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MP176 ‘Customer Analytics Reporting’

Annex A

Business requirements – version 1.0

About this document

This document contains the business requirements that support the solutions for this Modification Proposal. It sets out the requirements along with any assumptions and considerations. The Data Communications Company (DCC) will use this information to provide an assessment of the requirements that help shape the complete solution.

1. Business requirements

This section contains the functional business requirements. Based on these requirements a full solution will be developed.

Business Requirements	
Ref.	Requirement
1	For the User Roles: Import Supplier, Export Supplier, Gas Supplier, and Electricity Distributor, the DCC will provide inventory reporting identifying the User's Metering Estate.
2	The DCC shall provide reporting to its Users on the business processes defined in the Customer Analytics Reporting, which will include a view of the Users' performance against anonymised performance data for all Parties in the same User Role.
3	The DCC shall provide reporting on DCC and Device Alerts received by an Import Supplier, Export Supplier or Gas Supplier, which will consist of a total of all Alerts and individual reporting for each Alert, to the relevant Users.
4	The DCC shall make all the data captured under Requirements 1, 2 and 3 available to the relevant DCC User via an online interactive portal, allowing the User analytic capability through configurable data views.

This document contains requirements for multiple solution options, and an assessment for each option is to be provided. The table below summarises the requirements that make up each solution option:

Solution Options				
Option	Req. 1	Req. 2	Req. 3	Req. 4
Option 1	✓	✓	✓	
Option 2	✓	✓	✓	✓

2. Considerations and assumptions

This section contains the considerations and assumptions for each business requirement.

2.1 General

This solution will be applied to Smart Metering Equipment Technical Specifications (SMETS) 1 and SMETS2+ Devices.

The DCC will provide anonymised league tables for key business processes, identifying average performance per Smart Energy Code (SEC) Party for that Business Process and identifying the positioning on those league tables of only the SEC Party to whom that report is directed. DCC Customer Analytics Reporting will not share any Device Level data with any party other than the target SEC Party.

Any SEC Party which is active in DCC Systems can request a new report to be added to the Customer Analytics Reporting suite, or request a change to an existing report, by making a request to a DCC group mailbox.

As part of its Impact Assessment, the DCC is requested to consider how the delivery of the Customer Analytics Reporting suite will avoid duplication of other reports to its customers, and whether there are any synergies with the implementation of [MP096 'DNO Power Outage Alerts'](#) which could reduce overall costs.

2.2 Requirement 1: For the User Roles: Import Supplier, Export Supplier, Gas Supplier, and Electricity Distributor, the DCC will provide inventory reporting identifying the User's Metering Estate.

- 1) A single bar graph for each Device Type (Electricity Smart Metering Equipment (ESME), Gas Smart Metering Equipment (GSME), In Home Display (IHD), Pre-Payment Meter Interface Device (PPMID), Other) identifying each Device Model (along the x-axis) and the volume of meters and of each firmware model (on the y-axis).
- 2) A single Device Model bar graph giving a breakdown of each SEC Party's estate firmware version, highlighting the report recipient and the industry average
- 3) The DCC will provide for each customer a CSV data file identifying all Devices on their estate with the following data fields:
 - Device Identifier;
 - Smart Metering System (SMS) Identifier;
 - Device Type;
 - Device Model;
 - Firmware version;
 - Communication Service Provider (CSP) Id;
 - Energy Supplier Id;
 - Distribution Network Operator (DNO) Id;
 - MPxN;
 - Postcode;
 - Last Meter Read time/date;
 - Last Alert time/date;
 - Last Alert Code (only if sent to report recipient);
 - Commissioned Status;
 - Power Outage Alert Count in last month (including Polyphase Supply Interrupted Alerts);
 - Prepayment flag;
 - SMETS version;
 - whether the Device expires on the Central Products List (CPL) within 30 days;

- Devices whose Security Certificates are due to expire; and
- Change of Supplier Start and End dates.

Note: The above request was captured at a DCC Workshop. The DCC believe that this data could run to many million rows and therefore suggest some form of exception reporting. The format of this report is therefore to be discussed with customers in the Working Group. As part of the DCC's Preliminary Impact Assessment, the Smart Energy Code Administrator and Secretariat (SECAS) is requesting the DCC provide costing for the full reporting.

A Working Group member noted that there may be data privacy implications when reporting Device Alerts if they are not specific to the User receiving the report. It has been added to the requirements that Alerts reporting should only be provided to the User who receives those Alerts.

All inventory reporting will provide a snapshot view at the end of the calendar month.

2.3 Requirement 2: The DCC shall provide reporting to its Users on the business processes defined in the Customer Analytics Reporting, which will include a view of the Users' performance against anonymised performance data for all Parties in the same User Role.

- 1) The DCC will report for each of the requirements noted in this section, identifying in separate graphs:
 - a) A monthly average benchmark of success or failure against other Users operating in the same User Role;
 - b) A monthly view of Round Trip Time or Alert delivery time, identifying User best, worst, mean and median against those same metrics at an industry level for other Users operating in the same User Role;
 - c) A daily average view of success/failure and average Round Trip Time for that User compared to industry average. Where relevant, performance will be broken down by meter type, Region and SMETS1/SMETS2, and 'Category 1 & 2' Incidents will be highlighted. The report will identify all failures by Reason Code alongside all additional signifiers to enable Users to diagnose common themes.

'Success' will be determined by the receipt of a 'Successful' Response code that has not timed out. 'Failure' will be determined by the receipt of an 'Exception' or 'Timeout' Response code.

- 2) The DCC will provide a monthly CSV data file for each Service Reference Variant (SRV), identifying at an aggregated level the following criteria:
 - Response code;
 - Communications Hub Manufacturer;
 - Communications Hub Model;
 - Communications Hub Function;
 - Communications Hub Firmware;

- Device Type;
- Device Manufacturer;
- Device Model;
- Device Firmware Version;
- Region; and
- Round Trip Time.

2.4 Requirement 3: The DCC shall provide reporting on DCC and Device Alerts received by an Import Supplier, Export Supplier or Gas Supplier, which will consist of a total of all Alerts and individual reporting for each Alert, to the relevant Users.

Electricity Distributors will receive reporting on the following subset of Alerts:

- AD1 – Power Outage Alert;
- 8F35 – Supply Outage Restored;
- 8F36 – Supply Outage Restored - Outage \geq 3 minutes;
- 8F58 – Supply interrupted on Phase 1;
- 8F59 – Supply interrupted on Phase 2;
- 8F5A – Supply interrupted on Phase 3;
- 8F37 – Supply Outage Restored on Phase 1;
- 8F38 – Supply Outage Restored on Phase 1 Restored - Outage \geq 3 minutes;
- 8F39 – Supply Outage Restored on Phase 2 Restored;
- 8F3A – Supply Outage Restored on Phase 2 Restored - Outage \geq 3 minutes;
- 8F3B – Supply Outage Restored on Phase 3 Restored;
- 8F3C – Supply Outage Restored on Phase 3 Restored - Outage \geq 3 minutes;
- 8F0C – Clock not adjusted (adjustment greater than 10 seconds);
- 81C6 – Clock not adjusted (outside tolerance);
- N12 – Failure to deliver Command to Device;
- N13 – Failure to receive Response from Device;
- N53 – Command not delivered to ESME; and
- N55 – SMETS1 Service Provider (S1SP) Service Request Validation Failure

This reporting will provide the following views:

1. A daily average view of success/failure of Alert sending and average delivery time for that customer compared to industry average.
2. A monthly summary of success compared to industry average.

3. The DCC will provide a monthly CSV data file for each Alert type, identifying at an aggregated level all dimensions that SVP report on:

- Success/Failure;
- Communications Hub Manufacturer;
- Communications Hub Model;
- Communications Hub Function;
- Communications Hub Firmware;
- Device Type;
- Device Manufacturer;
- Device Model;
- Device Firmware Version;
- Region; and
- Round Trip Time.

'Success' will be determined by the receipt of a 'Successful' Response code that has not timed out. 'Failure' will be determined by the receipt of an 'Exception' or 'Timeout' Response code.

4. Reports for the Electricity Distribution role for the Alerts N13 'Failure to receive Response from Device' and N55 'S1SP Service Request Validation Failure' will receive an additional view identifying a breakdown of the Alerts split by Meter Make, Model, Firmware Version.
5. In addition, the following reports will be produced specifically for the Electricity Distribution role:
 - a) Report comparing the daily monitoring of N16 'Device Identity Confirmation' Alerts with N42 'Security Credentials Updated on the Device' Alerts identifying volumes which have met seven days service level agreement (SLA) for receipt of the N42 following N16 and those that have failed this metric, identifying the associated Responsible Supplier;
 - b) Standardised Reporting identifying Power Outage Alerts with no Power Restoration Alerts:
 - i) AD1 with no 8F35
 - ii) AD1 with no 8F36
 - iii) 8F35 with no AD1
 - iv) 8F36 with no AD1

2.5 Requirement 4: The DCC shall make all the data captured under Requirements 1, 2 and 3 available to the relevant DCC User via an online interactive portal, allowing the User analytic capability through bespoke data views.

The reporting scope and the change process will be unaffected, but in addition to delivering the reporting in a CSV/PDF format, DCC Users will be able to access the relevant performance metric data via the DCC web tool and tailor the data views to meet their own analytical needs.

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3. Glossary

This table lists all the acronyms used in this document and the full term they are an abbreviation for.

Glossary	
Acronym	Full term
CPL	Central Products List
CSP	Communication Service Provider
DCC	Data Communications Company
DNO	Distribution Network Operator
ESME	Electricity Smart Metering Equipment
GSME	Gas Smart Metering Equipment
IHD	In Home Display
PPMID	Pre-Payment Meter Interface Device
RSVP	Rate, Speed, Volume, Payload
SEC	Smart Energy Code
SECAS	Smart Energy Code Administrator and Secretariat
S1SP	SMETS1 Service Provider
SLA	Service Level Agreement
SMETS	Smart Metering Equipment Technical Specifications
SMS	Smart Metering System
SRV	Service Reference Variant