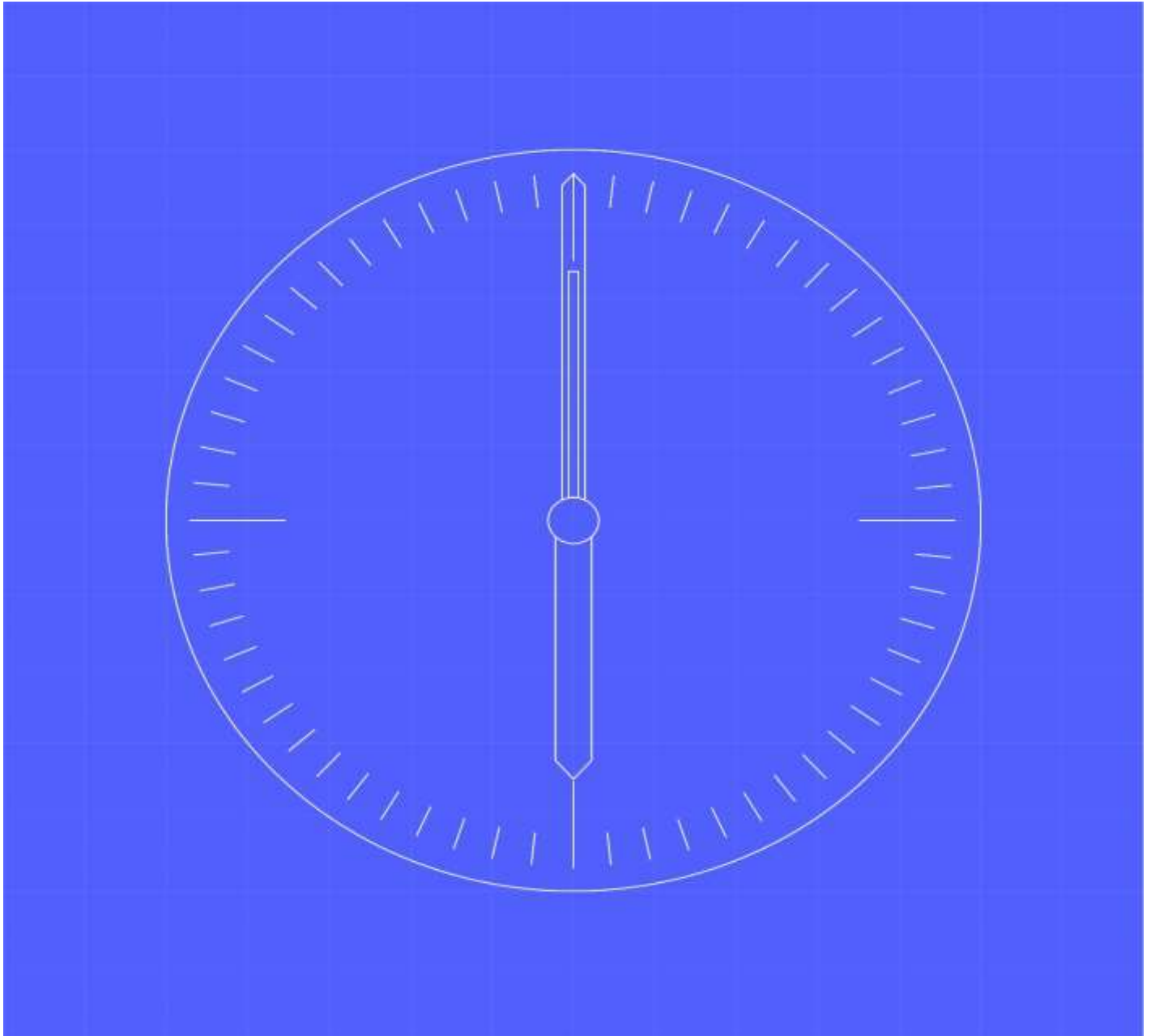




[02] Migration Framework - Principles and Guidelines



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1.1 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 following MCAG Interim Approval

1.2 References

Document	Publisher	Published	Additional Information
REF-1 MHHS-DEL2426-[01] Migration Framework Foundations v1.0	Migration Team	09/05/2024	Migration FW
REF-2 MHHS-DEL2427-[02] Migration Framework - Principles and Guidelines v1.0	Migration Team	09/05/2024	Migration FW
REF-3 MHHS-DEL2428-[03] Migration Capacity Calculations - Method Statements v1.0	Migration Team	09/05/2024	Migration FW
REF-4 MHHS-DEL2429-[03a] Migration Capacity Calculations – Parameters v1.0	Migration Team	09/05/2024	Migration FW
REF-5 MHHS-DEL2430-[04] Migration Requirements and Processes v1.0	Migration Team	09/05/2024	Migration FW
REF-6 MHHS-DEL2431-[04a] Migration Business Process Models v1.0	Migration Team		Migration FW
REF-7 MHHS-DEL961 – Migration Design Document v1.0	Migration Team	03/04/2023	
REF-8 MHHS-DEL953 – Data Assessment Report v1.0	Migration Team	21/02/2023	
REF-9 MHHS-DEL1128 – Migration, Cutover and Data Strategy v1.0	Migration Team	02/06/2023	
REF-10 MHHS-DEL1648 - Migration Thresholds Document v1.0	Migration Team	20/11/2023	
REF-11 MHHS-DEL813 – Overarching Test Data Approach and Plan v1.0	Testing Team	19/07/2023	
REF-12 MHHS-DEL1181 – Data Cleanse Plan v2.0	Migration Team	24/02/2024	
REF-13 MHHS-DEL1792 - M15 Acceptance Criteria v1.0	Migration Team	13/12/2023	

Terminology

Term	Description
BAU Process	This refers to a process within the MHHS arrangements as set out within the MHHS Core Design.
BSC	Balancing and Settlement Code
Central Services / Systems	MHHS Programme term referring to the parties and systems that comprise the supporting infrastructure for MHHS business processes and services, namely the Elexon Central Services, Electricity Enquiry Service, Data Service Provider, Central Switching Service, Data Transfer Network, and the Data Integration Platform.
CoA	Change of Agent
CoS	Change of Supplier
CSS	Central Switching Service
Daily Planned Migration Threshold	This is an industry-wide limit on the maximum planned for number of migrations that can take place on a given day under normal circumstances.
Data Cleanse Plan	The approach and activities required to improve and populate data prior to Migration start.
DC	Data Collector
DIP	Data Integration Platform
DS	Data Service
DSP	Data Services Provider

Term	Description
ECS	Elexon Central Services
EES	Electricity Enquiry Service
Export MPAN	An MPAN that exports energy to the grid from a premises.
Forward Migration	The process through which MPANs will move from legacy arrangements to MHHS arrangements.
IDNO	Independent Distribution Network Operator
Import MPAN	An MPAN that imports energy from the grid to a premises
ISD	Industry Standing Data
LDSO	Licensed Distribution System Operator
LDSO Portfolio Thresholds	Limits set for each LDSO based on the size of their portfolio, ensuring balanced migration across different operators See MHHS-DEL1648 - Migration Thresholds Document v1.0
Legacy Arrangements	The existing arrangements set out under the BSC and REC. For the purposes of the Migration Design, this is primarily the REC Metering Services Schedule and the Balancing and Settlement Procedures related to Data Collection.
MCC	Migration Control Centre
MHHS	Market-Wide Half-Hourly Settlement
MHHS Arrangements	The new MHHS arrangements as set out in the MHHS Core Design Artefacts.
Migration Design	The technical articulation of how MPANs will move from legacy to new MHHS arrangements. See MHHS-DEL961 – Migration Design Document v1.0
Migration Period	The period denoted by the Programme as occurring between the M11 and M15 milestones.
Migration Planning and Management Tool (MPMT)	Application to be developed for use by the MCC to manage the end to end migration process
MOP	Meter Operator
MPAN	Meter Point Administration Number
MPID	Market Participant Identifier
MS	Metering Service
MWG	Migration Working Group
NFR	Non-Functional Requirement
Primary MPAN	The MPAN, within a Related MPAN arrangement, for which a Switch is initiated, or a forward migration (via an IF-031) is initiated.
Qualified Supplier	A Supplier recognised in ISD as both having passed the relevant BSC qualification requirements; and declared that their service is operational within the MHHS arrangements.
Registration Service	The Registration Service is the LDSO service that holds Meter point standing data information about each MPAN within its Distribution Region..
REC	Retail Energy Code
Reverse Migration	The process through which MPANs will move from MHHS arrangements to legacy arrangements.
Secondary MPAN	The MPAN, within a Related MPAN arrangement, for which a forward migration occurs when an IF-031 is received for a Primary MPAN.
Switch	The process by which a new Supplier Registration supersedes an existing Supplier Registration, managed by the CSS.
Upper Migration Threshold	This is an industry-wide limit on the maximum number of migrations that can take place on a given day under exceptional circumstances. See MHHS-DEL1648 - Migration Thresholds Document v1.0
Supplier Capacity Envelope	A daily profile covering the whole migration period detailing the maximum number of migrations a given Supplier in a LDSO may undertake.
Supplier Submission	A Supplier's forward view of planned migrations at LDSO level that falls within the Supplier Capacity Envelope provided and includes all MPANs within their portfolio.

2 Introduction

2.1 Document purpose

The purpose of this document is to inform and guide Participants through the essential aspects of planning and managing migration activities in collaboration with the MCC. This document brings together the foundational principles and operational guidelines critical for the successful execution of the MHHS migration, including:

1. Migration Thresholds:

- An extension and elaboration of the Thresholds defined in MHHS-DEL1648 - Migration Thresholds Document v1.0

2. Core Principles:

- Essential tenets that align with the overarching MHHS Programme and migration goals.

3. MCC and Migration Schedule Principles:

- Outlining the Migration Control Centre's approach to integrating individual Supplier Migration Plans into a single MHHS Migration Schedule that meets the Migration Framework Principles and aligns with the Migration Framework Core Principles.

4. Modelling Assumptions:

- A set of assumptions that can help predict and inform how the migration phase will operate to support modelling.

5. Guidelines:

- Operational instructions for daily migrations, capacity management, MHHS plans creation and submission and plan adherence.

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

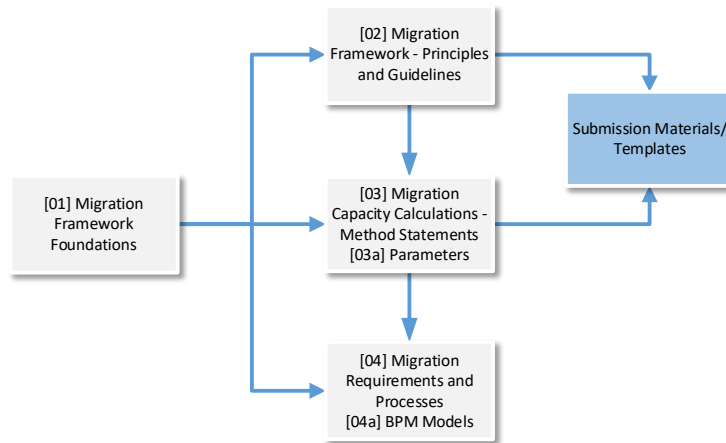


Figure 1 - Migration Framework Document architecture

The Migration Framework, overseen by the Migration Control Centre, will primarily focus on the initial setup of the Migration Schedule and its ongoing maintenance. This includes adapting to changes such as adjustments in qualification timelines and any deviations from the planned schedule.

3 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;
- ESO;
- Elexon Central Services (ECS);
- Electralink (DTN);
- REC and BSC Performance Assurance Boards; and
- UMOS.

4 Migration Thresholds and Limits Summary

Derived from MHHS-DEL1648 - Migration Thresholds Document v1.0.

#	Threshold Name	Description	Value	Period	Level	Notes
TH-001	Daily Planned Migration Threshold	Maximum number of MPANs planned for migration each day	200,000	Daily	Total Network Volume	The Sum Total of LDSO Portfolio Thresholds for All LDSOs with an active planned migration will not exceed this limit
TH-002	Upper Migration Threshold	Absolute maximum number of MPANs that can be migrated on any given day	300,000	Daily	Total Network Volume	This limit included the Daily Planned Migration Threshold and the tolerances required for: 1) Re-submissions for retries and errors 2) Reverse Migration Capacity 3) Reserved headroom for exceptional processing 4) MCC Discretionary headroom to accelerate Migration during periods of high demand/contention 5) Exceptional Capacity in the event of a significant impact/deviation to the Migration Schedule to protect M15 milestone
TH-003	LDSO Portfolio Thresholds (1)	LDSO Portfolio Size < 900K	10,000	Daily	LDSO	Limits set for each LDSO based on the size of their portfolio, ensuring balanced migration across different operators
TH-004	LDSO Portfolio Thresholds (2)	LDSO Portfolio Size 900K - 1.4M	15,000	Daily	LDSO	Limits set for each LDSO based on the size of their portfolio, ensuring balanced migration across different operators
TH-005	LDSO Portfolio Thresholds (3)	LDSO Portfolio Size 1.4M - 2.0M	20,000	Daily	LDSO	Limits set for each LDSO based on the size of their portfolio, ensuring balanced migration across different operators
TH-006	LDSO Portfolio Thresholds (4)	LDSO Portfolio Size 2.0M - 3.0M	30,000	Daily	LDSO	Limits set for each LDSO based on the size of their portfolio, ensuring balanced migration across different operators
TH-007	LDSO Portfolio Thresholds (5)	LDSO Portfolio Size > 3.0M	40,000	Daily	LDSO	Limits set for each LDSO based on the size of their portfolio, ensuring balanced migration across different operators

5 Migration Principles

Collected principles from previous migration artefacts, reviewed and refined.

5.1 Migration Framework Core Principles

Core principles driving the migration strategy, such as fairness, transparency, and efficiency.

ID	Name	Principle Category	Statement	Rationale	Implications
MCP-01	Equitable Migration Scheduling	Business	A Migration schedule will be agreed with participants before M10 and allocation principles will govern the allocation of migration capacity to participants in an objective, fair and transparent manner.	To provide all participants with an equal opportunity to prepare for migration and to ensure the process is considered fair.	Participants must be ready to commit to a schedule by M10 and accept that allocation is based on predefined principles that may require flexibility from participants.
MCP-02	Schedule Flexibility	Architectural	Participants will be required to be flexible with their migration schedules to enable the optimal utilisation of the finite migration capacity and support fair capacity allocation.	Flexibility ensures that unavoidable changes in capacity or participant readiness can be managed without significant disruption to the overall migration.	Participants will need to adapt to potential rescheduling and reallocation of migration capacity and/or start dates as required.
MCP-02a	Schedule Flexibility	Business	The Migration Schedule should seek to provide as much flexibility to Suppliers in their migration planning as constraints allow	Suppliers will have differing approaches as to how they wish to manage their migration and the approach should cater for that as far as is practicable	The MCC will need to ensure that Capacity Envelopes incorporate available headroom to allow suppliers to flex within that envelope and be able to identify areas where unused capacity may be offered to other participants.
MCP-02b	Schedule Flexibility	Communication	Participants will inform the MCC at the earliest opportunity should any events take place that could impact a party's ability to adhere to their migration schedule.	The MCC will continuously seek to re-allocate unused capacity	Avoid wasted capacity.
MCP-03	Maximized Migration Capacity Utilization	Migration Planning	The MCC will continuously seek to use all available capacity with the management of the migration schedule, monitoring of participant readiness, monitoring migration effectiveness and managing the re-allocation of capacity if required	To prevent any waste of migration capacity, and demonstrate fairness according to reallocation principles when adjusting the migration schedule.	The MCC may need to make frequent adjustments to the schedule, and participants must be responsive to these changes. 1. Some changes may be at very short notice in exceptional circumstance when another supplier is unable to meet the committed capacity allocated in the migration schedule. 2. This can impact allocations on daily, monthly, and per LDSO levels.
MCP-04	Delegated Schedule Management	Governance	The MCC will have delegated authority to manage changes to the Migration Schedule and re-allocations as per the MCC framework	Centralised authority allows for swift decision-making and consistent management of the migration process.	The MCC's decisions on schedule changes will be final, requiring participant adherence.

ID	Name	Principle Category	Statement	Rationale	Implications
MCP-05	Migration Schedule Level	Data	The MCC will provide the total planned migrations per day, per Licensed Distribution System Operator (LDSO); and will regularly report on migration performance (success, exceptions).	Maintains stakeholder confidence and allows for informed decision-making by participants.	Regular, detailed reports will be made available when key events occur such as: 1. Expected Supplier Qualification Date changes and slippage in expected migration start 2. Consistent underutilisation of capacity allocation by Supplier. 3. New Supplier about to start migration for LDSO 4. Migrations schedules allocation defined and communicated per LDSO
MCP-06	Performance Metrics Visibility	Data	The MCC will provide transparency of participant performance to plan. This may be in the form of a RAG status and not participant MPAN volumes.	Openness about performance encourages accountability and continuous improvement, and collaborative, creative problem solving.	Participants will need to regularly provide data related to performance e.g. deviations from planned, routes to green.

5.2 MCC and Migration Schedule Principles

Principles specific to the creation and maintenance and monitoring of the migration schedule:

ID	Name	Principle Category	Statement	Rationale	Implications
MSP-01	Network Levelling	Thresholds	<ul style="list-style-type: none"> The application of Central Services Threshold and Individual LDSO Thresholds ensures that migration modelling adheres to key constraints Individual LDSO Thresholds are informed by the LDSO's portfolio size, and the Central Systems Threshold caps the aggregate number of migrations at 200k per day, with a provision for up to 300k under exceptional circumstances 	<ul style="list-style-type: none"> Ensures system stability and efficiency by preventing overload and ensuring equitable distribution of migration capacity among LDSOs 	<ul style="list-style-type: none"> Migration modelling must account for both individual LDSO capacities and the overall system's capacity, impacting how migration slots are allocated and potentially limiting the number of migrations that can be conducted within a given period
MSP-02	Reserved Capacity	Capacity Allocation Migration Planning	<ul style="list-style-type: none"> Reserved capacity is essential for handling reverse migrations, erroneous migrations needing retries 	<ul style="list-style-type: none"> Acknowledges the changeable nature of the migration schedule and the need for flexibility to address unforeseen issues and corrections, and reverse migrations for which we do not have a benchmark 	<ul style="list-style-type: none"> A portion of the migration capacity is always available to address unexpected requirements, potentially reducing the overall daily migration capacity but increasing the robustness and adaptability of the migration schedule

ID	Name	Principle Category	Statement	Rationale	Implications
MSP-03	Small Portfolio Challenges	Capacity Allocation	<ul style="list-style-type: none"> Below a certain threshold for small Suppliers' and small LDSOs', capacity envelopes are an inappropriate means to provide capacity constraints for the purposes of planning 	<ul style="list-style-type: none"> Small portfolio sizes generate disproportionately small values for migration planning, complicating the allocation of migration capacities Similarly, when an LDSO portfolio is < 100K the share of Central Services Capacity the share of central services capacity is < 1K MPANs per day. 	<ul style="list-style-type: none"> A separate approach is required to support small portfolios
MSP-04	Balancing Migration Initiation & Completion	Thresholds	<ul style="list-style-type: none"> The MCC must consider both the initiation and completion stages of MHHS MPAN migrations. A concentration of load on specific effective start dates may lead to threshold breaches 	<ul style="list-style-type: none"> Avoid instances where Migration Thresholds breach / or individual systems capacity breach occurs as a result of concentrations of Agent Appointments confirmations having built up by previous days initiation activity 	<ul style="list-style-type: none"> There must be a fixed duration between initiation and completion.
MSP-05	MCC Calendar	Migration Planning Migration Coordination	<p>A Migration Control Centre Calendar will be provided to mark the following:</p> <ul style="list-style-type: none"> LDSO Operating hours as defined in the MHHSP_OPC001_Operational_Choreography Standard working days, weekends, Public holidays Non-migration days due to: <ul style="list-style-type: none"> Price control events Contract rounds Change freezes Migration Schedule Dates (TBC):e.g. <ul style="list-style-type: none"> Submission deadlines Schedule Baseline Schedule Publication 	<ul style="list-style-type: none"> To support effective migration planning and execution, participants need a clear understanding of the operational and non-operational days within the MHHS Migration environment 	<ul style="list-style-type: none"> Suppliers must use the Migration Calendar to align their migration submissions with the available operational days, accounting for non-migration periods To ensure that Suppliers and Agents are prepare to meet the submission deadlines for updated migration plans on a regular basis for the next migration sprint
MSP-06	Industry & Supplier Ramp-Up Profile	Capacity Allocation Migration Planning	<ul style="list-style-type: none"> MHHS Migration should begin with low volumes to initially validate the overall system's performance and, subsequently, the performance of individual parties involved. Additionally, suppliers starting migration post-initial cohort are required to follow a ramp-up period based on a risk methodology before operating at full capacity to prove successful operation 	<ul style="list-style-type: none"> Starting with lower volumes allows for the identification and resolution of issues without overwhelming the system 	<ul style="list-style-type: none"> Suppliers Migration Allocation Envelopes with include Industry Ramp-up profiles and Supplier Ramp-up profiles which allows for system validation and performance assessment before ramping up to full capacity This strategy should apply to all suppliers, including those starting after the initial ramp-up phase, to confirm operational readiness before full-scale migration including checks for any potential settlement issues with options to pause/stop migration

ID	Name	Principle Category	Statement	Rationale	Implications
MSP-07	Supplier Submission Granularity	Migration Planning Supplier Portfolio	<p>Suppliers may opt to migrate different segments of their portfolio in varied ways, and such differentiation should be reflected within their proposed migration profiles.</p> <ul style="list-style-type: none"> Segmentation may include: Metering Type (e.g., Smart, Traditional, Advanced, AMR) Import or Export meter The specific level of detail to be provided to the Migration Control Centre regarding Supplier Migration Portfolio segmentation is yet to be determined Prospective MHHS Agents 	<ul style="list-style-type: none"> Differentiation in migration submissions allows suppliers to tailor the migration process to specific characteristics and needs of various portfolio segments. Providing this information as part of the Suppliers Submission Plans allows the MCC to understand any potential risks to the overall migration. 	<ul style="list-style-type: none"> Suppliers need to prepare for detailed migration submissions that specify the segmentation of their portfolios. The Migration Control Centre must be equipped to handle and process this granular information for effective migration management.
MSP-08	Core Migration Volume Completion Period	Migration Planning MCC Approach	<p>Migration modelling assumes that parties will utilize the majority of available capacity and that the period between the start of migration and when it is largely complete will be broadly similar for suppliers.</p> <ul style="list-style-type: none"> Suppliers are expected to maximize the use of available migration capacity and aim to complete 95% (TBC) of their migration within 'n' months of their start date. The exact value of 'n' will be determined after further modelling. 	<ul style="list-style-type: none"> Ensuring a timely and efficient migration for all participants by optimizing capacity usage and adhering to a structured timeline. 	<ul style="list-style-type: none"> Suppliers need to strategically manage their migration submissions to align with the MCC Supplier Migration Capacity Envelopes and completion timelines while planning for the tail-end complexities and exceptions. <p>NOTE: It is expected that Supplier Migration plans will show a significant left-bias with a long tail. The long-tail allowing for migration repair and complex scenarios.</p> <p>Challenges in migrating certain MPANs are acknowledged, and provisions for exceptions must be incorporated. Time-bound dependencies exist; such as Export MPAN creation, that impact migration rates for specific MPAN subsets</p>
MSP-08a	Data Driven Approach to the Definition of Scaling Factors	Capacity Allocation MCC Approach	<p>Specific scaling factors relevant to the migration process will be determined at a later stage, contingent upon the availability of more detailed information, including:</p> <ul style="list-style-type: none"> Qualification Timelines Suppliers' preferred start dates Supplier ecosystem cohort qualification timelines Anticipated daily migration volumes 	<ul style="list-style-type: none"> Allows for a more accurate and relevant approach to providing the Supplier Migration Capacity Envelopes when more information is available 	<ul style="list-style-type: none"> As above

ID	Name	Principle Category	Statement	Rationale	Implications
MSP-09	Daily Migration Thresholds per Supplier / LDSO	Capacity Allocation Migration Planning	<ul style="list-style-type: none"> To manage network and system capacities effectively and maintain fairness, the Migration Control Centre (MCC) will issue Migration Capacity Envelopes at the Supplier (MPID) - LDSO (MPID) level These envelopes serve as the upper bounds for planning migration submissions, ensuring that the total submissions do not exceed the daily capacity of individual LDSOs or the overall system The envelopes will be calculated based on the supplier's portfolio proportion within a given LDSO against that LDSO's network levelled threshold for a given day Over time, as more suppliers become qualified within an LDSO, these envelopes will be scaled down to accommodate new entrants Additionally, the envelopes will be tailored with a left bias in accordance with the Core Migration Volume Completion Period Spare migration capacity will be identified and communicated to suppliers for potential use in-line with the Unused-Capacity Allocation processes 	<ul style="list-style-type: none"> Establishing clear guidelines and capacity envelopes ensures that supplier submissions do not exceed network and system thresholds and constraints, while also allowing the MCC to forecast migration end-dates and uphold fairness principles 	<ul style="list-style-type: none"> Suppliers must adhere to their provided Migration Capacity Envelopes when planning submissions, adjusting their plans based on systematic feedback and available spare capacity. In order for Supplier to make use of unused capacity their migration plans need to be able to respond to the short notice of availability of capacity within the Migration Spring LDSOs will receive Aggregate views all Supplier plans per LDSO once confirmed
MSP-10	Headroom for Errors and Reverse Migrations	Migration Planning MCC Approach	<ul style="list-style-type: none"> Errors and reverse migration events will inevitably occur and erode the overall migration capacity. This approach will initially reserve a portion of the Upper Migration Threshold capacity for handling such events. As migration progresses and a clearer understanding of the impact of errors and reverse migrations emerges, a more informed, risk-based approach will be employed to adjust the headroom within the exceptional circumstances threshold, either by releasing or reducing it based on actual migration outturn 	<ul style="list-style-type: none"> Accounting for errors and reverse migrations from the outset ensures that the migration schedule remains robust, resilient and adaptable, without significantly disrupting the overall migration capacity. 	<ul style="list-style-type: none"> Suppliers and the MCC must plan for and manage the impact of errors and reverse migrations within the predefined exceptional circumstances capacity, adjusting strategies as actual data on these events becomes available.

6 Candidate Migration Guidelines

Candidate set of Guidelines to be developed further as part of future consultations.

6.1 Migration Plan Submission

1. Criteria for initial plan submission
2. Granularity and detail required for daily migrations
3. Capacity Allocation and Management

6.2 Procedures for requesting and allocating capacity

1. Rules for managing unused capacity and reallocation process
2. Schedule Adherence and Monitoring

6.3 Mechanisms for tracking adherence to migration schedules

1. Reporting requirements for daily compliance
2. Deviations and Adjustments

6.4 Protocols for handling deviations from the migration plan

1. Steps for making schedule adjustments and baseline creation
2. Risk Management and Mitigation
3. Guidelines for managing risks related to migration errors and reverse migrations
4. Strategies for mitigating impacts on overall migration capacity

6.5 Communication and Escalation

1. Procedures for communicating with the MCC
2. Escalation paths for systematic deviations or unforeseen challenges

6.6 Capacity Envelope Updates

1. Frequency and process for updating capacity envelopes
2. Considerations for changes within the Sprint execution window

6.7 Stakeholder Collaboration

1. Expectations for supplier and agent collaboration
2. Guidelines for joint planning and validation of migration volumes

6.8 Consultation and Feedback

1. Processes for participating in industry consultations
2. Methods for providing feedback on guideline effectiveness

6.9 Compliance and Enforcement

1. Details on compliance checks and potential consequences.
2. Enforcement measures for repeated non-compliance.