[01] MHHS Migration Framework Foundations

Document owner	Document number	Version
MHHS Programme	**MHHS-DEL2426**	**3.2**
Status:	Date	Classification
C4 Updates	**11 April 2025**	**Public**

1   Contents

1.1 Table of Figures

1.2 Change Record

Date	Author	Version	Change Detail
18/03/2024	Migration Team	v0.1	Draft for Industry Consultation
19/04/2024	Migration Team	V0.2	Revised Draft for Assurance Meeting
08/05/2024	Migration Team	V1.0	Version uplifted to reflect Interim Approved by MCAG
13/06/2024	Migration Team	V1.1	Draft for Industry Consultation 2
28/06/2024	Migration Team	V1.2	Updated following Industry Consultation Comments
25/07/2024	Migration	V2.0	Version uplifted to reflect Interim Approved by MCAG
20/12/2024	Migration Team	V2.1	Draft for Consultation 3
31/01/2025	Migration Team	V2.2	Updated following Consultation 3 Industry Review
25/02/2025	Migration Team	V3.0	Interim Approved by MCAG
14/03/2025	Migration Team	V3.1	Draft for Consultation 4
11/04/2025	Migration team	V3.2	Updated following Industry Review

1.3 References

Document	Publisher	Published	Additional Information
REF-1 MHHS-DEL2426-[01] Migration Framework Foundations v3.2	Migration Team	11/04/2025 (Draft)	Migration FW
REF-2 MHHS-DEL2427-[02] Migration Framework - Principles and Guidelines v3.2	Migration Team	11/04/2025 (Draft)	Migration FW
REF-3 MHHS-DEL2428-[03] Migration Capacity Calculations - Method Statements v3.2	Migration Team	11/04/2025 (Draft)	Migration FW
REF-4 MHHS-DEL2429-[03a] Calculations Monitoring and Control – Parameters v3.2	Migration Team	11/04/2025 (Draft)	Migration FW
REF-5 MHHS-DEL2430-[04] Migration Requirements and Processes v3.2	Migration Team	11/04/2025 (Draft)	Migration FW
REF-6 MHHS-DEL2431-[04a] Migration Business Process Models v3.2	Migration Team	11/04/2025 (Draft)	Migration FW
REF-7 MHHS-DEL2762-[05] Migration Choreography v3.2	Migration Team	11/04/2025 (Draft)	Migration FW
REF-8 MHHS-DEL2763-[06] Migration Governance and Escalation Framework v3.2	Migration Team	11/04/2025 (Draft)	Migration FW
REF-9 MHHS-DEL2764-[07] Migration Data Requirements and Reports v3.2	Migration Team	11/04/2025 (Draft)	Migration FW
REF-10 MHHS-DEL961 – Migration Design Document v1.~~4~~5	Migration Team	~~12/06/2024~~ 26/03/2025	
REF-11 MHHS-DEL953 – Data Assessment Report v1.0	Migration Team	21/02/2023	
REF-12 MHHS-DEL1128 – Migration, Cutover and Data Strategy v1.0	Migration Team	02/06/2023	

Document	Publisher	Published	Additional Information
REF-13 MHHS-DEL1648 - Migration Thresholds Document v2.0	Migration Team	25/02/2025	
REF-14 MHHS-DEL813 – Overarching Test Data Approach and Plan v1.0	Testing Team	19/07/2023	
REF-15 MHHS-DEL1181 – Data Cleanse Plan v3.0	Migration Team	09/08/2024	
REF-16 MHHS-DEL1792 - M15 Acceptance Criteria v2.0	Migration Team	25/02/2025	
REF-17 MHHS-DEL3359 – Terminology and Glossary v3.2	Migration Team	11/04/2025 (Draft)	Migration FW

1.4   Terminology

Please see REF-17 MHHS-DEL3359 – Terminology and Glossary

1.5   Programme Milestones

The below Programme milestones are referenced throughout this document.

M9 – Start of System Integration Testing (SIT)

M10 – Go live of new services

M11/12 – Start of Migration for UMS / Advanced / Smart / Non-Smart

M14 – All Suppliers must be able to access MPANs under the new TOM

M15 – Full transition complete

M16 – Cutover to the new Settlement timetable

1.6   Intended Audience

These parties are:

- The Registration Services (including Service Providers);
- Suppliers;
- Data Collectors / Aggregators;
- Meter Operators;
- The DIP Service Provider;
- Metering Services (i.e., MSS, MSA);
- Data Services (i.e., SDS, ADS, UMSDS);
- EES;
- LDSOs (i.e., DNOs and iDNOs);
- Meter Administrators;
- The DCC, operating Smart Metering and CSS;
- NESO;
- Elexon Central Services (ECS);
- Electralink (DTN);
- REC and BSC Performance Assurance Boards; and
- UMSOs.

2 Introduction

2.1 Document purpose

The purpose of this document is to define the approach and high-level framework for managing the migration of Meter Point Administration Numbers (MPANs) from the legacy settlement arrangements to the new MHHS arrangements, and in accordance with the following approved MHHS documents:

- MHHS-DEL961 – Migration Design Document v1.

- MHHS-DEL1128 – Migration, Cutover and Data Strategy v1.0

- MHHS-DEL1648 - Migration Thresholds Document v2.0

- MHHS-DEL1181 – Data Cleanse Plan v3.0

- MHHS-DEL1792 - M15 Acceptance Criteria v2.0

This document should be read in conjunction with the following supporting artefacts.
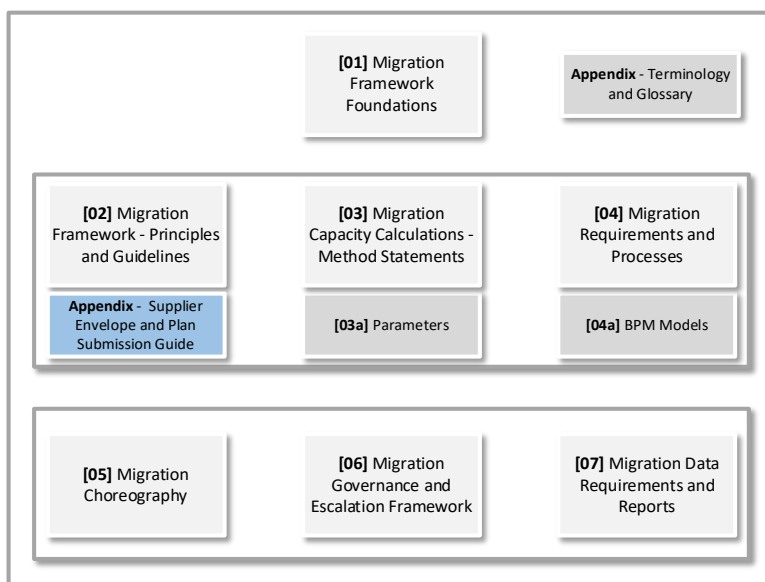

	[01] Migration Framework Foundations	**Appendix** - Terminology and Glossary
[02] Migration Framework - Principles and Guidelines	[03] Migration Capacity Calculations - Method Statements	[04] Migration Requirements and Processes
Appendix - Supplier Envelope and Plan Submission Guide	[03a] Parameters	[04a] BPM Models
[05] Migration Choreography	[06] Migration Governance and Escalation Framework	[07] Migration Data Requirements and Reports

Figure 1 - Migration Framework Document architecture

This document, and supporting documents as listed in the References section together with the migration timetable, form the MHHS Migration Plan that details the obligations, as defined in Section C12 of the Balancing and Settlement Code Section C, that defines the obligations on MHHS Market Participants relating to participation in the Migration of MHHS Metering Systems.

2.2 Migration Working Group collaboration and industry consultation

These documents have been developed in collaboration with the Migration Working Group (MWG). As communicated at the Programme Steering Group (PSG) and Migration & Cutover Advisory Group (MCAG), Participants were expected to attend the MWG meetings to contribute to these discussions. The Migration framework is being developed incrementally and the MWG will seek to not revisit key principles agreed in previous MWG meetings during the industry consultations, unless changes are required for good reason.

Participants can access the content and recordings of the MWG meetings and workshops on the Programme Collaboration Base: Migration Working Group (MWG) Page

The Migration framework will continue to be developed until Q2 2025 (calendar year) whereby it will be baselined and enter change control under the MCAG.

3 Executive summary

3.1 Introduction

As per the baselined Programme plan, industry will be required to migrate circa 33M MPANs from the existing legacy arrangements to the new MHHS operating model between M11 and M15. .

The MHHS Central Systems and all LDSO's will go-live at M10, and shortly thereafter SIT Parties will need to complete SIT Testing and also be qualified by Code Bodies and complete Service Activation tasks prior to commencing migration at M11/M12.. The non-SIT participants (those following the Qualification testing route) will commence their migration as indicated in the MHHS Programme plan.

3.2 Migration objectives

The purpose of the MHHS Migration Phase is to complete the migration of MPANs to the new settlement arrangements in a manner that:

1. Seeks to accelerate the realisation of the MHHS benefits

2. Is fair and transparent

3. Is in accordance with the MHHS Programme plan and prevents unnecessary overrun costs to Balancing & Settlement Code (BSC) parties and consumers

4. Achieves the M15 acceptance criteria

5. Does not adversely affect the industry or consumers

3.3 Migration complexities

1. **Fixed timeline:** The migration must be completed by M15 otherwise legacy settlement operations will need to be maintained for longer than expected which will come at significant cost. Mitigations and incentives will be required to contain this risk.

2. **Finite migration capacity:** The MHHS migration phase has a finite migration capacity due to the daily migration thresholds and the fixed timeline. This means that daily capacity should be used as much as possible and 'back loading' of the migration should be avoided at all costs.

   The process of migration requires multiple interactions between Suppliers, Agents, Registration Services and Central Services. These interactions are subjected to daily capacity constraints as defined in the Threshold Document and approved by the Testing & Migration Advisory Group (TMAG). The key challenge for capacity allocation and planning will be to ensure the migration schedule does not breach any element of these constraints.

   A process is necessary to equitably distribute capacity among suppliers, facilitating reliable planning. This process must include the collection of each party's plans and their consolidation into an initial baseline plan, against which changes may be managed.

3. **Differing approaches:** Participants will most likely have differing approaches to completing their migration and their preferred schedules may not align with the migration capacity availability. Due to the finite migration capacity, and the need for fair allocation, participants will be required to be flexible and align with the available migration capacity.

4. **Ecosystems:** Supplier and Agent qualification and service activation must be co-ordinated in order that qualified Suppliers may commence migration with their associated Agents.

5. **Ramp-down:** Suppliers may have complex elements within their portfolio and may be impacted by industry data issues that could lead to a long tail of MPANs which are difficult and time consuming to be readied for migration.

6. **Qualification dependency:** The Programme recognises that a key driver for volatility within the migration plan will be the entry point of Suppliers and Agents into the migration process following Qualification. The migration processes must therefore be able to respond to changes to the qualification plan to re-validate the schedule and adjust where required.

3.4 Migration Framework

To manage the migration complexities and set the Migration phase up for success a Migration Framework is required. The Framework will be developed and agreed with industry and will guide the Migration Control Centre activities.

This framework will logically describe the process that will be undertaken during the whole migration process which will be managed by the Migration Control Centre. This framework will subsequently underpin any technical activity that will be required i.e. Migration Planning and Management Tool, communication patterns etc.

The Migration Framework comprises of 6 components

#	Component	Description
01	**Initialise Schedule**	Steps to develop and agree v1 of the Migration schedule.
02	**Maintain Schedule**	After the creation of the v1 of Migration schedule. Regular updating and adjusting the MHHS Migration schedule to reflect changes such as Qualification progress and migration outturn, ensuring it remains realistic and achievable.
03	**Manage Sprint Execution**	Monitoring and managing migration execution according to the Daily MHHS Migration Schedule. Reviewing MHHS Migration Schedule vs Actual Supplier Migration performance and identifying and addressing deviations promptly. Managing migration constraints, risks and resolving issues. Apply rules to determine need for measures and/or escalations according to the Migration Governance Framework Manage in-flight allocation of unused capacity in response to control measures
04	**Data Analytics and Reporting**	Analyse migration data to provide insights and regular reports on migration progress, challenges, and achievements. Includes the collection, aggregation, analysis, and dissemination of migration data, reports and analytics to support a data-led decision making and control process for MHHS Migration.
05	**Close Down Migration**	Close-down reporting and decommission MCC, and finalise documentation.

The underlying principles of the framework will be documented in:

- MHHS-DEL2427-[02] Migration Framework - Principles and Guidelines v**3.2**

The operational details of each component of the framework will be documented in:

- MHHS-DEL2428-[03] Migration Capacity Calculations - Method Statements v**3.2**

- MHHS-DEL2429-[03a] Calculations Monitoring and Control – Parameters v**3.2**

- MHHS-DEL2430-[04] Migration Requirements and Processes v**3.2**

- MHHS-DEL2431-[04a] Migration Business Process Models v3.2

- MHHS-DEL2762-[05] Migration Choreography v**3.2**

- MHHS-DEL2763-[06] Migration Governance and Escalation Framework v**3.2**

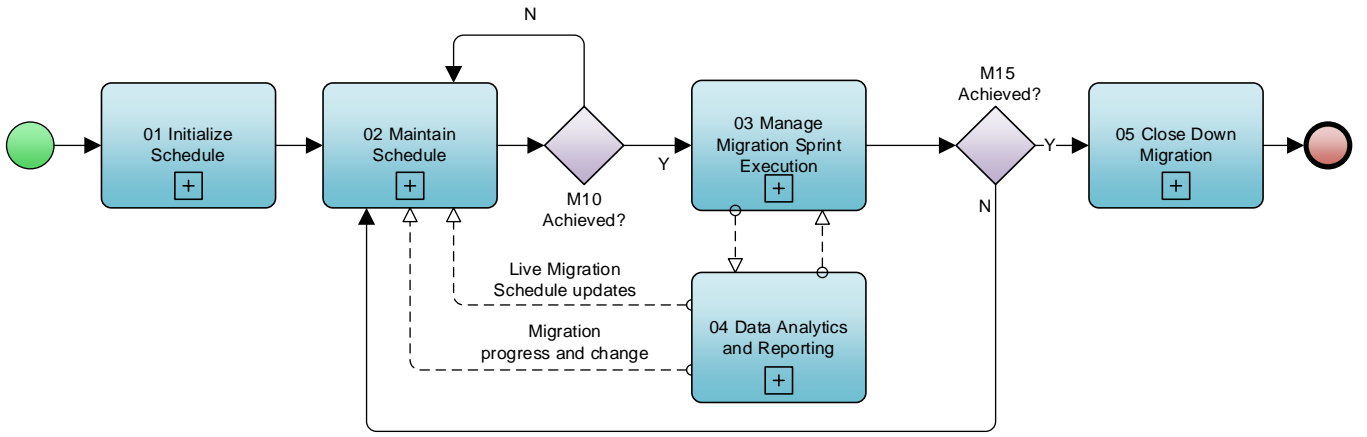- MHHS-DEL2764-[07] Migration Data Requirements and Reports v**3.2**

Figure 2 - E2E Migration Control Centre Process

4 Migration Control Centre

4.1   The Migration Control Centre

The Migration Control Centre will be the business function within the MHHS Programme that manages the Migration Process and orchestrates the execution of the Migration Framework. The current Programme Migration team, with the incorporation of the necessary resources and technology, will evolve into the MCC.

4.1.1   Responsibilities

The Migration Control Centre will be responsible for:

1. Planning, managing and coordinating the migration activity required by all involved parties to successfully conclude the migration of all MPANs from the old arrangements to the MHHS arrangements by M15, and in accordance with the Migration Framework

2. Communicating with and supporting Programme participants

3. Managing deviations against plan and escalations through appropriate governance where deviations are material and cannot be resolved by MCC intervention

4. Managing and supporting any required tools

5. Agreeing any changes to the Migration Framework / Tooling as may be required during migration execution

6. Reporting on migration progress, participant performance, trends, exceptions etc.

4.2   Delegated authority

The MCC will have delegated authority from the SRO to execute the processes and apply the principles contained within the Migration Framework.

The MCC has the authority to halt or pause migration activities under exceptional circumstances to protect central systems and LDSOs, as well as the overall migration and settlement processes.

5 MHHS Migration Schedule

5.1 Introduction

The Migration Schedule will be the foundation for the Migration Framework. It is a composite of all individual Suppliers' Migration plans and will provide the forward view of the migration volumes that will be required to be undertaken to migrate all MPANs by M15.

The creation and maintenance of a Migration Schedule is a complex balance between flexibility for supplier preferences, adherence to established system thresholds, and the overarching goal of completing the migration by the M15 deadline.

The Migration Control Centre must ensure the Migration Schedule does not breach any agreed threshold or regulatory constraint and have processes in place to cater for industry events e.g. SOLR.

The Migration Schedule is required to balance the requirement for Suppliers to control as far as is possible their own migration schedule whilst at the same time ensuring the overall Migration Schedule adheres to industry constraints articulated in the previously agreed Migration Thresholds document.

The Migration Control Centre will subsequently manage the key activities, which are described in the Migration Framework. These will be the Initialisation of the Migration Schedule and, thereafter the maintenance of the scheduler, which could require action in response to changes to circumstances i.e. changes to qualification timelines and deviation from schedule.

Where values for Parameters are defined within this document they are for illustrative purposes. The definitive source for the Parameter values is:

- REF-4 MHHS-DEL2429-[03a] Calculations Monitoring and Control – Parameters v3.1
- Also refer to Section 5.2.2 Capacity Allocation Methodology of this document

5.2 Key MHHS Migration Schedule Concepts

5.2.1 Supplier Led and Levelled Approach

Challenges are likely to arise when Suppliers submit schedules based solely on their preferences and without consideration of the known constraints, potentially leading to:

1. Aggregate migration schedules across all Suppliers surpassing system thresholds, necessitating substantial levelling activities, and resulting in deviations from suppliers' preferred migration profiles
2. Uneven distribution of migration activities, increasing the risk of heightened activity toward the end of the migration window, coinciding with all parties migrating, thereby placing further constraints on individual party capacities
3. Non-utilisation of finite migration capacity, posing a risk to the critical M15 completion milestone

In response to these challenges, the following principles will be applied:

1. Supplier preferences will be allocated whenever system constraints allow and in a fair manner.
2. Scheduling must strike a balance between the principle of supplier flexibility and requirement for migration activity to remain within agreed system thresholds noting that there is finite migration capacity.
3. A mechanism is therefore required that apportions capacity fairly amongst Suppliers noting the differential entry points into the migration process and differing portfolio sizes.
4. The MCC will communicate a Supplier's share of capacity at daily granularity per LDSO. This will represent the share of overall capacity, not merely sufficient capacity to migrate the Supplier's portfolio. This profile will subsequently be referred to as the 'Capacity Envelope'.

NOTE: Supplier Capacity Envelopes and Supplier Plan Submissions, and Supplier Migrations Plans will be defined at the Supplier MPID and LDSO MPID Level. See following sections for more information.

5. Capacity envelopes will be calculated such that in aggregate all Supplier's Capacity Envelopes do not exceed any LDSO or Central Service threshold.

6. Assuming a low volume industry ramp-up (this allows for systems, which includes Central Systems and LDSOs, validation and performance assessment) and non-migration days covering contract rounds and change freezes the total available migration capacity is circa 52M MPANs. This therefore leads to headroom within the capacity allocations of approximately 40%. (Assuming migration takes place five days a week)

7. Suppliers will subsequently submit plans that adhere to the daily limits within the Capacity Envelope and will encompass their whole portfolio within the given LDSO.

8. Suppliers are free to profile their migration as they see fit within the constraints of the Capacity Envelope and adhere to submission SLAs defined in Thresholds document.

9. Later sections provide more detail on these principles and a method statement is provided detailing the methodology for calculating the Capacity Envelopes.

10. Suppliers with smaller portfolio sizes for whom capacity envelopes would be small and potentially impractical.

    o See Section 5.2.7 Small Supplier & LDSO Portfolio Sizes (i.e. De minimis)

For further detail:

- See Section 5.2.7 Small Supplier & LDSO Portfolio Sizes (i.e. De minimis)

- See MHHS-DEL2427-[02] Migration Framework - Principles and Guidelines v3.2

- See MHHS-DEL2428-[03] Migration Capacity Calculations - Method Statements v3.2

5.2.2   Capacity Allocation Methodology

The Capacity Allocation Methodology is a framework designed to allocate migration capacity to suppliers based on their market share within a Local Distribution System Operator (LDSO) area. The framework also takes into consideration the maximum migration total and individual LDSO maximum daily totals as defined in the thresholds document. The Capacity Allocation methodology will ensure these values are not exceeded.

More specifically capacity is allocated to each Supplier MPID that has been qualified and has planned migration volumes for a given period for each LDSO MPID.

The factors that inform the Capacity Envelope creation are as follows:

1) Suppliers' portfolio share within an individual LDSO

2) Scaling Factors; modelling has indicated that there is a mechanism required to factor into the rate at which suppliers migrate their portfolios at a high level. This is required to ensure capacity is released by parties entering the migration process earlier to those coming in later to ensure equitable access to capacity.

3) Overall Central Services Capacity apportioned to each individual LDSO to ensure no Central Service Threshold is breached

This methodology considers the number of suppliers qualified under MHHS in each migration period. By incorporating headroom into the overall capacity, the methodology provides each supplier with a fair share of the capacity, reducing the likelihood of significant levelling due to capacity contention among different migrating parties.

For further detail:

- See MHHS-DEL2428-[03] Migration Capacity Calculations - Method Statements v3.2

5.2.3   Scaling Factors

Scaling factors, within the context of Migration Capacity Allocation, are multipliers used to adjust the access to migration capacity over time for suppliers. A principle embedded within the scaling factors is the assumption of a six-month Core Migration Window for suppliers to conclude the bulk of their migration. This is based on the assumptions used to develop the Migration capacity thresholds, as per section 8.3 of MHHS-DEL1648 - Migration Thresholds Document v2.0, which assumes suppliers will "migrate their entire portfolio within 6 months". These factors consider

the need for a ramp-up period and the overall migration timeline, spanning a ~~six-month~~132 day Core Migration Window period of full allocation of capacity before tapering down. The core migration window follows the ramp-up period.

After this peak period (Core Migration Window), the capacity is reduced, creating more availability for suppliers who qualify later in the migration timeline. The intent is to provide proportional access to capacity, taking into consideration both earlier and later participants joining the MHHS migration. While indicative in nature, scaling factors will be configurable and may be adjusted when there is a better understanding of the potential Migration profile and Migration capacity contingency requirements.

We expect there may be some variation with the six-month window if a particular window is co-incident with a high number of non-migration days or if Central Parties and LDSOs performance impact Suppliers' ability to migrate.

For further detail see:

- REF-2 MHHS-DEL2427-[02] Migration Framework - Principles and Guidelines v3.2
- REF-3 MHHS-DEL2428-[03] Migration Capacity Calculations - Method Statements v3.2
- REF-4 MHHS-DEL2429-[03a] Calculations Monitoring and Control – Parameters v3.2

5.2.4 Central Services Capacity Apportionment

The MCC will set the Central Services Migration Threshold on a Migration Date basis to facilitate the calculation of Supplier Envelopes. The CSMT will follow the rules set out below. .

The Capacity Envelope creation will therefore apportion Central Service capacity proportionally based upon the portfolio size of the LDSO.

By sharing the Central Systems Capacity in this way, we can ensure no breach of either Central System or LDSO thresholds in the aggregated Envelopes.

NOTE: The Central Systems capacity, and LDSO Thresholds will be maintained by the MCC following Migration Framework principles and processes, refer to the following from further information:

- MHHS-DEL2427-[02] Migration Framework - Principles and Guidelines v3.2
- MHHS-DEL2428-[03] Migration Capacity Calculations - Method Statements v3.2
- MHHS-DEL2429-[03a] Calculations Monitoring and Control – Parameters v3.2

NOTE: Section 5.2.7 Small Supplier & LDSO Portfolio Sizes (i.e. De minimis)will consider LDSOs with smaller portfolio sizes.

5.2.5   Supplier Capacity Envelope

The Supplier Capacity Envelope sets the supplier's upper limits per LDSO over time within which a supplier can plan their Migration Plans for a given Supplier MPID, at weekly granularity. It is designed to account for all MPANs that need to be migrated within the supplier's responsibility while providing headroom flexibility when deciding each day's migration volume. A Supplier Capacity Envelope defines the maximum migration capacity available to a supplier over the whole migration window from the Supplier's migration start date, tailored over time to ensure fair and proportional access throughout the entire migration period.
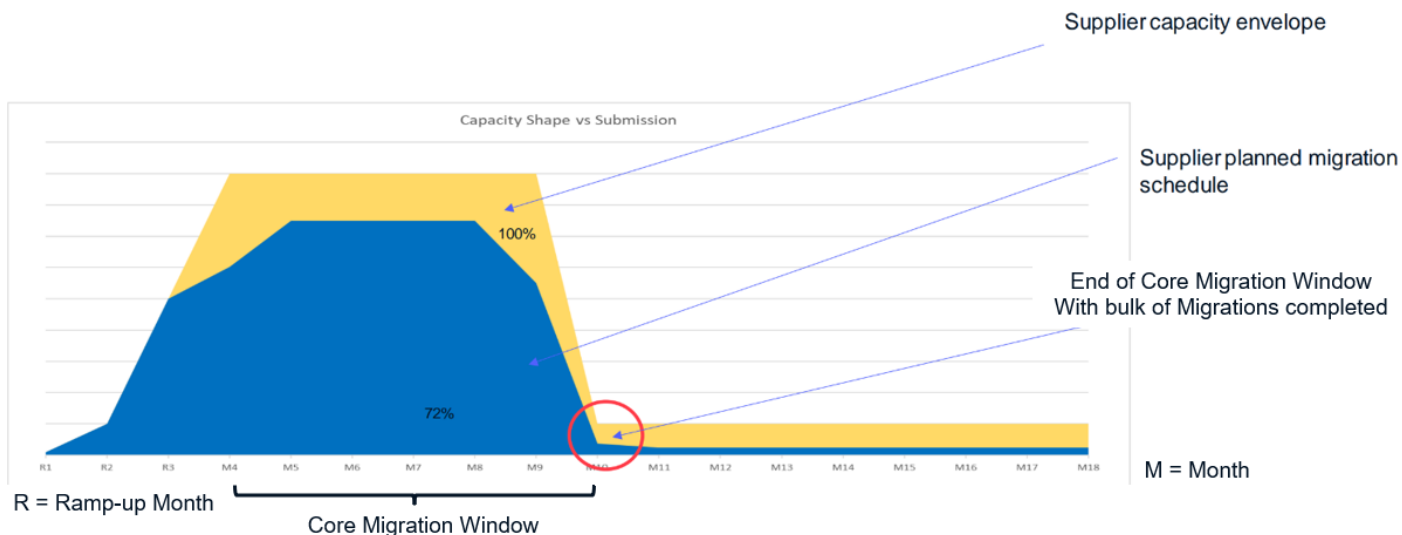

Figure 3 - Supplier Capacity Envelope example

The Supplier Capacity Envelope has three distinct phases:

1) **Ramp-up:** A gradual increase in capacity (a) as part of the **industry ramp-up** for SIT participants, and (b) individual **supplier ramp-up** for remaining non-SIT participants.

2) **Core Migration Window:** A designated period for Suppliers to execute the bulk of their migrations from their portfolio to allow later participants fair access to migration capacity.

3) **Ramp-down:** The decrease of capacity to allow for newly qualifying suppliers to have access to migration capacity.

For further detail see:

*   REF-3 MHHS-DEL2428-[03] Migration Capacity Calculations - Method Statements v3.2
*   REF-4 MHHS-DEL2429-[03a] Calculations Monitoring and Control – Parameters v3.2

There are further considerations that need to be considered for SIT participants with Migration Start Dates at a point after the start of Early Life Support.

*   Where a Supplier's Migration start date coincides with the start of Early Life Support they will have the full three months of the Early Life Support Period as their Ramp-up period ahead of their core Migration Window

*   Where a Supplier's Migration Start Date is as a point more than two months after the start of the Early Life Support period then a full month will be allocated as ramp-up ahead of their core migration window started.

This ensures all SIT parties regardless of their Migration Start Date will have access to at least one month of ramp-up period ahead of their core migration period.

For the avoidance of doubt Capacity Envelopes will only be issues where the Supplier's portfolio within a given LDSO exceeds the de minimis threshold.

5.2.6   Unused Capacity Allocation process

As part of cyclic schedule baselining and schedule execution a periodic process will run to identify unused capacity and make available to parties for use if they so wish during the Sprint Execution phase. The Ad-hoc Unused Capacity processes are defined in:

- REF-5 MHHS-DEL2430-[04] Migration Requirements and Processes v3.2
- REF-9 MHHS-DEL2764-[07] Migration Data Requirements and Reports v3.2

5.2.7   Small Supplier & LDSO Portfolio Sizes (i.e. De minimis)

5.2.7.1   Supplier Considerations

When applying portfolio-based apportionment methodologies to the allocation of Central Systems and LDSO capacities a problem emerges regarding small portfolio sizes.

The smaller portfolio shares generate very small values in terms of the available envelopes for migration planning.

When considering an example LDSO the following was identified:

- 90% of MPANs are held by the 10 largest Supplier MPIDs. Furthermore 98% of the portfolio is held by 21 Supplier MPIDS. This leaves 70 Supplier MPIDs holding 2% of the portfolio and each with a Portfolio of 10k or less within the LDSO.

Assuming a portfolio of 10k for a Supplier MPID and a migration period of 300 days, the daily average envelope would be 33.33 MPANs per day.

- There are 70 MPIDS in the example LDSO under consideration. These MPIDS comprise a total of 81k MPANs.

Assuming this migration load is spread over 300 migration days this represents an average of 270 MPANs per day.

- This would represent less than 1% of the migration capacity for the LDSO in question.
- Capacity envelopes generated for Suppliers in this order would result in daily migration volume values in the range < 1 to 100.

Suppliers with smaller portfolios within an LDSO or all Suppliers within a small LDSO will therefore be subject to the following considerations:

- We expect that all suppliers be subject to a low volume ramp-up period whether or not they receive a Capacity Envelope
- Suppliers in the De minimis category must still apportion their migration activity over a reasonable period. i.e. do not attempt to migrate all MPANs in a single day
- The MCC will consider accommodating a De minimis supplier who wishes to migrate all MPANs for a very large customer in a single day
- This will apply to Supplier's portfolios that are:
- < 40k within an LDSO;
- All Supplier Portfolios within LDSOs with an MPAN count < 150k; and
- Parties in this category will follow all other planning steps.

The rules to be applied therefore are:

1 - In the first month following a Supplier's migration start date:

Ramp Up Range Percentage Minimum ($RURP_{min}$) - For ~~De minimis~~ Supplier Group LDSOs:

The minimum percentage of MPANs that must be migrated within each LDSO Region where the Supplier has registered MPANs.

Ramp Up Range Percentage Maximum ($RURP_{MAX}$) - For ~~De minimis~~ Supplier Group LDSOs:

In the first month following a Supplier's migration start date the maximum percentage of MPANs that can be migrated within each LDSO Region where the Supplier has registered MPANs.

2 - De minimis Number of Migration Days Post Ramp Up (DDPRU) - For De minimis Supplier Group LDSOs:
Upon successful conclusion of the Supplier Ramp Up the remaining MPANS must be migrated in no fewer than the Migration Day Minimum Migration Dates.

3 - De minimis ~~Migration~~ Submission Percentage (D~~M~~SP)- For De minimis Supplier Group LDSOs:
The percentage of an LDSO Threshold that a De minimis Suppliers cannot exceed on any individual Migration Date.

4 - Small Supplier LDSO Portfolio Threshold (SSLPT) - The Total Supplier MPAN count within an LDSO below which no Supplier submission constraints will be applied, in terms of numbers for Migration allowed per migration working day.

Parameter	Parameter Values
$RURP_{min}$	5%
$RURP_{max}$	10%
DDPRU	20
D~~M~~SP	10%
SSLPT	500

For further detail see:

- REF-3 MHHS-DEL2428-[03] Migration Capacity Calculations - Method Statements v3.1

  REF-4 MHHS-DEL2429-[03a] Calculations Monitoring and Control – Parameters v3.1

5.2.8 LDSO Considerations

Similarly, when an LDSO portfolio is < 150,000 MPANS the share of Central Services Capacity is the equivalent of < 1000 MPANs per day.

Therefore, submissions for all suppliers within these LDSOs will conform to the same approach as for the previous supplier point. i.e. de minimis value applied.

Analysis would need to be undertaken if at any point the LDSO thresholds may be breached on any given day and re-profiling undertaken if required.

5.2.9 Use of Exceptional Capacity Threshold (200k-300k)

The exceptional threshold capacity will be used operationally in the following circumstances:

- Any use of exceptional threshold will be predicated on a successful ramp-up period where stability at the Operational Threshold of 200k migrations per day has been demonstrated.

- Stability will have deemed to be met where Migrations have occurred at or above 90% of the current threshold for at least ten days (not necessarily contiguous) in the preceding period.

- Following successful conclusion of the ramp-up period the MCC will seek to implement the following:

    i. Exceptional Threshold utilised to accommodate errors and reverse migrations assuming 1% errors and 1% reverse migrations i.e. 4k events per day. This is defined as the Reserved Capacity Factor (RCFC) as defined in the:

    REF-4 MHHS-DEL2429-[03a] Calculations Monitoring and Control – Parameters v3.2

    This will allow 200k planned migrations per day to be incorporated into Capacity Envelopes.

ii.   At the successful conclusion of the first operational sprint a Tranche of the exceptional capacity will be incorporated into planning for the next Sprint; 200k-250k. Given the planning cadence this will be available for Sprint 3. Approval required by MCAG subject to a pre-defined set of success criteria.

a) Assuming that there are no operational issues arising from the use of ii above, three weeks into the execution of Sprint 3 a further tranche between 250k – 280k will be made available for the planning of Sprint 4. Approval required by MCAG subject to ~~a pre-defined set of success criteria.~~the same criteria as described above.

We will not at any point plan for migrations to exceed 280k to provide a buffer to protect the hard constraint of 300k.

5.2.10   Agent Constraints

Under the Supplier Hub principle, BSC obligations are on the Supplier to manage their agents as set out under Section J of the BSC.

Suppliers and Supplier Agents will be qualified separately by the Code Bodies. To start migration, a Supplier will require all the agents they plan to have in place to service MPANs in the new MHHS roles are qualified and ready to migrate. It is the Suppliers' responsibility to ensure that their Agents are "migration ready" when they start MPAN migration. This should be part of the commercial arrangements a Supplier has with agents under the Supplier Hub principle.

As such any Supplier wishing to start migration (via SIT Qualification or early Qualification Wave) should ensure their Agents are on the same or similar qualification timeline and have sufficient capacity to execute the Suppliers Migration plans. Non-SIT Suppliers should work with their Agents to ensure their "minded to" Qualification Waves are consistent. Where a Supplier has multiple Agents, then during migration they will need to ensure they only migrate MPANs with Agents that are "migration ready".

The above notwithstanding the MCC will undertake an oversight activity to collect as part of Supplier Schedule submissions the volumes to be migrated at an agent level. The MCC will then calculate aggregate load profiles for each agent and separately validate with agents that these profiles are supported.

5.2.11   Capacity Considerations for the Initiation and Completion of Migration Messages

System thresholds are pertinent for both the initiation and completion of migration messages. Concentration of load on particular effective start dates will lead to threshold breaches and therefore initiations and completions need to be balanced.

To balance this load there is a requirement that the **effective date** of all Forward CoA migrations is **five working days** (Migration Activation Offset (Default) (MAO_{def})) for the whole of the Supplier's Migration Window except for a short constrained "**Fast feedback**" period to allow suppliers to ensure systems stability early in an efficient manner on the Forward CoA migrations during part of their ramp-up periods only according to the following rules:

- Starting from the beginning of Industry Ramp-up or Supplier Ramp-up
- For no more than a 2-week period
- For no more than the first 500 migration initiations
- Reduce the effective date to less than five working days from initiation
- Ensure that the effective date is greater than 1 working day from initiation

NOTE: For Suppliers that are part of Early-Life Support at the start of SIT a "Fast Feedback Period" will be permitted with duration and the limit for the number of initiations to be agreed as part of later migration workshops related specifically to migration Early Life Support.

The MCC will be tracking the Migration Completions and will report on the number of reduced deltas for each sprint, to ensure suppliers comply with this discretionary allowance.

Furthermore, this fast feedback period will be clearly identified as part of the submitted plans provided to the MCC.

See Section 2 REF-4 MHHS-DEL2429-[03a] Calculations Monitoring and Control – Parameters v3.2 for more information related to the "Fast Feedback Period" (FF) parameter.

5.3 Migration schedule granularity

The MCC will seek to baseline the Migration schedule by July 2025 and thereafter enter the Migration sprint cycles. The Migration schedule will account for all MPANs.

Due to the numerous factors that will influence the MHHS migration (e.g. SIT progress, Qualification progress, Migration outturn, churn, etc.), it would be ineffective to maintain the Migration Schedule at a daily level of granularity for the entire migration phase.

The MCC will therefore maintain the Migration Schedule at a weekly granularity.

5.4 Migration sprints and schedule re-baseline

There is a requirement to plan at a daily granularity nearer to Migration activity and the MCC will manage this planning using a series of nine sprints, each with a sprint duration of 2 months.

Sprint planning will be undertaken with the relevant participants before each sprint to agree the daily migration plans per supplier per LDSO. Suppliers will be issued Capacity Envelopes per LDSO per day to guide their sprint planning.

As part of the sprint planning, the MCC will review the overarching capacity envelopes and Migration Schedule (i.e. the period beyond the Sprint to M15) to account for any material changes to participant plans due to the aforementioned reasons (SIT, Qualification progress etc). This will also provide an opportunity for participants to adjust their longer-term Migration Schedules should they require.

At the completion of each sprint planning period the relevant sprint plan will come under change control and the Migration Schedule will be re-baselined.

A sprint review will be completed after every sprint to analyse the effectiveness of the sprint and seek to identify improvements to be undertaken, as well as report on trends. This process would also include making recommendations for adjustments to the Migration Framework principles and parameters if necessary.

Note – The Sprint review reporting is not to be mistaken for Sprint Execution reporting which will report on Migration outturn, exceptions, capacity utilisation daily and weekly during the sprint.

Using the sprint approach provides participants with the flexibility to adjust their short and long-term Migration schedules whilst remaining in their capacity envelopes.

5.5 Supplier Submissions where there are Secondary MPANs

The Supplier Portfolio counts include Secondary MPANs. There are for Related Metering Points for example where separate circuits are Metered for storage or immersion heaters, or where multiple MPANs share a capacity and are invoiced together for DUOS purposes. The number Secondary MPANs will be factored into the Supplier Envelopes.

In these instances, Suppliers initiate a migration for a Primary MPAN with one or more Secondary MPANs by sending a single IF-31 Message for the Primary MPAN. The registration System then triggers appointments for the Secondary MPANs. This results in the creation of IF-36 Messages for the Secondary MPANs as well as the Primary MPANs on the appointment effective date. The MCC need to track the impact of Primary MPANs with related MPANs that may result in an unexpected spike in IF-36 completions.

The Envelope calculations and de minimis rules remain unchanged. However, Suppliers when providing Planned submissions must include related MPANs as part of their Migration counts.

I.e.:

- If there is 1 x Secondary MPAN this counts as two Migrations
- If there are 2 x Secondary MPANs this counts as three Migrations

The MCC can then track the numbers of IF-36 completions relating to Secondary MPANS.

5.6   Bulk Change of Agent

BSCP 708 Places an obligation on parties to consult with the MCC prior to undertaking any 'bulk change of agent' activity

The MCC must therefore ensure that Bulk COA does not adversely impact migration.

A process therefore will be employed between M11 and M15 to manage the MCC approvals required.

Step	Activity
1	Suppliers to submit BULK COA intentions as soon a requirement identified. High level of detail not required at this point
2	3 Months prior to Bulk COA being undertaken detailed plan to be submitted to MCC including daily volumes and impacted parties (Agents / LDSOs)
3	MCC Will examine aggregated Migration Schedules at LDSO and National level
4	MCC will consult with impacted parties i.e. LDSOs, Suppliers and Central Service Providers
5	Where aggregate load exceeds exceptional thresholds, Suppliers will be asked to re-profile activity
6	MCC Will consider representations from impacted parties, if there are co-incident exceptional events that would add risk to overall activity plan e.g. System Upgrades, Scheduled DR tests etc.
7	MCC will then provide approval to BSC that bulk COA may be undertaken.

5.7   Treatment of Complex Sites, SVA Shared Metering Arrangements and Private Networks

Several discussions have taken place within MWG regarding how the migration of Complex Sites, SVA Shared Metering Arrangements and Private Networks will be managed.

The migration complexity is driven by two key constraints:

- The Migration of all MPANs within ~~a Complex~~these Site arrangement must be undertaken at the same time; and

- No migration of ~~Complex~~these Sites may be undertaken prior to M14.

On this basis the Programme believes that these migrations must be managed and tracked at the Site level.

To that end the following will be undertaken:

- PPIR to be issued to Advanced Data Collectors and Suppliers to capture details of all ~~Complex~~such Sites and MPANs

- Programme to consolidate this information into a central log to be subsequently validated by impacted Suppliers and Agents

- Following validation Suppliers and Agents for each site under consideration to orchestrate activity and agree timelines for migration which will then be included in the Suppliers' migration plan and recorded in a tracker

- Programme in collaboration with Suppliers to confirm successful migration of each site

The BSC definition of a ~~c~~Complex ~~s~~Site is in BSCP27 (1.8.2) as follow:

- Complex Sites: those Metering Systems that cannot be adequately expressed via the D0268, Half Hourly Meter Technical Details, and where the MOA is required to provide additional information in accordance with the Retail Energy Code Metering Operations Schedule.

5.8   Early Life Support Considerations

The Programme Early Life Support model is currently under consultation.

Whilst we have rules governing throughput for Suppliers in this period industry will also be required to meet aggregate volumes of migration to inform stability in the new arrangements.

Following further discussions in TORWG and MWG we anticipate that further planning will be required to understand how these volumes may be achieved within the Migration Framework planning.

5.9   Service Activation

The Migration Control Centre fulfils a role within the Elexon Service Activation Process.

The MCC provides an input into the process confirming that a Suppliers ~~party~~ ha~~s~~ve fulfilled their obligation in terms of planned submissions described in the framework as a pre-requisite to the completion of a party's Service Activation.

If a ~~party~~Supplier has not provided valid migration plans as part of this process the MCC may not provide approval for Service Activation.

Please refer to the published process:

https://www.mhhsprogramme.co.uk/migration-and-transition/transition/service-activation

6   Migration Schedule Compliance

6.1   Monitoring and Compliance

Suppliers are expected to adhere to the agreed sprint plans and achieve their daily migration targets. Suppliers should not exceed their planned migrations as this could result in the breaching of the LDSO and Central Services Thresholds. If participants seek to migrate more than planned for their sprint, then additional capacity will be sought to be made available using the Unused Capacity Allocation process which will re-allocate excess capacity and will be agreed in future consultations. Similarly, we would also expect that exception rates be reasonable. The MCC will seek to engage if a high proportion of migrations result in exceptions. The MCC would also act as an escalation point for consistent issues with migration initiation.

Suppliers should not exceed their planned migrations or deviate from the defined period between migration initiation and effective from date as this could result in the breaching of the LDSO and Central Services Thresholds

6.2   Deviation from plan and exceptions

It is reasonable to expect 'unplanned' deviations from the sprint plan due to exceptions. If participants encounter migration issues and need to deviate from the sprint plan, then the MCC must be informed as early as possible so that unused capacity can be reallocated.

If participants require additional capacity to recover 'unused' capacity, participants can use the Unused Capacity Allocation process set out in Section 11 of MHHS-DEL2764-[07] Migration Data Requirements and Reports v3.0 or alternatively adjust their schedule in the next Sprint planning period.

6.3   Good faith and Systematic Deviations

Participants with occasional deviations and acting in good faith won't typically lead to escalations. The MCC is more concerned about scenarios where participants continuously deviate from plan (i.e. trend versus ad-hoc). These patterns of deviation may result in corrective actions and escalations by the MCC to maintain the integrity of the migration process and fairness among all participants. The governance and reporting around Migration execution has been defined in

- MHHS-DEL2763-[06] Migration Governance and Escalation Framework v3.2
- MHHS-DEL2764-[07] Migration Data Requirements and Reports v3.2

We also recognise that Central Parties and LDSOs may experience outages to core systems issues such as cyber-attack etc that will impact parties' ability to migrate. It is understood that events of these nature should not inform migrating parties' performance as these issues are not within their gift to control.

6.4   Capacity Reallocation and Adjustment

Suppliers may request extra capacity through the Unused Capacity Allocation process if they would like to exceed their planned Sprint migrations.

If Suppliers expect to not achieve their planned sprint migrations, then they must notify the MCC as soon as possible so that their capacity can be reallocated. Suppliers can also adjust their plans in the subsequent Sprint planning period.

6.5   Plan Submission and Revision

The MCC will issue revised Capacity Allocation Envelopes to all Suppliers in every sprint planning period based on participant progress though SIT and Qualification, as well as Migration outturn and other impacting factors.

Suppliers who will participate in the impending sprint will be required to submit their sprint schedules at a daily granularity per LDSO. Suppliers must provide a valid daily granularity migration plan for the impending Sprint to the MCC. In the absence of a valid daily granularity plan the Supplier will not be permitted to undertake any migrations until a valid daily granularity plan is in place.

- See MHHS-DEL2762-[05] Migration Choreography v**3.1**

All Suppliers can adjust their overarching Migration Schedule (i.e. beyond the sprint to M15) during the sprint planning cycles as well, provided changes are within the Capacity Envelopes.

6.6   Lost Migration Days

A Lost Migration Days process will be available until the M14 Milestone for Suppliers with envelopes that are not De minimis or below the Small Supplier LDSO Portfolio Threshold (SSLPT). This process addresses situations during the Sprint Execution phase where Suppliers are unable to complete planned migrations due to circumstances beyond their control. The reason this is only available until M14 is there is only 6 months migration remaining at that point. Lost Days between M14 and M15 will need to use the unused capacity processes to ensure migration is completed on time.

This is to ensure that external disruptions beyond the Supplier's control do not negatively impact their migration performance and in particular the ability to Migrate [90%] of their portfolio by the end of their Core Migration Window part of their plan.

Any validated Lost Migration Days will result in an extension of the Supplier Core Migration Window, ensuring Suppliers retain access to their full allocated capacity and are not disadvantaged by disruptions beyond their control.

These disruptions may arise due to Circumstances beyond the Supplier's control, such as:

- DIP outage (including scheduled outages)
- Other Central Service outage (including scheduled outages)

This will be considered on a case by case basis. The MCC shall evaluate each incident and look at the extent and timings of the outage. For example, if the outage occurs for a significant period or throughout the Migration activity window for the Migration Date.

Where deemed appropriate all active Migrating Suppliers will automatically be provided with one or more additional Migration days following the end of their Core Migration Window.

Affected Suppliers will be made aware within 2 working days and the outcome will be notified within 10 working days. Where deemed appropriate the Lost Migration days will be automatically applied.

For LDSO outages relating to Supplier Meter Registration ~~Systems~~Services the MCC will consider any incidents on a case by case basis taking into account the portfolio size of the affected LDSO and the duration of the incident.

In instances where MCC does not automatically apply the Lost Migration days the Supplier can apply to have them added to their Core migration Window as follows:

6.6.1   Supplier Claim for 'Lost Migration Day(s)'

A Supplier can claim for additional Core Migration Window migration days where situations beyond their control including, natural disasters or other outages beyond their ability or their agents ability to resolve.

1. **Apply for the Lost Migration Day update citing:**

   - Impact to Suppliers Migration Plan;

   - Impacted Supplier Plan Dates;

   - Impacted number of Migrations;

   - Number of Migration Days lost due to issue; and

   - Specific LDSO(s).

2. **Related Incident Number**

   - Using MHHS Service Management capability

3. **Responsible Party**

   - Related party/parties causing issue.

4. **Supplier Issue Owner**

   - Accountable person managing the issue resolution from the Supplier.

5. **Resolution / Fix / Mitigations**

   - Steps being undertaken to resolve and minimise impact to Supplier Planned Migrations.

6. **Supporting Information**

   - Any relevant shareable information e.g. emails, logs, plans, reports.

6.6.2   MCC Evaluation and Decision

1. **Evaluation**

   - If an existing incident covers the issue (if Central Party-related).

   - If sufficient evidence supports the claim (for non-visible issues);

   - If the impact is material enough to justify Lost Migration Days; and

   - If the integration of the overall migration schedule can be maintained.

2. **Decision and Outcome**

   - MCC takes decision to MCAG for ratification:

   - If Approved: Lost Migration Days are recorded, Suppliers Core Migration Window will be extended accordingly.

   - If Rejected: Supplier receives feedback.

7 Migration Success Criteria

Migration Milestone	Category	Success Criteria
M10	Migration schedule	1) Migration schedule approved
	Migration governance	1) Migration Framework approved 2) MCC delegation of authority approved 3) Migration incentives implemented
	Migration readiness	1) MCC tested and ready
M11 + 3/6/9/12/15 months	Migration performance	1) Participants achieving ~~95~~90% of their agreed migration schedules <u>by the end of their Core Migration Window </u>(Plan vs Actual at a participant level) <u>including any adjustments for Lost Migration days.</u> 2) ~~95~~90% of MPAN migration target achieved for the period (Plan vs Actual at an aggregated level) <u>including any adjustments for Lost Migration days</u> 3) Migration forecast is on target to complete within timelines 4) Migration schedule and activities are in accordance with the Migration Framework
	Migration exception management	1) Migration ~~activity not ~~<u>issues </u>adversely affecting other industry processes <u>are all resolved</u> 2) No material flaws in the migration design or process 3) ~~No introduced~~<u>Issues potentially causing</u> customer detriment <u>are all resolved</u> 4) All parties adhering to Non-Functional Requirements
	Migration experience	1) Participant experience has been without any major issues
M15	Migration performance	1) M15 Acceptance Criteria achieved See MHHS-DEL1792 - M15 Acceptance Criteria v2.0

8 Decision-making responsibilities

Phase	Body	Responsibilities
Pre-M11	Migration & Cutover Advisory Group (MCAG)	Assess and recommend for approval to the SRO: • Approve Migration Framework • Approve the Baseline Migration Schedule • Approve Migration start • Approve delegated authority to the MCC for M11-M15
M11- M15	Migration Control Centre (MCC)	Execute the processes and apply the principles contained within the Migration Framework.
M11- M15	Migration & Cutover Advisory Group (MCAG)	• Monitor adherence to the Migration Framework by industry and the MCC • Assess and recommend changes to the Migration Framework • Approve use of exceptional capacity band
M11- M15	Programme Steering Group (PSG)	• Consider and action MCAG recommendations • Monitor progress of participants to the Migration Schedule and Thresholds and achieving M15. • Make recommendations to Ofgem if required

9   APPENDICES

9.1   Appendix 1: Example: Supplier Capacity Envelopes

9.1.1   Supplier's Capacity Envelope and weekly Migration Schedule for a particular LDSO
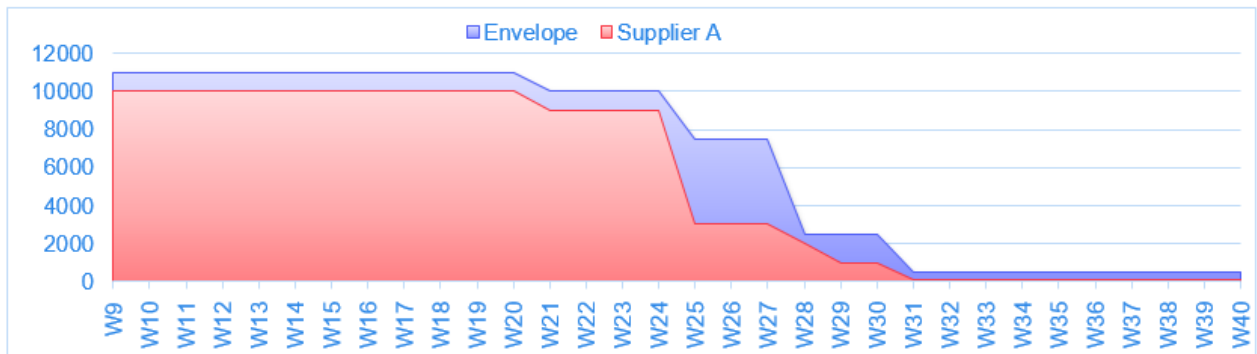

Figure 4 - Example Supplier Migration Envelope and weekly Migration Schedule

W = Week

W9 = Supplier Migration start week

In Figure 4 - Example Supplier Migration Envelope and weekly Migration Schedule.

- The blue area is the Supplier's **weekly Capacity Envelope** for a LDSO
- The red area is the Supplier's planned migrations for each week

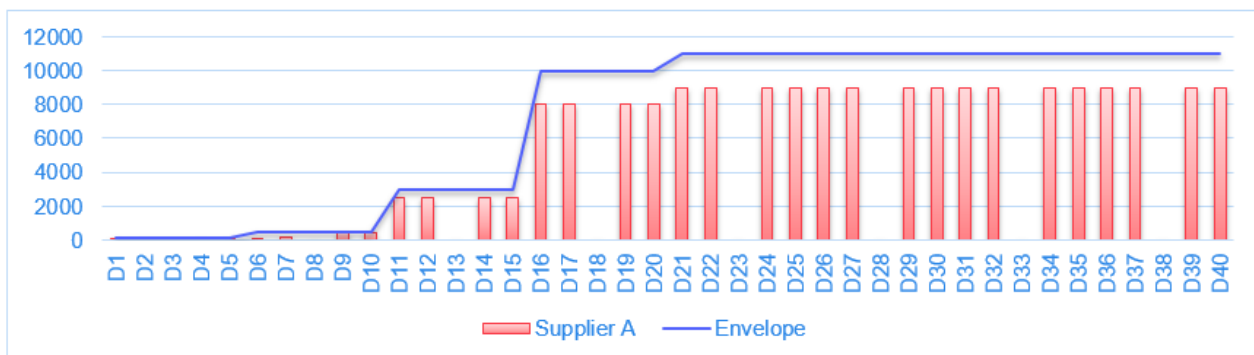### 9.1.2   Supplier's Capacity Envelope and daily sprint plan for a particular LDSO

Figure 5 - Example Supplier Sprint Envelope and Daily Sprint Plan

D = Day

D1 = Supplier Migration Start Date.

In Figure 5 - Example Supplier Sprint Envelope and Daily Sprint Plan:

- The blue line is the Supplier's **daily Capacity Envelope** for a LDSO for a Sprint;
- The red bars are the Supplier's planned migrations for each Migration Day D(n) in that period; and
- Supplier A has elected to have migrations only four days per week.