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Building an agile commodity trading organisation

Unlocking value through an Integrated Operating Model driving risk intelligence

Executive summary

The commodity trading landscape has fundamentally shifted. Historically, elevated volatility masked operational inefficiencies and enabled profit generation through tactical responses. Today, leading organisations recognise that sustainable profitability requires a strategic approach centered on value-driven insights, operational and risk optimisation, enabled by data and digitalisation.

From cyclical volatility to structural uncertainty

This transformation is driven by both internal and external pressures. Internally, outdated Commodity/Energy Trading Risk Management (C/ETRM) systems and ecosystems no longer meet business requirements. Externally, geopolitical tensions and climate impacts on supply-demand dynamics are reshaping markets.

Coupled with decarbonisation imperatives, regulatory shifts and changing consumer preferences are increasing volatility. In this complex environment, information asymmetry has become a critical competitive lever. Traditional operating models built on functional silos and manual processes are no longer viable.

Southeast Asia: Amplified dynamics and emerging opportunities

The pressure is particularly acute across Southeast Asia. From Singapore's tightening regulatory environment to Indonesia's energy transition, Malaysia's Liquefied Natural Gas (LNG) exposure, and the rapidly expanding power sectors of Vietnam and the Philippines. Markets in transition offer significant opportunities; organisations must transform their trading ecosystems to capture them and keep pace with change.

The strategic imperative: From risk mitigation to value creation

To capture value, organisations need to make a decisive shift. Transforming risk management from a control function to a driver of competitive advantage. The imperative is to build an integrated risk management framework that translates uncertainty into managed performance.

Why traditional operating models fall short

Most organisations are held back by **four interconnected challenges**:

1. **Outdated systems and siloed data** – no single, real-time view of organisation-wide exposure
2. **Manual processes** – inefficiency, error, and compliance risk embedded in core workflows
3. **Siloed risk management** – market, credit, liquidity, and working capital managed in isolation
4. **Reporting without actionability** – leadership receives more data, but with less clarity on what to do

These challenges lead to fragmented visibility of exposures, slower responses to market opportunities and an inability to unlock operational value. The resulting opportunity cost manifests in siloed decision making, leaving significant value on the table.

What leading organisations are aspiring to achieve

The response among leading players converges on **four ambitions**:

1. **Value chain optimisation** – integration of data across the value chain to drive organisation level decisions
2. **Automation capability for efficiency** – standardised, automated processes that eliminate manual inefficiency at scale
3. **Improved risk management and return on capital** – integrated risk management across market, credit, and liquidity domains to allocate capital with purpose and precision
4. **Capture value in emerging markets** – capability build for emerging carbon markets

Making the transformation real

Execution requires five key outcomes:

1. Realigning strategy to connect trading ambition with risk appetite
2. Redesigning operating models for a digital environment
3. Building a data foundation that supports a near real-time organisation-wide view
4. Translating complex data into decision-ready insights
5. Deploying AI-enabled capabilities that shift the organisation from insight to foresight

Underpinning all of it is change management which no transformation takes hold without.

This point of view sets out why this transformation is essential, what it looks like in practice, and how leading organisations are undertaking this journey.

From cyclical volatility to structural uncertainty

Commodity markets were once dominated by cyclical supply-demand dynamics. Today, volatility is persistent and multi-dimensional, driven by four structural forces that are reshaping global commodity markets:



Geopolitical tensions are amplifying supply and demand uncertainty through multiple channels. Ongoing conflicts, sanctions regimes, and trade restrictions disrupt shipping routes and create unpredictable swings in supply availability and transportation costs, while tariffs and critical minerals security concerns introduce new sourcing complexities.



Climate change is impacting physical operations. Extreme weather events are causing crop failures, power imbalances and logistics bottlenecks – creating sudden supply-demand shocks and driving sharp price movements across commodity classes.

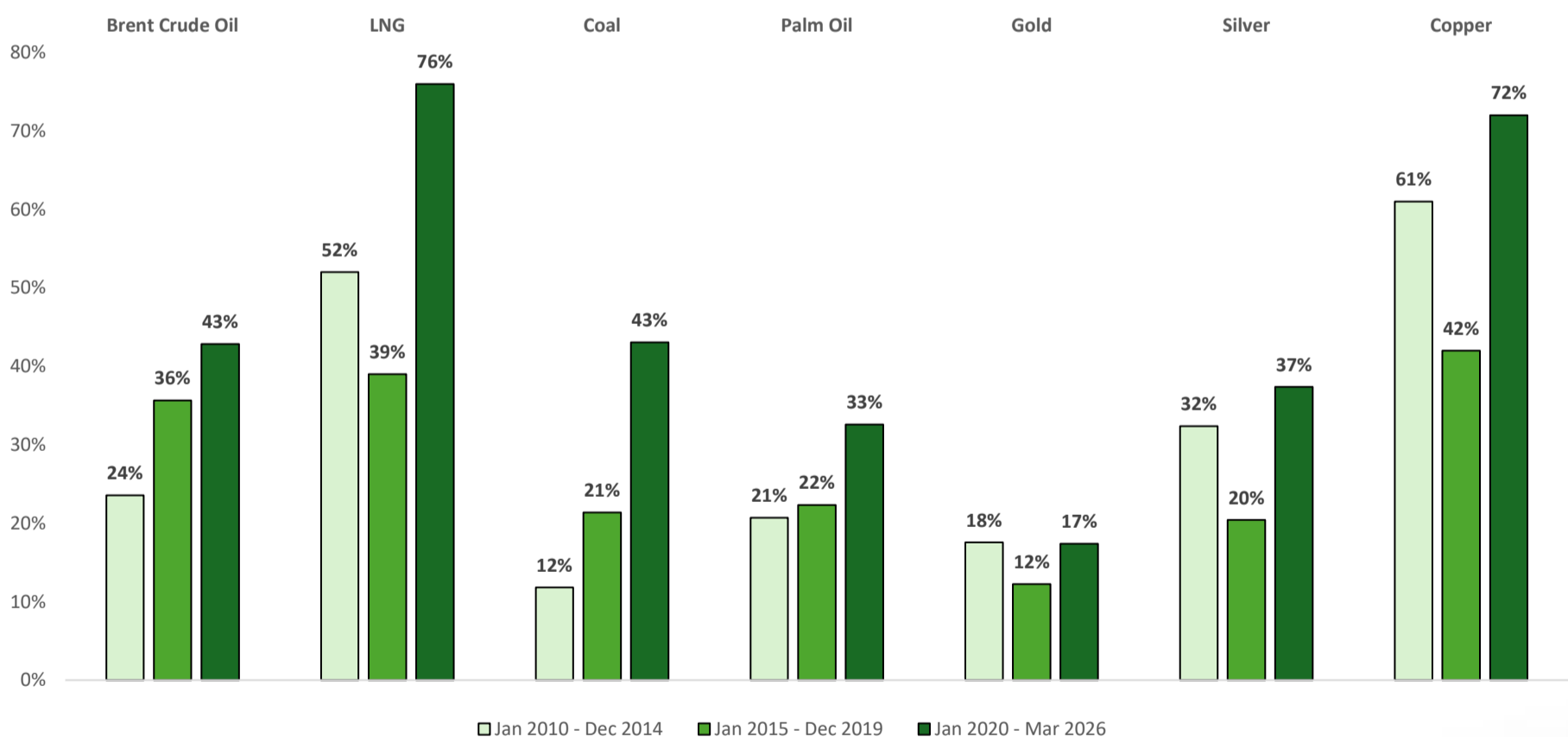


The energy transition is reshaping market dynamics. Differing speeds of decarbonisation create volatility in demand and supply for carbon intensive commodities, alter demand for existing commodities and gives rise to new commodity markets that are crucial to the transition.



Technology and regulatory shifts are reshaping commodity markets across Southeast Asia, introducing new cost structures, tighter trade finance and compliance requirements, and evolving trading dynamics. Similarly, digital advances have enabled faster, more efficient connections between suppliers, buyers, and other stakeholders across the commodity trading ecosystem, supporting continued maturation of key markets.

Figure 1: Commodity price volatility¹ has increased across major markets, reflecting a shift towards structurally higher volatility



¹Volatility is calculated using the annualised rolling volatility of daily log returns for the respective periods.
Source: Bloomberg; Refinitiv; Deloitte Analysis

The chart highlights a clear structural shift in commodity price dynamics. Across most commodities, the annualised rolling volatility has increased materially in the period since 2020, with the most pronounced impact observed in energy markets. Brent crude oil, LNG and coal all exhibit a step-change in volatility, reflecting the growing influence of geopolitical tensions, supply disruptions, and the energy transition.

Recent events, including the heightened instability in the Middle East, have further reinforced this trend. Disruptions to critical supply routes, such as the Strait of Hormuz, have triggered sharp price movements and heightened market sensitivity to geopolitical risk, underscoring how volatility is now driven by persistent, structural forces rather than isolated shocks.

The data points to a transition from cyclical volatility to a more sustained and structurally elevated volatility regime, where markets are increasingly shaped by overlapping geopolitical, economic, and climate-related disruptions.

Southeast Asia: Amplified dynamics and emerging opportunities

In Southeast Asia, these dynamics are amplified by region-specific structural forces. Singapore's position, as one of Asia's leading commodity trading hubs, is home to over 400 global trading firms¹ which means that the concentration of trading risk is substantial.

The energy transition agenda is reshaping the Southeast Asia commodity markets in ways that extend well beyond traditional energy sectors, affecting metals, agricultural products, and emerging transition-linked commodities. Metals and some agricultural commodities, critical inputs for the transition itself, are experiencing increased volatility as organisations react to decarbonisation's impact on supply and demand.

Simultaneously, carbon markets are emerging as a new commodity class, characterised by significant information asymmetry and growth potential. Singapore's positioning as Asia's carbon services hub, combined with Southeast Asia's accelerating energy transition, creates substantial opportunities for regional organisations.

Southeast Asia is emerging as a strategic diversification hub for commodity trading organisations seeking operational, regulatory and talent resilience. Singapore anchors this ecosystem as the region's centre of excellence for risk management, treasury, and governance, while neighboring markets play increasingly complementary roles. Malaysia, Indonesia, Philippines, and Vietnam are developing as capable locations for middle office and operations functions, offering a deeper, cost-effective talent base that extends organisational capacity without compromising control.

Singapore's proximity to the fastest growing transition commodity markets including LNG, critical minerals, agricultural products, combined with its standing as Asia's leading carbon trading hub, provides a natural base to build carbon risk management capabilities ahead of the regional regulatory curve.

The strategic imperative: From risk mitigation to value creation

Recent commodity driven growth, amid high market volatility, prompted organisations to increase headcount and deploy additional working capital in an effort to remain agile, sustain expansion and hold favorable trading positions. While such measures may have suited more buoyant markets, they often give rise to process inefficiencies, inflated staffing levels and sub optimal capital deployment, functioning as short term tactical responses rather than elements of a coherent long-term strategy. With competition intensifying, profit generation now depends on optimisation and cost reduction rather than volatility alone.

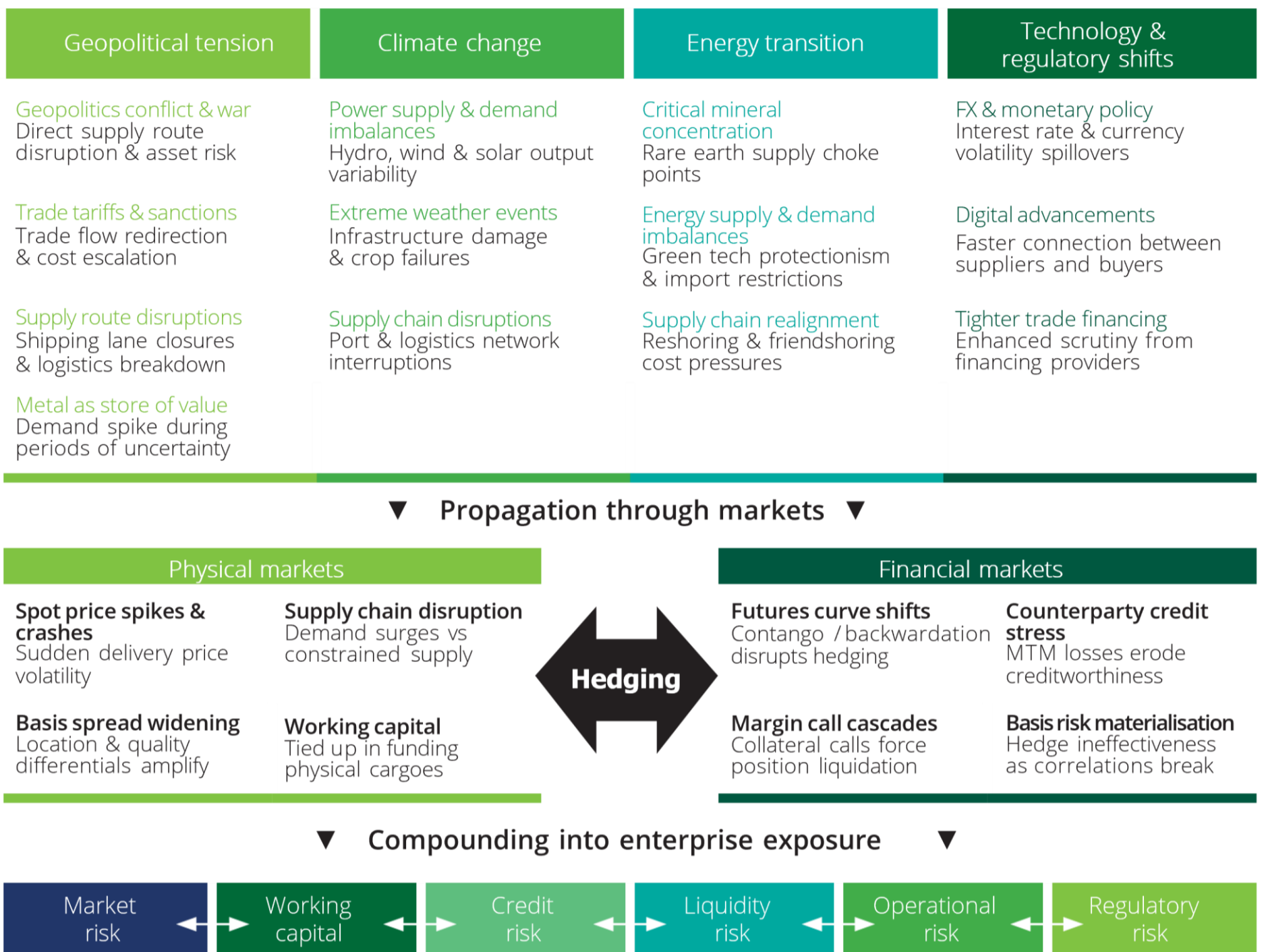
The interdependencies of risk, make siloed risk management untenable, as managing risk in isolation creates blind spots that can translate into material losses. Leading trading houses are increasingly diversifying their earnings streams into counter-cyclical revenue sources including logistics services, risk-as-a-service offerings, including hedging and working capital optimisation, and digital infrastructure plays.

This represents a systemic shift from a defensive, loss-avoidance stance to an offensive approach in which risk management creates value. Organisations must strive to integrate risk across desks, regions and the entire value chain and adopt near-real-time monitoring to manage exposures within appetite, optimise risk capital and apply the same rigor to risk as to P&L and performance metrics.

Resilience now depends on end-to-end visibility, governance and the ability to act on risk holistically rather than in isolation.

¹"Singapore's role as commodity hub increasingly crucial amid rising geopolitical tensions: market watchers". Enterprise Singapore, April 2025

Figure 2: The cascade effective: How macro shocks compound into organisation-wide exposure



Why traditional operating models fall short?

The fragmentation problem

Commodity trading sits at the intersection of volatile financial markets and complex physical operations. The principal challenge today is not the presence of risk but the way data is managed across the trade life cycle and integrated to produce actionable insights that create value at an organisational, rather than merely functional level. Many commodity trading organisations operate with fragmented, siloed views across the life cycle.

Below are illustrative examples of siloed areas:

- Procurement focuses on supply contracts and pricing terms
- Logistics manages scheduling and physical constraints
- Trading manages market positions and hedges
- Credit and middle office manage counterparty exposure and limits
- Finance & treasury manages liquidity, collateral, and settlement

Four interconnected challenges

1. Outdated systems and siloed data models

Outdated systems have exacerbated the problem. Commodity trading organisations are upgrading C/ETRM systems, moving from monolithic and heavily customised legacy systems to scalable, integrated platforms that underpin an insight-driven organisation. Geopolitical instability, cyber incidents, and infrastructure failures can sever access to critical systems and personnel at precisely the moments when active risk management is most urgent, leaving single-site, fragmented-data organisations unable to manage or reduce exposure during a crisis.

Siloed data models and manual controls result in slow information processing in an industry that increasingly requires real-time insights. Data is spread across C/ETRM platforms, supporting systems, treasury systems, standalone risk tools or spreadsheets and Enterprise Resource Planning (ERPs). Integration is limited or batch driven, leaving datasets isolated and misaligned. Consequently, data is assessed on a lagged basis with an incomplete view of the business. The latter results in a critical shortcoming in periods of market stress.

In the absence of a foundational data layer that links these domains, organisations forfeit critical, value creating insights and are relegated to a reactive posture, making decisions on incomplete information as market volatility outpaces internal reporting cycles. Near real time, integrated data is therefore not optional but the indispensable basis for credible risk steering, particularly during periods of market stress.

2. Manual processes perpetuating inefficiency and compliance exposure

Legacy ecosystems depend on manual processes that hinder efficient data capture and integration thereby increasing operational risk. Many commodity trading organisations still remain heavily dependent on spreadsheets, emails, and manual reconciliations which extend fulfilment cycles, increase operational headcount requirements, and divert staff from higher-value activities.

These manual steps introduce:

- **Operational risk:** incorrect data being captured, and broken handoffs between front, middle, and back office
- **Control weaknesses:** Inconsistent approvals, poor audit trails, and limited traceability of changes
- **Compliance exposure:** Delayed or incomplete regulatory reporting, limit breaches detected after the fact, inconsistent KYC, and trade surveillance gaps

3. Silo risk management approach

Historically, commodity trading organisations have focused primarily on managing market risk, followed by credit and liquidity risk. The systemic links between these risks have often been overlooked, preventing organisations from understanding their cumulative impact and implications for working capital.

These risks propagate through transmission chains that remain hidden until losses materialise. What becomes increasingly critical is how organisations manage the interaction between these risks.

A market shock triggers margin calls, creating liquidity pressure that forces close outs at unfavorable prices. Counterparty stress converts market losses into credit losses. Operational disruptions amplify all of the above by forcing replacement trades at adverse prices.

4. Reporting without actionability

Even where reports exist, they often suffer from structural issues:

- **Backward-looking:** Daily or weekly reports outdated in an intraday volatile environment
- **Inconsistent definitions:** Different P&L and exposure metrics across desks, driving debates about numbers instead of decisions
- **Limited actionability:** Voluminous packs with metrics without clear triggers, escalation thresholds, or linkage to decision rights
- **Weak drill-down:** Inability to trace organisation exposure to deal-level drivers

This creates a governance paradox: leadership receives more reporting yet has less clarity on what actions to take.

The opportunity cost

These challenges are interconnected, and they require an integrated response. Addressing any single challenge in isolation such as upgrading a C/ETRM system without redesigning risk governance, improving reporting without fixing the data foundation, or automating manual processes without rethinking decision rights will produce incremental improvement at best.

The opportunity cost is substantial. Organisations with fragmented systems and siloed decision-making are compelled into reactive, rather than proactive, decision making, leaving value on the table through:

1. **Misaligned hedging** that does not reflect true organisation level exposure
2. **Inefficient logistics** driven by local optimisation rather than value chain coordination
3. **Ineffective risk management** where the interplay between risks is not managed proactively within the desired risk appetite, resulting in losses or unexpected financing costs
4. **Suboptimal capital allocation** where risk capital is not deployed to the highest-returning opportunities
5. **Higher operating and transaction costs and slower fulfilment cycles** eroding margins due to untimely processes
6. **Missed opportunities** in value chain optimisation, where integration across procurement, logistics, and trading could unlock substantial margins by managing optionality

What are leading commodity trading organisations aspiring to achieve

Organisations are fundamentally shifting their focus and embarking on an ecosystem transformation that extends beyond traditional E/CTRM system upgrades. This broader transformation encompasses process efficiencies to reduce costs, improved data usability and timeliness, integration of systems across the trade lifecycle, and leveraging insights across the value chain. The ultimate objective is to create value, manage risks effectively, and reduce costs across the entire organisation through digitalisation. Modernising core systems and automating workflows is therefore an imperative to restore control, improve timeliness and free capacity for strategic tasks.

This generally converges into four ambitions:

Value chain optimisation

Adopt a synchronised commercial system in place of siloed value chain to drive procurement, logistics, and ensure that financial decisions are taken concurrently with complete end to end visibility.

Value Chain Optimisation (VCO) teams act as cross-functional arbiters using data and analytics to monetise optionality and maximise organisation-wide economic value rather than desk-level performance.

Automation capability for efficiency

Fragmented manual processes, compounded by acquisitions and lack of standardisation, are being replaced with streamlined, automated workflows benchmarked against leading practice.

Benefits include lower FTE costs, reduced manual error, standardised compliance, and faster execution enabling near real-time decision-making.

Improved risk management & return on capital

Leading organisations manage risk as a single interconnected system, not in separate silos. This enables early identification of risk transmission chains (where one risk triggers another) before losses materialise.

Return on risk-adjusted capital metrics and capital charges are increasingly used to identify underperforming strategies and redirect capital to higher-value trades.

Capture value in emerging markets

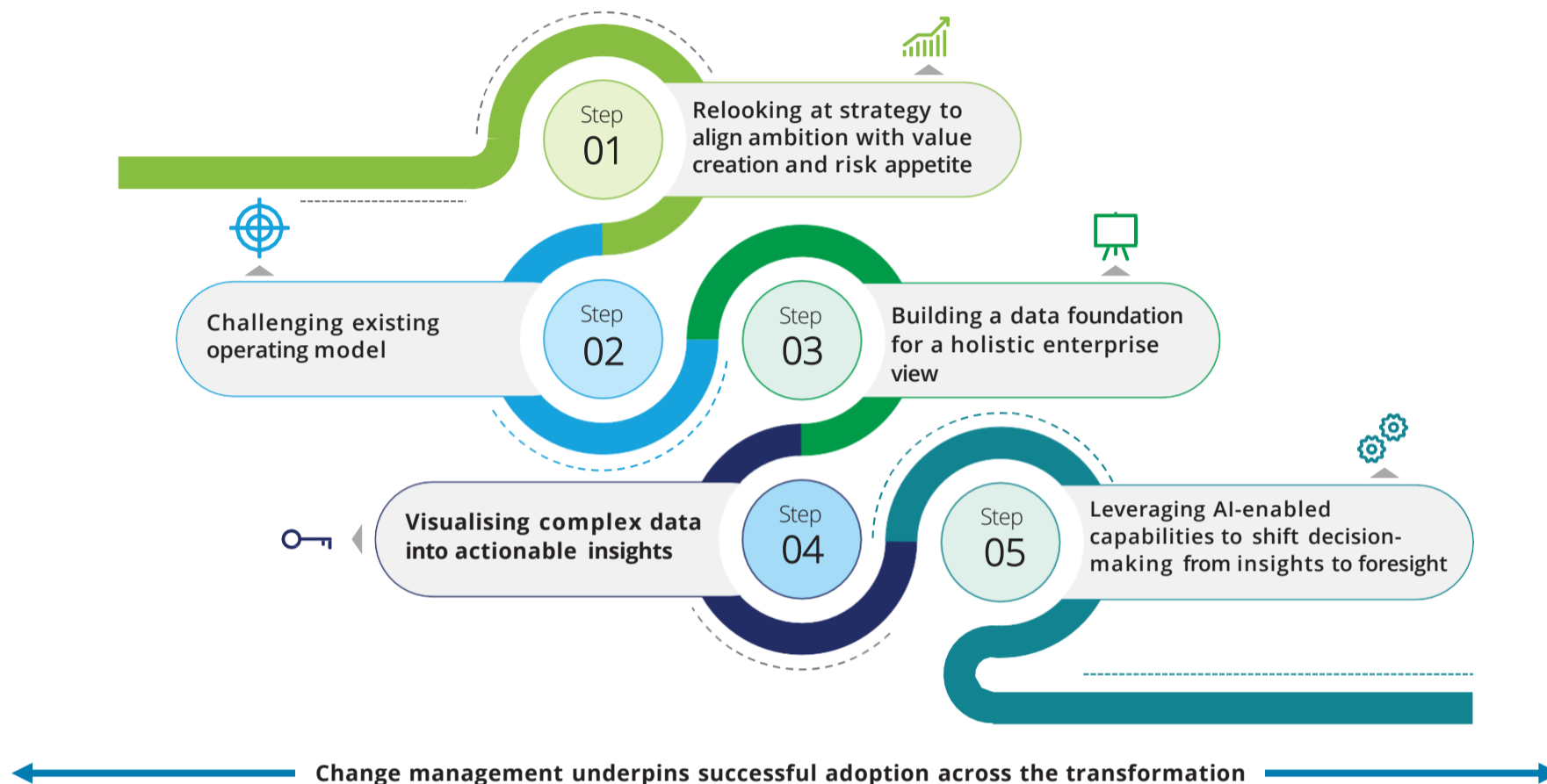
The energy transition is reshaping commodity markets, extending beyond traditional energy commodities to metals and agricultural products and catalysing new commodity markets, while regulatory changes drive significant growth in carbon markets.

Organisations must assess decarbonisation's impact on supply and demand, embed carbon costs into commercial decisions and develop capabilities to capture the resulting growth opportunities.

Making the transformation real

Commodity trading organisations are building digital capabilities to realise transformation benefits. While C/ETRM system upgrades are core, they represent just one component of a broader ecosystem transformation. Organisations must reassess their holistic IT landscape to understand where data resides, how to access it faster, and how to integrate it for meaningful insights.

The following section outlines key steps for implementing this transformation in practice.



Step 1: Relooking at strategy to align ambition with value creation and risk appetite

Define the organisation’s trading ambition and target value pools it intends to capture. This strategic clarity determines:

- Required capabilities to monetise opportunities and manage risk
- Core KPIs to monitor progress
- Critical decisions for execution
- Data requirements to inform proactive decision making

Strategic clarity must be translated into organisation wide alignment. This requires assessing how the trading strategy demands changes to: organisational structure (breaking silos and establishing cross functional teams); operating processes (redesigning workflows); people and capabilities (identifying skill gaps and transformation needs); and technology enablement (the systems and tools required)

In Southeast Asia, these dynamics are amplified by region-specific structural forces. Singapore’s position, as one of Asia’s leading commodity trading hubs, is home to over 400 global trading firms which means that the concentration of trading risk is substantial.

Step 2: Challenging the existing operating model

Commodity trading has transformed, yet many operating models remain manually intensive and control heavy. Organisations must reassess their operating models to improve integration, align capabilities with strategy, embed technology, enhance data quality and meet evolving business needs. This assessment typically covers:

Governance & steering model:

Enhance governance and organisational design to foster common objectives and strategic alignment, through three common dimensions:

- **Unified risk and control taxonomy**
Define and simplify how all risk types are measured, aggregated and governed (including key controls) as a single organisation-wide exposure, using common definitions, aligned measurement horizons and consistent escalation process and governance
- **Cross-functional governance**
Break silos across the organisation through cross functional committees, shared dashboards, and decision rights that span functions
- **Aligned KPIs**
Establish metrics that priorities organisation-level value over functional performance

Step 3: Building the data foundation for a holistic organisation-wide view

Improving analytics in commodity trading is often seen as a matter of deploying more advanced tools or models, but the real constraint is more fundamental: the quality, consistency and timeliness of the underlying data. Many initiatives fail because fragmented data architecture does not deliver a holistic view that allows timely decision to be made. Without a foundational integrated data layer and robust governance, even the most sophisticated models cannot generate reliable, actionable insights.

Addressing this challenge requires a deliberate shift toward building a robust data foundation that enables analytics to support proactive decision-making rather than retrospective reporting. Key aspects include:

- **Common data layer** that connects data sets across systems in near real-time. This is not simply a technology investment, it requires agreement on data ownership, quality standards, reconciliation frequency, and the hierarchy of systems. Without this foundation, integration remains aspirational regardless of the governance structures in place.
- **Timely and standardised data pipelines** with near real time ingestion make analytics relevant to decision making, while common definitions ensure cross functional consistency. This enables an aligned view that supports faster, coordinated decisions. Robust governance and automated controls, including clear data ownership, standardised models and embedded reconciliation, preserve accuracy, prevent degradation and establish the platform as a reliable foundation for decision making.

Step 4: Visualising complex data into actionable insights

As data becomes more integrated, usability becomes the key challenge. Without effective presentation, the value of data is lost in complexity. Visualisation capabilities enable:

- Rapid identification of trends and anomalies
- Near real-time monitoring of exposures and performance
- Alignment across stakeholders through a shared view
- Forward looking impact analysis of key performance and risk metrics, based on next best decision

Well-designed dashboards and analytical tools transform data into decision-ready insights, improving both speed and quality of decision-making in volatile environments.

Step 5: Leveraging AI-enabled capabilities to shift decision-making from insight to foresight

To unlock the value of data, human insights supported by AI analytics provide a competitive advantage. Advances in cloud computing, machine learning, and near real-time data integration have made it feasible to move from static, backward-looking reporting to dynamic, predictive steering. AI augments human judgement by delivering speed, pattern recognition, and foresight.

Six illustrative AI-enabled capabilities:

<p>Predictive risk analytics ML models analyses market data, operational signals, counterparty behavior, weather patterns, and shipping data to anticipate stress events.</p>	<p>Dynamic exposure aggregation Continuous reconciliation of physical and financial positions provides a single, trusted view of net exposure by commodity, location, and tenor which are updated in near real-time.</p>
<p>Scenario analysis & stress testing Rapid simulation of combined market, credit, liquidity, and operational shocks to assess cascading impacts across the value chain and inform proactive decision-making.</p>	<p>Automated trade surveillance Real-time monitoring of trading activity, limit utilisation, and anomaly detection provides operational efficiency and regulatory confidence.</p>
<p>Risk-adjusted portfolio optimisation AI-driven hedging strategies that optimise across commodity, geography, and tenor – balancing risk reduction with cost efficiency and margin impact.</p>	<p>Trading insights AI-enabled scenario modelling and evaluation of pending contracts which integrates trade capture system plan with inventory/ product distribution plan and provides trade recommendations.</p>

Change management underpins a successful adoption across the transformation

Even the best-in-class technology and sophisticated data capabilities deliver limited value without meaningful adoption. Without embedding these tools into day-to-day decision-making and workflows, they risk becoming isolated capabilities rather than drivers of performance.

Successful transformation requires:

- Clear digital strategy and articulation of the transformation vision
- Active stakeholder engagement to build alignment
- Strong leadership sponsorship
- Investment in talent and capability development to become more tech-savvy

Conclusion

As markets grow ever more volatile and competitive, real time digital capabilities have become essential, and emerging technologies such as quantum computing promise to further amplify analytical power. The cost of failing to transform, far exceeds the cost of change: delay entrenches a structural disadvantage through higher operating costs, slower decision making, potential unnoticed risk signals and missed opportunities in fast-moving markets. To remain competitive, organisations must embed risk management and compliance as routine operational disciplines and integrate data so that structured financial records are combined with operational signals and market intelligence. Only then can firms generate the actionable insights needed to inform capital allocation and trading strategies. This challenge is not primarily technological but one of operating model design and governance.

For Southeast Asia, the imperative is unambiguous. Regulatory expectations are rising and digitally advanced competitors are intensifying pressure. The resilience of trading houses will depend on building three foundational capabilities: an integrated operating model that breaks functional silos; organisation-wide risk intelligence that connects trading, operations, and compliance; and AI-enabled digital capabilities that enable real-time response to market disruption.

Volatility is not the risk. Lack of preparation is. Those who move decisively will not merely weather the next disruption. They will be the ones who profit from it.

Contact us

For a conversation about your strategy to build resilience



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