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September 28th, 2023

Reimagining Energy Supply, Trading, and Risk Management

Create a data-centric digital ecosystem to unlock value and enable next-generation business capabilities

ENERGY TRADING WEEK

Your
speakers

ALBERTO BRUNO
VP, Energy & Commodities
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SAM MATHEW
UK Energy Industry Advisor
Microsoft

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Agenda

- WHY now – the case for change

- WHAT can organisations do

- HOW to accelerate your transformation

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Evolution of the Energy & Commodity Market Landscape

Complexities of the energy industry

Rapid evolution and interconnected nature of global energy markets.

Need to develop new capabilities and digital pipelines to capture opportunities across geographies and asset types.

Upstream	Rigs	Wells	Oil	Gas & Condensate	Biofuel	RNG	Agro	Minerals	
Midstream	Oil	Natural Gas	Processing Plant	Crude Storage	LNG	Power Generation	Hydrogen Manufacturing	Batteries	CCS & CO2
Downstream	Refineries	Diesel	Plastic		Alternative Fuels	Ammonia	Hydrogen Fuel	Insets/ Offsets	Wind
End Customer	Industrial	Commercial			Steel	EV	Green Transportation	Cement	Agro, Insets/ Offsets

Solar

Typical archetypes within Energy & Commodities Trading

Business Solution Archetypes to deliver on the core and advanced capabilities

Different organizations developed different solution archetypes to deliver the capabilities required for the supply & trading organization.

1

ERP for ETRM

2

ETRM
+
ERP

3

ETRM(s)
+
TSW for Scheduling
+
ERP
+
Specialized SW for Credit, Curve Mgmt. & Taxes

4

Solution Hub

Multiple ETRMs
+
Multiple Scheduling (TSW, RA, Endur)
+
ERP
+
Specialized SW for Credit, Curve Mgmt. & Taxes
+
Cloud-based Solution Hub for cross-functional capabilities

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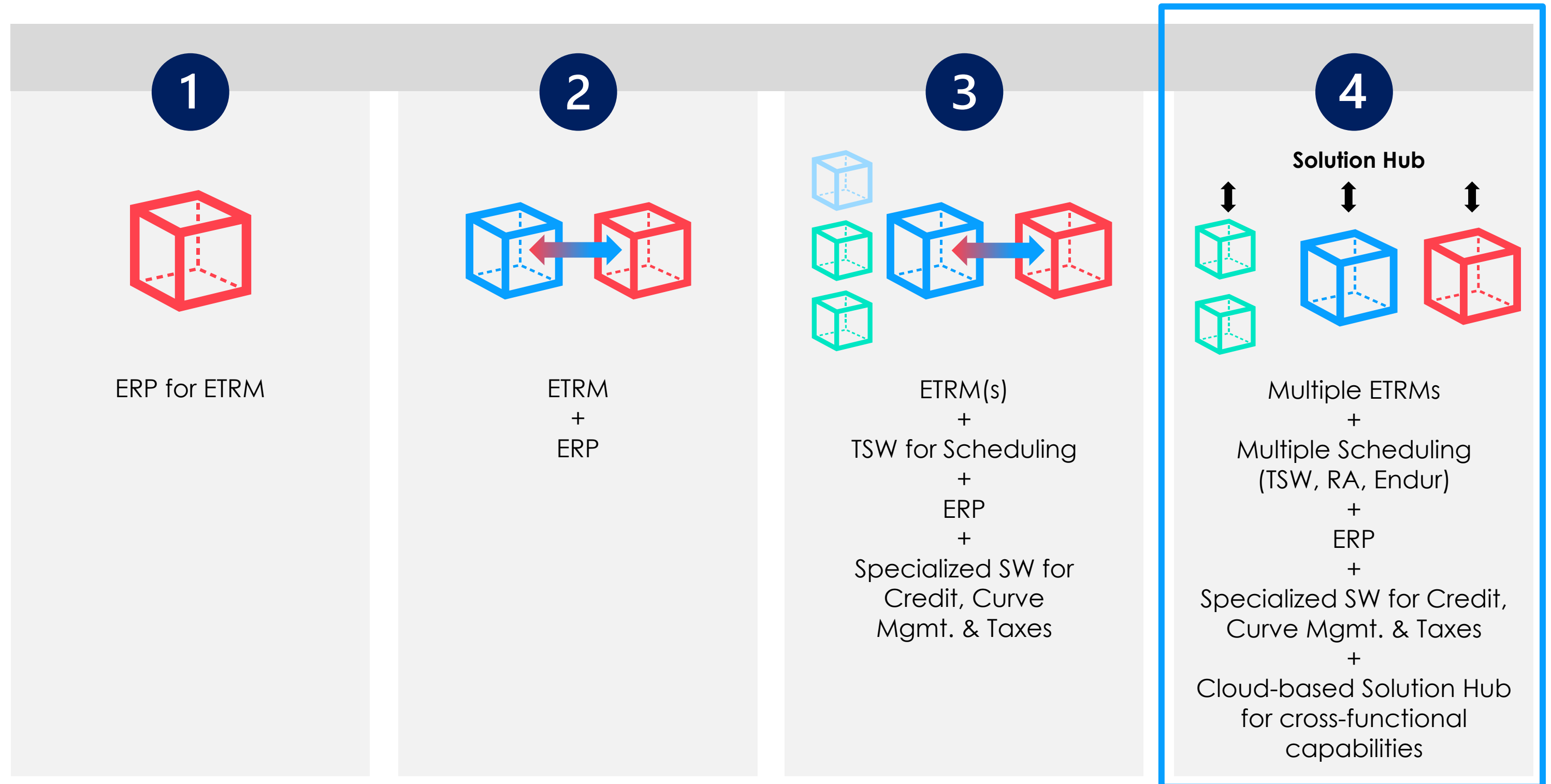
Fundamental Shift in Approach

Moving from capability centric to data centric

A data-centric digital ecosystem unlocks value by improving visibility, enabling agility, increasing efficiency, and enhancing collaboration and innovation.

It allows incremental, modular growth in line with business value unlock.

ETRM centric
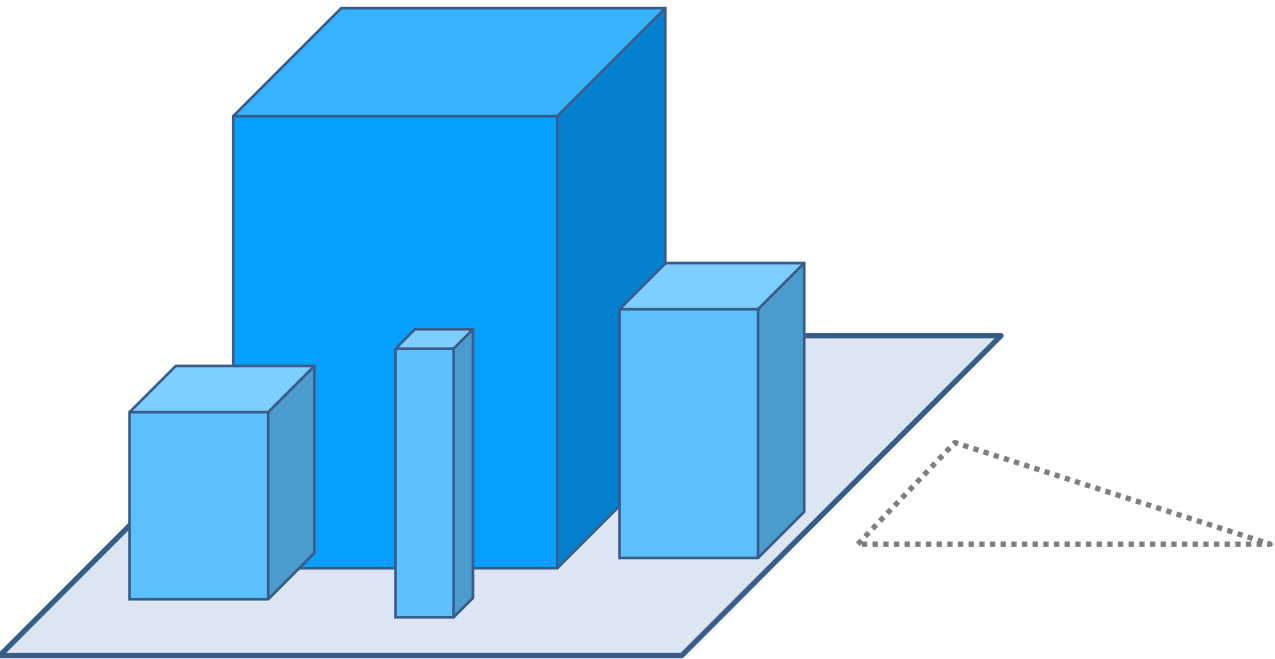
Functionally rich
Centralised
Controlled

Data centric
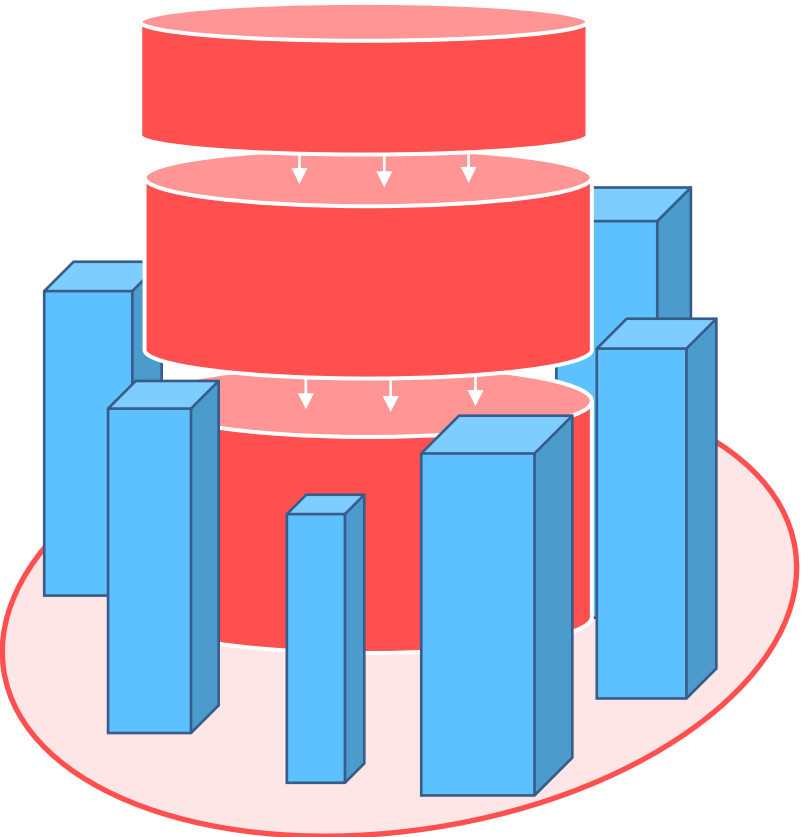
Incremental
Self service
Open

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Digital Ecosystem Value Drivers & Opportunities

Transform your Supply and Trading landscape

Re-center systems and processes around a next-generation, connected data landscape.

A data-centric digital ecosystem unlocks value by improving visibility, enabling agility, increasing efficiency, and enhancing collaboration and innovation.

Gain **agility** to maximize value in a rapidly evolving commodity market

Accelerate decision-making and enhance **collaboration** and **innovation**

Automate to improve **efficiency** and reduce risk

Optimize portfolios and achieve sustainability goals by enabling **end-to-end visibility**

Energy Supply, Trading & Risk Digital Ecosystem
Connected data landscape

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The unavoidable busy diagram….
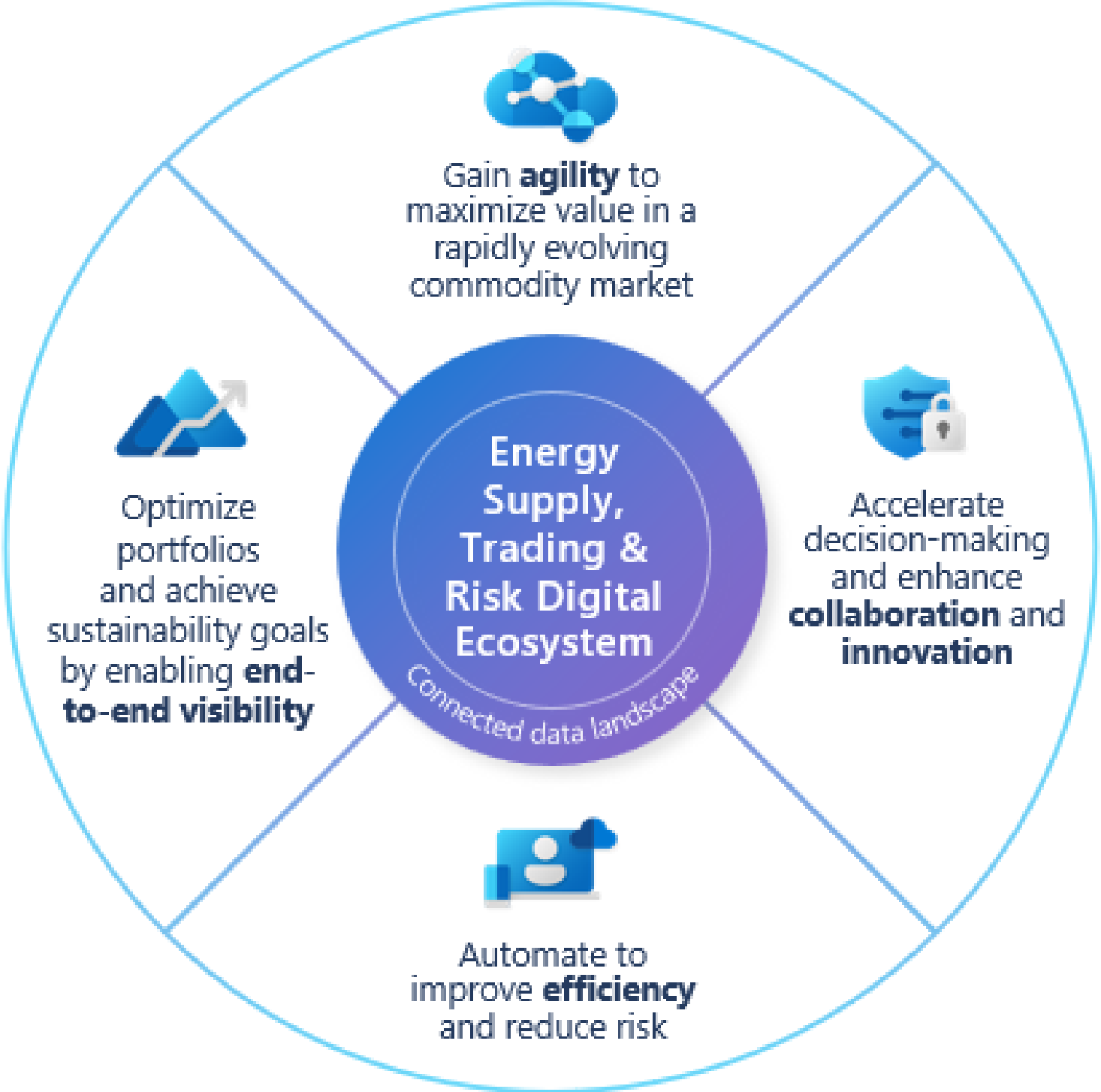
Modern Supply and Trading solution framework

Modular architecture capable of supporting multiple CTRM systems.

Improved UX through a multi channel but consistent UI.

Modern data and analytics layer based on an enterprise domain model.

TRADING ECOSYSTEM

USER CHANNELS — Multi channel UX improving access and providing consistency

SERVICE LAYER — Stakeholder aligned domain services accessible to the presentation layer

Domain Services: Front Office | Product Control | Operations | …

EXTERNAL INTEGRATION — Integration layer to decouple systems
- Trading Venues
- Market Data
- Service Providers
- ISOs/TSOs
- Regulatory Bodies, Cert Registries
- Forecast

C/ETRM SERVICES — Transaction management by asset type managing state of the deal.

C/ETRM 1: Deal Capture | Deal Validation | Risk Calc. | …
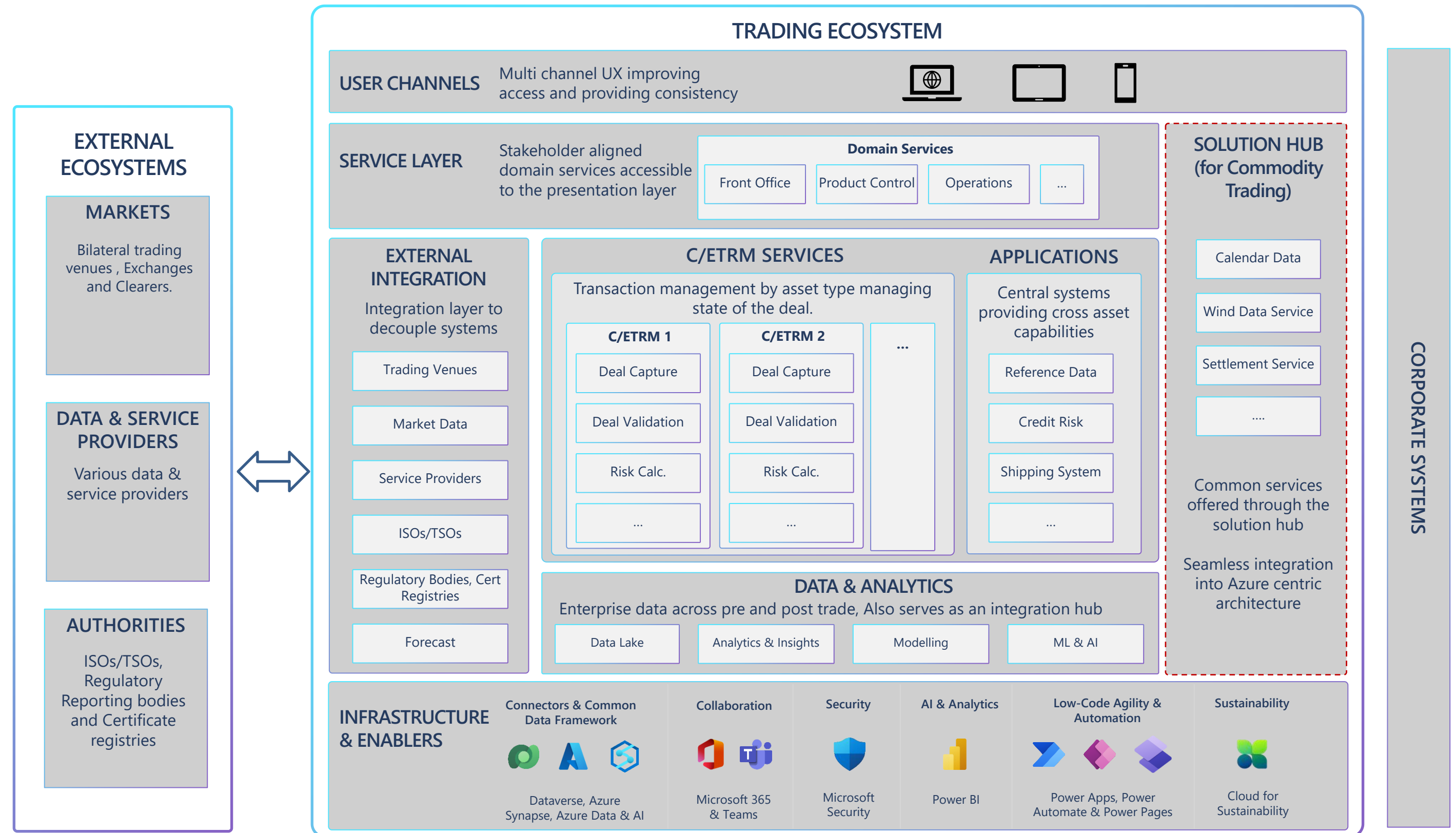C/ETRM 2: Deal Capture | Deal Validation | Risk Calc. | …

APPLICATIONS — Central systems providing cross asset capabilities
- Reference Data
- Credit Risk
- Shipping System
- …

DATA & ANALYTICS — Enterprise data across pre and post trade, Also serves as an integration hub
- Data Lake
- Analytics & Insights
- Modelling
- ML & AI

SOLUTION HUB (for Commodity Trading)
- Calendar Data
- Wind Data Service
- Settlement Service
- ….

Common services offered through the solution hub

Seamless integration into Azure centric architecture

INFRASTRUCTURE & ENABLERS
- Connectors & Common Data Framework — Dataverse, Azure Synapse, Azure Data & AI
- Collaboration — Microsoft 365 & Teams
- Security — Microsoft Security
- AI & Analytics — Power BI
- Low-Code Agility & Automation — Power Apps, Power Automate & Power Pages
- Sustainability — Cloud for Sustainability

EXTERNAL ECOSYSTEMS

MARKETS — Bilateral trading venues , Exchanges and Clearers.

DATA & SERVICE PROVIDERS — Various data & service providers

AUTHORITIES — ISOs/TSOs, Regulatory Reporting bodies and Certificate registries

CORPORATE SYSTEMS

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Transformation journey will be unique to your organisation

Align to your desired business outcomes

1. Improve efficiency and increase agility
2. Enhance collaboration and drive innovation
3. Enhance advanced trading and risk practices
4. Gain full-cycle visibility incl. sustainability
5. Grow revenue through new business models

Digital Business Model

Experimental

Aspirational

Change Market Position

Improve Market Position

Run and Optimise the Core

ADVANCED ANALYTICS

E2E EMISSIONS AUDITABILITY AND OPERATIONAL INTELLIGENCE

NEW REVENUE STREAMS E.G. DATA MONETISATION

NEW VALUE CHAINS E.G. HYDROGEN

INTEGRATED & OPTIMISED E2E VALUE CHAINS

REAL TIME INSIGHTS

CLOUD DATA FEDERATION

AI-ENABLED DECISION MAKING

REAL TIME CROSS B.U. KEY BUSINESS METRICS

MULTI-CHANNEL E2E TRADING VIEW

TRANSACTION AUTOMATION E.G. SHARED LEDGERS

FO AUTOMATION

CLOUD ENABLEMENT

INSIGHTS AUTOMATION

AI-ENABLED CONTROL FUNCTIONS

PROPRIETARY ALGORITHMS AND APPS

MO/BO AUTOMATION

CTRM DE-COUPLE

Existing Business Model

Incremental

Evolutionary

Tactical

Strategic

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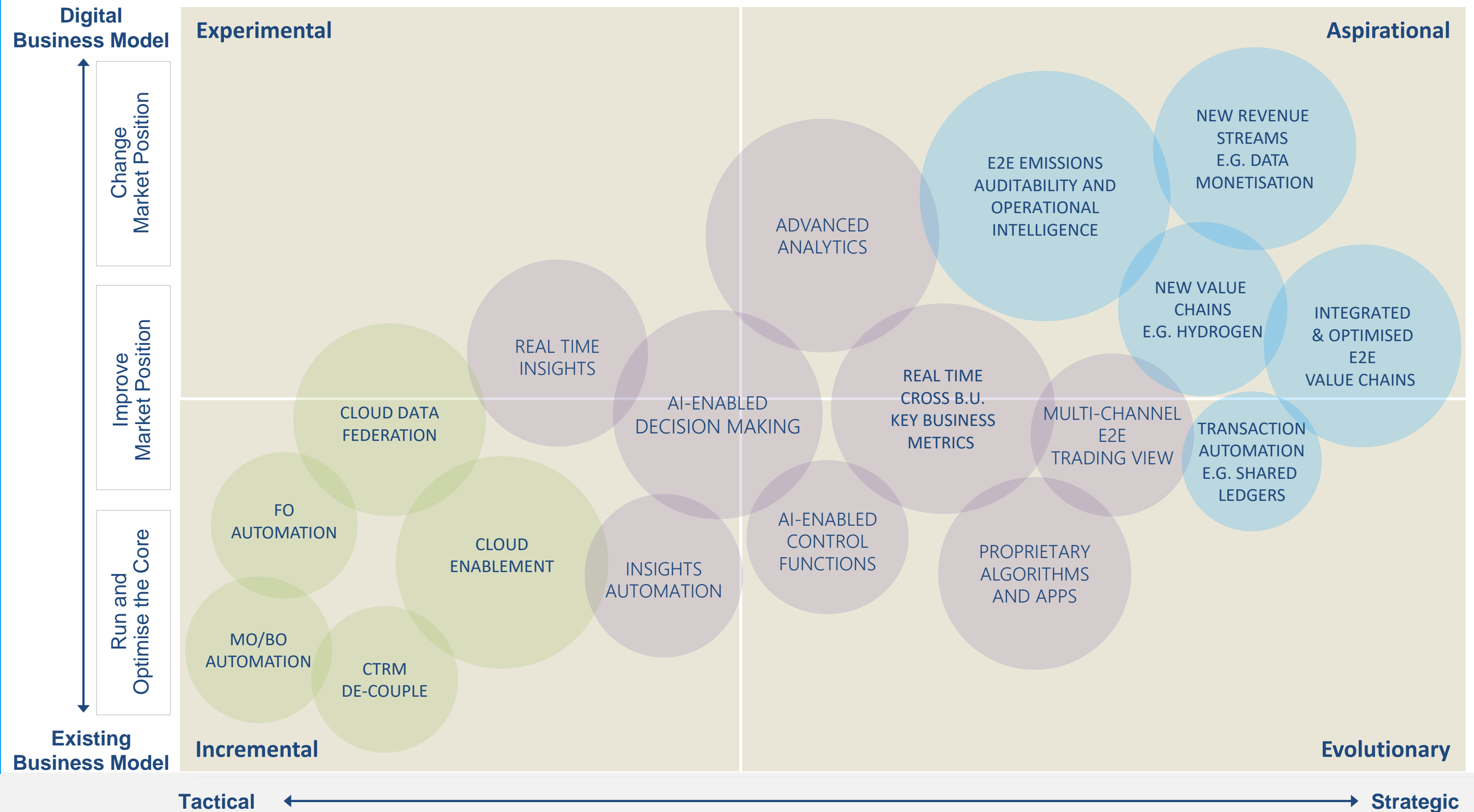
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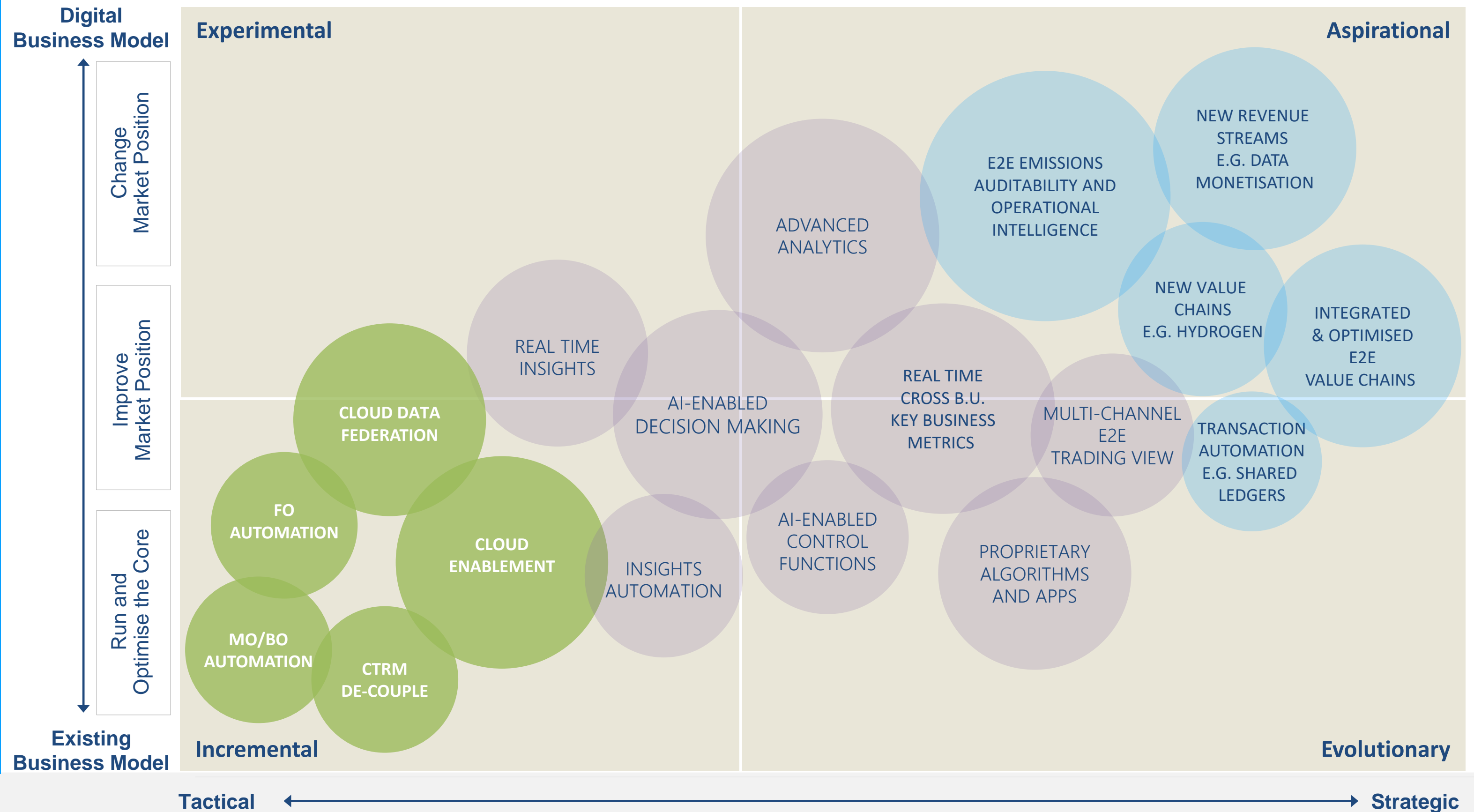
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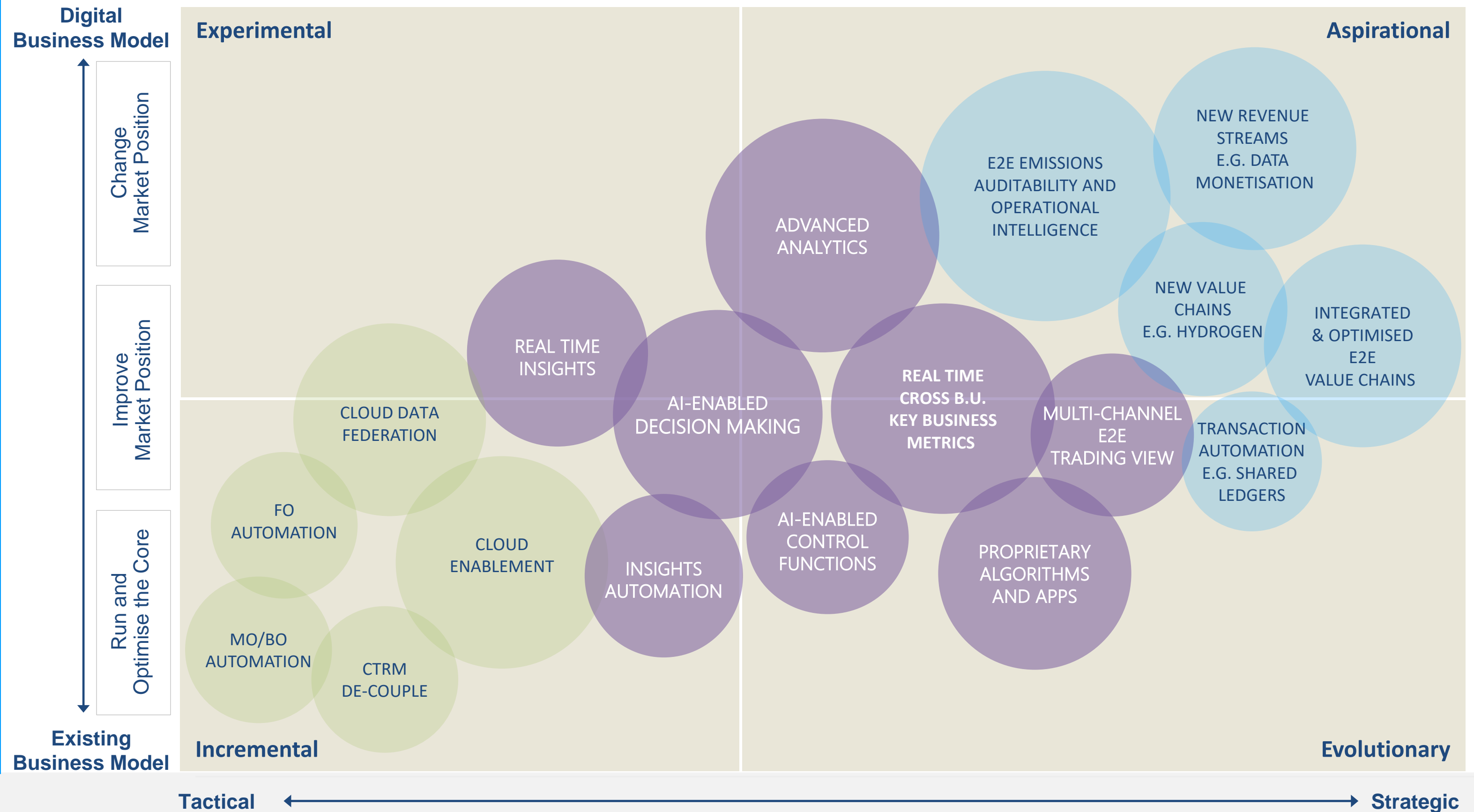
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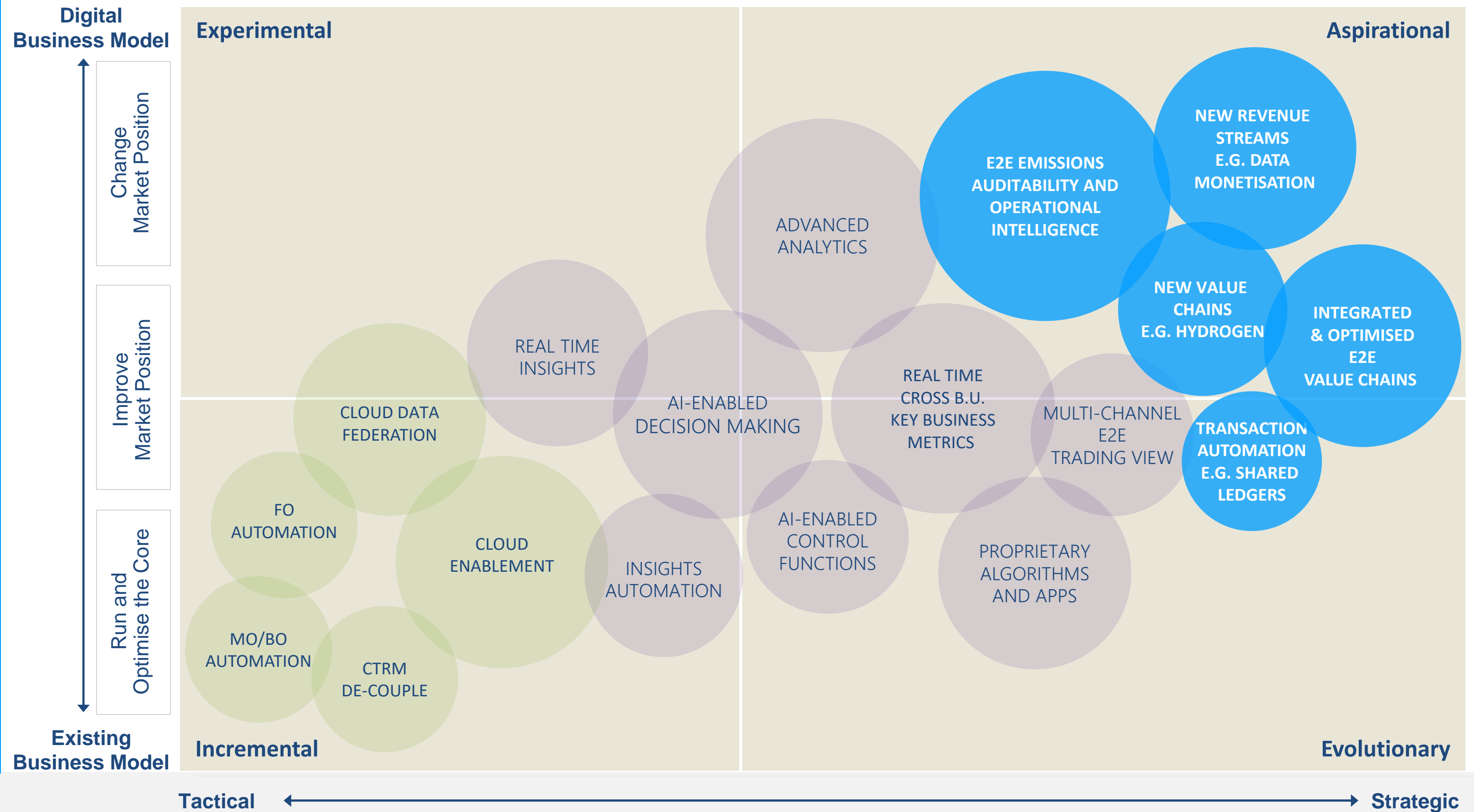
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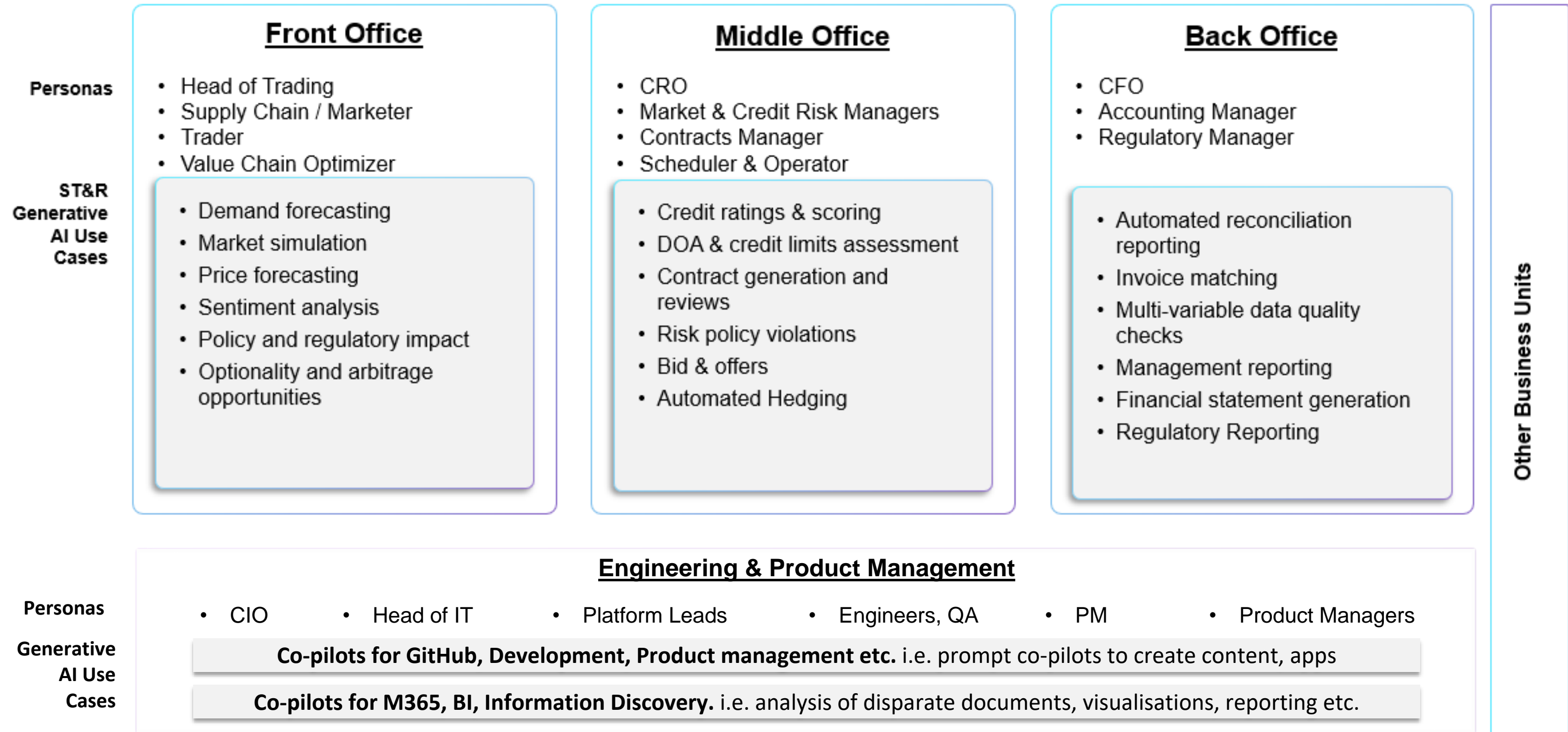
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Generative AI accelerates innovation across FO, MO, BO and IT

A data-centric architecture unlocks AI and Generative AI enabled use cases

Experimentation and value creation with AI and Generative AI enabled workflows across the entire organisation.
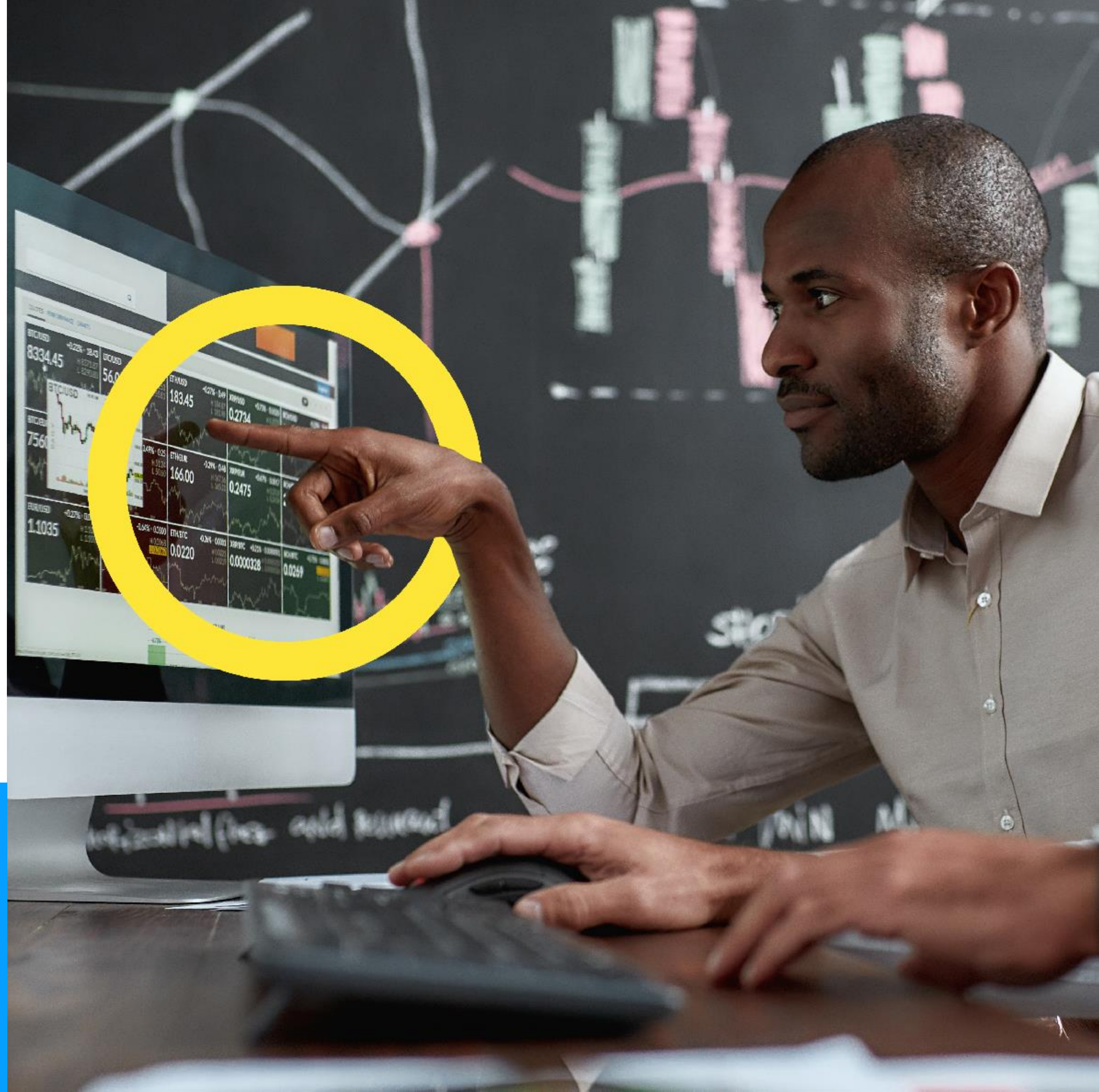
Personas

ST&R Generative AI Use Cases

Front Office

- Head of Trading
- Supply Chain / Marketer
- Trader
- Value Chain Optimizer

- Demand forecasting
- Market simulation
- Price forecasting
- Sentiment analysis
- Policy and regulatory impact
- Optionality and arbitrage opportunities

Middle Office

- CRO
- Market & Credit Risk Managers
- Contracts Manager
- Scheduler & Operator

- Credit ratings & scoring
- DOA & credit limits assessment
- Contract generation and reviews
- Risk policy violations
- Bid & offers
- Automated Hedging

Back Office

- CFO
- Accounting Manager
- Regulatory Manager

- Automated reconciliation reporting
- Invoice matching
- Multi-variable data quality checks
- Management reporting
- Financial statement generation
- Regulatory Reporting

Other Business Units

Engineering & Product Management

Personas

- CIO
- Head of IT
- Platform Leads
- Engineers, QA
- PM
- Product Managers

Generative AI Use Cases

Co-pilots for GitHub, Development, Product management etc. i.e. prompt co-pilots to create content, apps

Co-pilots for M365, BI, Information Discovery. i.e. analysis of disparate documents, visualisations, reporting etc.

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Accelerate your digital future

THANK YOU

Reimagining Energy Supply, Trading & Risk Management
e-book – *now available!*

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