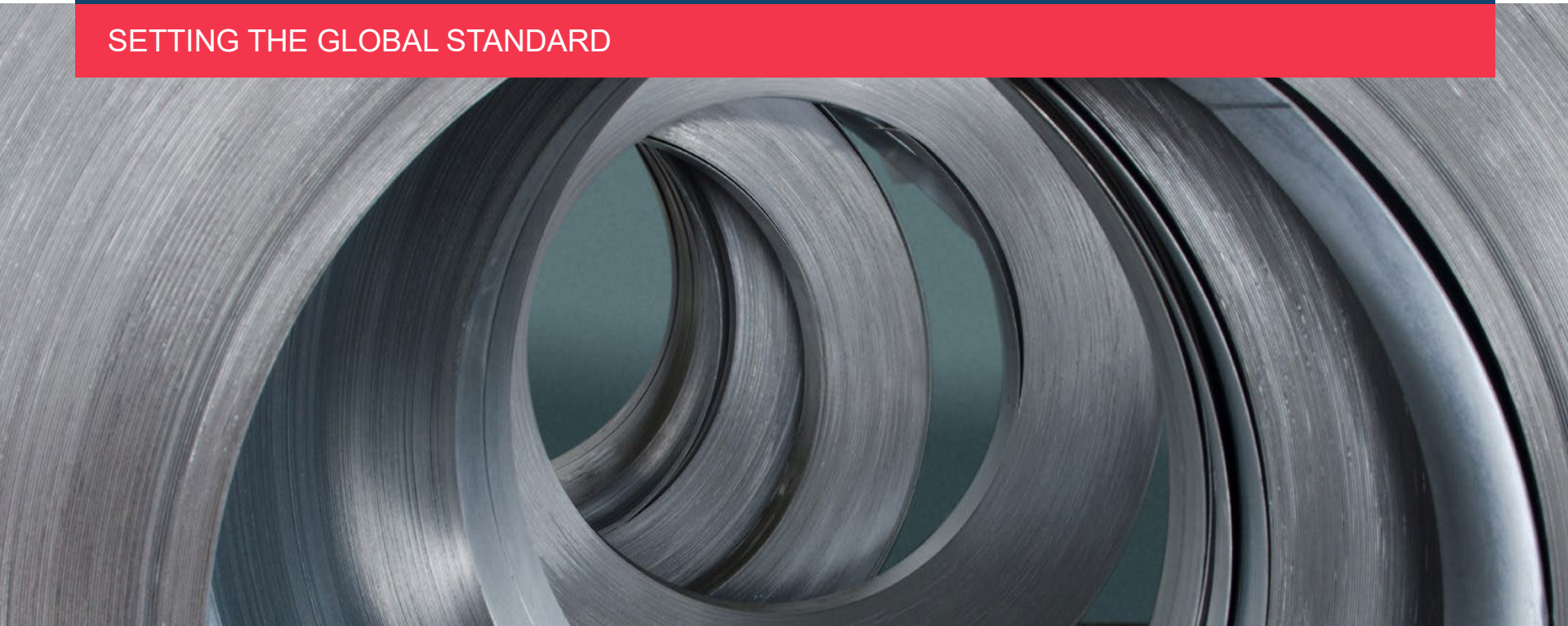


# Member Update Forum – New Trading Platform

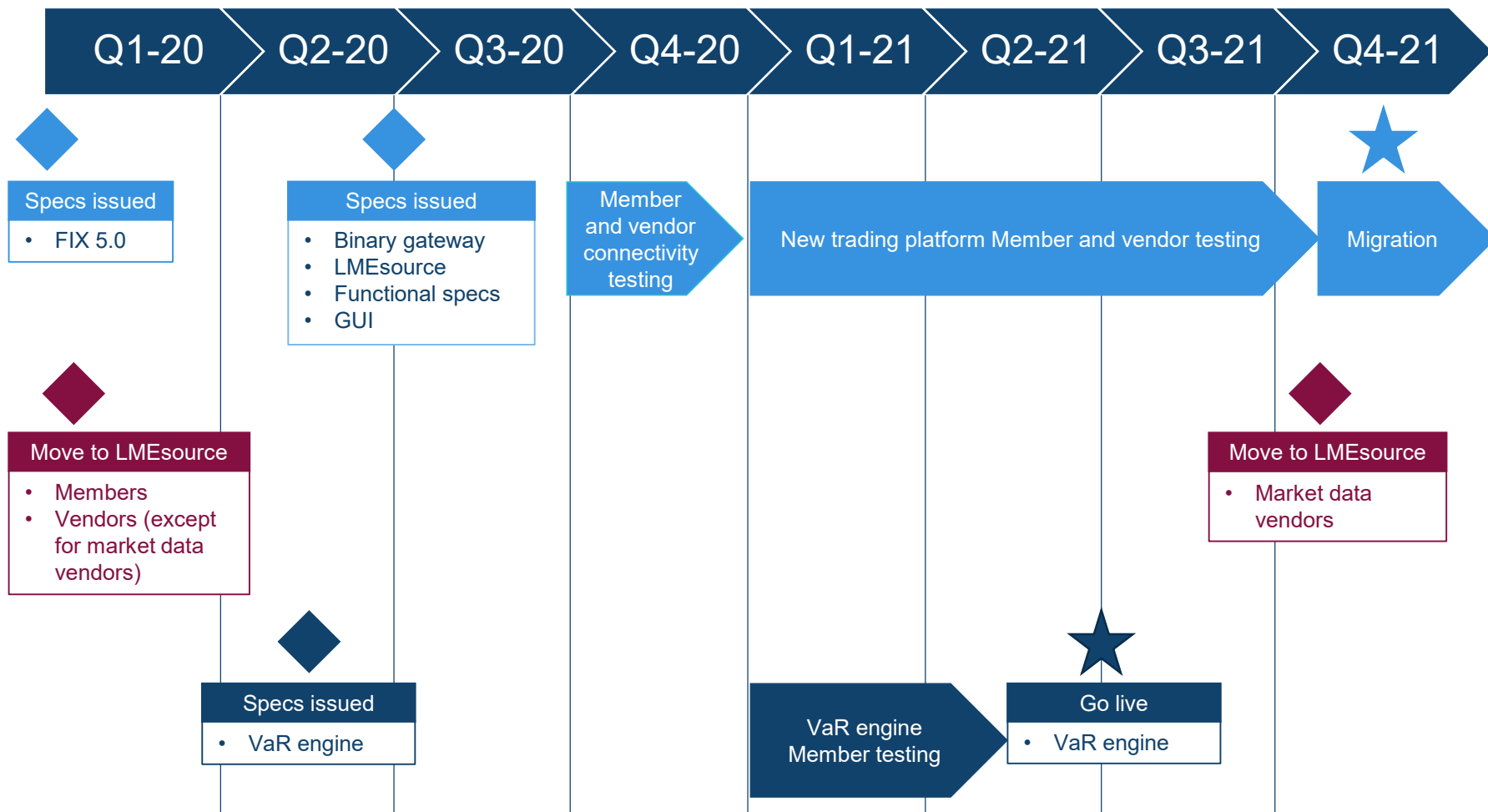
Wednesday 29 January 2020



SETTING THE GLOBAL STANDARD



# LME technology roadmap



# Introduction

## Update on the LME new trading platform initiative

The following update forum provides Members and Independent Software Vendors (ISV's) with an update on the LME's strategic initiative to implement a new trading platform

Specifically the following slides focus on the following:

- Market design
- FIX 5.0 interface
- Binary interface
- Market data
- Market migration proposal
- Next steps and timeline

Following the update forum the LME will seek feedback from Members and ISV's on the proposed market migration approach



Please note, the following slides contain a number of dates and timelines that are based on the latest information. Any changes to these dates/timelines will be communicated via the methods described at the end of this presentation

# Key developments and benefits

New trading platform will deliver a number of key benefits to market participants

## New trading platform

Entirely new architecture, leveraging HKEX technology

- Higher performance capability, enabling premium quoted options and more implied pricing
- More stable and reliable latency
- More dynamic, allowing future changes

## New trading GUI

Entirely new front-end GUI for Members and Clients

- Web based, less resource heavy
- Easier to update, adding new functionality or products without a software update
- Members able to provide to their Clients

## Market data platform

Rationalised market data offering, retiring legacy systems

- Maximise use of LMEsource for low latency data
- Standardisation of market data approach to ease use for Members, ISV's and market data vendors

# Key features and external impacts

New trading platform involves a number of changes that will impact market participants

## Key features:

- New trading platform will replace the current LMEselect platform
- New trading platform will offer enhanced functionality
- New market design based on market partitions offering predictable latency and scalability
- Standardised market data offering (LMEsource)

## External impacts:

- New FIX 5.0 interface (replaces current FIX 4.4 interface) offering convenience of industry standard interface
- New binary interface offering reduced latency
- New trading GUI application offering improved distribution
- LMEselectMD market data feed replaced with an upgraded LMEsource

# Enhanced functionality

## Participant model and PTRM

Self service user risk management

Kill switch

Mandatory setting of PTRM limits

Common PTRM checks for all participants

## Order books

Intra-day strategy creation outside of order flow

Increased implied routes

Merging of order books

Increased custom strategies

## Order management

Additional order types

Configurable order management

RFQ

Mass order cancellation

Mass quote

Additional order validation

## Execution management

Drop copy replay of execution reports

Speedbumps

Indicative opening price publication

Self execution prevention

Market maker protection

# New trading GUI

The LME will partner with a leading global provider of trading software to provide the front-end interface for the LME's new trading platform



## Lowering barriers to entry

- Advanced browser-based trading GUI
- Mobile access for Android and iOS (if permissioned by Member)



## Broadening participation

- Direct access for Members and Clients of Members
- Access to all LME products



## Enhancing the user experience

- Rich feature set including options trading functionality and RFQs
- Customisable layout that persists through upgrades

# Market design

Market partitions offering performance, predictable latency and scalability

## Order management

- Each partition gateway (binary protocol) offers direct high performance access to a single ME partition
- Convenience gateways (FIX 5.0) offer single connection access to all markets

## Risk management

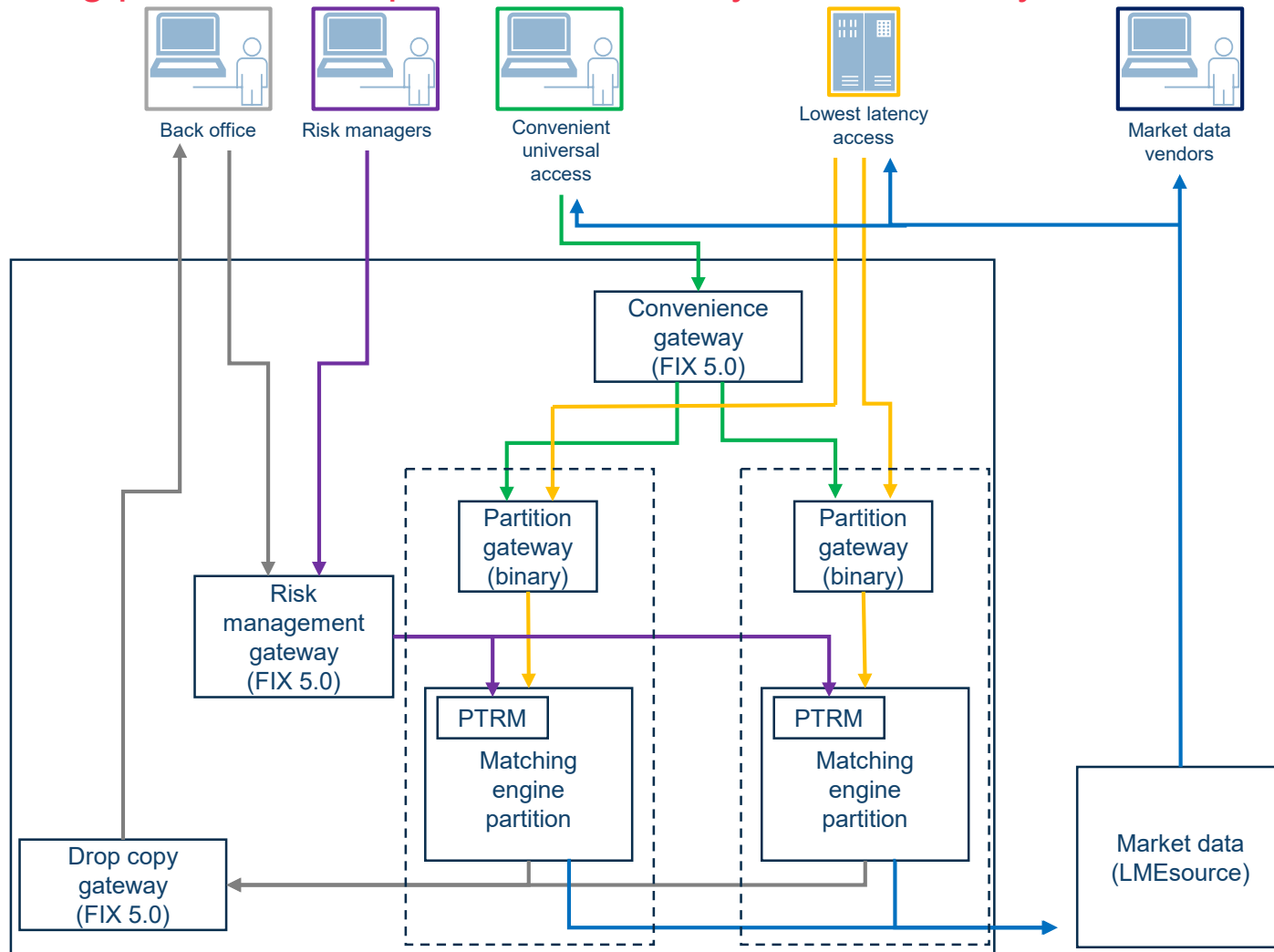
- Single risk management gateways (FIX 5.0) offer configuration of PTRM for each partition

## Back office

- SEP and MMP configuration across all markets
- Single drop copy gateways (FIX 5.0) deliver FIX execution reports across all markets

## Market data

- LMEsource provides data access across all markets





# FIX and binary interfaces

New trading platform will support both FIX 5.0 and binary interfaces

	FIX 5.0	Binary
Principles	Aligned with FIX principles  Minimise use of custom tags	Proprietary protocol, based on the existing HKEX cash binary interface  Specifically designed to reduce latency
Convenience gateway	Yes (excluding mass quotes)	No
Partition specific gateway	No	Yes (including mass quotes)
Drop copy gateway	Yes	No
Risk management gateway	Yes	No
Specifications	Issued 31-Dec-19	To be issued Q2 2020

**Next steps:** Please provide feedback on the FIX 5.0 specification by end Q1 2020

# Market data interface

## LMEsource to be enhanced to support the new trading platform

Existing LMEsource to be enhanced to provide market data pertaining to the new trading platform including:

- All functionality offered by the new trading platform
- Orders and trades available on the same market data channel
- Separate channels for options and futures
- RFQ details to be included in the order and trade channel
- Reference data, providing a full list of securities/tradeable instruments, only available via LMEsource
- Level 3 (order by order) data available

**Note: LMEselectMD interface will be de-commissioned**

**Next steps:** LMEsource specification to be issued Q2 2020

# Migration approach

## Migration approach proposal for discussion

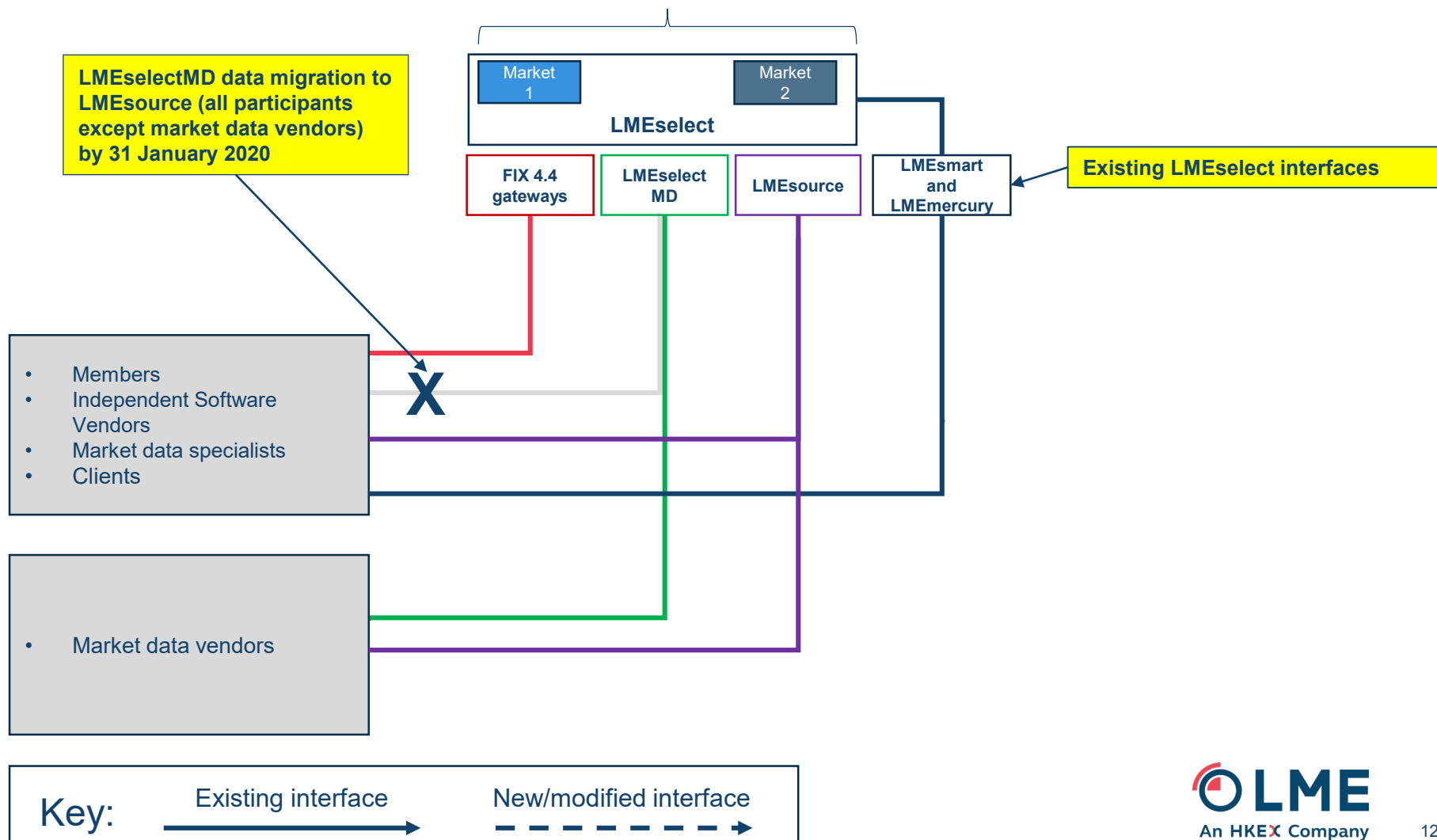
- To minimise migration risk from LMEselect to the new trading platform the LME is proposing a phased migration
- Migration phases will be product based
- Each migration phase will be ‘big bang’ – no provision for backwards/forwards compatibility
- LME will assist participants with their migration preparation including;
  - Regular communication updates
  - Early visibility of technical specifications
  - 6 month (minimum) test window including dev/test, conformance, dress rehearsals
- The following slides provide an example of this proposed migration approach

**Note:** The LME will issue a questionnaire seeking feedback from stakeholders on the proposed migration approach with responses due in March 2020

# Migration approach

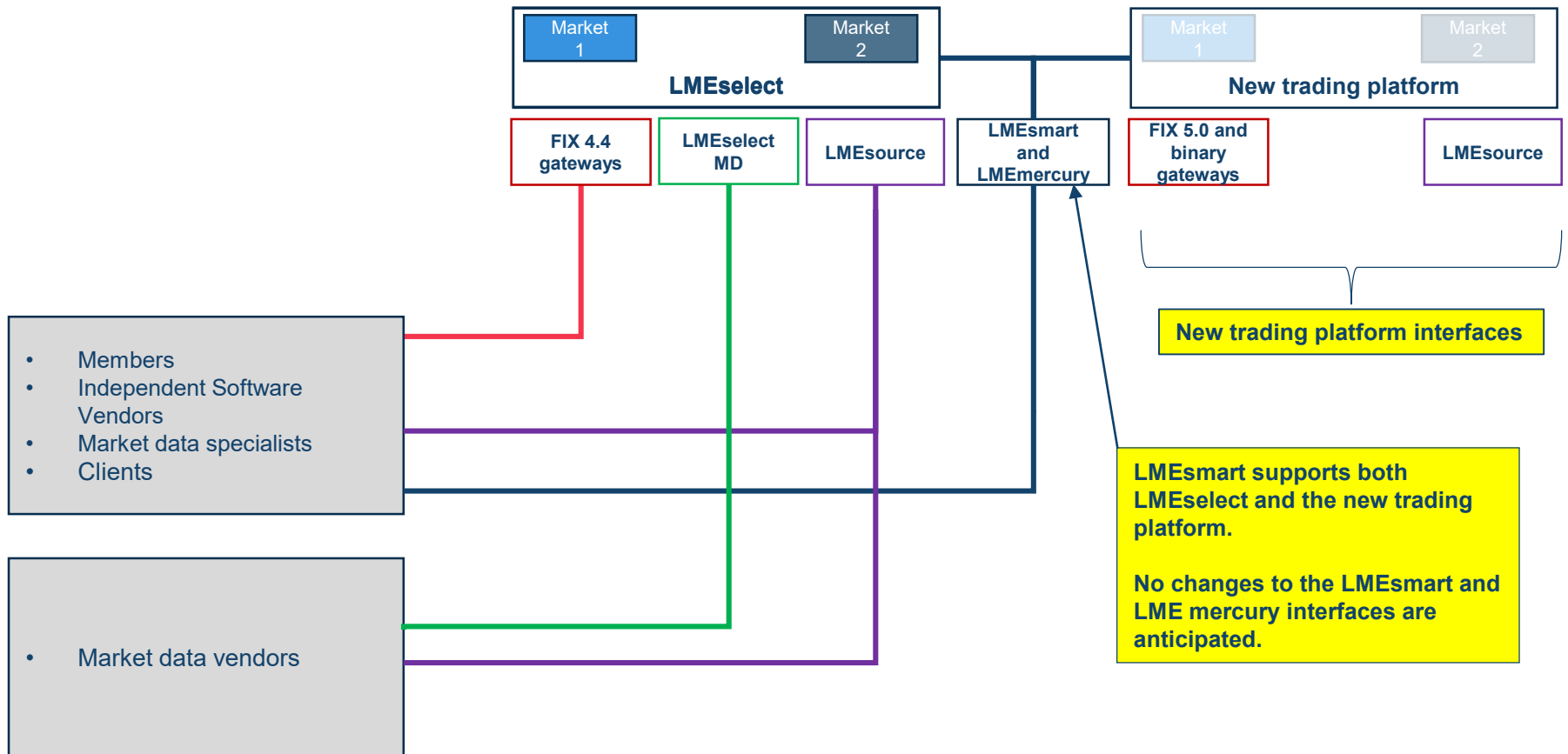
## Step 1: LMEselectMD decommissioned for all users except market data vendors

For the purposes of this example, 2 product groups are shown. Exact details TBC



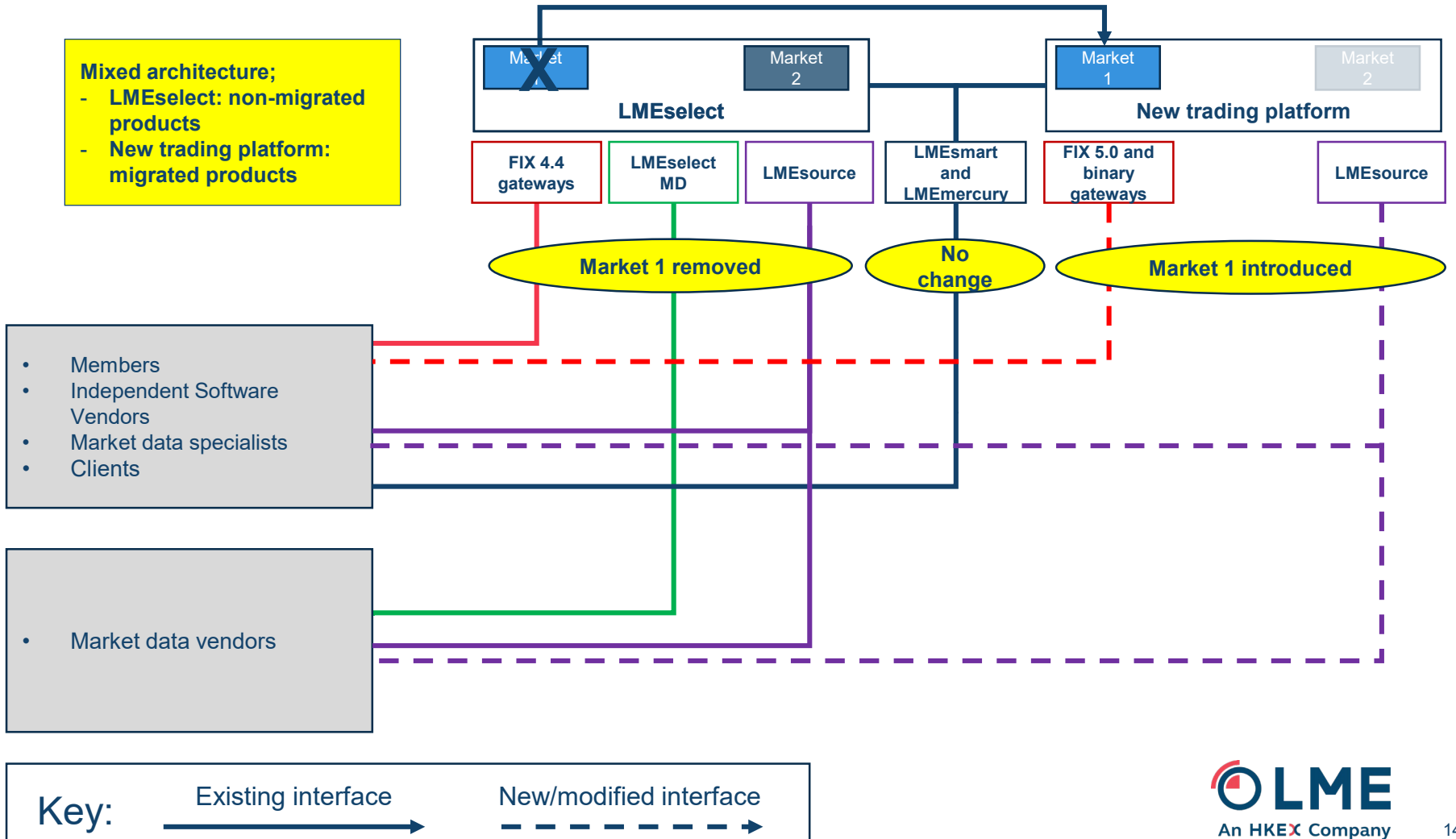
# Migration approach

## Step 2: New trading platform introduced into production environment



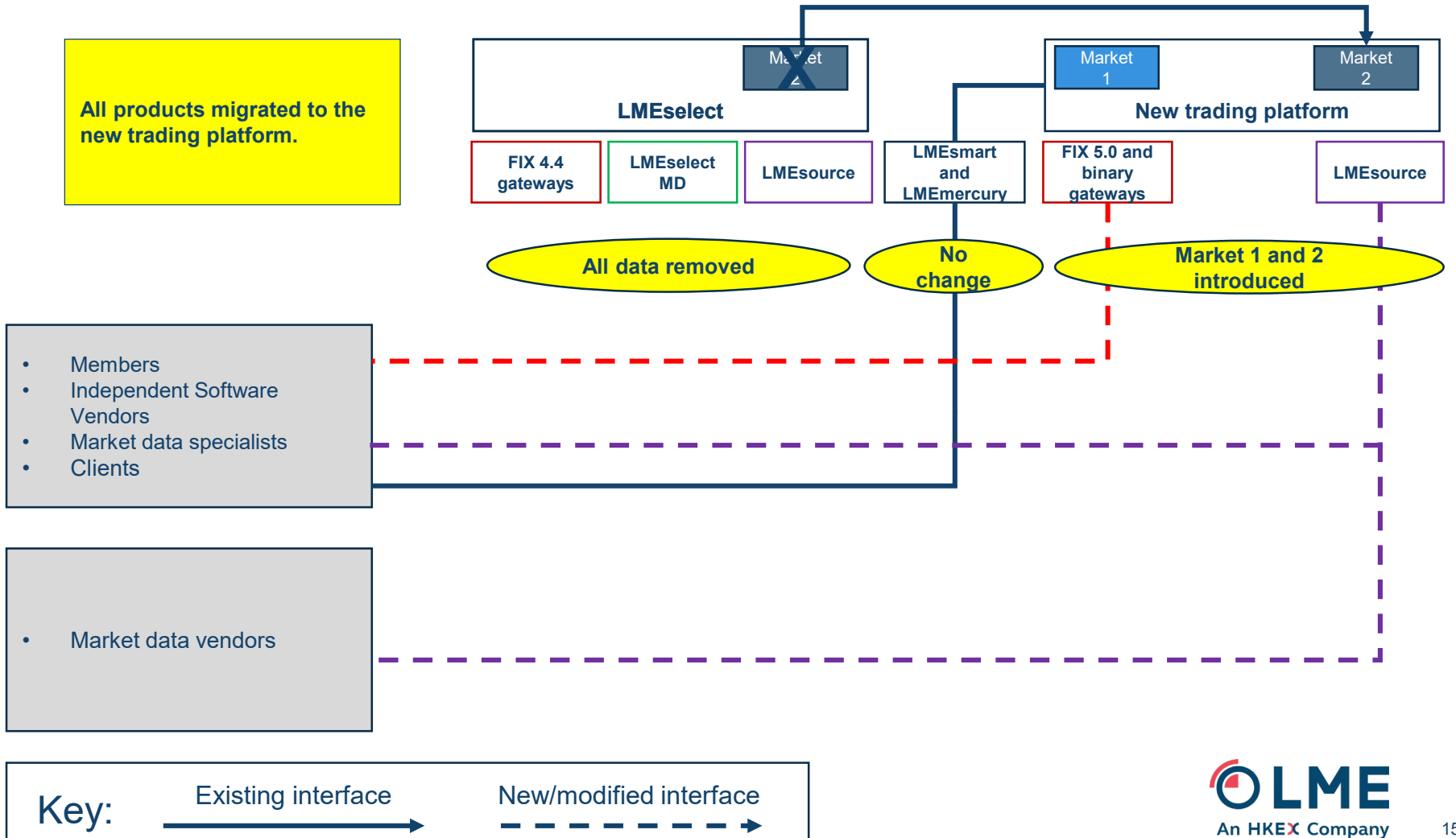
# Migration approach

## Step 3: Product migration (market 1)



# Migration approach

## Step 4: Product migration (market 2)



# Recent FIX spec release

## Feedback

### Topics raised so far:

Differences between  
FIX 4.4 and FIX 5.0

Pricing model

Binary speed

LMESmart API

Further documentation to  
be released

Trading GUI changes and  
demos

Testing environments

Impact on clearing  
Members



# Next steps and timeline

# Next steps

New trading platform involves a number of changes that will impact market participants

## External impacts:

- LMEselectMD market data feed replaced with LMEsource

- New FIX 5.0 Interface (replaces the current FIX 4.4 interface)

- Market migration approach

- Member and vendor testing

## Participant next steps:

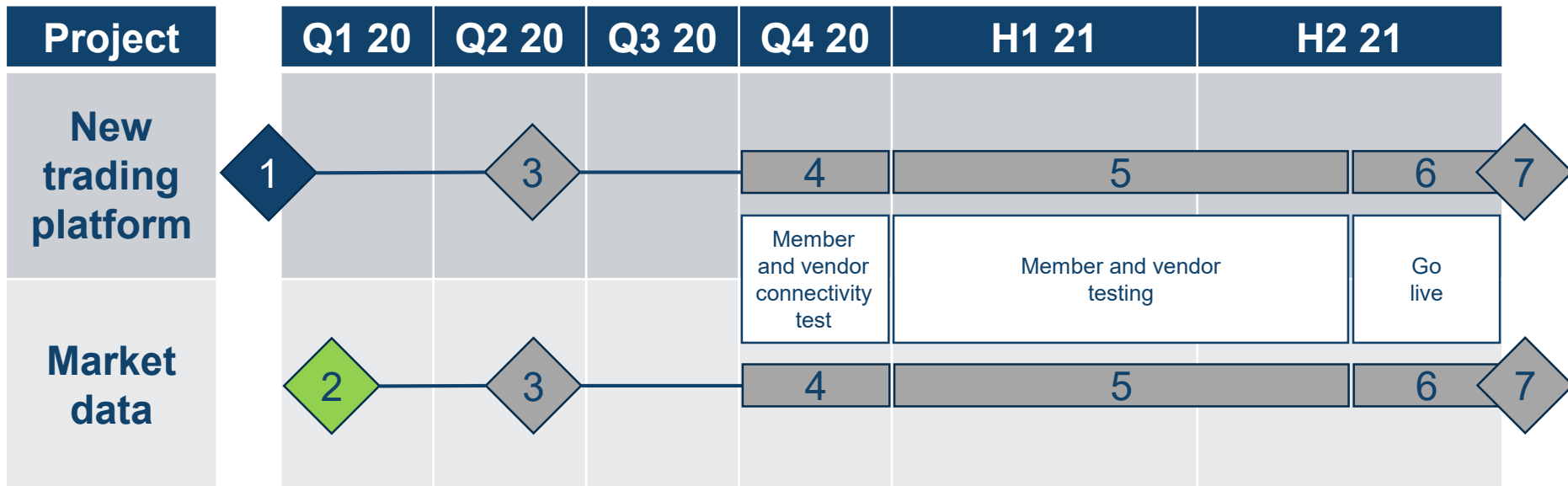
- Migrate from LMEselectMD to LMEsource (all participants except market data vendors) by 31-Jan-20

- Review FIX 5.0 specification (issued Q4 2019) and provide feedback Q1 2020

- Provide feedback on the market migration proposal by March 2020

- Line up development and testing resources for Member and vendor test from Q4 2020 onwards

# High level timeline



No	Date	Description
1	31-Dec-19	FIX 5.0 specification issued
2	31-Jan-20	Migrate from LMEselect MD to LMEsource (all participants except market data vendors)
3	Q2 2020	Binary specification, new trading platform functional definition, LMEsource specification, and GUI details issued
4	Q4 2020	Member and vendor test environments available for initial connectivity testing
5	Q1 2021	Member and vendor testing service available
6	Q4 2021	Go live of new trading platform and updated LMEsource
7	Q4 2021	LMEselect de-commissioned. LMEselect MD de-commissioned

# Communications framework

Communications framework established providing regular and ad-hoc updates

- Provide external parties with regular update forums on the new trading platform initiative
- Allow external parties to submit ad-hoc questions related to the new trading platform initiative

## Ad-hoc queries

- Any questions related to the new trading platform can be submitted via the [newtradingplatform@lme.com](mailto:newtradingplatform@lme.com) inbox

## Regular updates

- Regular updates will be posted onto the LME web site

## Specifications issues

- Binary specification, new trading platform functional definition, LMEsource specification and GUI details all due to be issued Q2 2020

## Update forum

- Next scheduled for Q2 2020

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