breadth of the requirements and their presentation. DCC have carried out analysis of the Business Requirements document. Based on the reporting requirements DCC have provided an estimation of the number of pages to satisfy the requirements in the table following.

To complete the estimation, certain assumptions have been necessary and where possible these have been included in the Detail section. For instance, some SRVs may only be sent to a particular device (8.11 is sent to CHF only for instance). The number of regions for instance is assumed to be CSP North, CSP Central, CSP South and SMETS1, four in total, but for some SRVs it may also be necessary to report on the devices where the CSP Region is Unknown (marked as U in the following table).

Some sections have multiple output options depending on the level of granularity required for the report. The level of granularity can have a considerable impact on the resulting number of pages in the report. Taking the reporting to the more granular level could be required to give a clearer understanding of the cause of poor performance or a failure to meet target in a particular area.

Section 1.2 of the Business Requirements document, which is based on the OMR, asks for performance to be broken down by meter type and region where relevant. Where this may be a useful level of granularity, an estimation of the impact on the number of report pages has been included.

This analysis only considers the graphs and tables requested, but additionally, there will be the need for additional analysis and commentary.

Section	Detail	Max Pages	Comments
2.1.1 – Measuring SRVs	34 SRVs included across the 10 business processes Single graph and table per SRV as per Business requirements document with room for commentary as necessary - 1 page per SRV OR As above, with separate graph per region (4 regions) – 2 pages per SRV OR As above with separate graph per region (4 regions) and per device (4 devices) – 6 pages per SRV OR As above further separated by Mode of Operation (MoO), to cover the difference between on demand and scheduled (3 max per SRV) – 18 pages per SRV	34 68 204 612	For each of the SRVs outlined in Table 1 of the business requirements document there will be at least 1 graph and a table required. There are duplications of SRV across the business processes (1.1.1 for instance) but DCC will be looking to apportion the SRVs to their appropriate business process.
2.1.2 – Measuring Alerts	Approximately 60 Alerts Single graph and table per Alert as per Business requirements document OR As above, with separate graph per region (4	60	Requirement 1 is about measuring monthly service performance of SRV's. The details for the SRVs are detailed in the document in section 2.1.1 – Measuring SRVs. Section 2.1.2 follows on with Measuring Alerts.

	regions) – 2 pages per Alert OR As above, with separate table per device (4 devices) – 6 pages per Alert	120 360	An allowance has therefore been made to report on Alerts with a graph and a table along similar lines to that requested of the Business Process SRVs. The number of Alerts with sufficient data to report on is estimated to be 60 currently. Increasing the number of alerts included will exponentially increase the number of report pages if full granularity is desired
2.2.1 – Measuring Success of key business processes	Pivot table style output with SU vertically and Device Type / Region horizontally. Values show number of attempted iterations of a business process and how many returned a failure Alert or no response.	15	
2.2.2 – Install and Commission	Pivot table style output with SU vertically and Device Type / Region horizontally	15	There could be 4 Regions (N, C, S & U) included in this report. SMETS1 is excluded.
2.2.3 – Change of Supplier – CoS1 – M1 **CoS1 – M2**	Pivot table style output showing daily Success with SU vertically, day of month horizontally, all devices and regions OR As above broken down per Region (4) and per device (4) Pivot table style output showing daily Success with SU vertically, all devices and regions horizontally (6 pages – 3 per SRV) OR As above broken down per Region (4) and per device (4)	3 48 6 96	

CoS1 – I1 **CoS1 – I2**	Commentary Pivot table style output with SU vertically and all devices / regions horizontally OR As above broken down by regions (4) OR As above, further broken down by meter type (4)	1 3 12 48	
2.2.4 – Meter Reads	Monthly graph showing success / failure of combined SRV's. Graphical output doesn't separate per SRV, 4 graphs per page. All devices on 1 page, 1 page per region OR As above broken down by SLA (2) or MOO (<=3)	4 8 – 12	
2.2.5 – Prepayment – PP1 - M1 **PP1 – I1** **PP1 – I2** **PP1 – I3** **PP2**	Anonymised league table, no need for daily breakdown. 2 devices, 4 regions. Dependant on number of SUs. 2 pages giving breakdown by region per device type (2) Similar layout to above but may be possible to combine onto the same graph as M1 above. ?Unclear. More analysis required. Similar layout to above, 2 pages for all SUs and regions then by device type Similar layout to above, 2 pages for all SUs and Regions then by device type	4 4 - 4 4	
2.2.6 – Update Device Firmware	Single table broken down by Region for the whole month, not broken down daily.	1	Should be possible to combine all the DF1 – DF3 requirements onto a single page.

2.2.7 – Update CH Firmware	Subject to getting the data for SRV 11.1 sent to CHF, single page for CHF1 and CHF2	1	
2.2.8 – Alerts Management	Simple graph showing all Alerts daily based on delivered within SLA and not broken down by device type. OR Simple graph showing all Alerts daily based on delivered within SLA. Broken down by device type by region. OR Simple graph showing all Alerts daily based on delivered within SLA. Broken down by device type by region and Alert Type (approx. 60 Alerts)	1 4 240	
2.3 – End to End Service Availability	5 Availability measures, 1 page per measure	5	

From the above, the total number of report pages is estimated to be in the range of 165 for the lowest level of detail to 1470 for the highest.

It should be noted, that even if the graphs are not in the report, DCC will still need to monitor and analyse at this level to explain anomalies in the higher level reporting.

The content detailed above is new and does not include the existing report content (approximately 65 pages).

New content is being added to the existing reports for SMETS1 - approximately 2 pages per provider taking current reporting to approximately 80 pages. This will vary subject to the number of incidents raised in the month.

4 Initial FIA Proposal

The following sections provide reviews and analyses based on the original FIA provided on 10th September, and identifies the basis for the proposed costs.

4.1 Development and Implementation Costs

Costs for development and implementation have been reviewed and confirmed as follows. Note these costs are not impacted by requirement 4, " Reduce the time it takes to create the PMR to within 10 Working Days from the end of the measurement reporting period".

£	Design, Test and Implement
Phase Total	209,500

4.2 Additional Licence Costs

In terms of additional software licences for the DCC Reporting Platform, DCC would move from a per user license to a site license, the latter being the more cost-effective option. The expected additional cost will be £27,500 per annum. Note these costs also apply to the other solution options examined in the document.

4.3 Resourcing Related to the Application Support

The following table indicates the profile of the Application Support resources associated with this Modification for the first year.

	TOC 24/7	Reporting BAU	3rd Line Support	Service Management	Service Delivery Management
February Release (10 Days)	4 x FTE	4 x FTE	2 x FTE	3 x FTE	3 x FTE
February Release (20 Days)	4 x FTE	3 x FTE	2 x FTE	3 x FTE	3 x FTE
February Release (25 Days)	4 x FTE	2 x FTE	2 x FTE	3 x FTE	3 x FTE

The time to provide the report will be 10, 20, or 25 days after the reporting date depending on the selected option. However, the staff will be working full-time on the reporting, with investigations, queries, and exception handling being carried out on a daily basis. Staffing profiles are based on the following.

TOC Proactive Monitoring with TOC 24/7 staff	Additional 24/7 monitoring will be used to help with the real time annotation of reports – essentially these staff reduce the FTEs needed to turn around such a large report.
TOC Reporting Staff	Required to support and maintain the TOC system as Business as Usual, building DCC data throughout month and packaging report in 10 day production cycle.

TOC Third Line Support	For report requirements; support and query answering, plus maintenance and optimisation.
Operations Support, Service Delivery and Service Delivery Management	Covers both Service and Service Delivery Management[1] and is centred on the requirement to provide commentary. Investigation will be required to identify whether the performance deterioration is as a result of issues with system, Comms Hubs, Meters, Orchestration or areas entirely outside DCC visibility (actions taken by SEC Parties e.g., Staff being taken off work due to training, system issues with customers etc.).

It should be noted that DCC have reviewed resourcing with a view to reducing the level of Operations Support in following years as detailed in section 4.6 following.

For the FTEs in this quote and subsequent sections, these roles are not managerial or senior level roles, all are direct increases to the working pool of reporting and support resources.

As stated to the Change Board, and in common with all DCC SEC Modification submissions, these resources will only work on the functionality and support for this Modification. The resource figures are for new work associated with this Modification only. The Operations Support (Service Delivery and Service Delivery Management) resources will be used to investigate measures that are below target with both customers and Service Providers.

4.4 Anticipated Volumes of Incident Reporting

It must be stated that DCC do not, and cannot, know exactly how many incidents , outages, and exceptions are expected on a daily basis, as this information is not currently reported on.

DCC have used current volumes of Service Requests, alerts, messages, and notifications as the basis to estimate the traffic that will need to be reported, and the existing numbers of Sev 1 and 2 outages along with problems.

In addition, DCC have drawn on experience from other complex reports in production, such as Change of Supplier (CoS) or Post-Commissioning Obligation (PCO), which generate an almost continuous stream of data querying. These can range from exploring edge case scenarios, improving the initial requirements, customers not understanding the data, to report improvements and bug fixes. Given the number of reported elements in this report, DCC would expect one 3rd Line Support FTE to work full time fielding queries and the other to be working on continuous improvement, environmental support, testing etc.

4.5 Investigation and Reporting Activities

The retrieval and processing of the data for reporting will be programmable and automated. However the investigation of supplied data, including outages and exceptions, particularly Service Provider and User performance will require investigation by the resources.

4.6 Potential Application Support Cost Reduction Over Time

There are a number of ways that costs will reduce over the first 5 years of operation.

[1] Service Management is customer-facing, Service Delivery Management is Service Provider-facing

Investigation and the provision of commentary cannot be automated. However there are likely to be opportunities to tune efforts as the reporting resources and view of the reporting mature.

DCC identified in the Working Group meetings that DCC may be able to introduce some automation over time, but this could not be achieved for the initial deliverable to meet the required timescales. If there are savings to be made, these would normally be achieved and reported back through our standard mechanism, the annual Price Control.

However as a result of planned automation, new tooling and process efficiencies that DCC believe can be made during the first year of operation, it is possible that DCC could reduce the additional resource for Operational Support (liaising with our customers and Service Providers) from the first year position of 3 Service Managers and 3 Service Delivery Managers (FTE) to a second and subsequent year resources of 1 Service Manager and 1 Service Delivery Manager, resulting in a reduction of £220,000 per annum. However this saving would be tempered by the need to acquire and implement new tooling, requiring new software and infrastructure resources.

	TOC 24/7	Reporting	3rd Line Support	Service Management	Service Delivery Management
Year 1	4	4	2	3	3
Year 2	4	4	2	1	1
Year 3	4	4	2	1	1
Year 4	4	4	2	1	1
Year 5	4	4	2	1	1

The spend profile for completing the Modification as proposed in the original FIA with a 10 day reporting period is as follows.

Original FIA Proposal, 10 day Reporting						Total
Develop	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Support
209500	907500	737500	737500	737500	737500	3,857,500

With 25 day reporting, the spend profile is as follows.

Original FIA Proposal, 25 day Reporting						Total
Develop	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Support
209500	797500	627500	627500	627500	627500	3,307,500

Note that DCC have investigated an option to further reduce the Application Support resources and hence costs by changing the implementation approach. That approach is documented in section 5.1 following.

All spend profiles for the proposed options are summarised in section 6 on page 19 for ease of comparison.

4.7 Other Cost Saving Proposals

As part of the review, SECAS asked whether there would be any cost reduction if SECMP0122A would be completed as part of a wider release (i.e. not standalone) or whether there is anything more which can be done as an upfront cost, to reduce the annual ongoing costs, such as front-loading the automation work or setting up SharePoint for immediate reporting of performance deviation.

As stated in the FIA, this release would be purely to the TOC system which is unaffected and untouched by a Smart Metering System SEC Release. There is no additional cost associated with running this as a standalone project or implementation.

DCC are investigating options to reduce the Application Support resources and hence costs by changing the implementation approach as part of the FIA submission. However, this approach is likely to result in a longer implementation period. These options are noted and costed in the following sections.

A further question from SECAS asked if any aspect of the Modification is driving the costs up disproportionately and requested suggestions to bring costs down whilst still achieving the intent of the Modification. DCC recognises the following factors as the key drivers of the development and support costs for SECMP0122A:

1. The requirement to complete reporting in 10 days. This factor has changed the application support model from the current model where staff effectively wait until the end of the reporting period before starting the reporting activities to one where the application support staff are assigned to reporting, querying and investigating on a pro-active, live basis, as issues are discovered.

2. The planned completion date of February 2021 has precluded a longer development and implementation period, which has meant that automation to reduce the application support effort would start after the Go Live. An option to develop automation during development and implementation is covered in section 5.1 following.

3. The number of reports and dimensions that are required for reporting. DCC have made suggestions to streamline the content of this Modification throughout the discussions without the Working Group and have indicated selected reporting areas that will add significant complexity and effort to the reporting. One area of concern is to meet the requirement to produce commentary to identify a smaller level of deviation from the current norm, DCC will need to recruit additional Operations Support headcount to investigate and track deviations from our customers and Service Providers; this one activity requires a total of 6 FTEs per annum. Reducing the scope for an initial release is examined in section 5.2 following.

5 Alternative Delivery and Implementation Methods

This section outlines alternative ways that DCC could deliver this Modification and potentially reduce the costs. This information is new, and was not part of document [6].

At this time the estimates and design details are not complete, and are being refined.

5.1 Longer Development and Implementation Schedule

DCC believes with a longer period of time to spend time on designing, developing and testing and including full end to end automation in the implementation, the requirement for some of the Application Support staff could be reduced.

5.1.1 Development and Implementation

Using this approach DCC would develop the reporting and build in automation during the development and implementation. Including the automation at the same time would take more resources, including a greater degree of testing, such that DCC would both have to extend the time to build the reporting and automation and add additional testing. The automation would require new tooling, new software and new infrastructure which is included in the costs.

To develop and implement the requirements with automation built-in during development would require 12 months effort with resource and infrastructure costs as shown.

£	Design, Test and Implement
Phase Total	587,000

5.1.2 Application Support

With this option, the Operations Support resources can be reduced to 1 new FTE to manage interactions with suppliers and 1 new FTE to project manage the interface between the automated monitoring and the existing Service Managers. The overall Application Support resources and costs are as shown following.

	TOC 24/7	Reporting	3rd Line Support	Service Management	Service Delivery Management
Year 1	4	2	2	1	1
Year 2	4	2	2	1	1
Year 3	4	2	2	1	1
Year 4	4	2	2	1	1
Year 5	4	2	2	1	1

This Application Support profile is constant throughout the period shown, however it is difficult to predict the level of incidents, outages, and reporting complexity in advance, beyond noting that DCC would expect the Smart Metering System to be at scale by Year 5, with a consequent level of stability.

Calculations show the implementation costs will be higher than those described for the FIA previously, but Application Support costs will be lower over the 5-year period. However this

would extend the implementation date significantly. The spend profile for this option is as follows.

Built in Automation Proposal, 10 day Reporting						Total
Develop	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Support
587000	627500	627500	627500	627500	627500	3,137,500

5.2 Ofgem OPR Functionality with Current Timelines

In this option, DCC would implement a solution which meet the Ofgem OPR as stated in the requirements document [1]. This would include reports on the success or failure timeouts and minimum, maximum, median and average Round Trip Time of the following SRVs.

Business Process	SRV	Description
Install and Commission[2]	8.11	Update HAN Device Log
	6.21	Request Handover of DCC Controlled Device (Update Supplier Certificates)
	8.1.1	Commission Device
	8.7.2	Join Service (Join GPF with GSME)
	6.20.1	Set Device Configuration' (Import MPxN)
	1.1.1	Update Import Tariff (Primary Element)
	6.8	Update Device Configuration (Billing Calendar)
	8.14.1	Communications Hub Status Update Install Success

Measures and Indicators will include all included in IC1 and IC2. DCC recommend that if Ofgem want a measure that monitors the success of the Install and Commission process, that they should adopt: "Measure daily total volume of successful and failed installations broken down by CH/ESME/GSME and Region".

Business Process	SRV	Description
Pre-Payment	1.6	Update Payment Mode (Payment Mode = Prepayment)
	2.1	Update Prepay Configuration
	2.2	Top Up Device (Update Balance with positive value)

Measures and Indicators will include all included in PP1 and PP2. DCC recommend that if Ofgem want a measure that monitors the success of the Prepayment process, that they should adopt: "Measure the percentage of successful SRV 2.2 'Top Up Device' SRVs successfully delivered to the Devices. Include a measure by Device type and Region."

Business Process	SRV	Description
Update Device Firmware	11.1	Update Firmware
	11.3	Activate Firmware (Individual SR for each GUID for firmware activation)

Measures and Indicators will include all included in DF1, DF2, and DF3. DCC will not be able to report on the transfer of Firmware images until the release of SECMP0007 (due November

[2] Note, although some of the SRVs listed under Install and Commission are applicable to SMETS1, the rollout of SMETS1 Devices has ended and therefore the overall Install and Commission business process is not applicable to SMETS1.

2021), but irrespective recommend that if Ofgem want a measure that monitors the success of the Firmware Upgrade process, that they should adopt: “Measure the percentage of success and failure responses to the SRV 11.3 ‘Activate Firmware’ request.”

For **Firmware Upgrades on Comms Hubs**, DCC propose reporting on CHF1 and CHF2. As there are no mandated timescales within the SEC regarding the update of Comms Hubs, DCC do not consider that it is appropriate for Ofgem to provide an OPR measure against these metrics.

In terms of Service Availability, this requirement refers to the combination of each of the following DCC interface and supporting sub-systems as a ‘DCC Service’:

- the DCC User Interface
- the Registration Data Interface
- the Smart Metering Key Infrastructure (SMKI) Repository Interface
- the SMKI Services Interfaces
- the Self-Service Interface (SSI)

Service availability shall be measured as a percentage for all the above Services. DCC recommend that Ofgem adopt the SECMP0122 wording exactly, but note that:

- Only the DCC User Interface is required to communicate with devices in end consumers premises
- Only DCC User interface includes an element of regionality

Based on the above requirements, estimates suggest this reporting level and content would give between 100 and 150 new pages in addition to the current reporting.

5.2.1 Development and Implementation

To develop and implement the requirements meeting the Ofgem OPR would require 6 months effort with costs as shown.

£	Design, Test and Implement
Phase Total	117,250

5.2.2 Application Support

DCC believe that after year 1 with an option based on the OPR scope, the TOC should be able to absorb the 2 FTE providing TOC 24/7 support into the DCC BAU support team, through learnings from that year, additional automation and an understanding of the level of commentary. In addition, this approach would reduce the number of Operations Support FTEs required after 2 years, and hence the overall Application Support costs.

	TOC 24/7	Reporting	3rd Line Support	Service Management	Service Delivery Management
Year 1	2	2	1	2	2
Year 2		2	1	2	2
Year 3		2	1	1	1
Year 4		2	1	1	1
Year 5		2	1	1	1

However as noted in Section 4.2, it is difficult to predict the level of incidents, outages, and reporting complexity in advance, beyond noting that DCC would expect the Smart Metering System to be at scale by Year 5, with a consequent level of stability.

The spend profile for this option is as follows.

OPR Scope Proposal, 10 day Reporting						Total
Develop	Year 1	Year 2	Year 3	Year 4	Year 5	5 Year Support
117250	572500	462500	352500	352500	352500	2,092,500

6 Summary of Spend Profiles

The spend profiles for the options described above are as follows.

Original FIA Proposal, 10 day Reporting						Total
Develop	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**5 Year Support**
209,500	907500	737500	737500	737500	737500	3,857,500
Original FIA Proposal, 25 day Reporting						Total
Develop	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**5 Year Support**
209,500	797500	627500	627500	627500	627500	3,307,500
Built in Automation Proposal (5.1), 10 day Reporting						Total
Develop	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**5 Year Support**
587,000	627500	627500	627500	627500	627500	3,137,500
OPR Scope Proposal (5.2), 10 day Reporting						Total
Develop	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**5 Year Support**
117,250	572500	462500	352500	352500	352500	2,092,500

7 Timeline Concerns

The original plan for the Modification development and implementation was agreed with SECAS at the start of the Modification process. It should be noted that the delivery date for the original FIA and subsequent dates were slipped due to changed business requirements. The decision to not vote at Change Board has meant that DCC are unable to start recruiting and training staff. Latest planned dates are as shown following.

In the first scenario working with the full scope shown following, DCC will not start hiring development staff until Ofgem approval. This schedule does not include work over Christmas and compresses the “Upskilling” (Training) time.

February 2021 Release	Start Date	End Date	Duration
1. Start recruiting on Ofgem approval			
Second FIA Submission	24/09/2020	30/09/2020	5d
adhoc Change Board		07/10/2020	
Authority Decision		11/11/2020	
DCC Start Recruiting	12/11/2020	10/12/2020	20d
Initial Upskilling	11/12/2020	30/12/2020	11d
Development	04/01/2021	27/04/2021	80d

In the second scenario working with the full scope, DCC would start hiring development staff on Change Board approval. Naturally there is an element of risk associated with this plan. This schedule does not include work over Christmas and includes 20 days Upskilling and startup time.

February 2021 Release	Start Date	End Date	Duration
2. Start recruiting on Change Board approval			
Second FIA Submission	24/09/2020	30/09/2020	5d
adhoc Change Board		07/10/2020	
Authority Decision		11/11/2020	
DCC Start Recruiting	08/10/2020	04/11/2020	
Initial Upskilling	05/11/2020	03/12/2020	20d
Development	07/12/2020	05/04/2021	80d

DCC note the significant risk associated with hiring new staff, and the Christmas-New Year period when contract staff are typically furloughed has pushed the potential Implementation period to 80 days.