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End-to-End Walkthrough IV Metering

19th August 2022 10:00 – 12:00

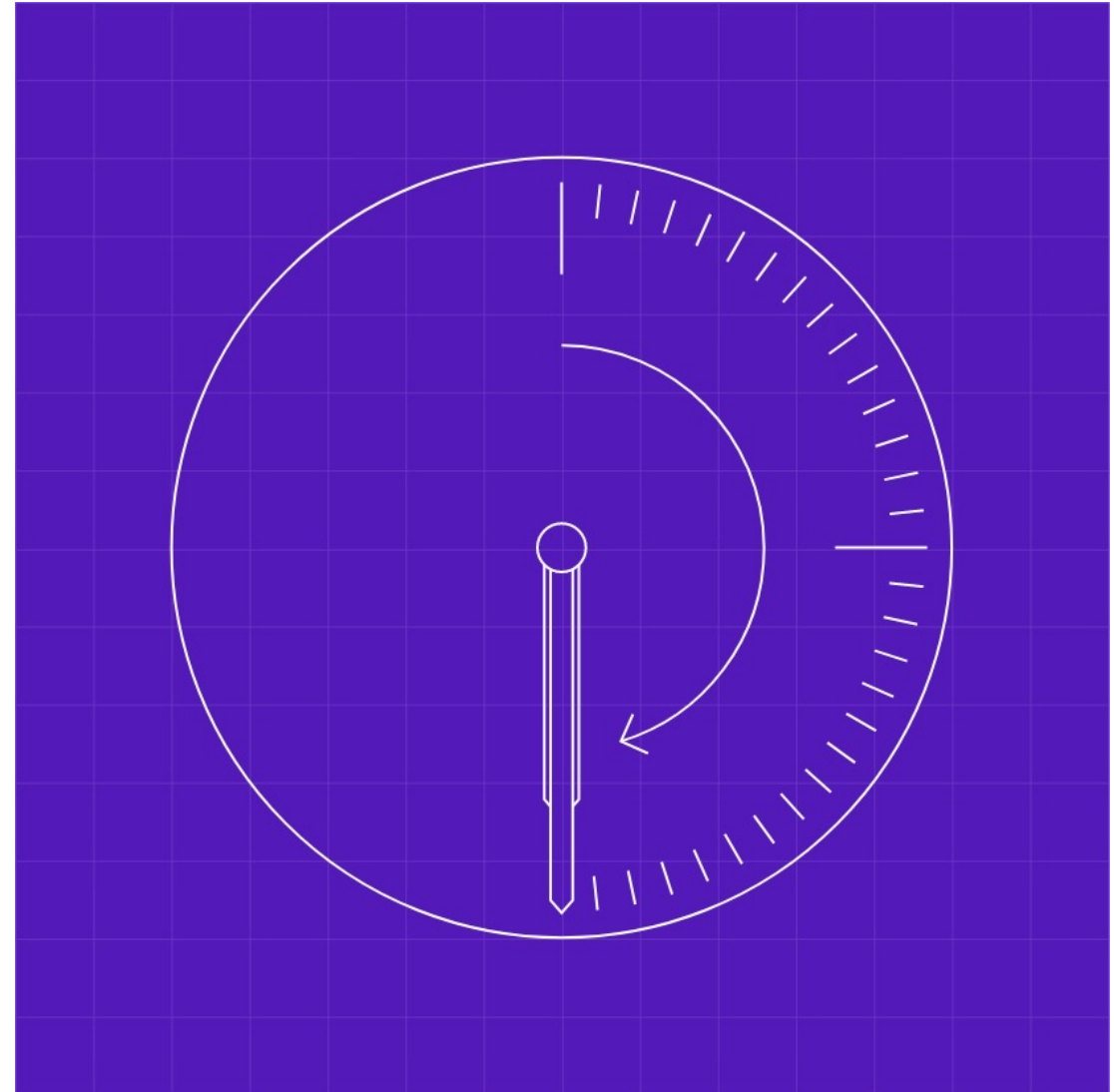MHHS-DEL582 - SC/EP MHHS Design Team – Metering E2E Version 1

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Any questions?

Please join at Slido.com

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- Metering Changes
  - Exchange
  - Install / Remove

- Change of Energisation Status

- Disconnection

- Change of Connection Type / Change of Segment

- LDSO / Non-Supplier Registration Updates

- Headline Changes / Context

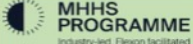- Business Process Overview

- Slido Questions

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MHHSP - Interface & Publication List

These cols require further review as part of Physical Design & ECS Data Reqs & Obfuscation

MHHSP Interface ID	Interface Name	Description	Sender	Always (Role)	Primary Recipient (Only Sender Knows)	Secondary Recipient (MPAN Look Up / Optionality)	Business Processes
DIP-COMMON	DIP COMMON Blocks	Message Header Information	DIP				
MHHSP-IF-001	Notification of Change of Supplier	Notification of Change of Supplier	Registration Service	MDS	Supplier (Incoming)	N/A	BP001 - COS
MHHSP-IF-002	Registration Update to Supplier (COS Gain)	Notification to New Supplier of Site Information	Registration Service	N/A	N/A	Supplier	BP002 - COS
MHHSP-IF-003	Central Systesm - MPAN Creation & Update	Central Systesm - MPAN Creation & Update					
MHHSP-IF-005	Metering Service MTD Updates to Registration	To notify the Registration Service of Metering related Data Item changes, for example, New install, Removal, MEX, change to existing Meter Details	MSS, MSA	Registration	N/A	N/A	BP09 - Change of Meter
MHHSP-IF-006	Registration Service Notification of MTD Updates	Outcome of Metering Service Request to Update Registration after Install, Removal, MEX or Updates to Existing Meter	Registration Service	N/A	XOver MS, DS, Supplier	MS, DS, Supplier, LDSO	BP09 - Change of Meter
MHHSP-IF-007	Change of Energisation Status Outcome	Metering Service Notification of Outcome of Energisation Status to Registration	MSS, AMS. LDSO	Registration Service	N/A	N/A	BP008 - Chg En Status
MHHSP-IF-008	Registration Service Notification of Change of Energisation Status	Registration Service notification of Change of Energisation Status [back to] MS & other parties	Registration Service	Central Systems	XOver MS, DS, Supplier	MS, DS, Supplier, LDSO	BP008 - Chg En Status
MHHSP-IF-009	Registration Service Notification of Disconnection	Registration Notification of Disconnection	Registration Service	Central Systems	XOver MS, DS, Supplier	MS, DS, Supplier, LDSO	BP07 - Disconnection
MHHSP-IF-013	MDS Defaults Applied	Still to be discussed by ECSWG	Central Settlements	N/A	N/A	Supplier	BP05 - Data Processing
MHHSP-IF-015	Request Historic Consumption	Request Consumption History Back	ADS (Gain)	DIP	N/A	N/A	BP0000

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MHHS INTERFACE / MESSAGE SPECIFICATION

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Interface Name:	Notification of Change of Supplier
Interface / Pub ID:	IF-001 / PUB-001
Version Number:	v0.1

DIP Delivery Pattern	Pattern A (JSON via DIP)
Security Category:	Cat 2
Business Process Docs	BP01

From Parties Registration Service (REGS)

To Parties Suppliers, Marketwide Data Service (MDS)

Purpose / Description Following a successful Change of Supplier CSS will notify this to the Registration Service. This is the interface that will be used by the Registration Service to notify, interested, MHHS Participants that a successful Change of Supplier has taken place.

Routing Rules

Event Code(s) / Conditions	Always Routing	Primary Routing	Secondary Routing	Correlation ID Required
[ChangeOfSupplier]	MDS	SUPPI - Incoming Supplier	N/A	

Message Structure

MHHSP Data Item ID	Data Item	Description	Item Owner	MHHSP Data Type Ref	Data Type	Schema Optionality	C/M/O	Conditionality Rule	Obfescation	Population Notes
S0- Transactional Info (Mandatory)										
DI-000	Interface Id	Interface Id	Sending Party		String 6	M	M			IF-001
DI-999	Event Code	Code used to identify the nature of the Event	Sending Party	DT-004	String~50	M	M			[ChangeOfSupplier]
S1 - Sender Info (Mandatory)										
D0- Transactional Info - DIP Set (Added by DIP - Mandatory)										
A0 - Addressing (Optional for non-Primary Routing)										
Z0 - Interface Signature (Mandatory)										
Z1 - Publication Signature (Added by DIP - Mandatory)										
M0 - MPAN										
DI-063	MPAN Core	A business key used to uniquely identify the metering point that is the subject of the update.	Sending Party	DT-002	String~13	M	M			
		The market-wide unique								

JSON Example

```
[
  {
    "payload": {
      "CommonBlock": {
        "S0": {
          "interfaceId": "IF-XXX",
          "eventCode": "[EventType]"
        },
        "S1": {
          "environment": "PROD",
          "schemaVersion": "0.0.1",
          "senderUniqueRef": "string",
          "senderEnvelopeRef": "string",
          "sentTimestamp": "2022-03-01T13:00:00+00:00",
          "senderId": "10090123456",
          "senderEZName": "Very Long Named Energy Co (Metering) Ltd",
          "senderRole": "10090123456",
          "agentId": "10090123456"
        },
        "A0": {
          "primaryRecipient": [
            "10090123456"
          ],
          "secondaryRecipient": [
            "10090123456"
          ],
          "always": [
            "101",
            "10090123456"
          ]
        },
        "D0": {
          "correlationId": "CI-BP09-20220401-1234567890123",
          "transactionId": "T-006-1234567890123-106-20220401-1234CC",
          "transactionTimestamp": "string",
          "publicationId": "string"
        },
      }
    }
  }
]
```

https://mhhsprogramme.sharepoint.com/:v:/r/sites/Market-wideHalfHourlySettlement/Meeting%20Papers/MHHS%20DES184%20Registration%20Sub%20Group%20Interfaces%20and%20Validation%20Rules%2021%20July%202022%20Meeting%20Recording%20v1.0.mp4?csf=1&web=1

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Change of Metering

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- Work is requested by the Supplier, and confirmed by the Metering Service using whatever the contractually agreed mechanism is in place between them

  - MS Web Portal, E-Mail, Telephone, **D0142** (some suggestion that the D0142 was not ideal, and could be replaced via a new DIP based interface – agreement this would be subject to a future Change Request)

- Recovery of HH consumption at the point of the Exchange/Removal – subject to the commercial agreements that a Supplier has in place with their Service Provider(s)

- 'Minimum requirement' on the Metering Service is to capture & share a Cumulative Read (Smart Meters) / Register Readings as appropriate for Traditional Meters

- MHHS Rule of Thumb for Meter Readings (across all processes)
  - Smart Cumulative Reads = IF-041/PUB-041   MTD's = IF-006/PUB-006
  - Traditional /Register Reads = D0010   MTD's = D0149/D150
  - Advanced Readings = D0010   MTD's = D268

- Appointed Metering Service only, will have 'D312 like' functionality to maintain the meter history

- MAP's will continue to be looped in using D303 / D304 and other existing mechanisms

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- **Review BP-009 – Change of Metering**

- MHHSP-BP009-Change of Metering-v3.0.pdf

Change of Energisation Status

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- Much of the 'up front' interaction between the Supplier / MOP / LDSO (if required) continues to use existing D-Flows

- Main change is that responses – either Failed Job or Confirmation – will flow via the DIP

- As with Meter Exchange any attempt at recovery of HH Data is subject to the arrangements each Supplier has in place with their Service Provider(s)

- 'Minimum requirement' on the Metering Service is the capture and sharing of a Cumulative Reading (Smart) or Register Reading(s) (Traditional/Advanced)

- Possible a Metering Service may do a 'combined' Remove and De-Energise – this is fine – but would be treated as two separate 'events' ….

  - Metering Service would send Registration Service IF-005 (Remove) & IF-007 (De-Energisation)

  - Participants would see PUB-006 (Remove) & PUB-008 (De-Energisation)

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- **Review BP-008 – Change of Energisation Status**
- MHHSP-BP008-Change of Energisation -v3.0.pdf

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Disconnection

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- Again a number of retained D-Flows – but with the outcome / result communicated via the DIP

- Following implementation of the CSS - Disconnection is now effectively a *two* stage process:

  - Disconnection recorded at the LDSO
  - De-Activation / De-Registration at the CSS

- Only Suppliers are notified of the LDSO Disconnection event

- Service Providers will simply be 'Auto De-Appointed' – with a Reason Code of 'Disconnection' once the Registration Service received confirmation the MPAN has been 'killed off' in CSS

- Registration Service will also formally confirm to Suppliers & ECS that the MPAN has been De-Activated / De-Registered in the CSS via PUB-009

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- **Review BP-007 – Disconnection**

- MHHSP-BP007-Disconnection-v3.0.pdf

Change of Connection Type and/or Change of Segment

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- **Connection Type** – owned and maintained, in the Registration Service, by the LDSO

  - Whole Current (W) , LV CT (L) , HV CT (H) , EHV CT (E) , Unmetered (U)

- **Market Segment** – dynamic / derived data item - determined by the Registration Service

  - Smart incl. Traditional (S) , Advanced (A) , Unmetered (U)

  - Meter Type + Connection Type →→ Market Segment →→→ Service Provider Compatibility

- **Scenario 1 – "Easier"**

  - Change of Connection Type – LVCT to HVCT - No change of metering required

  - Just have to worry about coordinating the LDSO and Metering Service (if required) to action the required changes on the same day → 'Target Work Date'

  - Assuming the work goes ahead (within 2wd)
    - LDSO will update the Connection Type & Registration Service will issue PUB-043 'Change of Connection Type'
    - Registration Service will automatically 're-evaluate' Market Segment
    - Identify there is <u>no change </u>(i.e. still advanced) & therefore Service Providers are sill appropriate for segment
    - DUoS Tariff Change may be required PUB-018

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- **Review BP-011 – Change of Connection Type / Segment Re-Evaluation**

- MHHSP-BP011-Change of ConType andor Mkt Segment-v3.0.pdf

- **Scenario 2 – ~~Scary~~ Complex**

  - Change of Connection Type – Smart Whole Current to LVCT →→→ Change of Segment from Smart to Advanced
  - Now have to worry about coordinating many separate elements:

    - LDSO – change and update Connection Type
    - Metering Service to action a meter exchange
    - Change of Service Providers

- Supplier will need to

  - agree 'Target Work Date' with both the LDSO & an [incoming] Advanced Metering Service
  - ensure that 'accepted' Prospective Service Provider Appointments with a reason code of 'SEG' are in place!

- Assuming the work goes ahead (within 2wd)
  - LDSO will update the Connection Type & Registration Service will issue PUB-043 'Change of Connection Type'
  - Metering Service will update Registration Service with details of the meter exchange PUB-006
  - Prospective 'Advanced' Service Provider Appointments will become active PUB-036
  - Registration Service will automatically 're-evaluate' Market Segment
    - Identify there is a change (i.e. Smart to Advanced) and issue PUB-044
    - [New] Service Providers are appropriate for segment – so no action required here
  - DUoS Tariff Change may be required PUB-018

- **Review BP-011 – Change of Connection Type / Segment Re-Evaluation**

- MHHSP-BP011-Change of ConType andor Mkt Segment-v3.0.pdf

- **Scenario 2 – Complex – What if ?**

  - LDSO or Metering Service does not perform their updates…?
    The Supplier has ultimate responsibility to ensure that all steps of the process are completed successfully !

    As soon as one of the updates is received and processed, Registration Service Market Segment Re-Evaluation will detect that there is an *invalid combination* of Meter Type + Connection Type – Market Segment & Automatically De-Appoint the now invalid Service Provider(s).

    Market Segment does not change to 'invalid' per se, but will remain set as the old Market Segment until such time as a new 'valid' Market Segment can be determined by the Registration Service (i.e. new valid combination of Meter Type + Connection Type)

    Supplier will receive 'Registration Service Reminders' PUB-045, whilst either an invalid combination persists or there is no Service Provider(s) appointed.

  - LDSO or Metering Service does not perform their updates… even after 2 working days?
    There is a 'grace period' as the limit set in the Registration System is actually 5wd. However, beyond this point the Prospective Appointments would Lapse and would need to be replaced/re-issued by the Supplier.

  - [New] Service Provider Appointments are not in place for the 'Target Work Date' or become 'Lapsed'?
    LDOS AND Metering Service updates would have to have been completed! Once this was done, then Supplier would need to submit new Service Appointments, these would need to have the 'Appointment Start Date' set *retrospectively* to the 'Work Date'.

- **Scenario 2 – Complex – What if ?**

  - I did not use 'SEG' Appointment type?
    This will mean that the Service Provider Appointments do not benefit from the extended time, 5 day grace period, in the Appointments Queue – so would be treated like all other appointments and be 'Lapsed' on the Appointment Start Date as they would not meet the matching criteria (unless both the LDSO update and Metering update had both been submitted and processed on the Work Date)

  - Work does not go ahead?
    Once the 5 day grace period had been reached and there was no update to either the Connection Type or Metering – the appointment would be automatically 'Lapsed' by the Registration Service. If the work was re-scheduled new Service Provider Appointments would need to be put in place on or in-advance of the re-agreed 'Target Work Date', with an appointment start date matching that new 'Target Work Date'
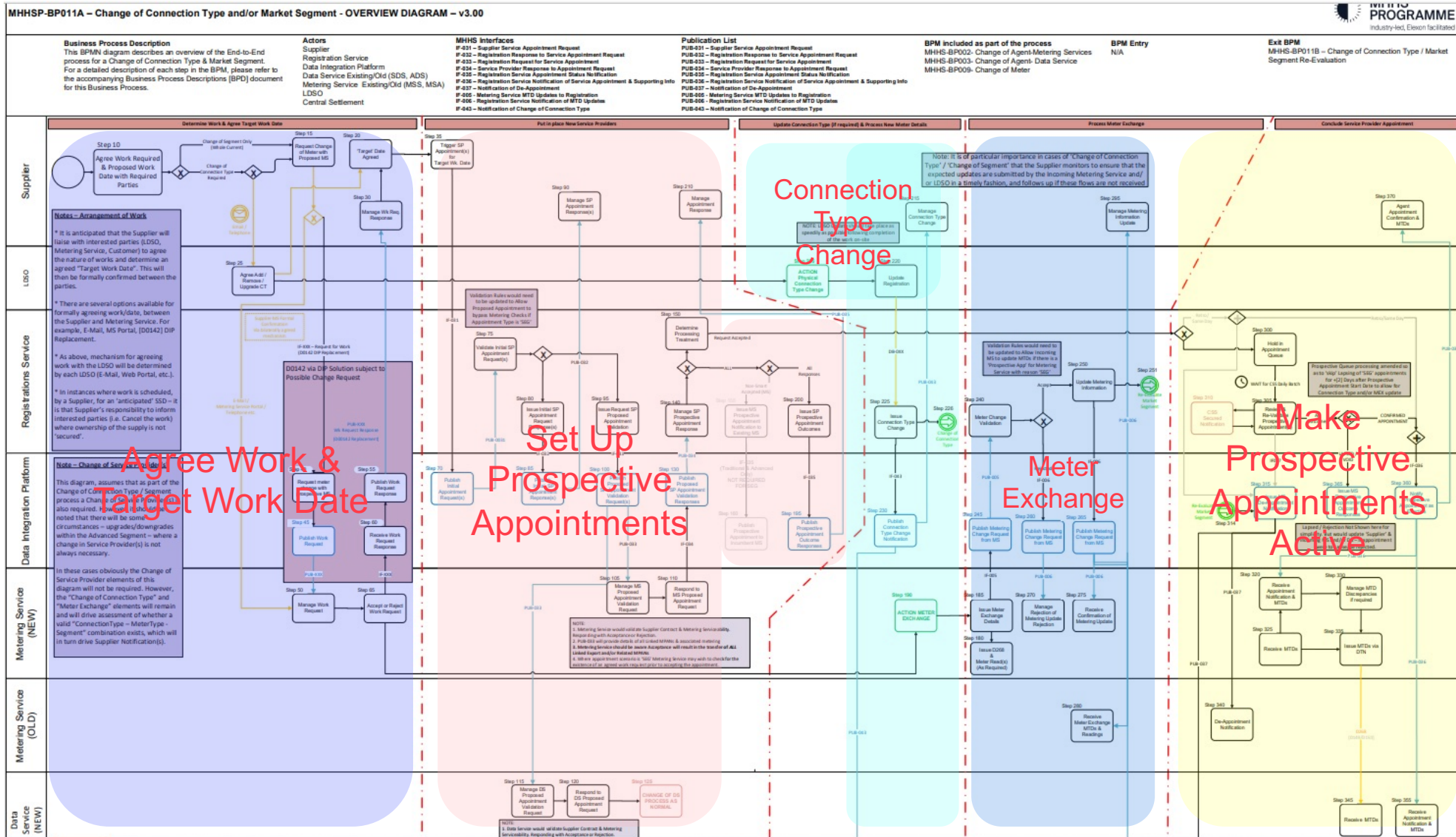
  - 'Target Work' is scheduled to place to coincide with a Supplier's SSD?
    There is nothing to prevent an incoming supplier scheduling work to take place on their anticipated SSD. However, as would be the case today, it would be that Supplier's responsibility to cancel any such planned work if the switch was no longer going ahead.

  - A supplier acquires an MPAN where there is a Connection Type / Market Segment mis-alignment issue?
    Should be incredibly rare – why would a customer arrange Meter Works with a supplier at the same time as independently transferring supply?! However, in this unfortunate case, the acquiring supplier would need to work with previous Supplier, LDSO and their own Metering Service to establish the situation both on-site and with respect to system updates and request / initiate data updates as appropriate

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Update of Registration Data Items

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- Predominantly data items own and maintained by LSDO or CSS (i.e. not directly updated by Suppliers IF-024/25)

  - Change of Meter Point Address
  - Change of GSP
  - Change of Import / Export MPAN Linkage
  - Change of Related MPANs
  - Change of DUoS Tariff ID & LLF ID

  - Change of Domestic Indicator (received into Registration Service via update from CSS)

  - Change of Energy Direction & Metered/Un-Metered Indicator (should never change, but there is provision for one-off corrections)

- All follow the same pattern in that Registration Service is updated (directly / DB Flows / CSS) and are notified to MHHS Participants using PUB-018

- MHHSP-BP010-Change of Registration Data -v3.0.pdf

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Additional Resources

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- Metering related documentation
  - https://mhhsprogramme.sharepoint.com/sites/Market-wideHalfHourlySettlement/SitePages/Design%20Artefacts%20by%20Business%20Process%20-%20Metering%20Changes.aspx

- MHHS Supporting Documentation (Requirements Documents – Registration Service, Suppliers)
  - https://mhhsprogramme.sharepoint.com/sites/Market-wideHalfHourlySettlement/SitePages/Design%20Artefacts%20by%20Business%20Process%20-%20Supporting%20Documents%20.aspx

- MHHS Interface High-level Overview (approx. 1hr)
  - https://mhhsprogramme.sharepoint.com/:v:/r/sites/Market-wideHalfHourlySettlement/Meeting%20Papers/MHHS%20DES184%20Registration%20Sub%20Group%20Interfaces%20and%20Validation%20Rules%2021%20July%202022%20Meeting%20Recording%20v1.0.mp4?csf=1&web=1

- Email Contact Points
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