

# Benchmark Evolution

## *Emerging LNG Hubs - Flame*

Amsterdam May 8, 2017



# Platts in Numbers

Growing relevance and reach

**12000**

DAILY PRICE  
ASSESSMENTS AND

**1400+**

EXCHANGE TRADED  
CASH SETTLED  
FUTURES

**100+**

YEARS OLD

**1100+**

EMPLOYEES  
INCLUDING

**450+**

CONTENT

CUSTOMIAN  
BENCHMARK IN OIL  
WITH

**BRENT**

BEING **>60%**

PHYSICAL  
BENCHMARK IN

**NORTH  
AMERICAN GAS**

EMERGING  
BENCHMARKS IN  
GLOBAL LNG

WITH **JKM**  
AND **GCM**

INFORMATION  
REACHES

**>10000**

CUSTOMERS  
ACROSS THE  
SUPPLY CHAINS IN

**150**

COUNTRIES

REACHES

**2500 +**

COMPANIES IN  
NORTH AMERICAN  
& EUROPEAN GAS

**5**

LNG MARKERS

# Continuous pricing and market coverage

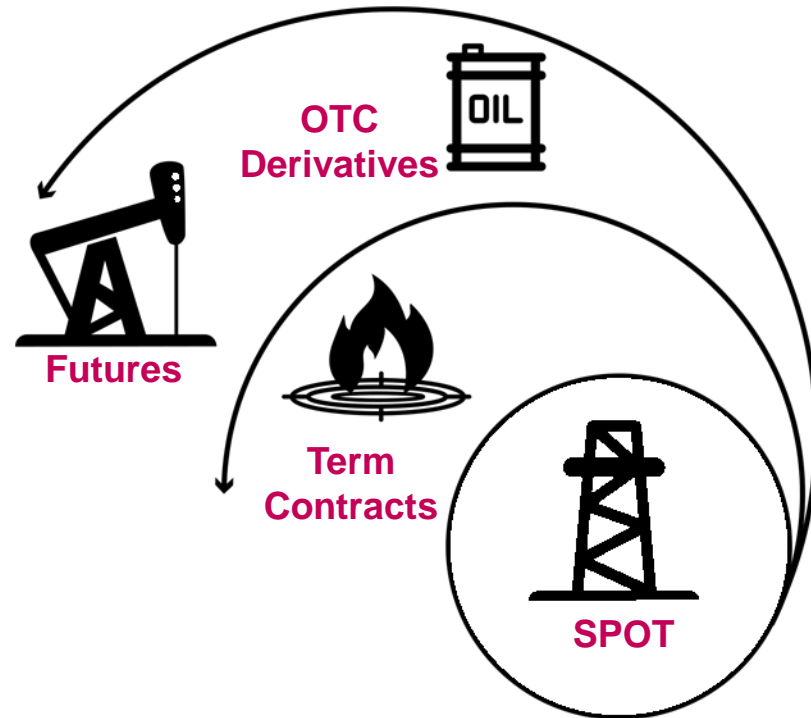


- As each market closes, information is passed onto the next desk in the following time-zone, allowing for continuous price and market data gathering
- Allows for wider survey of market participants; portfolio players, traders, end-users etc.

# What do we assess?

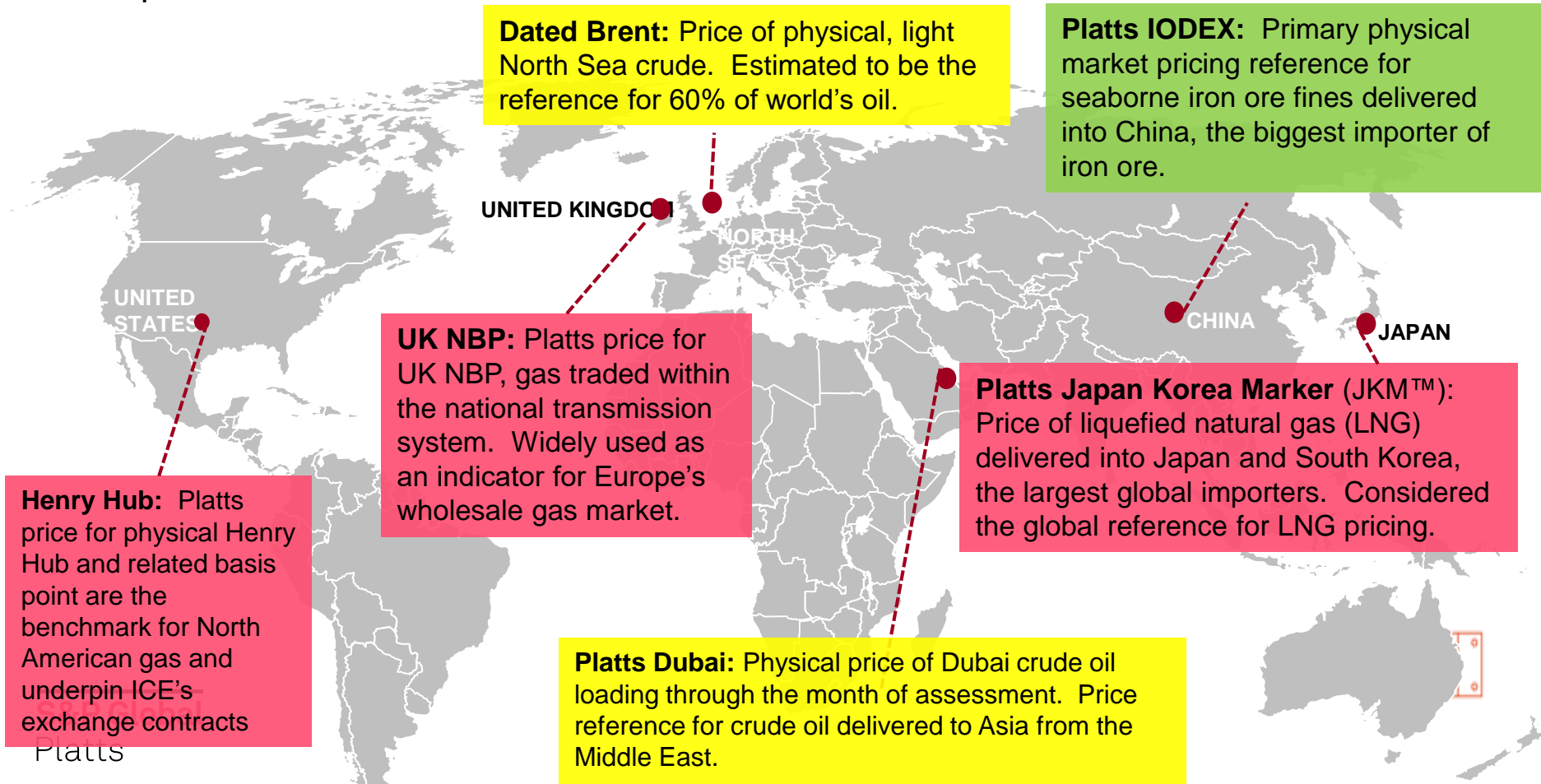
1. Platts benchmarks are used to price spot, strip & term contracts
2. Futures settlements are often tied to Platts spot market assessments e.g. ICE Henry Hub
3. OTC Derivatives settle against Platts spot price assessments e.g. ICE/CME JKM™

## Focus, Impact & Relevance



# Platts assessments serve as benchmarks

Many price assessments have become “benchmarks” that market participants use to write contracts, monitor their commodity market and achieve full transparency around transactions. For example:



**Henry Hub:** Platts price for physical Henry Hub and related basis point are the benchmark for North American gas and underpin ICE's exchange contracts

Platts

**Dated Brent:** Price of physical, light North Sea crude. Estimated to be the reference for 60% of world's oil.

**Platts IODEX:** Primary physical market pricing reference for seaborne iron ore fines delivered into China, the biggest importer of iron ore.

UNITED KINGDOM

**UK NBP:** Platts price for UK NBP, gas traded within the national transmission system. Widely used as an indicator for Europe's wholesale gas market.

NORTH SEA

CHINA

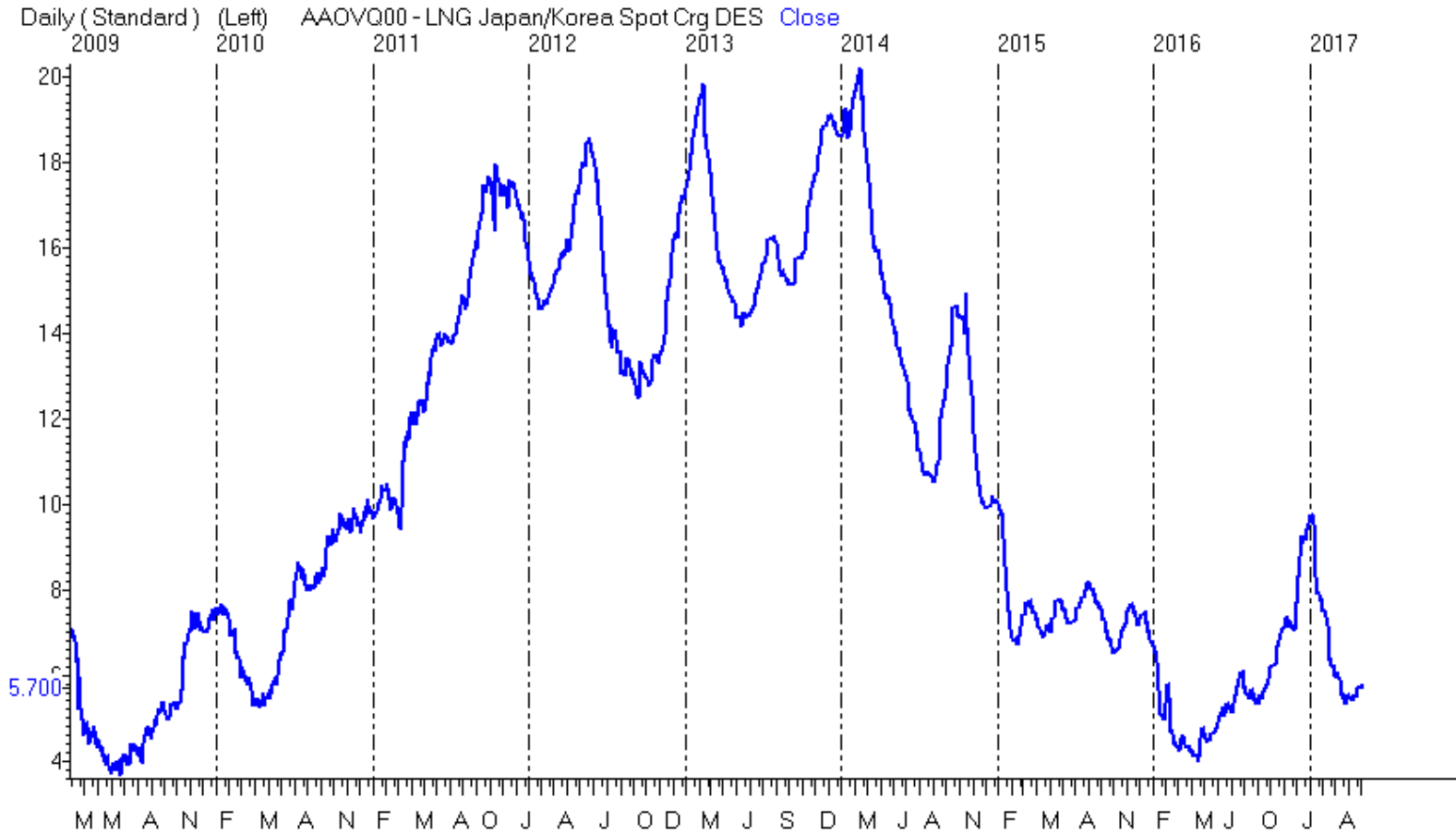
JAPAN

**Platts Japan Korea Marker (JKM™):** Price of liquefied natural gas (LNG) delivered into Japan and South Korea, the largest global importers. Considered the global reference for LNG pricing.

**Platts Dubai:** Physical price of Dubai crude oil loading through the month of assessment. Price reference for crude oil delivered to Asia from the Middle East.

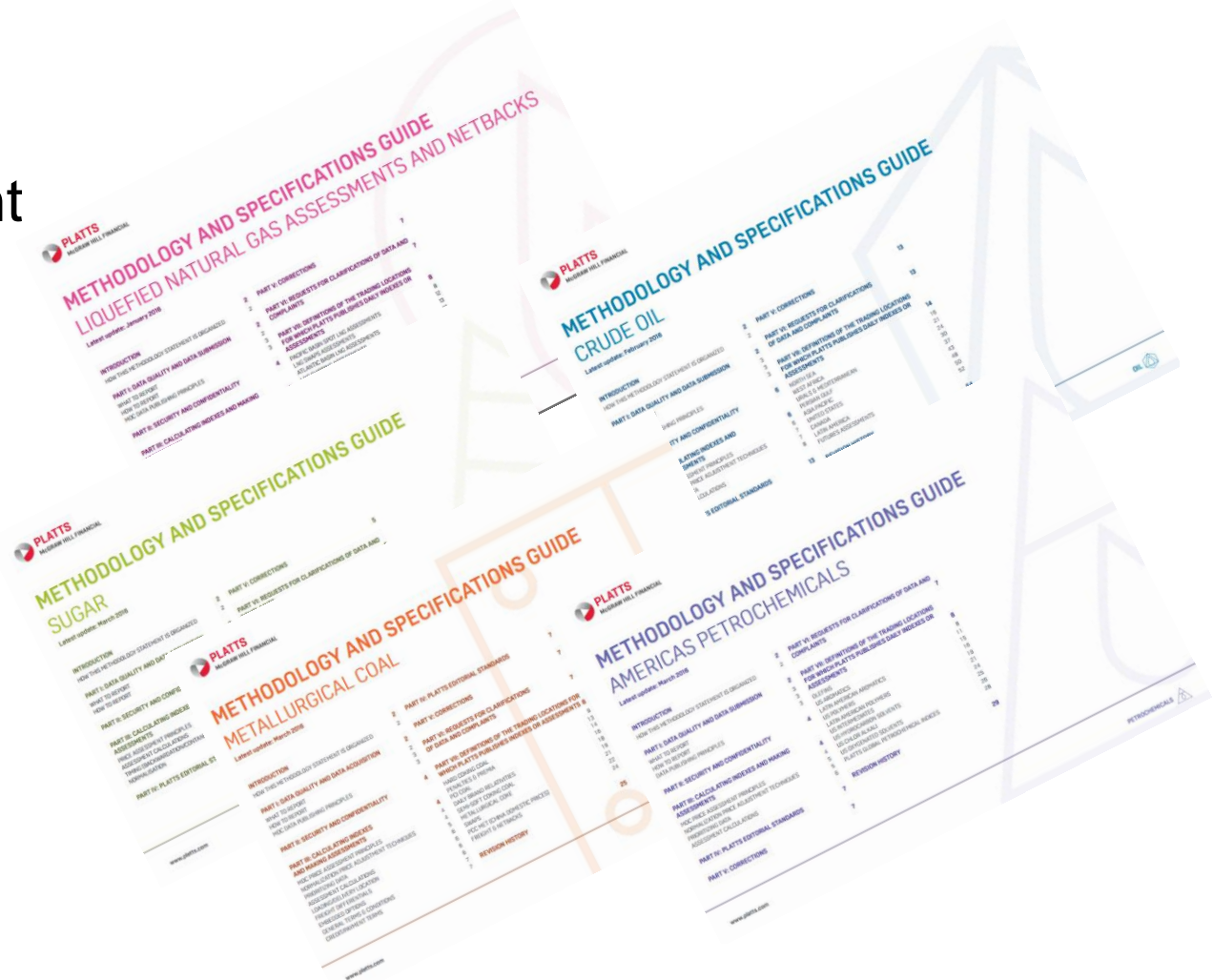
# JKM price reference since 2009

Reflecting LNG fundamentals



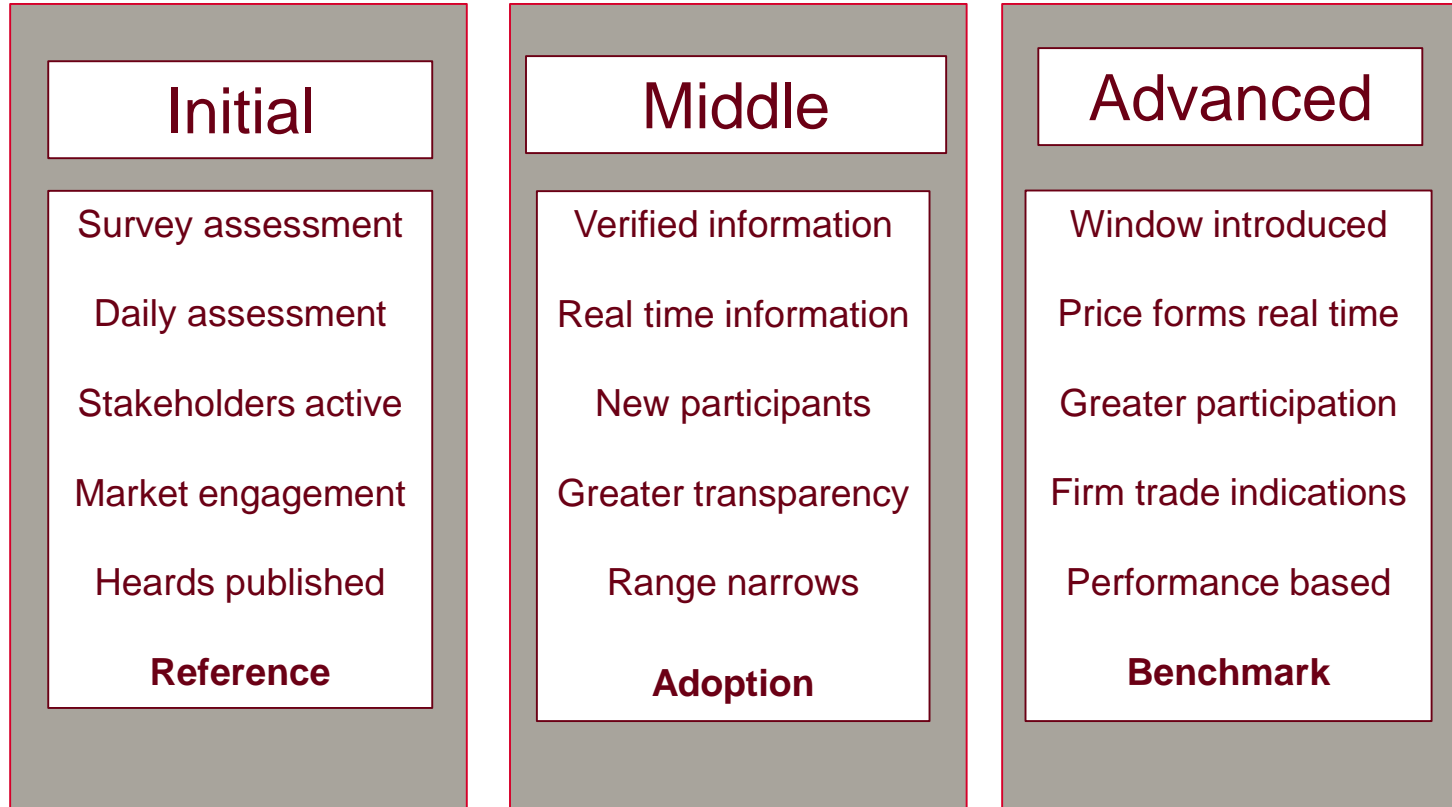
# Platts assessments methodologies

Clearly defined and transparent methodologies are the backbone of Platts' price assessment processes



# Evolution of price assessments

From price reference to contractual basis





# Platts LNG benchmark: JKM™

Parameter	Detail
Frequency	Published <b>each business day, reflecting the close of Asian markets</b> (16:30 Singapore time)
Basis & Location	Cargoes delivered ex-ship at ports in <b>Japan and Korea</b> . Cargoes delivered to ports in <b>Taiwan and China</b> may be normalized to basis Japan/Korea using as assessed freight deviation cost.
Unit	All prices quoted in <b>US dollars per million British Thermal Unit (\$/MMBtu)</b>
Quality	Price assessments reflect <b>lean and rich</b> gas
Volume	Standard cargoes of <b>135,000-175,000 cu m</b>
Timing	JKM™ represents the <b>average of the two half-month cycles which represent the first full month</b> . Half month inputs assessed for 3 <sup>rd</sup> -6 <sup>th</sup> half months forward
Contract Roll	JKM™ <b>rolls on 1st and 16th</b> of each calendar month

Full details available at <https://www.platts.com/IM.Platts.Content/MethodologyReferences/MethodologySpecs/Ingmethodology.pdf>

# Assessment approach: survey

## How the data is prioritized and analyzed

16:30 Singapore  
End of day process  
begins

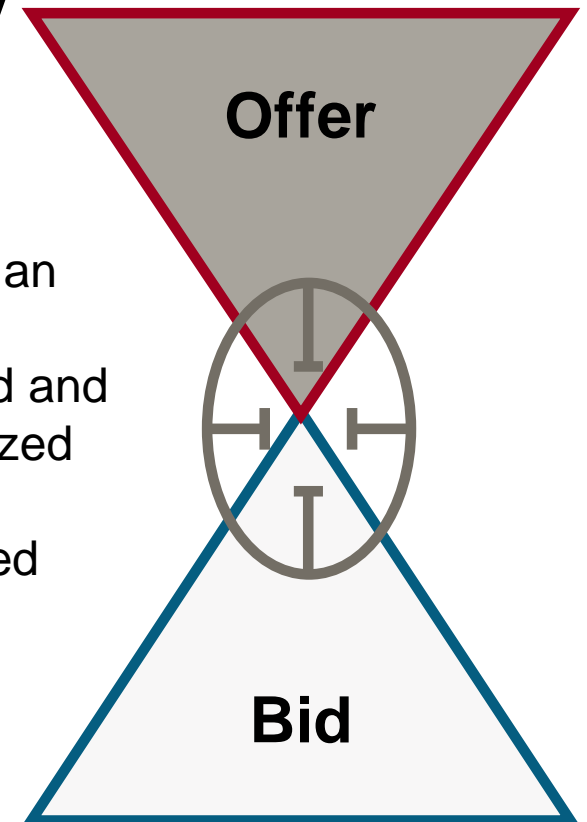


- No new hears accounted for after cut-off time –similar to eWindow assessment -enhancing:
- **Clarity** over the point in time reflected in the assessments
- **Consistency** throughout markets allowing assessments of both outright and spread values
- **Accuracy and relevance** by aligning assessment to periods of highest trading activity

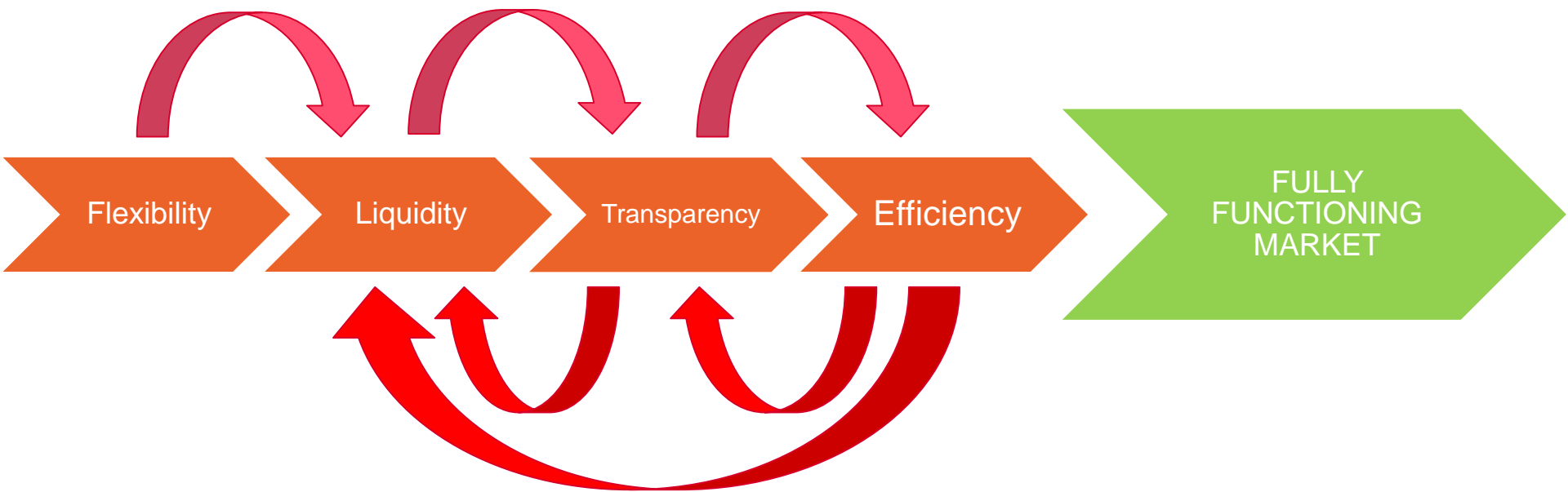
**S&P Global**  
Platts

Zeroing in on the tradable level;  
Assessing market value at the close of the trading  
day

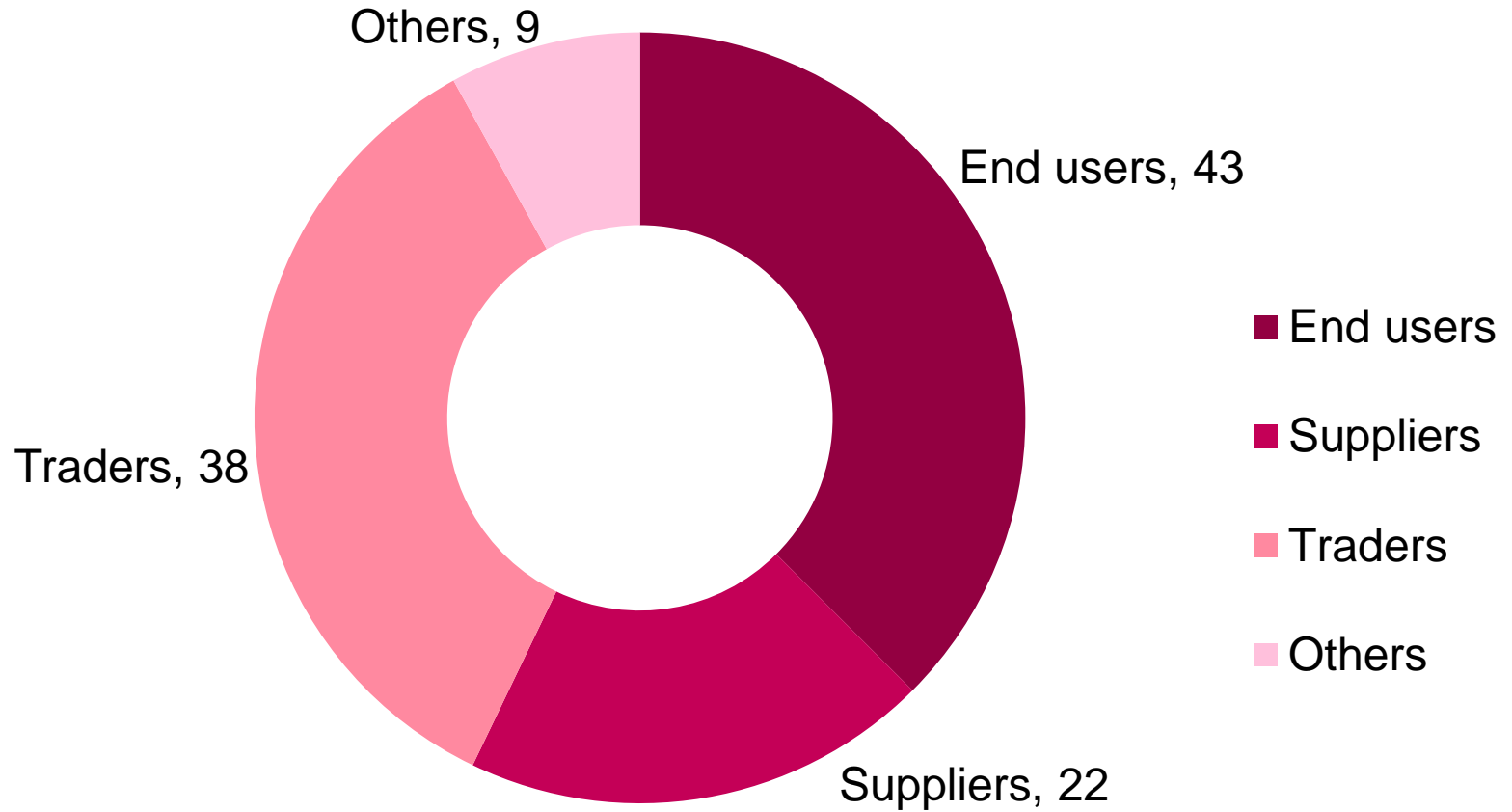
- Market assessment, an exclusive process
- Confirmed, published and tested hears prioritized
- Repeatability and incrementability tested



# Flexibility creates liquidity and market efficiency



# JKM™ process: participating companies



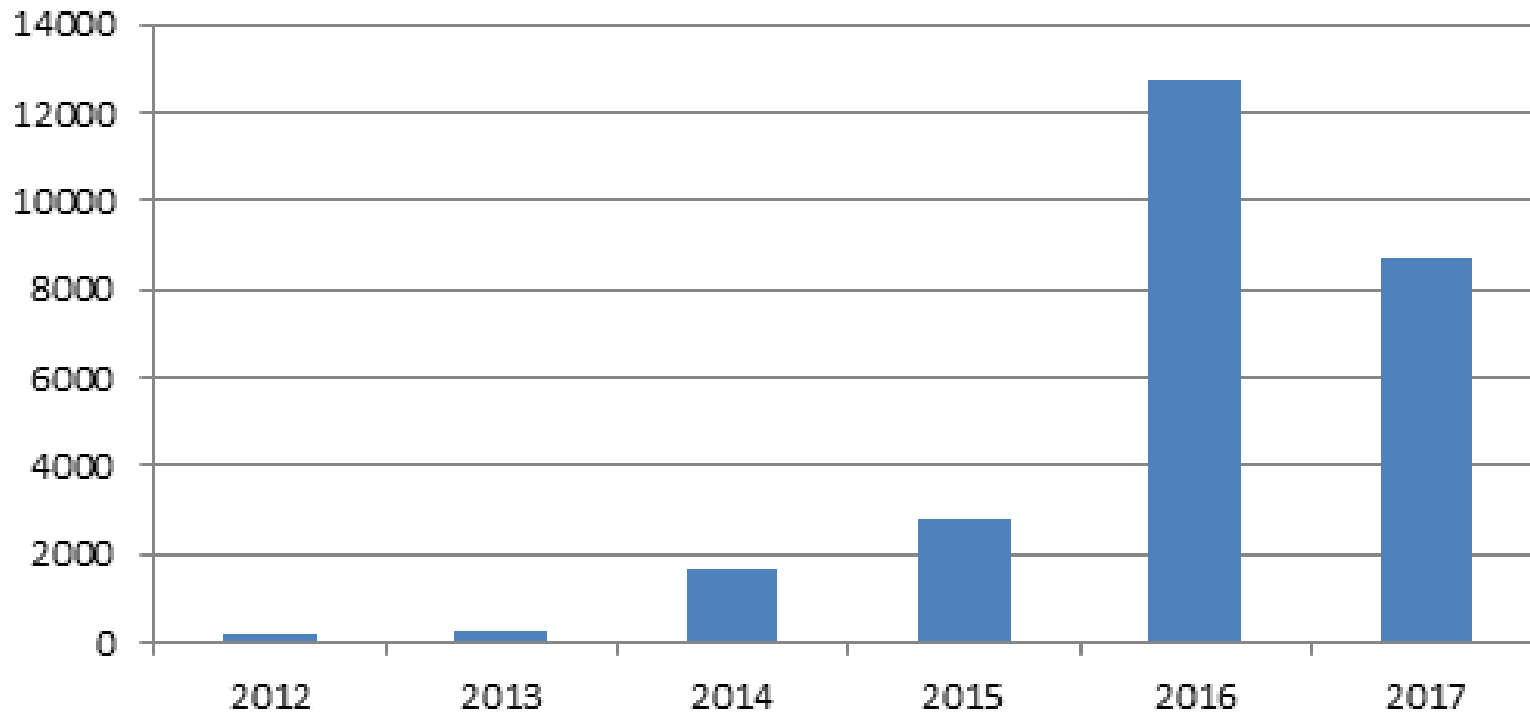
# JKM swaps: Quick facts and developments

- Clip size: 10,000 MMBtu, began trade in 2012.
- Trades are OTC, can be cleared through ICE or brokers.
- Periods traded are similar to European gas hubs, and trade as far ahead as calendar year contracts
- December 2016 was a record month, with 2,710 lots traded, equivalent to just over 9 cargoes. For the whole of 2016, just under 43 cargoes worth of JKM swaps changed hands.
- Market participants include financials, portfolio players, traders, and end-users.
- Market sophistication has improved with rising liquidity: spreads between months and quarters reported
- More than 20 counter-parties set up for trade
- Brokers and participants have reported while risk mitigation is the main source of activity, growing proportion of transactions are pure trades

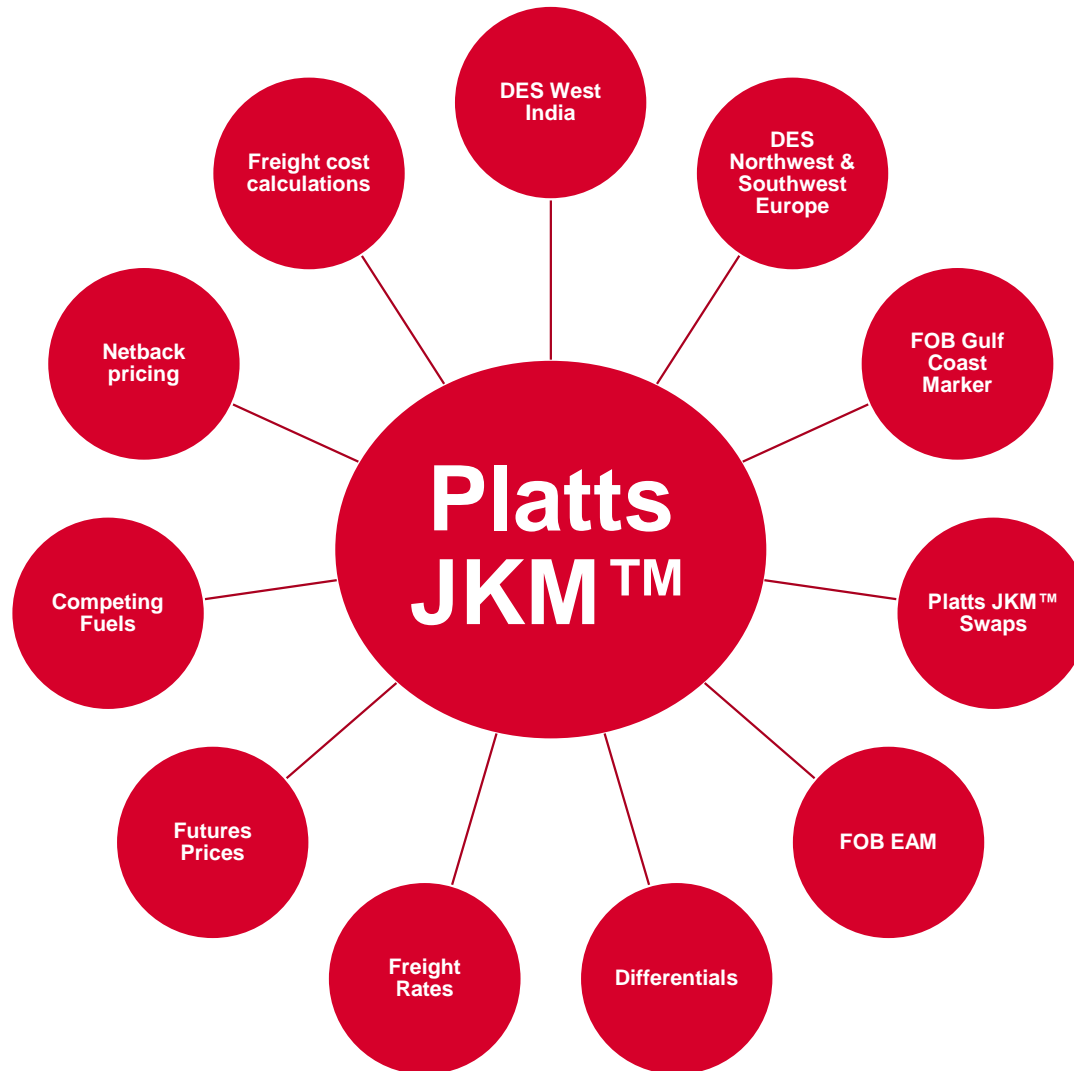
# JKM swaps

2017 could see 24000+ lots; 90 cargoes

## Swaps cleared through ICE



# Platts LNG price assessments portfolio

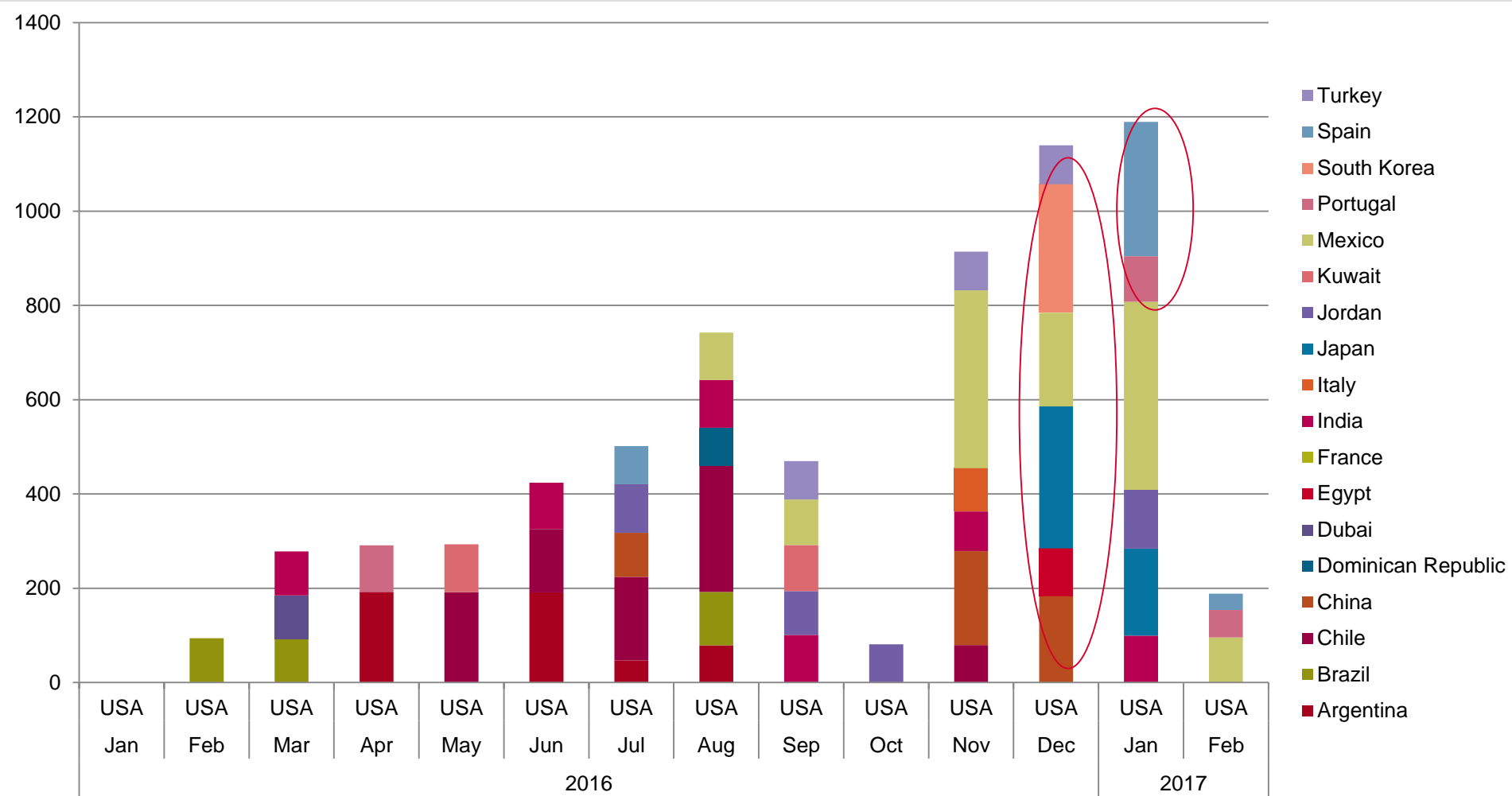


# Continuous approach to methodology development

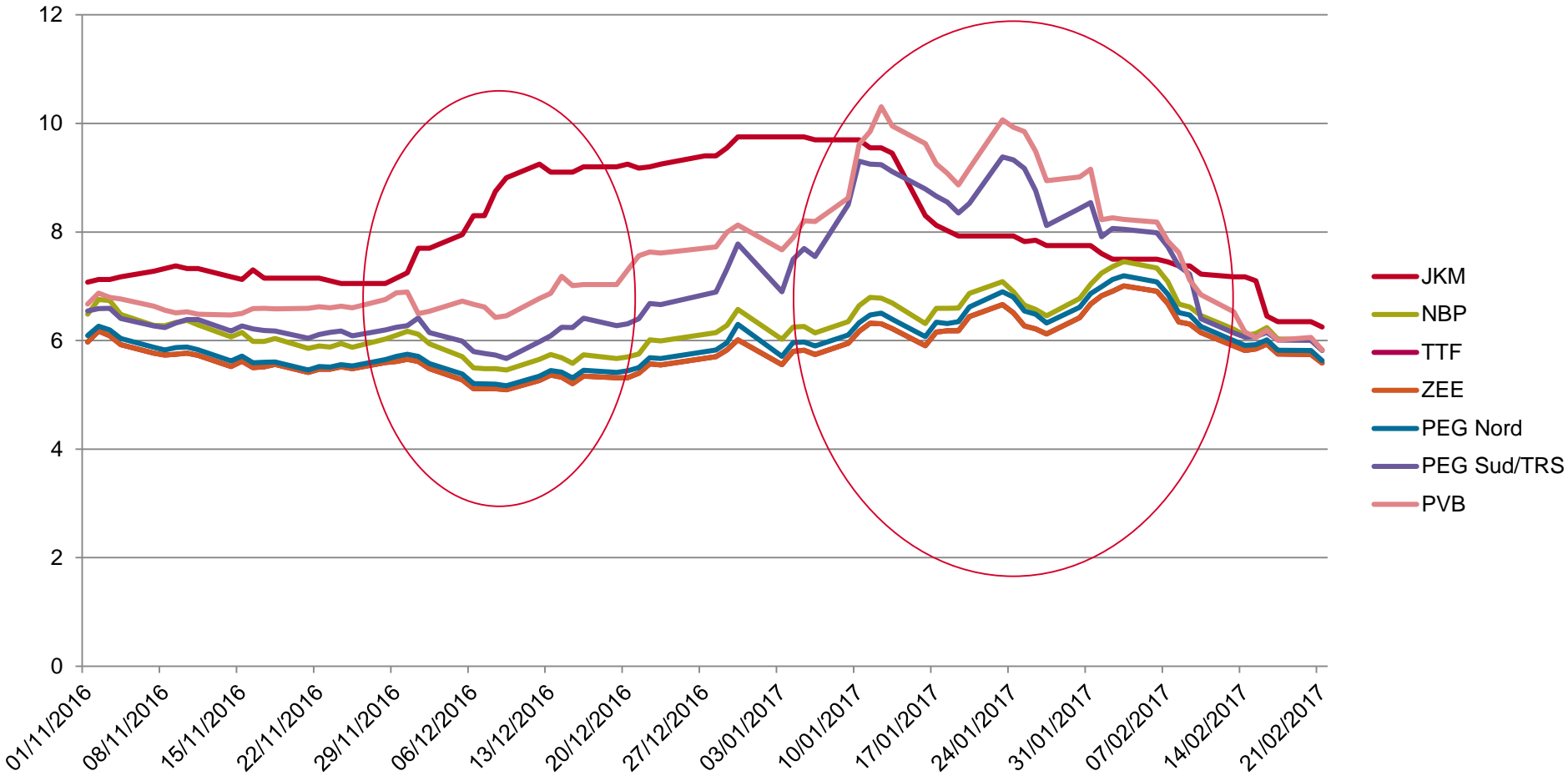
Project	Rationale	Status	Launch
Review existing JKM methodology	Improve usefulness as industrial index; Reflect increasing sophistication and complexity of spot market	In research	TBC
Introduction of Middle East pricing	Significant new demand centre	Launched	16 January 2017
Extend assessed curve for JKM swaps	Increased liquidity on the curve; facilitate hedging and mark-to-market activities	Launched	16 November 2016
Introduce monthly and cumulative monthly averages	Improve usefulness as industrial index; facilitate settlement	Launched	16 November 2016
Introduce Japanese Yen conversion	Increase relevance for Japanese market; facilitate spark spread calculations	Launched	17 October 2016
Launch of new FOB US Gulf assessments & freight costs	Significant new supply source	Launched	16 June 2016
Revised shipping and freight route cost assumptions	Reflect changes in composition of the LNG fleet	Launched	1 January 2016
Launch of DES Brazil netback	Establish value in key consumer of spot volumes	Launched	1 October 2015
Launch of East Atlantic Marker	Reflect FOB loadings (production and re-loads in the Atlantic basin)	Launched	01 January 2015



# Flexible Atlantic volumes are chasing the best value



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# Concluding remarks

- LNG is a seaborne cargo market requiring a clearing price
- Contractual flexibility attracts new players who mitigate risk
- Floating price basis will increase
- Differentials will increase in importance; quality, location and time
- Hub, Venue and/or Platform
- LNG is a global market

# Q&A

**Thank you, we welcome your  
feedback**

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