# SEC Modification Proposal, SECMP0024

## Enduring Approach to Firmware Management

## Preliminary Impact Assessment (PIA), DCC CR 1162

| | |
|---|---|
| **Version:** | **0.34** |
| **Date:** | **20th February 2020** |
| **Author:** | **DCC** |
| **Classification:** | **DCC PUBLIC** |

# Contents

# 1 Document History

## 1.1 Revision History

| Revision Date | Revision | Summary of Changes |
|---|---|---|
| 03/11/2019 | 0.1 | Compilation from Service Providers, requested changes |
| 20/02/2020 | 0.34 | Internal review and revision by DCC |
| | | |

## 1.2 Associated Documents

This document is associated with the following documents:

| Ref | Title | Source | Issue Date |
|---|---|---|---|
| 1 | Business Requirements Proposal v0.41 | DCC | 25 March 2019 |
| | | | |

## 1.3 Document Purpose

The purpose of this Preliminary Impact Assessment (PIA) is to provide the relevant Working Group with a counter proposal for refining the business requirements associated with both option of this modification.

## 1.4 Previous Document Information

The original Proposer for this Modification was Rob Williams.

The Preliminary Impact Assessment was requested of DCC in May 2019.

# 2 Introduction

This Modification seeks to amend the Smart Energy Code (SEC) and DCC's systems to enable a process and systems support for coordination of firmware upgrades of end devices on the smart metering system

## 2.1 Context

This Modification would reduce the risk of Communications Hub (CH) firmware updates causing issues with supplier installations of metering equipment in terms of both financial measurements and customer experience (within the premises and in billing/settlements).

The ability of a supplier to provide input into the scheduling of CH firmware updates would:

- Reduce the risk of large-scale corrective action and remediation following inappropriate deployment and activation of firmware to significant numbers of CHs

- Reduce the risk of impact to consumers through issues related to CH firmware performance issues

- Reduce the risk of large-scale interoperability issues

- Allow DCC and suppliers to monitor and provide feedback on successes and failures

- Reduce financial expenditure on meter technician visits to resolve interoperability issues

- Assist the journey to technical excellence in the SMIP program

- Reduce the risk of reputational damage to the SMIP

Customers would benefit from:

- A more reliable customer journey with minimal disruption caused by meter technician visits to resolve interoperability issues

- Increased customer confidence in the SMIP program

## 2.2 Original High Level Business Requirements

The original high level business requirements for this Modification are included in Appendix A; Original High Level Business Requirements on page 21. However after discussions with the Service Providers and Working Group, the process and solution implied by the Business Requirements were agreed as not being viable due to the technical constraints of the Communication Service Provider (CSP) solutions, whereby the distribution of firmware must be considered within and subject to each CSP's network capacity planning processes such that utilisation is optimised.

## 2.3 Firmware Management Proposals and Requirements

An extensive Communication Hub Firmware Management Consultation led by the DCC and including the Service Providers and their suppliers was carried out in 2018-19, and recommendations on the requirements and potential solutions to firmware management and distribution were made.

At the Modification Working Group on 25<sup>th</sup> February, 2019, it was agreed that requirements derived from the consultation and subsequently refined in workshops with the Service Providers would be used for SECMP0024. The requirements are contained in the following attached document:

SECMP0024
BRS0.43.docx  .

## 2.4 Firmware Management Process Overview

Based on the discussions at the Working Group and the Business Requirements as set out in the Solution Design Document, this Modification includes a view of the technical constraints the business requirements account for, as well as a proposal on the high level process that can work within the technical constraints of the CSP solution.

In order to provide Energy Suppliers with some control over CH firmware updates, the following new firmware management process is proposed. The activities involved in the proposed Comms Hub firmware management process will be managed in four process stages as described below.

### 2.4.1 Notification

The first stage in the firmware management process consists of DCC sending notifications to the Service Users when a new firmware version is available for roll out.

### 2.4.2 Piloting

During the piloting phase, Service Users will be allowed to select a pilot group of Comms Hubs for the new firmware version to be deployed to and a schedule for deployment.

The CSPs will prepare an initial 'Default Pilot List' of Comms Hubs and a 'Default Pilot Schedule'; both will be shared with the Service Users. The Service Users will then able to share their 'Preferred Pilot List' and 'Preferred Pilot Schedule' with the CSPs and DCC. The 'Preferred' lists and schedules will be used for the pilot group deployment. In a split Supplier scenario, both the Import and Gas Suppliers' 'Preferred' lists and schedules need to be coordinated.

The firmware upgrade will be deployed. Existing firmware management procedures will be used to track progress and to report on the status of the firmware upgrade at an individual Comms Hub level.

At the end of the Pilot phase, DCC will share the overall success or failure of the deployment with all the relevant parties.

### 2.4.3 Safe Launching

After the piloting phase, the Service Users will be provided with a Safe Launch schedule by the DCC.

DCC will report on the status of Safe Launch deployments to all the relevant parties.

### 2.4.4 Closure

At the end of the firmware version roll out, DCC will send notifications to all the relevant parties to inform them about the rollout closure and the completed firmware upgrade.

# 3 Description of Solution Options

It should be noted that both of the proposed solution options would allow Suppliers to carry out firmware upgrades at different times via scheduling, rather than all together, and the entire process could be voluntary until there was a need for a compulsory firmware upgrade.

## 3.1 Option 1: CH Firmware Update Management with Service Request

The general principle behind Option1 is to allow Service Users to share relevant data in support of the Comms Hubs firmware management process via Service Requests. The success and failure of any processing stage could be communicated back to the Service Users via either DCC Alerts or emails.

Option 1 has been considered against the below table of interactions.

| Process Outline | | | | | | | Process Area | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Action | ID | Initiating Actor | Receiving Actor | Initiating Mechanism | Receiving Mechanism | Granularity | Notifying | Piloting | Safe Launching | Closing |
| Initial Notification | A01 | DCC-L | Service Users | Email | Email | | x | | | |
| Default Pilot List | A02 | CSPs | Service Users | File Upload | DCC Alert | GUIDs | | x | | |
| Default Pilot Schedule | A03 | CSPs | Service Users | File Upload | DCC Alert | Groups of GUIDs | | x | | |
| Preferred Pilot List | A04 | Service Users | CSPs, DCC-L | Service Request | Report | GUIDs | | x | | |
| Preferred Pilot Schedule | A05 | Service Users | CSPs, DCC-L | Service Request | Report | Groups of GUIDs | | x | | |
| Notify Pilot Success | A06 | DCC-L | Service Users | Email | Email | Process Level | | x | | |
| Notify Pilot Failure | A07 | DCC-L | Service Users | Email | Email | Process Level | | x | | |
| Safe Launch Schedule | A08 | CSPs | Service Users | File Upload | DCC Alert | Groups of GUIDs | | | x | |
| Notify Safe Launch Success | A09 | DCC-L | Service Users | File Upload | DCC Alert | Process Level | | | x | |
| Notify Safe Launch Failure | A10 | DCC-L | Service Users | File Upload | DCC Alert | Process Level | | | x | |
| Notify Closure | A11 | DCC-L | Service Users | Email | Email | Process Level | | | | x |
| Notify Supersession | A12 | DCC-L | Service Users | Email | Email | Process Level | | | | x |

Machine to machine communication interfaces will be used to share data between CSPs, DSP and DCC. The existing data communication patterns will be employed for most of these. However, for DCC to send data to DSP, a new inbound ESI interface will be introduced. This will require security review and approval.

A set of high-level interaction patterns have been identified, showing the parties involved in a processing flow, the originator and the target systems. The diagram below shows these patterns and the associated interactions.
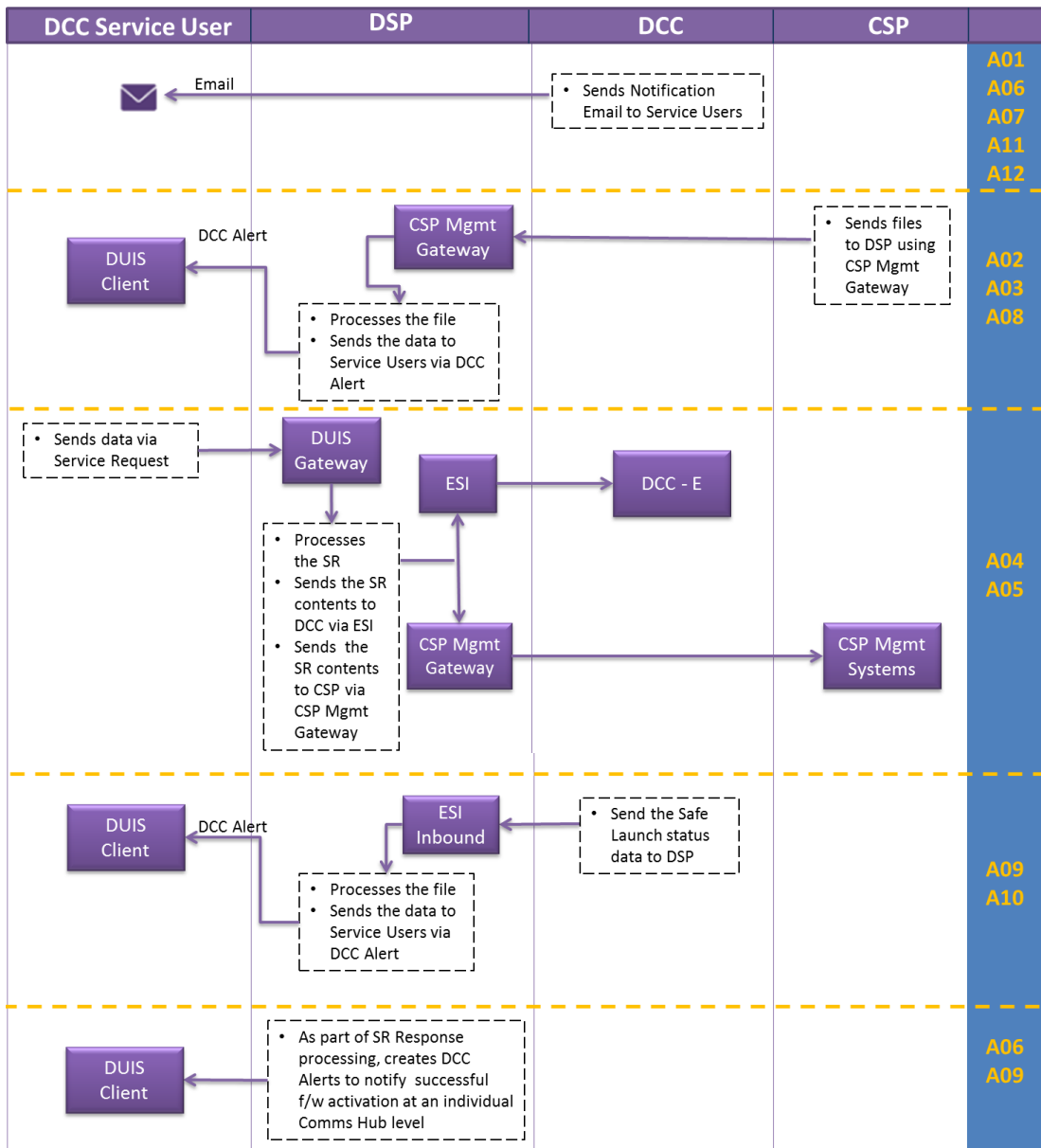
The following data flows require CSPs to send data to the Service Users:

- A02    Default Pilot List;
- A03    Default Pilot Schedule;
- A08    Safe Launch Schedule.

DSP will provide new interfaces in the CSP Management Gateway for the CSPs to submit the required data related to the data flows above. The received data will be forwarded to the Service Users via DCC Alerts.

The DCC Data Systems will be updated to provide two new Service Requests for the Service Users to send their Preferred Pilot List (A04) and the Preferred Pilot Schedule (A05) to the CSPs and to DCC. The data received as part of these SRs will be forwarded by DSP to both the CSPs and the DCC via CSP Management Gateway and the ESI respectively.

In order for DCC to send the data related to the success and failure of the Safe Launch phase (A09, A10), DSP will build a new ESI inbound interface. The data received by DSP will be sent to the Service Users via DCC Alerts.

The process level success notifications are initiated by DCC for the Piloting and Safe Launching stages (A06, A09).

DSP will send a new DCC Alert to the Service Users for each successful firmware activation at an individual Comms Hub level. The existing SR Response processing will be updated to include the new Alert.

### 3.1.1   DSP Impacted Components for Option 1

The following components will be impacted by Solution Option 1:

- DUIS/DUGIDS
    - New Service Requests will be created to handle the Preferred Pilot List and Preferred Pilot Schedule data
    - New DCC Alerts will be created to send the notifications to the Service Users
- Request Management Functionality will be added to:
    - Process the new Service Requests
    - Implement the associated validations
    - Implement the new DCC Alerts
- ESI
    - A new ESI inbound interface will be created to receive files from DCC
    - Functionality will be added to support the sending of new data extracts to DCC
- CSP Management Gateway
    - New interfaces will be added to send and receive data from CSP

### 3.2   Option 2: CH Firmware Updates Management via Web Portal

Option 2 is the **Web Portal** based solution for CR1162 and will be built using the existing SSI/SSMI suite. SSI and SSMI will be updated to provide new interfaces to manage all stages of the Comms Hub firmware update process. The DCC solution would be modelled according to the Hypercare project and would use a web-portal type interface for Suppliers. This portal would not require Service Requests, which is a considerable difference to the Option 1 above.

There would be a pilot phase to ensure Suppliers were in control deciding which of their customers would be upgraded and when, protecting those at risk such as vulnerable customers to ensure they were not part of any early deployments. There would also be split-Supplier approvals whereby Suppliers could use the interface to see where one Supplier has approved an upgrade to the Communication Hub and react as appropriate, without disclosing details of the Suppliers to each other.

Additional tooling will be required to replace the spreadsheets used currently with Hypercare and move to an interface similar to that of the Self-Service Interface (SSI). Notifications and alerts would then be managed via the web-portal.

Option 2 has been considered against the below table of interactions:

| Process Outline | | | | | | Process Area | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Action** | **Initiating Actor** | **Receiving Actor** | **Initiating Mechanism** | **Receiving Mechanism** | **Granularity** | **Notifying** | **Piloting** | **Safe Launching** | **Closing** |
| Initial Notification | DCC-L | Service Users | SSMI Initiate Process | SSI Dashboard | | x | | | |
| Default Pilot List | CSPs | Service Users | SSMI Pilot Mgmt | SSI Pilot Mgmt | GUIDs | | x | | |
| Default Pilot Schedule | CSPs | Service Users | SSMI Pilot Mgmt | SSI Pilot Mgmt | Groups of GUIDs | | x | | |
| Preferred Pilot List | Service Users | CSPs, DCC-L | SSI Pilot Mgmt | SSMI Pilot Mgmt | GUIDs | | x | | |
| Preferred Pilot Schedule | Service Users | CSPs, DCC-L | SSI Pilot Mgmt | SSMI Pilot Mgmt | Groups of GUIDs | | X | | |
| Notify Pilot Success | DCC-L | Service Users | SSMI Pilot Mgmt | SSI Pilot Mgmt | Process Level | | X | | |
| Notify Pilot Failure | DCC-L | Service Users | SSMI Pilot Mgmt | SSI Pilot Mgmt | Process Level | | X | | |
| Safe Launch Schedule | CSPs | Service Users | SSMI SafeLaunch Mgmt | SSI Safelaunch Mgmt | Groups of GUIDs | | | x | |
| Notify Safe Launch Success | DCC-L | Service Users | SSMI SafeLaunch Mgmt | SSI Safelaunch Mgmt | Process Level | | | x | |
| Notify Safe Launch Failure | DCC-L | Service Users | SSMI SafeLaunch Mgmt | SSI Safelaunch Mgmt | Process Level | | | x | |
| Notify Closure | DCC-L | Service Users | SSMI Closure | SSI Dashboard | Process Level | | | | x |
| Notify Supersession | DCC-L | Service Users | SSMI Closure | SSI Dashboard | Process Level | | | | x |

This solution would be built using the existing SSI/SSMI suite. SSI and SSMI will be updated to provide new interfaces to manage all stages of the Comms Hub firmware update process. The new functionality will be organised as follows:

1. CH Firmware Update Initiation;
2. CH Firmware Piloting;
3. CH Firmware Safe Launch;
4. CH Firmware Update Closure.

Note that the Web Portal based solution expects all the interactions to be handled via the User Interfaces; there will be no support for machine-to-machine interfaces.

This solution enables DCC to create all the notifications targeted at the Service Users (A01, A06, A07, A09, A10, A11, A12) within SSMI, which will then be accessed by the Service Users via SSI.

New SSMI interfaces will be provided to CSPs for the uploading of Default Pilot List (A02), Default Pilot Schedule (A03) and Safe Launch Schedule (A08), which will then be made available to the

Service Users via SSI. It shall be noted that SSMI currently does not provide file upload interfaces to the CSPs. This introduces a new processing pattern and will require security review and approval.

New SSI interfaces will be built for the Service Users to upload their Preferred Pilot List (A04) and the Preferred Pilot Schedule (A05), which will be made available at SSMI for the CSPs and the DCC to access. SSI currently does not provide a file upload interface to the Service Users and therefore this will also require security approval.

The following diagram shows an overview of the process flow for the interactions identified in Table 1, for solution Option 2.
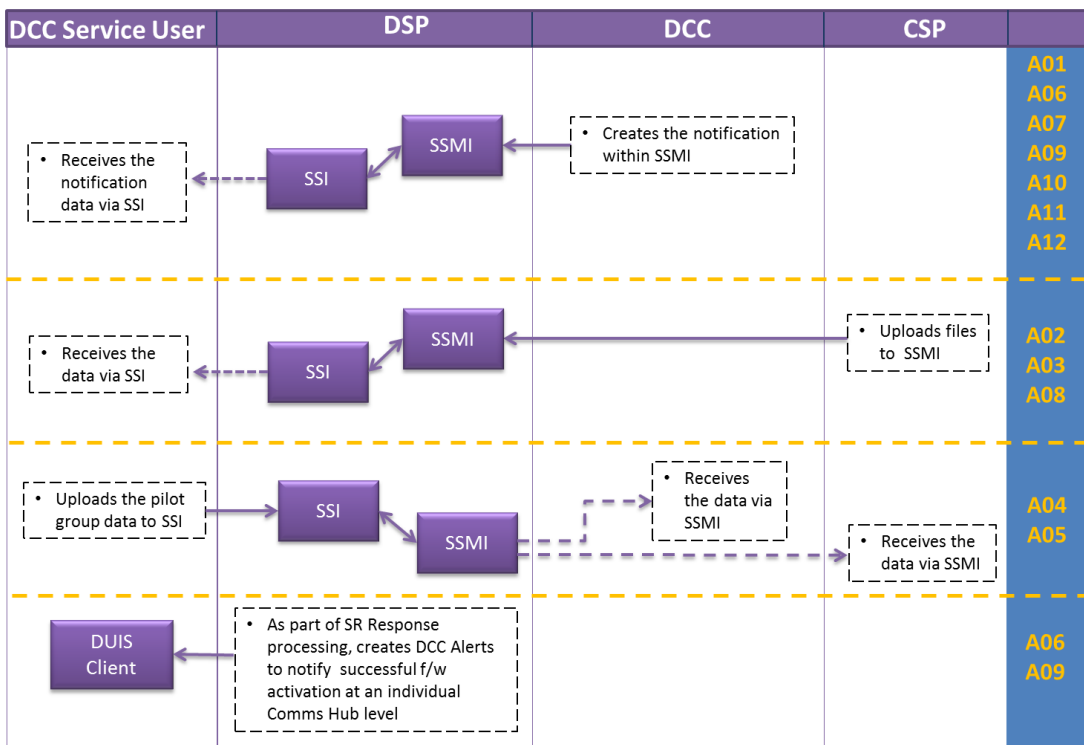


*Figure 1 Interaction Patterns - Web Portal*

The overall success notifications for the piloting and safe launching stages will be created by DCC using SSMI (A06, A09). For the successful firmware activation at an individual Comms Hub level, DSP will create a new DCC Alert to notify the Service Users.

This PIA assumes that the files shared between the parties as part of the firmware update management process will not require signing. DSP understands that this may change depending on what integrity checks the CSPs would like to enforce.

## 3.2.1  DSP Impacted Components for Solution Option 2

The following components will be impacted by Solution Option 2:

- DUIS/DUGIDS
  - DCC Alerts will be created to notify firmware activation at a device level
- Request Management Functionality will be added to:
  - Implement the new DCC Alerts scenarios
- SSI

▪ Build new user interfaces for Service Users to receive notifications and files shared by DCC and the CSPs.

- SSMI
  - Build new user interfaces for DCC to create notifications, upload files and receive files.
  - Build new user interfaces for CSPs to send and receive files.

## 3.3 Constraints

| Process Action | Constraint |
|---|---|
| General | • With respect to firmware distribution, a primary concern for both CSPs is managing scarce bandwidth on their networks<br>• When distributing firmware, CSPs must take into account geographical distribution of devices as well as network activity at the point in time where firmware must be distributed<br>• The process of upgrading CH firmware requires a high degree of manual intervention due to the above constraints<br>• Because the CSPs need to actively manage the process of CH firmware upgrades, the CSPs largely need to remain in control of the scheduling and grouping of CH firmware upgrades |
| Initial Notification | • No constraint |
| Default Pilot List | • CSPs have an interest in ensuring that the groups of CH's selected for piloting a new firmware deployment are large enough to ensure a valid sample<br>• CSP's also have the knowledge of which CH's are suitable for pilot deployments<br>• It would make sense therefore for CSP's to build the initial pilot deployment lists and allow the Service Users to make amendments as necessary |
| Default Pilot Schedule | • Given the constraints noted in the General section above, it makes sense for the CSP's to notify a period of time in which a pilot would be deployed |
| Preferred Pilot List | • Given the above notes around 'Default Pilot List', we believe it makes sense for Service users to specify amendments to the default list |
| Preferred Pilot Schedule | • Given the constraints noted above, we believe it makes sense for Service users to be able to request amendments to the pilot deployment schedule, but the final say needs to remain with the CSPs.<br>• This constraint is largely driven by the need for CSP's to maintain a consistent demand profile on the personnel managing firmware deployment |
| Notify Pilot Success | • No constraint |
| Notify Pilot Failure | • No constraint |

| | |
|---|---|
| Safe Launch Schedule | • Constraints around scheduling of a safe launch are primarily related to the technical constraints noted in the general section as well as the constraint noted in 'Preferred Pilot Schedule' around CSP's needing to manage demand on the personally managing firmware deployments.<br><br>• Given the volume of upgrades and the need to optimise deployment schedules around technical constraints of the networks, we don't believe it is possible to offer Service Users a system driven facility to request changes in the scheduling of a safe launch. That is not to say that exceptional circumstances could not be managed off system |
| Notify Safe Launch Success | • No constraint |
| Notify Safe Launch Failure | • No constraint |
| Notify Closure | • No constraint |
| Notify Supersession | • No constraint |

# 4 Impact on DCC's Systems, Processes and People

This section describes the impact of SECMP0024 on the DCC Total System services and interfaces that impact Users and/or Parties.

This PIA assumes that there are no requirements for DSP to split the Comms Hubs data received from CSPs based on the Suppliers of that premise. Any such requirements will need further elaboration of scope and shall be considered during the Full Impact Assessment stage.

## 4.1 Security Impact

The implementation will be security assured during the implementation phase. This includes reviewing designs, test artefacts and providing consultancy to the implementation and test teams.

A more detailed Security impact will be carried out as part of the Full Impact Assessment.

## 4.2 Infrastructure Impact

There will be no change to the infrastructure design as a result of this change. No material impact on system performance is expected.

The change does not impact the DSP resilience or DR implementation.

It will be necessary to deploy the revised DUIS schema to Data Power devices.

## 4.3 Integration Impact

The functionality will need to be validated in both the SIT and UIT environments and will require integration testing which involves both DSP and CSPs as a minimum. It is assumed that this Modification will be integrated as part of a wider release with other changes and that the costs of regression testing will be covered through a Release Change Request.

## 4.4 Service Impact

This Modification introduces new interfaces and business processes within the DCC Data Systems. It is possible that the expansion of the functionality will result in some additional queries and issues for the DSP Applications Management Support team to resolve. As such, the Operational Service will require an uplift in order to support and maintain the solution.  The impact will be assessed further as part of the FIA.

# 5 Implementation Timescales

The timescales for the implementation of the change will be determined via the Full Impact Assessment.

## 5.1 Implementation Approach

Implementation of this change is assumed to follow a waterfall methodology. The release lifecycle duration will be confirmed as part of the FIA.

## 5.2 Testing and Acceptance

This change includes the standard test phases as documented in schedule 6.2 and it is assumed that the change will be implemented and tested as part of a major release and will include release-based regression testing in SIT and UIT.

# 6 Costs and Charges

The table below details the cost of delivering the changes and Services required to implement this Modification Proposal.

The scope of supply under this PIA includes design, development (build), system testing, and unit testing within the PIT environments.

The Rough Order of Magnitude cost (ROM) shown below describes indicative costs to implement the functional requirements as assumed above. The price is not an offer open to acceptance. It should be noted that the change has not been subject to the same level of analysis that would be performed as part of a Full Impact Assessment and as such there may be elements missing from the solution or the solution may be subject to a material change during discussions with the DCC. As a result, the final offer price may result in a variation.

## 6.1 Design, Build, and Testing Cost Impact

The table below details the cost of delivering the changes and Services required to implement this Modification. For a PIA, only the Design, Build and PIT indicative costs are supplied.

| £ | Design, Build and PIT | SIT | UIT | TTO | App. Support | SP Total |
|---|---|---|---|---|---|---|
| Option 1 | £2.7 – 3.7 million | n/a | n/a | n/a | n/a | £2.7 – 3.7 million |

| £ | Design, Build and PIT | SIT | UIT | TTO | App. Support | SP Total |
|---|---|---|---|---|---|---|
| Option 2 | £1.9 – 2.7 million | n/a | n/a | n/a | n/a | £1.9–2.7million |

| | |
|---|---|
| Design | The production of detailed System and Service designs to deliver all new requirements. |
| Build | The development of the designed Systems and Services to create a solution (e.g. code, systems, or products) that can be tested and implemented. It includes Unit Testing (also referred to as System Testing), Performance Testing and Factory Acceptance Testing by the Service Provider or supplier. |
| Pre-Integration Testing (PIT) | Each Service Provider tests its own solution to agreed standards in isolation of other Service Providers. This is assured by DCC. This phase also includes regression testing across all Comms Hub products |
| Systems Integration Testing (SIT) | All the Service Providers PIT-complete solutions are brought together and tested as an integrated solution, ensuring all SP solutions align and operate as an end-to-end solution. The System Integrator is responsible for leading this phase with the Service Providers offering testing support services. |
| User Integration Testing (UIT) | Users are provided with an opportunity to run a range of pre-specified tests in relation to the relevant change. The DCC is responsible for leading this phase with the Service Providers offering testing support services. |

| Implementation to Live (TTO) | The solution is implemented into production environments and ready for use by Users as part of a live service. The Transition to Operations (TTO) service is subject to implementation costs. |
|---|---|
| Application Support | Any costs associated with supporting the new functionality. |

The fixed price cost for a Full Impact Assessment is:

**£194,937.13 for Option 1; or**

**£187,599.76 for Option 2**

and would be expected to be completed in 30 days.

# 7 Risks, Assumptions, Issues, and Dependencies

In the following sections, Risks, Assumptions, Issues, and Dependencies have been identified.

It is possible that further RAID will be established as part of the Working Group reviews and the FIA.

## 7.1 Risks

| Ref. | Area | Description | Recommended action |
|---|---|---|---|
| MP24-RA01 | System Upgrades | The introduction of this Modification is likely to result in a reduction in the speed at which the DCC ecosystem can be upgraded both to resolve defects and to add features.<br><br>As such, there is a risk that this could affect the perceived value of the DCC solution.<br><br>DCC is concerned that neither the solution presented in this Modification, nor the development of industry capabilities to assure meter interoperability will provide suitable assurance to Service Users that DCC releases will not affect communications to or interoperability with Service User provided meters.<br><br>DCC has concerns in the following areas:<br><br>• The progress being made in establishing an interoperability testing organisation via the SMDA;<br><br>• Any definition of how the DCC and its Service Providers will interact with the interoperability testing to support DCC interoperability assurance. | Plan in fixed periods of Service User testing prior to Go Live for releases to increase Service User confidence in the solution. |
| MP24-RA02 | Update Content | There is a risk that the existing development methods to bundle defect fixes together may result in functional defect fixes being included with either security or operational fixes and as such, bypassing any process introduced in this Modification.<br><br>This may introduce a perceived interoperability risk to Service Users that this Modification seeks to mitigate as DCC deploy an urgent security update that has been developed against the latest Production software | |

| MP24-RA03 | Maintain Connectivity | There is a risk that the introduction of a process within this Modification does not provide the Service Users with adequate confidence that a Production Communication Hub firmware upgrade will maintain connectivity and service to their meters. | Agree that a small sub-set of Comms Hubs are excluded from the 'pilot' for every release. The number of Communication Hubs to be excluded would in each case be fewer than one hundred (100) in total and would serve to prove the viability of Communication Hub software interaction with Service User selected meters within consumer premises. This would not replace any non-Production testing.

Agree friendly customer with Service Users for early targeting of Communication Hub firmware upgrades to expedite the first Service User approvals. |
| --- | --- | --- | --- |
| MP24-RA04 | Bypass Pilot Scheme | There is a risk that that Communication Hubs that are agreed by one Service User to bypass the 'pilot' process subsequently change Supplier to another Service User. In this situation DCC will have been permitted to bypass the 'pilot process by a Service User that is no longer responsible for the HAN associated with the Communication Hubs. | Accept |
| MP-RA05 | Constraints | There is a risk that any constraints that Service Users request as part of the 'preferred pilot schedule' are not compatible with the approach and resourcing that CSPs arrange to support the 'default pilot schedule'. | As noted in MP24-AD08, produce and agree with Service Users and CSPs a list of valid scheduling constraints that Service Users may select to produce their 'preferred pilot schedule'. |

## 7.2   Assumptions

| Ref. | Area | Description | Accept |
| --- | --- | --- | --- |
| MP24-AD01 | Testing | Testing for this Modification will be delivered via the B stream of test environments. | |
| MP24-AD02 | Deployment | A single Release CR will be raised to support deployment of this and all other candidate changes for the selected release. | |
| MP24-AD03 | Process | DCC assumes that:<br><br>- a 'pilot deployment period' may last up to six (6) months however a 'pilot deployment period' of one to two months will be typical; | |

| | | | |
|---|---|---|---|
| | | - the 'pilot deployment period' duration will be determined by DCC; | |
| | | - a 'pilot deployment period' will be optional for a release; | |
| | | - a 'pilot deployment period' will not be used for operational or security impacting releases; | |
| | | - any Hypercare period for a specific Communications Hub firmware release will begin at the point that the relevant CSP raises the first Operational Change Release that seeks to deploy that specific Communication Hub firmware release | |
| MP24-AD04 | Service Levels | There will be no additional Performance Measures or Service Levels as part of this Modification. | |
| | | - | |
| MP24-AD05 | Process | DCC will maintain a list of 'friendly customers' in agreement with Service Users for the purposes of identifying potential early Communication Hubs for upgrade. | |
| MP24-AD06 | Tooling | DCC will re-use existing file specifications where appropriate in relation to the communication of lists of Communication Hubs. | |
| MP24-AD07 | Process | DCC will create a set of valid constraints that Service Users may request in their 'preferred pilot schedule' such that only constraints that are compatible with each CSP's 'default pilot schedule' are requested. | |
| MP24-AD08 | Tooling | There is no need / benefit to the introduction of a fixed file format for the 'default pilot schedule' or the 'preferred pilot schedule' given that: <br><br> - neither schedule is expected to be at a GUID level; <br><br> - the 'default pilot schedule' is to be treated as an informal reasonable endeavours service level agreement rather than a granular plan. | |
| MP24-AD09 | Process | The following obligations will be placed on Service Users: <br><br> - all Service Users must participate with a pilot; <br><br> - all Service Users must contribute at a minimum number of Communication Hubs to the pilot, noting that DCC may look to agree rules with larger suppliers rather than all suppliers to limit complexity; <br><br> - all Service Users that participate in the pilot must provide at least x% of their Communication Hubs within the first two months of the pilot. <br><br> - In the event that Service Users do not provide Communication Hubs within the first two months of any pilot, DCC will select hubs on the Service Users' behalf. | |
| MP24-AD10 | Scope | Production proving Communication Hubs will be included in the pilot and added to the 'preferred pilot list' by DCC. | |
| MP24-AD11 | Tooling | DCC will define and arrange for an enhanced monitoring process for any Communication Hub enrolled in a 'pilot' to | |

| | | provide additional visibility of Communication Hub performance to Service Users and DCC. | |
|---|---|---|---|
| MP24-AD12 | Process | A 'safe launch' will be automatically triggered at the end of the pilot phase unless the Communication Hub firmware is withdrawn from the CPA. | |
| MP24-AD13 | Process | Where approval is received for a Communication Hub firmware deployment for a release where the previous release is still in a 'pilot' phase then this shall serve to invalidate the 'pilot' phase of the previous release. | |
| MP24-AD14 | Scope | One option will be selected to progress to FIA. | |

## 7.3 Issues

None at this time.

## 7.4 Dependencies

| Ref. | Area | Dependency | Impact |
|---|---|---|---|
| MP24-DD01 | Process | Any scheduling requests that relate to a set of Communication Hubs are provided and linked to the set of Communication Hubs to ease identification of the Devices by the relevant CSP. | Med |

# Appendix A; Original High Level Business Requirements

The high level business requirements for this Modification were as follows.

Note these requirements have been superseded.

| 1 | The DCC will notify all relevant Users of a Communications Hub firmware update being available |
|---|---|
| 2 | The DCC shall trigger the firmware update to a 'pilot group' of Communications Hub prior to mass deployment |
| 3 | The Supplier(s) can choose to trigger the firmware update at an earlier time than the DCC's specified deployment date |
| 4 | Any solution shall be able to accommodate split Supplier scenarios |
| 5 | The DCC will update Suppliers regularly at different stages of firmware processing |
| 6 | If issues are identified with deployed firmware, the DCC shall investigate and determine whether to proceed with the roll-out |

## Appendix B: Glossary

The table below provides definitions of the terms used in this document.

| Acronym | Definition |
| --- | --- |
| CH | Communications Hub, Comms Hub |
| CPL | Certified Products List |
| CR | (DCC) Change Request |
| CSP | Communication Service Provider |
| DCC | Data Communications Company |
| DCC-L | DCC Total System, DCC Licensing |
| FIA | Full Impact Assessment |
| GUID | Globally Unique IDentifier |
| PIA | Preliminary Impact Assessment |
| SEC | Smart Energy Code |
| SIT | System Integration Testing |
| SMIP | Smart Metering Implementation Programme |
| UIT | User Integration Testing |