



**MHHS
PROGRAMME**
Industry-led, Elexon facilitated

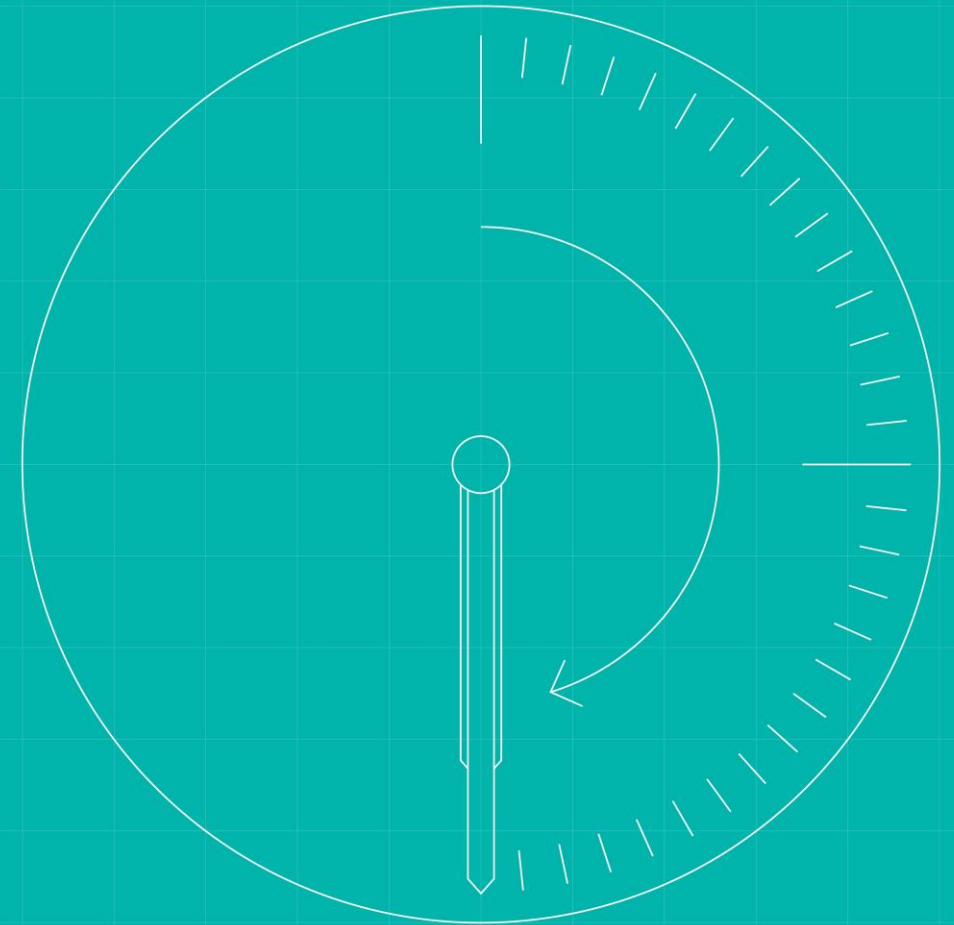
MHHS Design Artefacts Guidance & Signposting

20/02/2023

MHHSDES188

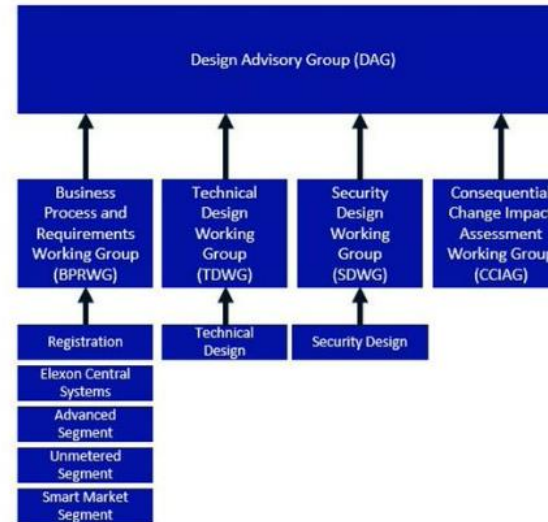
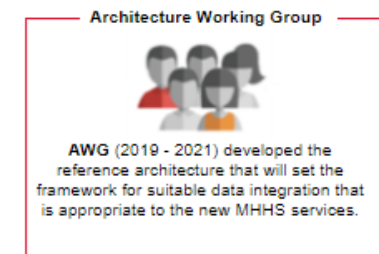
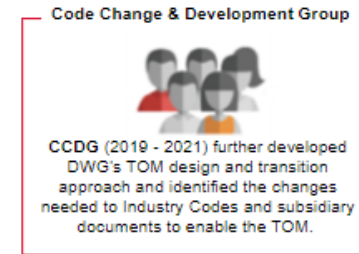
Version 2.0

MHHS Design Artefacts

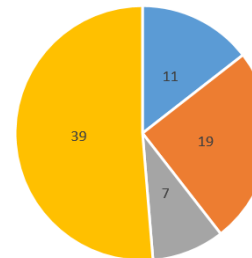


Development of the MHHS Design

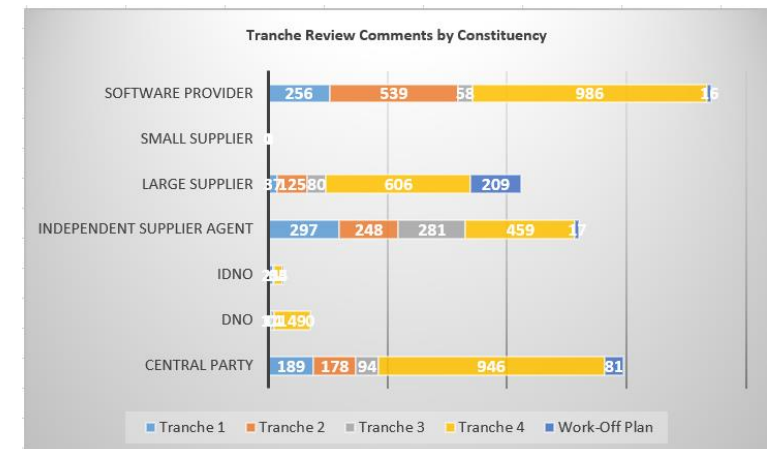
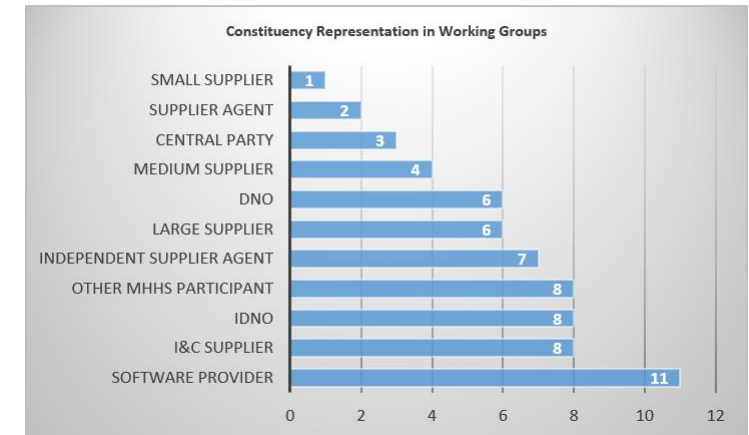
- Prior to the mobilisation of the MHHS Programme, an initial set of working documents were created by the existing industry working groups. These working documents formed the basis of the MHHS Design.
- The Artefacts were developed and reviewed with industry over four staggered tranches. The purpose of this approach was to provide a controlled process to systematically develop stability in the Design. The core processes were defined and agreed in the first tranche and built upon in the subsequent tranches by adding supporting technical information
- 3 Working Groups and 13 Sub-Working Groups were established to engage and consult with industry to develop the Design Artefacts. From November 2021 there were over 120 Working Group meetings attended by over 3,300 attendees (443 unique persons) representing 86 organisations
- A series of 14 webinars were attended by over 1,600 attendees to help participants navigate and understand the MHHS Design to support their review
- MHHS Participants reviewed the Design Artefacts at the end of each tranche and a total of 5,147 comments were received and responded to across all tranches
- The Design Advisory Group (DAG) approved the baseline of the Design Artefacts on 31st October on the condition that the remaining design elements were delivered as part of a Work Off Plan.
- The Work Off Plan was delivered and the re-baseline of the Design Artefacts approved by DAG on 16 February.



Design Artefacts



■ Tranche 1 ■ Tranche 2 ■ Tranche 3 ■ Tranche 4

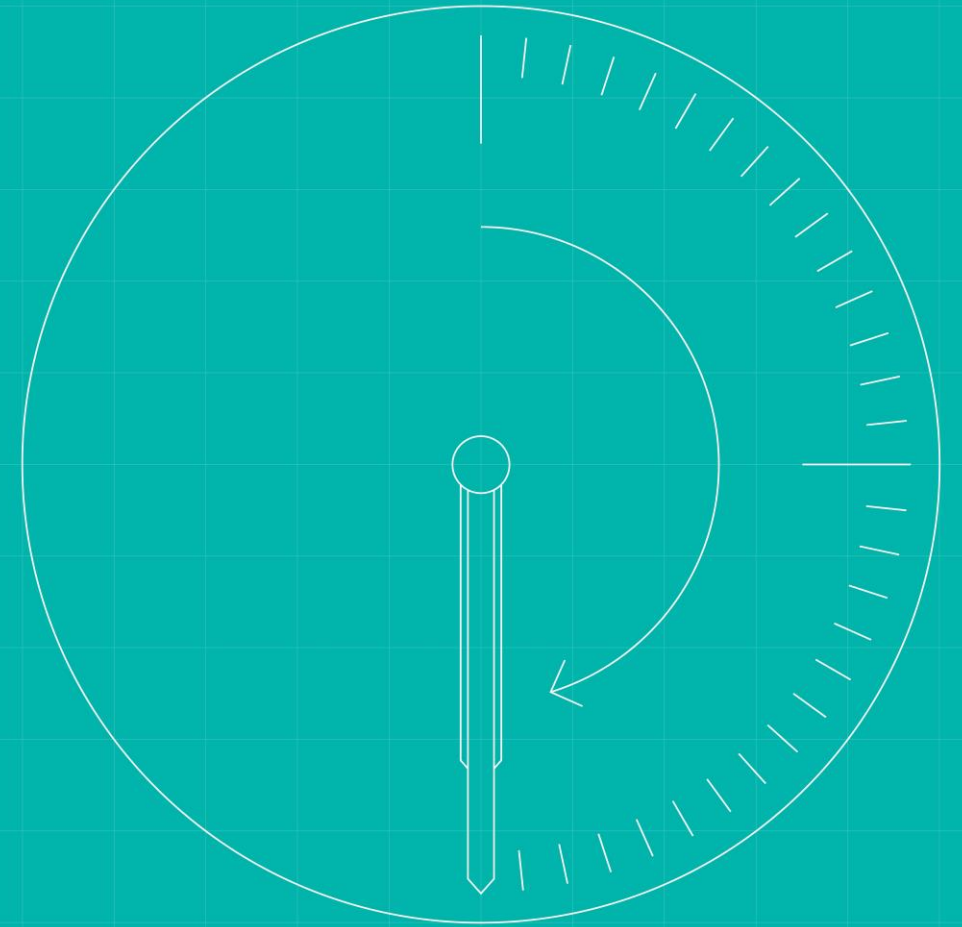


The MHHS Design is a collection of **70** individual artefacts which follow an orthodox approach and have been developed collaboratively with industry participants through a series of Working Groups.



- **Business Process Diagrams** (19 in total)– typically a single business process illustration with multiple swimlanes following established modelling conventions
- **Business Process Descriptions** (19 in total)- documents providing a description of each of the steps within the associated Business Process Diagram
- **Business Requirements Specifications** (13 in total) – documents defining the detailed business requirements underpinning each TOM Service
- **Interface Catalogue** (1 document comprising of 35 Logical Interface Specifications) – documents defining the data models and data catalogues for interfaces
- **Reporting Catalogue** (2 documents comprising of 18 Reporting Interface Specifications) – documents defining the data models and data catalogues for reporting interfaces
- **Supporting Artefacts** (13 in total)- documents providing additional detail to support the design, including Method Statements, Operational Choreography and Logical Data Model.
- **Technical Artefacts** (6 in total)- documents detailing the technical aspects of the design, including the End-to-End Technical Architecture, Non-functional Requirements, and Security Architecture.

Design Artefacts by Business Process



The Design Artefacts have been grouped into themes which underpin the End to End Walkthrough Design Playback Sessions:

- **MPAN Ownership** – processes associated with the appointment of parties such as supplier, metering service or data service
- **Metering Changes**- processes associated with metering such as disconnections, changes to energization status or change of meter
- **Meter to Bank**- processes associated with the collection and processing of data through to settlement.

- This table provides guidance on the processes that we recommend each constituency prioritise as part of their review process.
- Further detail of the Design Artefacts which support each process can be found on the following slides.
- A detailed breakdown of all of the Design Artefacts can also be found in the Design Artefact Matrix

E2E Walkthrough	Reference	Business Process	Constituency						
			Supplier	Independent Agent	Supplier Agent	DNO	iDNO	Smart DCC	Elexon
MPAN Ownership	MHHSP-BP001	Change of Supplier	Y			Y	Y	Y	Y
	MHHSP-BP010	Change of Registration Data	Y	Data & Metering Service		Y	Y		
	MHHSP-BP002	Change of Service - Metering Service	Y	Metering Service		Y	Y	Y	
	MHHSP-BP003	Change of Service - Data Service	Y	Data Service		Y	Y	Y	
	MHHSP-BP003A	CSS and DCC Update		Data Service				Y	
	MHHSP-BP003B	Change of Existing Service Appointment Details	Y	Data & Metering Service				Y	
	MHHSP-BP003C	Transfer of Reads - Change of Data Service	Y	Data Service					
Metering Changes	MHHSP-BP007	Disconnection	Y			Y	Y		
	MHHSP-BP008	Change of Energisation Status	Y	Data & Metering Service		Y	Y		
	MHHSP-BP009	Change of Meter	Y	Data & Metering Service		Y	Y		
	MHHSP-BP011	Change of Market Segment and/or Connection Type	Y	Data & Metering Service					
Meter to Bank	MHHSP-BP004	Data Collection	Y	Data Service				Y	
	MHHSP-BP005	Data Processing	Y	Data Service				Y	Y
	MHHSP-BP013	Demand Disconnection Events				Y	Y		Y
	MHHSP-BP016	Consumption Amendment	Y	Data Service					Y
	MHHSP-BP018	Load Shaping Service (ECS)	Y	Data Service		Y	Y		Y
	MHHSP-BP019	Market-wide Data Service (ECS)							Y
	MHHSP-BP020	Volume Allocation Service (ECS)							Y
MHHSP-BP021	Industry Standing Data (ECS)	Y	Data & Metering Service		Y	Y	Y	Y	

Business Processes & Related Artefacts- MPAN Ownership

The below table lists the Design Artefacts related to each of the business processes which were covered under the [MPAN Ownership E2E Design Playback Session](#).

Change of Supplier

[Business Process Diagram](#): BP001-Change of Supplier

[Business Process Description](#): BPD001-Change of Supplier

[Interface Specification](#): IF001-Notification of Change of Supplier

[Interface Specification](#): IF002-Registration Update to Supplier (COS Gain)

Change of Registration Data

[Business Process Diagram](#): BP010-Change of Registration Data

[Business Process Description](#): BPD010-Change of Registration Data

[Interface Specification](#): IF018-Notification of Registration Data Item Changes

[Interface Specification](#): IF025-Supplier Updates to Registration

[Interface Specification](#): IF026-Registration Service Notification of Supplier Data Chg

Change of Service- Metering Service

[Business Process Diagram](#): BP002-Change of Service - Metering Service

[Business Process Description](#): BPD002-Change of Service- Metering Service

[Interface Specification](#): IF031-Supplier Service Appointment Request

[Interface Specification](#): IF032-Registration Service Response to Supplier Service App Request

[Interface Specification](#): IF033-Registration Service Request for Service Appointment

[Interface Specification](#): IF034-Service Provider Response to Appointment Request

[Interface Specification](#): IF035-Registration Service Appointment Status Notification

[Interface Specification](#): IF036-Registration Service Notification of Service Appointment & Supporting Info

[Interface Specification](#): IF037-Registration Service Notification of Service De-Appointment

[Interface Specification](#): IF038-Customer Direct Contract Advisory

[Interface Specification](#): IF039-Customer Direct Contract Advisory Response

[Interface Specification](#): IF041-Cumulative Meter Reading

Change of Service- Data Service

[Business Process Diagram](#): BP003-Change of Service - Data Service

[Business Process Description](#): BPD003-Change of Service- Data Service

[Interface Specification](#): IF031-Supplier Service Appointment Request

[Interface Specification](#): IF032-Registration Service Response to Supplier Service App Request

[Interface Specification](#): IF033-Registration Service Request for Service Appointment

[Interface Specification](#): IF034-Service Provider Response to Appointment Request

[Interface Specification](#): IF035-Registration Service Appointment Status Notification

[Interface Specification](#): IF036-Registration Service Notification of Service Appointment & Supporting Info

[Interface Specification](#): IF037-Registration Service Notification of Service De-Appointment

[Interface Specification](#): IF038-Customer Direct Contract Advisory

[Interface Specification](#): IF039-Customer Direct Contract Advisory Response

CSS & DCC Update

[Business Process Diagram](#): BP003A-CSS and DCC Update

[Business Process Description](#): BPD003A-CSS and DCC updates

[Interface Specification](#): IF035-Registration Service Appointment Status Notification

Change of Existing Service Appointment Details

[Business Process Diagram](#): BP003B-Change of Existing Service Appointment Details

[Business Process Description](#): BPD003B-Change of Existing Service Appointment Details

[Interface Specification](#): IF031-Supplier Service Appointment Request

[Interface Specification](#): IF032-Registration Service Response to Supplier Service App Request

[Interface Specification](#): IF033-Registration Service Request for Service Appointment

[Interface Specification](#): IF034-Service Provider Response to Appointment Request

[Interface Specification](#): IF035-Registration Service Appointment Status Notification

Transfer of Reads- Change of Data Service

[Business Process Diagram](#): BP003C-Transfer of Reads - Change of Data Service

[Business Process Description](#): BPD003C-Transfer of read

[Interface Specification](#): IF015-Request Historic Consumption Replay (ADV Sites only)

[Interface Specification](#): IF016-HH Consumption History Replay (ADV Sites only)

Business Processes & Related Artefacts- Metering Changes

The below table lists the Design Artefacts related to each of the business processes were covered under the [Metering Changes E2E Design](#) Playback Session.

Disconnection
Business Process Diagram : BP007-Disconnection
Business Process Description : BPD007-Disconnection
Interface Specification : IF009-Registration Service Notification of Disconnection
Change of Energisation Status
Business Process Diagram : BP008-Change of Energisation Status
Business Process Description : BPD008-Change of Energisation Status
Interface Specification : IF007-Change of Energisation Status Outcome
Interface Specification : IF008-Registration Service Notification of Change of Energisation Status
Change of Metering
Business Process Diagram : BP009-Change of Metering
Business Process Description : BPD009-Change of Metering
Interface Specification : IF005-Metering Service MTD Updates to Registration
Interface Specification : IF006-Registration Service Notification of MTD Updates
Interface Specification : IF041-Cumulative Meter Reading
Change of Connection Type and/or Market Segment
Business Process Diagram : BP011-Change of Connection Type and/or Market Segment
Business Process Description : BPD011-Change of Connection Type and/or Market Segment
Interface Specification : IF043-Registration Service Notification of Change of Connection Type
Interface Specification : IF044-Registration Service Notification of Change of Segment
Interface Specification : IF045-Registration Service Notification of Invalid Segment or No Agents Appointed

Business Processes & Related Artefacts- Meter to Bank

The below table lists the Design Artefacts related to each of the business processes were covered under the [Meter to Bank E2E Design](#) Playback Session.

Data Collection
Business Process Diagram : BP004-Data Collection
Business Process Description : BPD004-Data Collection
Interface Specification : IF024-Supplier Advisory Notification to DS
Data Processing
Business Process Diagram : BP005-Data Processing
Business Process Description : BPD005-Data Processing
Interface Specification : IF013-MDS Defaults Applied
Interface Specification : IF014- Rejected Consumption Data Submission
Interface Specification : IF021-UTC Settlement Period Consumption Data
Interface Specification : IF022-LSS Period Data
Interface Specification : IF023-LSS Totals Data
Interface Specification : IF040-Notification of ECS Annual Consumption
Demand Disconnection Events
Business Process Diagram : BP013-Demand Disconnection Events
Business Process Description : BPD013-Demand Disconnection Events
Method Statement : METH008- DDE Method Statement
Business Requirements Specification : BRS013-Demand Disconnection Events
Consumption Amendment
Business Process Diagram : BP016-Consumption Amendment
Business Process Description : BPD013-Consumption Amendment
Interface Specification : IF027-Consumption Amendment Request
Interface Specification : IF028-Consumption Amendment Request Response

Load Shaping Service
Business Process Diagram : BP018-Load Shaping Service (ECS)
Business Process Description : BPD018-Load Shaping Service (ECS)
Method Statement : METH005-LSS Method Statement
Business Requirements Specification : BRS007-Load Shaping Service (ECS)
Market-wide Data Service
Business Process Diagram : BP019-Market-wide Data Service (ECS)
Business Process Description : BPD019-Market-wide Data Service (ECS)
Method Statement : METH007-MDS Method Statement
Business Requirements Specification : BRS008-Market-wide Data Service (ECS)
Volume Allocation Service
Business Process Diagram : BP020-Volume Allocation Service (ECS)
Business Process Description : BPD020-Volume Allocation Service (ECS)
Method Statement : METH006- VAS Method Statement
Business Requirements Specification : BRS009-Volume Allocation Service (ECS)
Industry Standing Data
Business Process Diagram : BP021-Industry Standing Data (ECS)
Business Process Description : BPD021-Industry Standing Data (ECS)
Business Requirements Specification : BRS010-Industry Standing Data (ECS)
Interface Specification : IF047-Publish ISD
Supporting Detail : EDI021-ISD Entities
Supporting Detail : EM021-ISD Entity Map

Supporting Design Artefacts

The below table lists the [Supporting Design Artefacts](#) included within the end-to-end MHHS Design

Business Requirements Specifications

BRS001-Data Services Requirements
BRS002-Metering Services Requirements
BRS003-Registration Service Requirements
BRS004-Supplier Requirements Overview
BRS005-LDSO Requirements Overview
BRS006- EES & SDEP Requirements
BRS012-Annual Consumption
BRS014- ECS Registration Data Archive Requirements

Method Statements

METH001-SDS Validation & Estimation
METH002-ADS - Validation & Estimation
METH004-UMSDS- EM Functions
METH009-UMSO Method Statement
METH010--Annual Consumption

Supporting Artefacts

Operational Choreography: OPC001-Operational Choreography
Reporting Catalogue: ERI011A-ECS Reports- Internal
Reporting Catalogue: ERI011B-ECS Reports- External
Interface Catalogue: DES138-Interface Catalogue
Logical Data Model: DES052-Logical Data Model

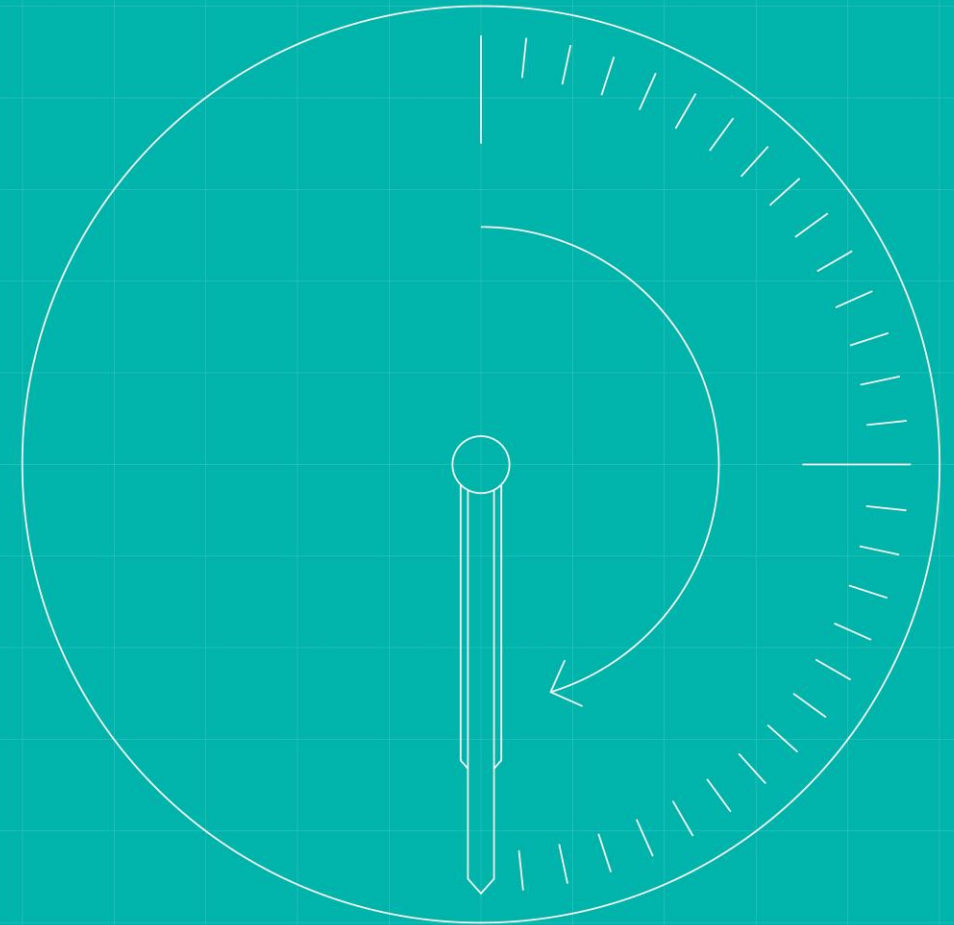
Technical Artefacts

E2E002-End to End Non Functional Requirements
E2E001-End to End Solution Architecture
E2E003-Physical Interface Specifications

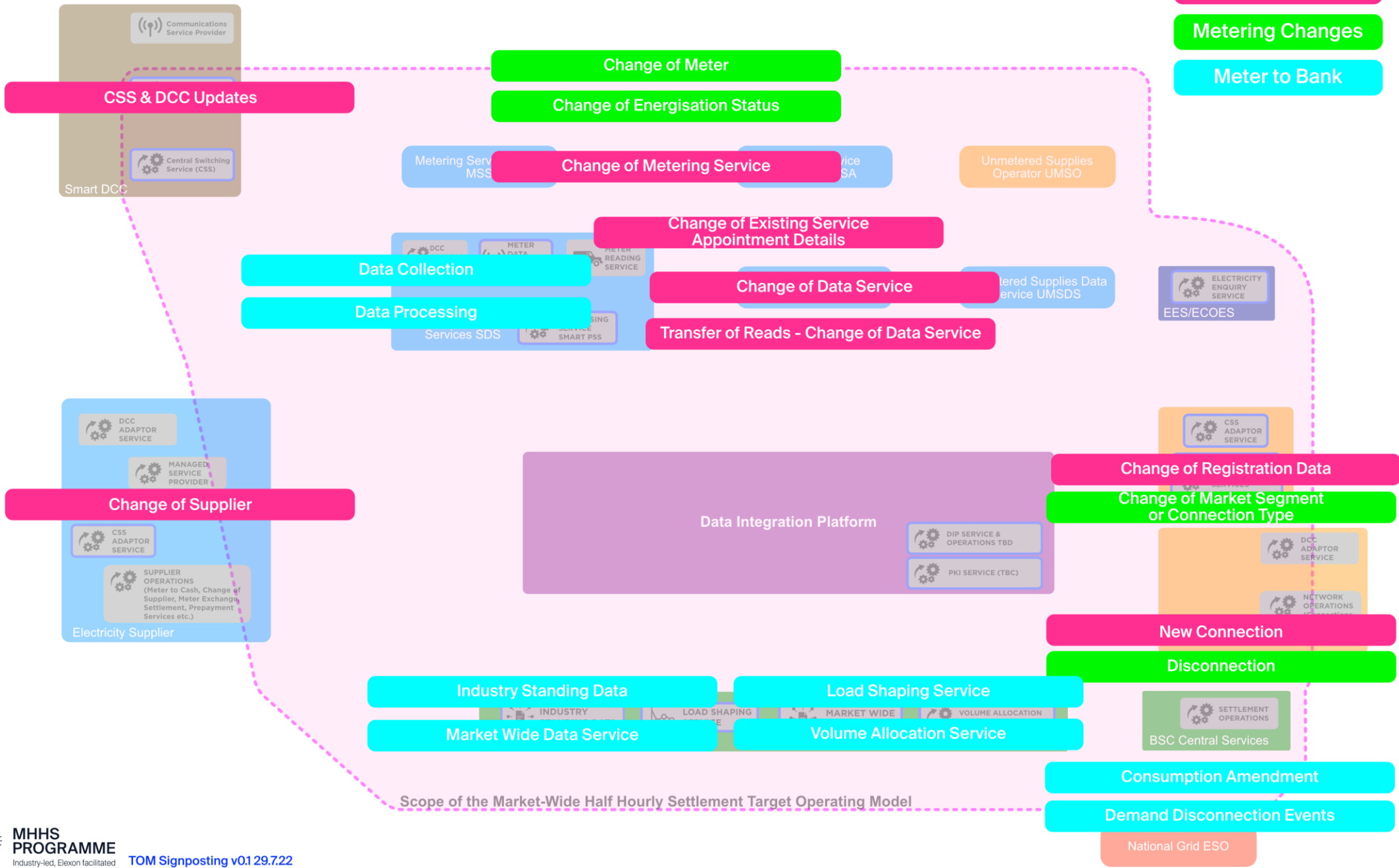
Security Artefacts

DIP-004-Cyber Security Code of Connection Guidance

Design Artefacts in relation to the TOM



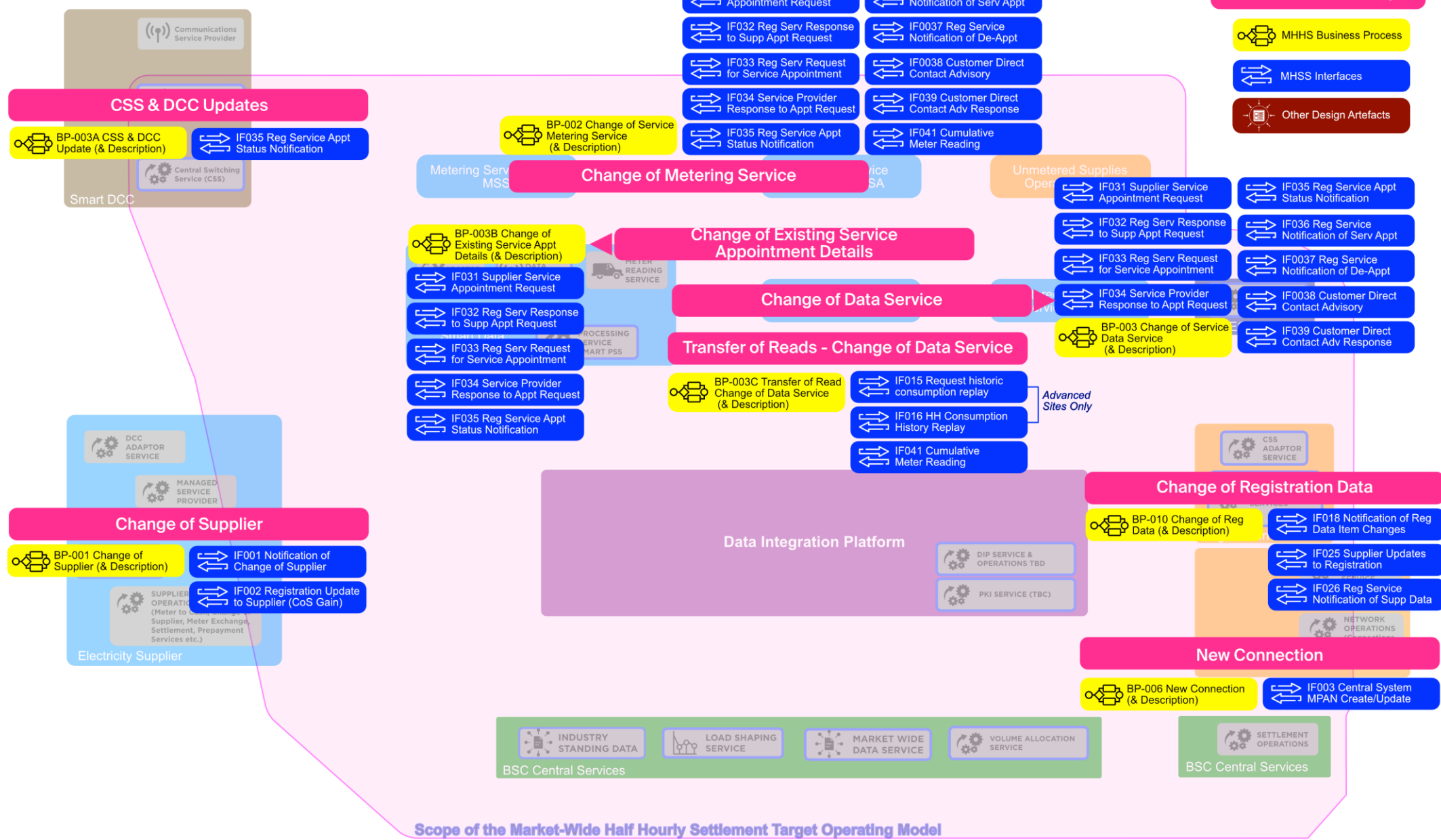
- KEY**
- MPAN Ownership
 - Metering Changes
 - Meter to Bank

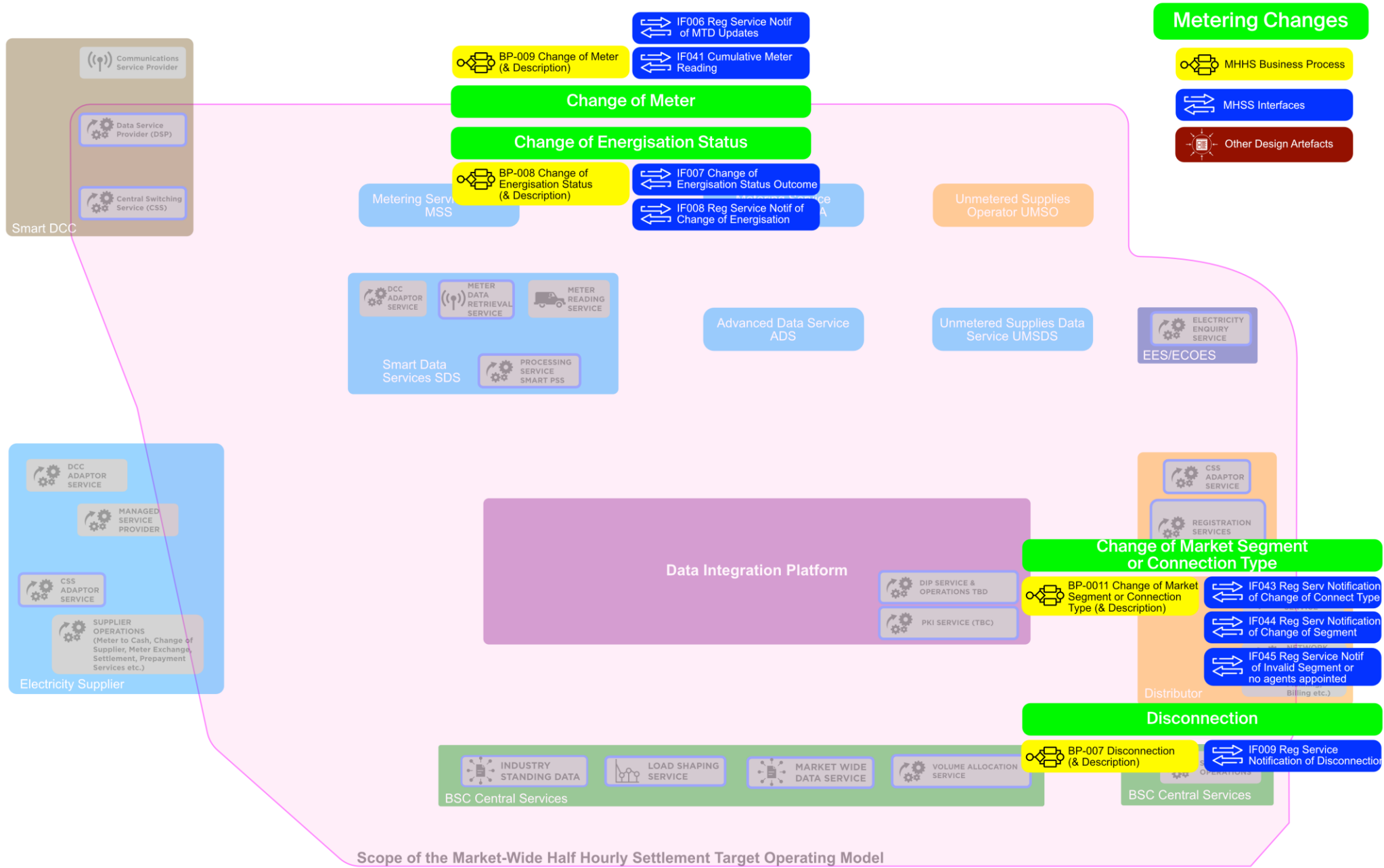


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MPAN Ownership

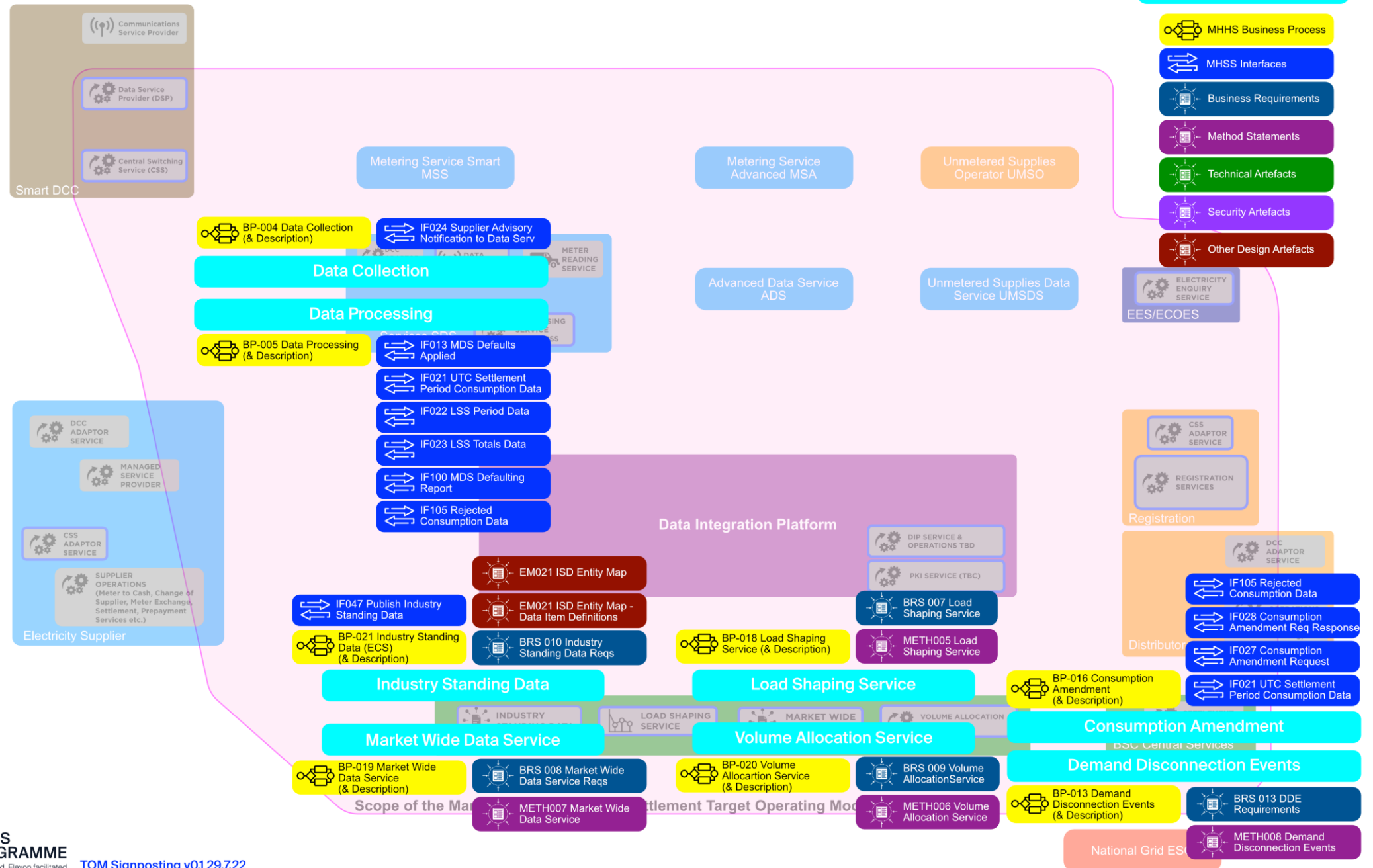
- MHHS Business Process
- MHSS Interfaces
- Other Design Artefacts

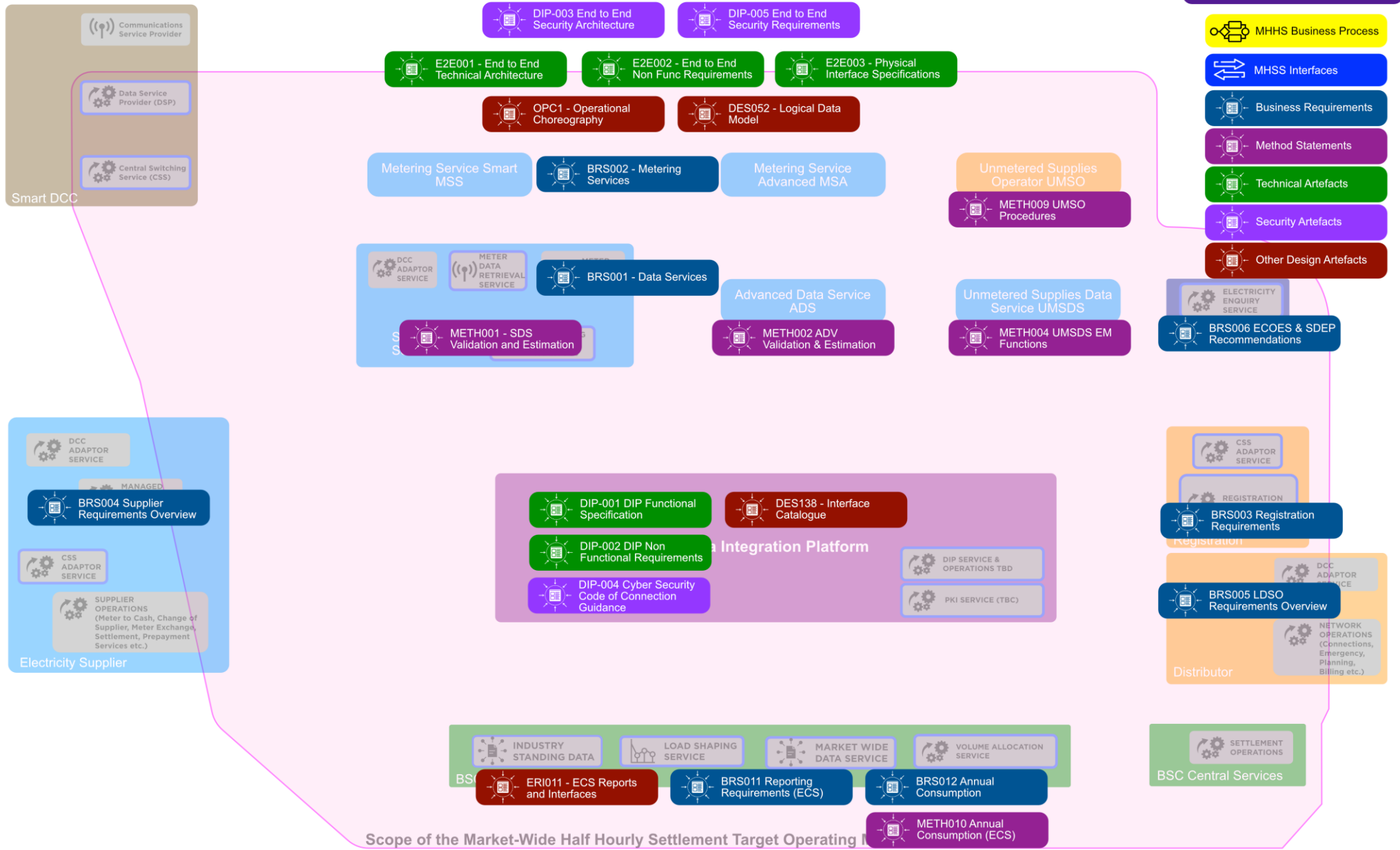


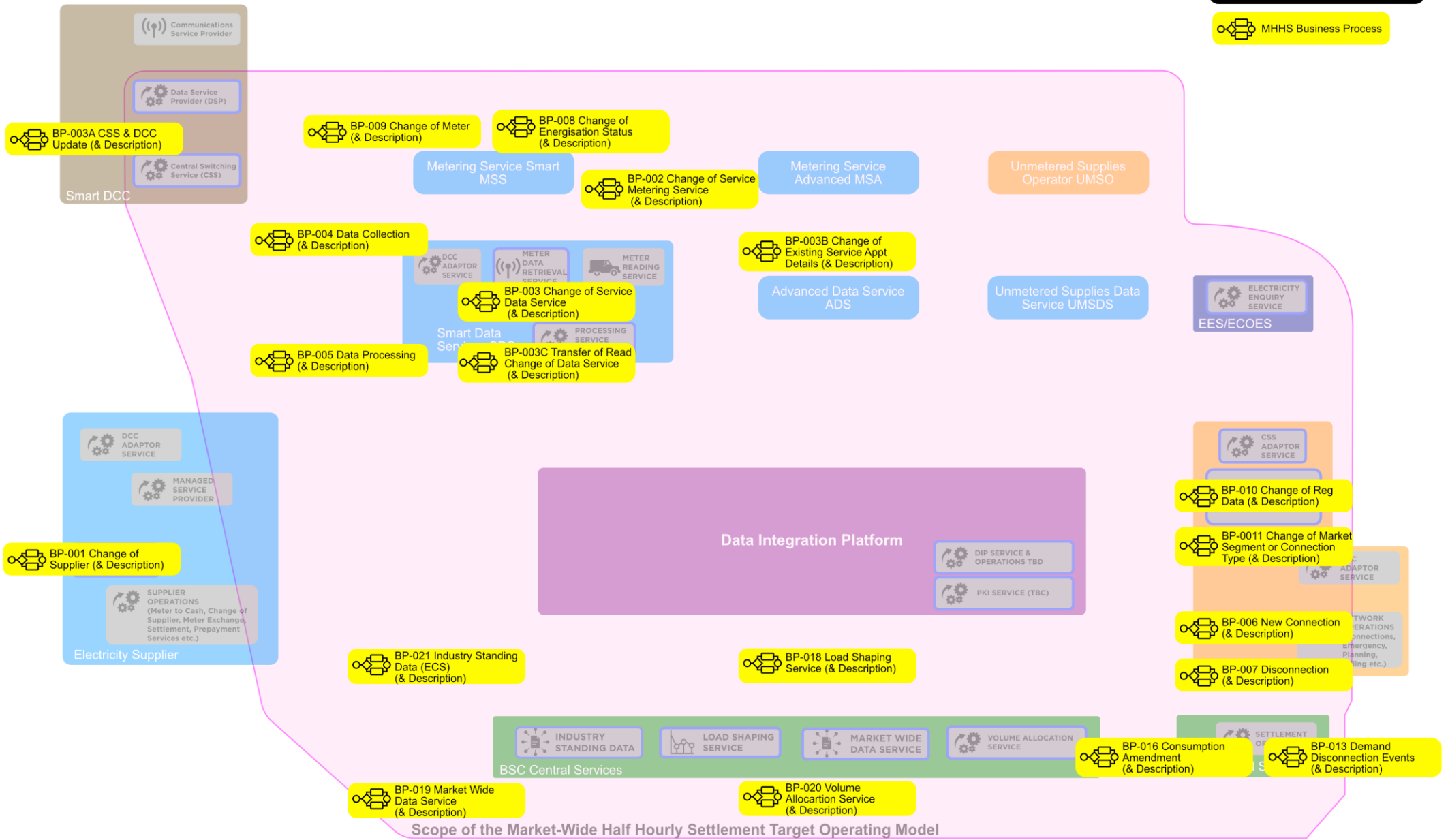


Meter to Bank

- MHHS Business Process
- MHSS Interfaces
- Business Requirements
- Method Statements
- Technical Artefacts
- Security Artefacts
- Other Design Artefacts



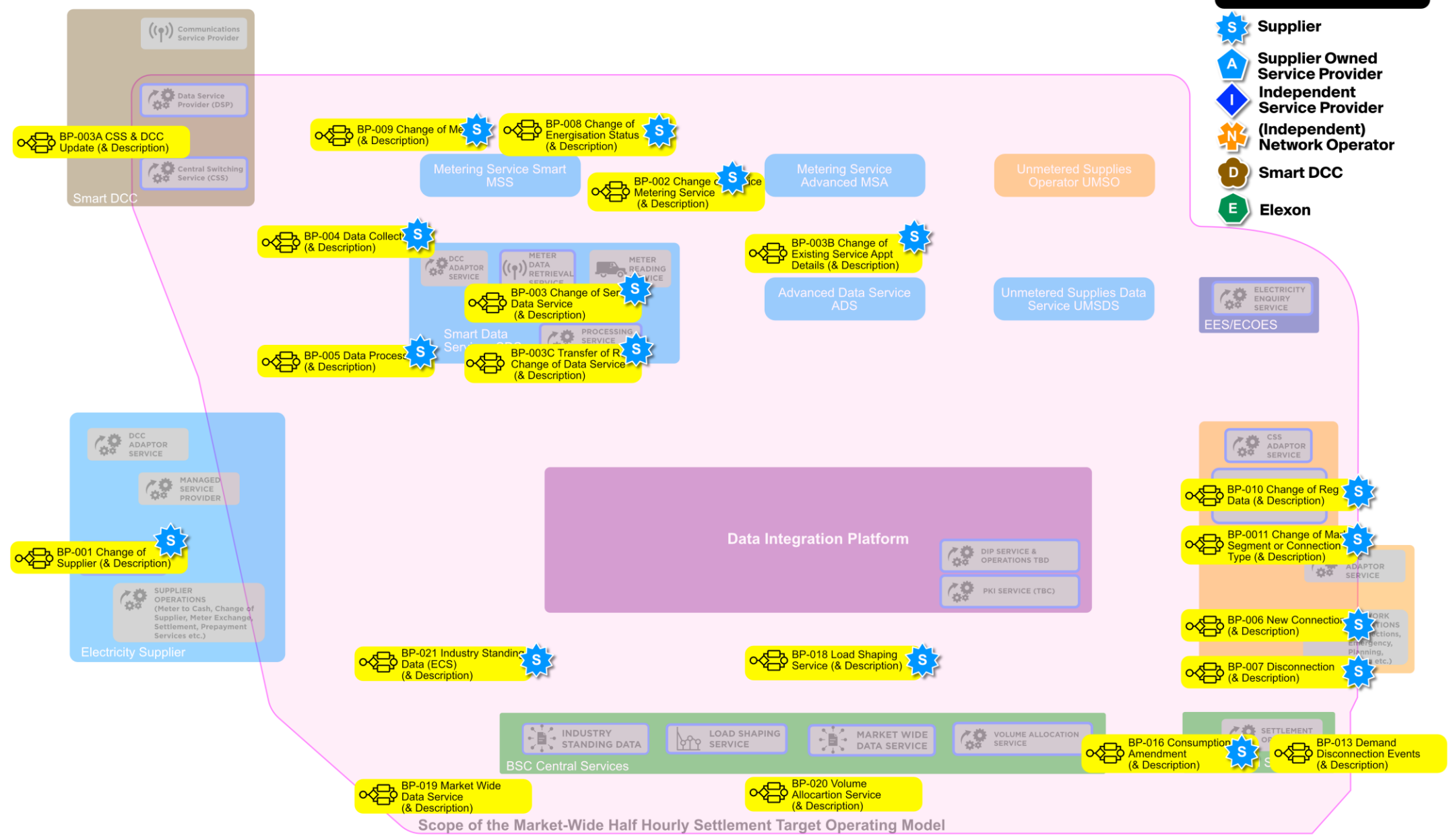




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Process Artefacts

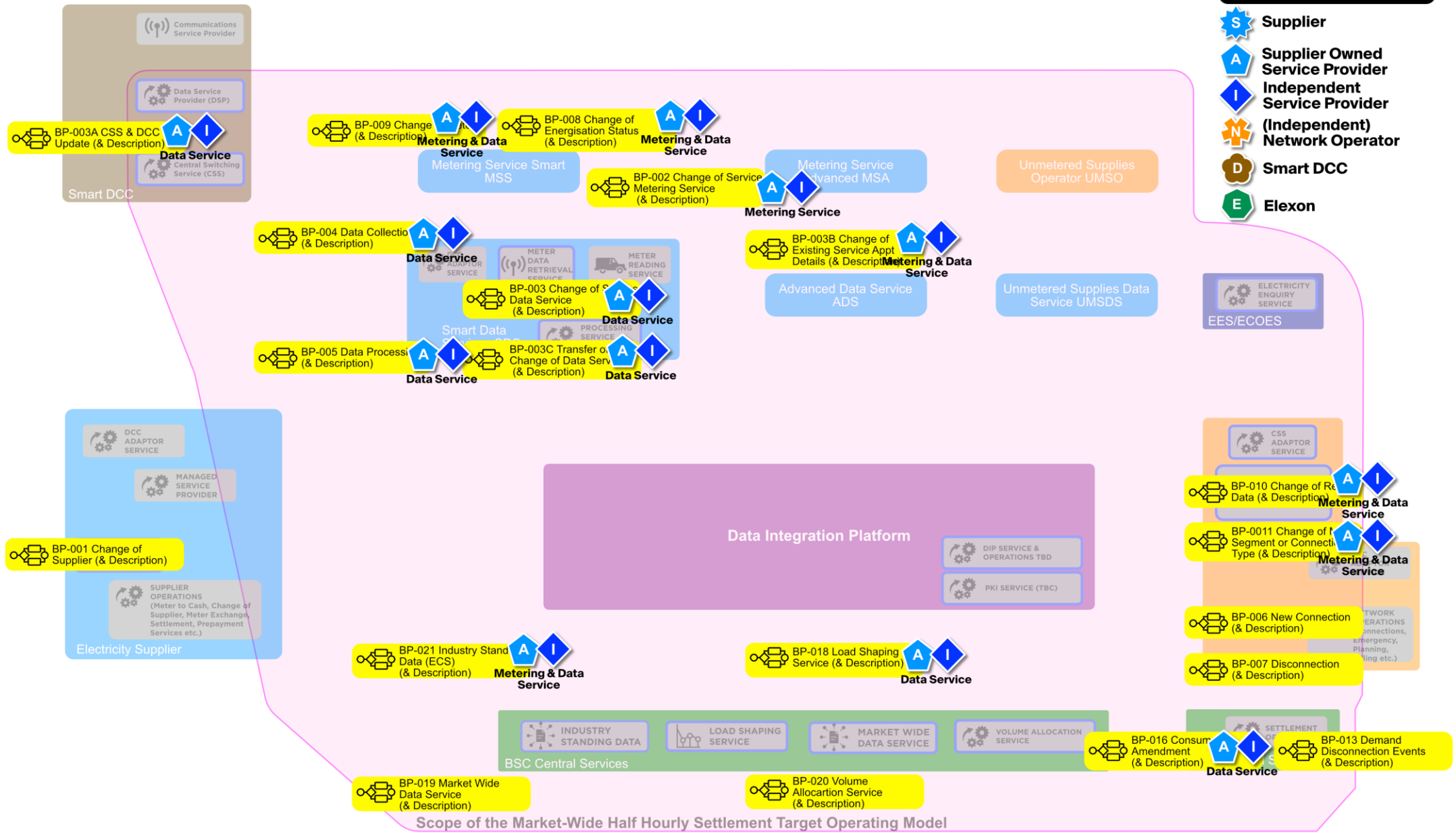
- S** Supplier
- A** Supplier Owned Service Provider
- I** Independent Service Provider
- N** (Independent) Network Operator
- D** Smart DCC
- E** Elexon



KEY

Process Artefacts

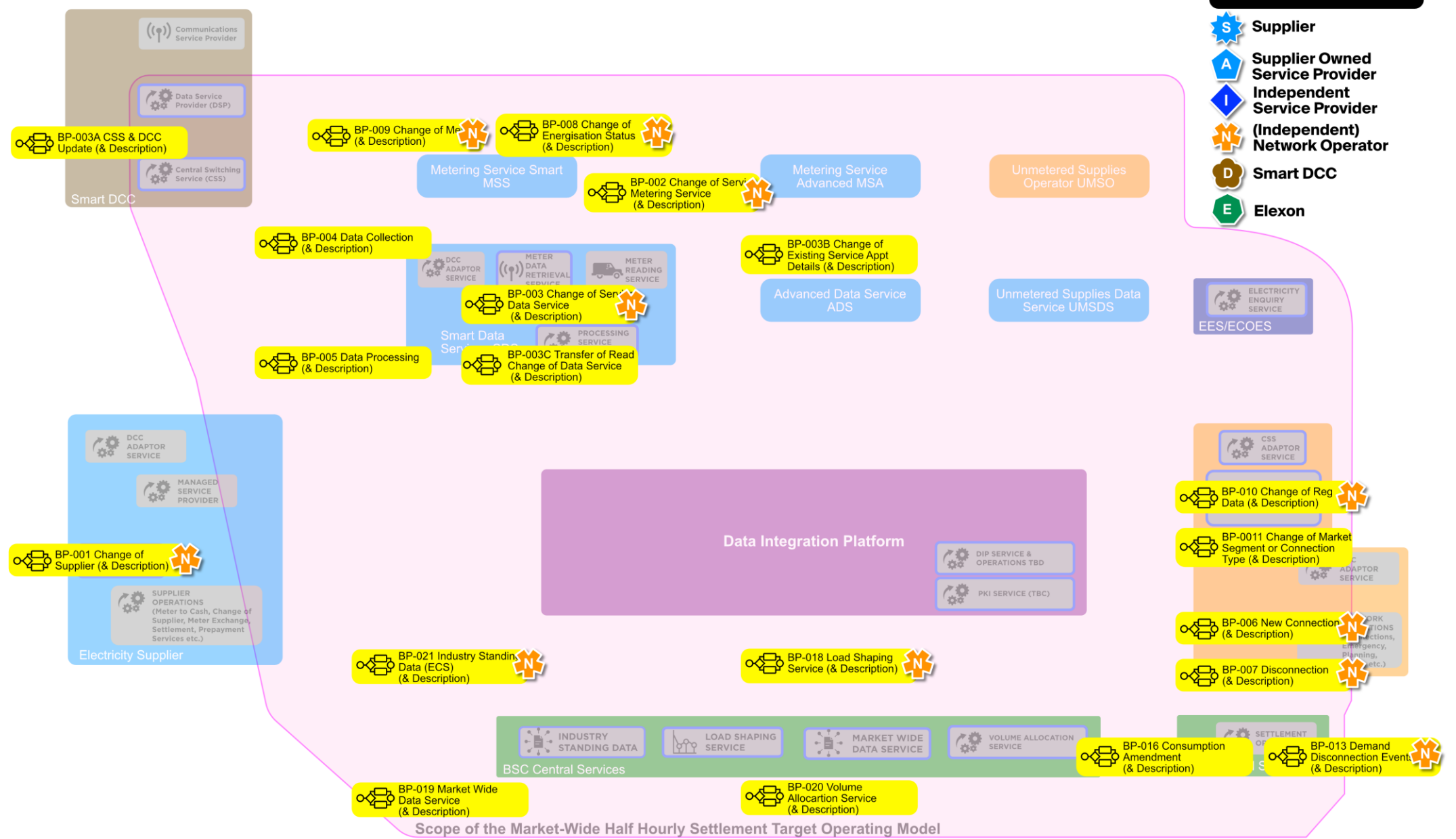
- Supplier
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KEY

Process Artefacts

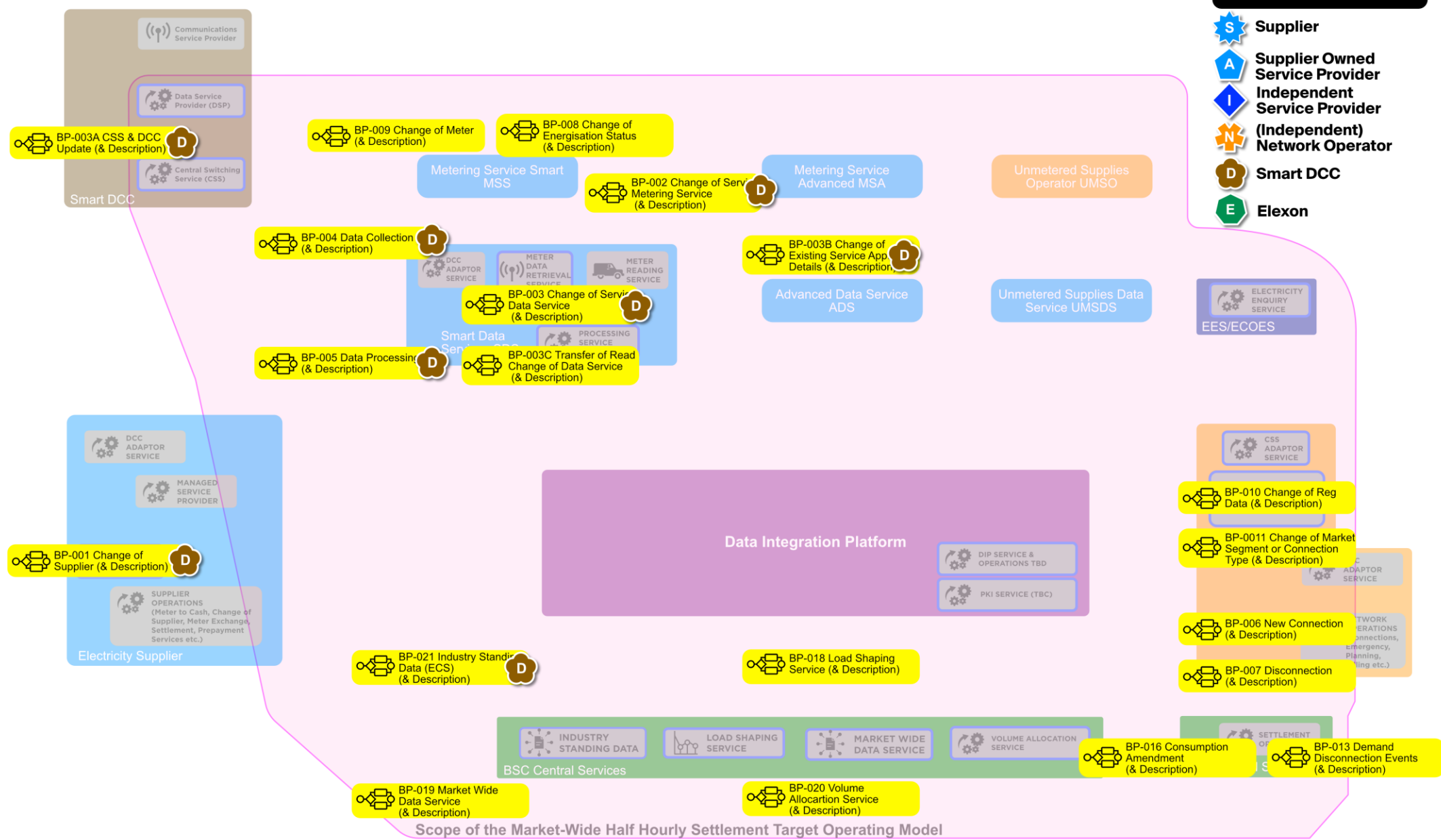
- Supplier
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KEY

Process Artefacts

- Supplier
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- KEY**
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 - Elxon**

