

First Derivatives plc

Investor Day

Brian Conlon, CEO



www.firstderivatives.com

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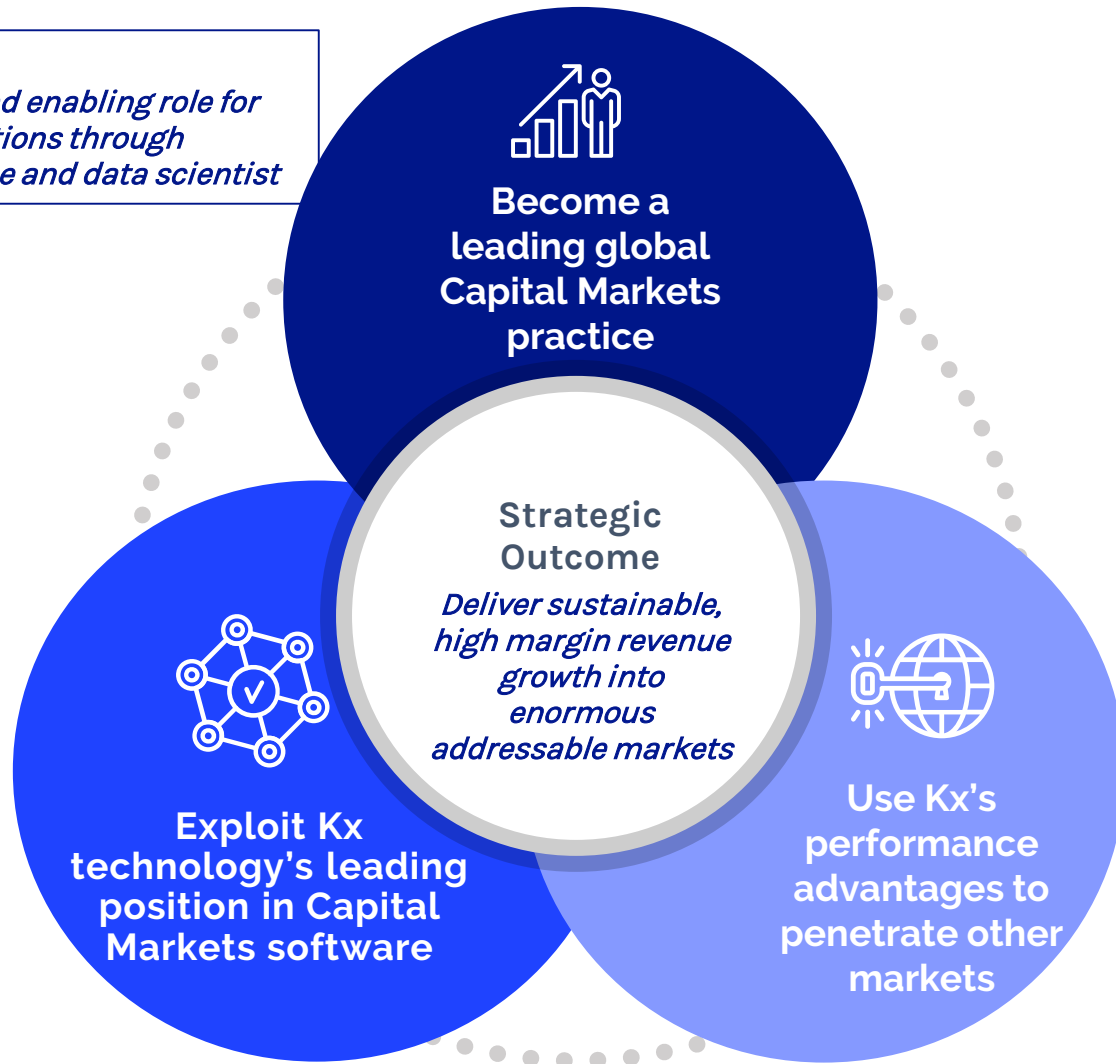
>> The path we are on

MS&C practice

Provides vital support and enabling role for our Kx technology operations through FinTech domain expertise and data scientist resource pool

Kx in FinTech

Core market with enormous growth potential and providing strategic solutions for our growing client base of banks, exchanges and regulators

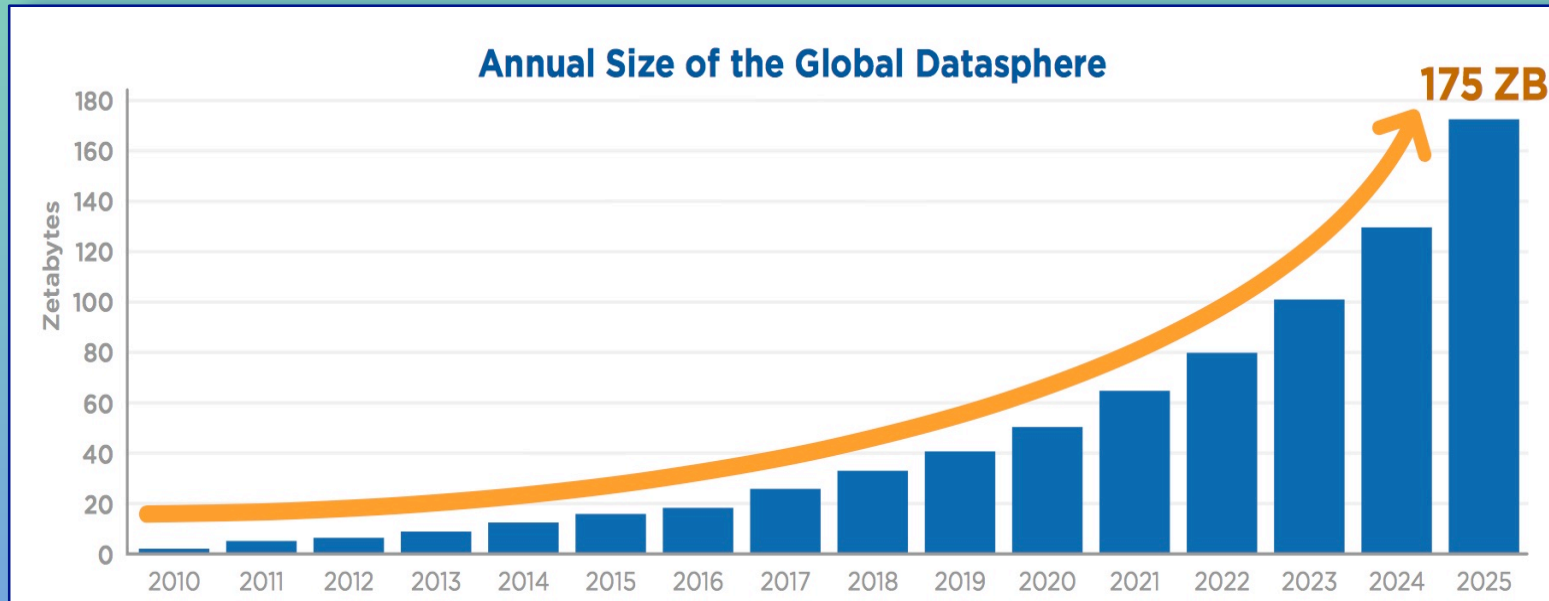


Kx in other markets

Develop and commercialise solutions providing competitive advantage to clients across multiple industries utilising Kx's performance and TCO advantages



Data continues to grow exponentially



By 2019, 75% of cloud-native application development will use in-memory computing for high-performance, massively scalable applications (source: Gartner)



Spending on cognitive and AI systems will exceed \$50bn in 2021 (IDC) and AI-derived business value is forecast to reach \$3.9 trillion in 2022 (Gartner)



Internet of Things software spending in 2018 was expected to exceed \$80bn, led by analytics software and platforms (IDC)



>> Businesses are digitising...

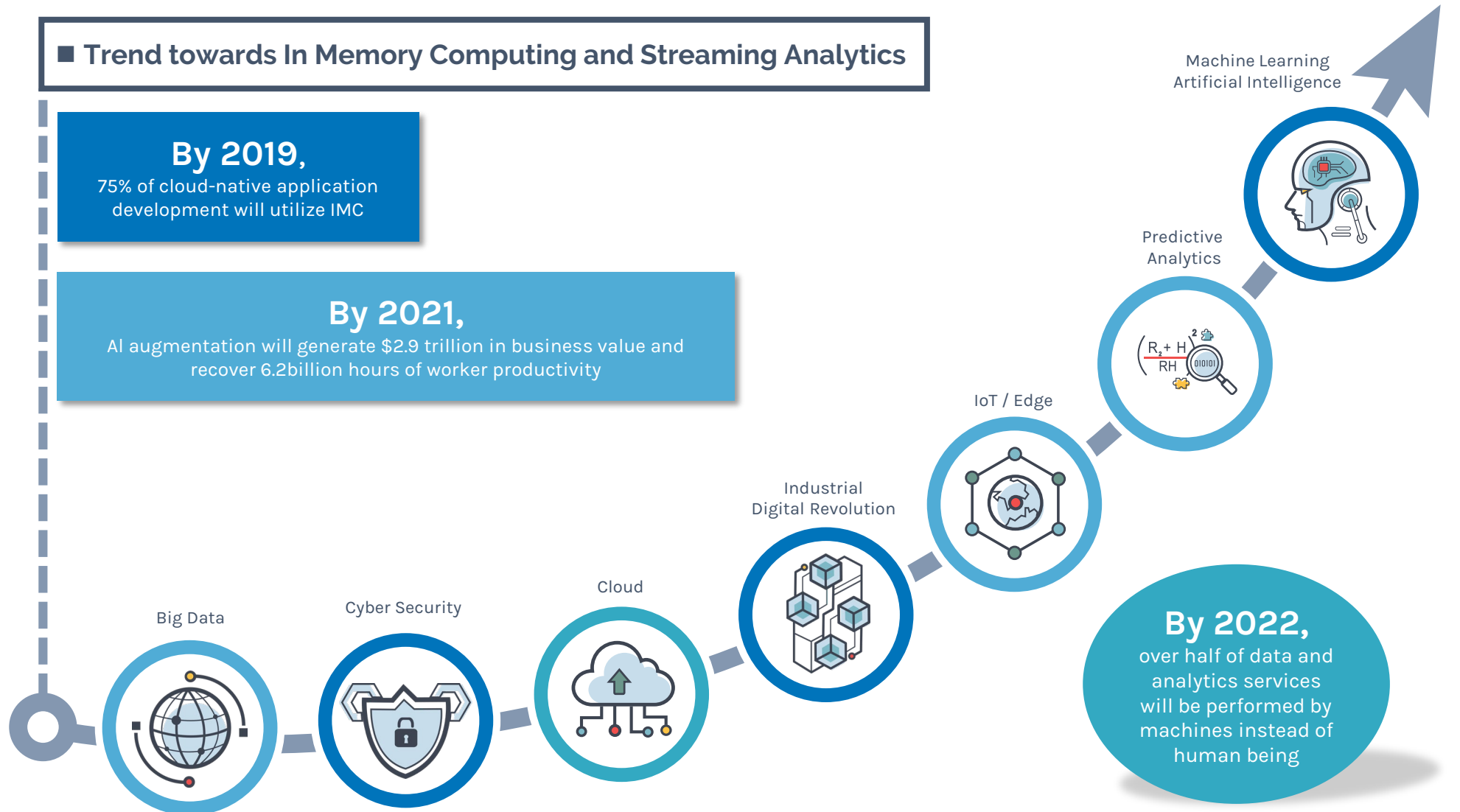
■ Trend towards In Memory Computing and Streaming Analytics

By 2019,

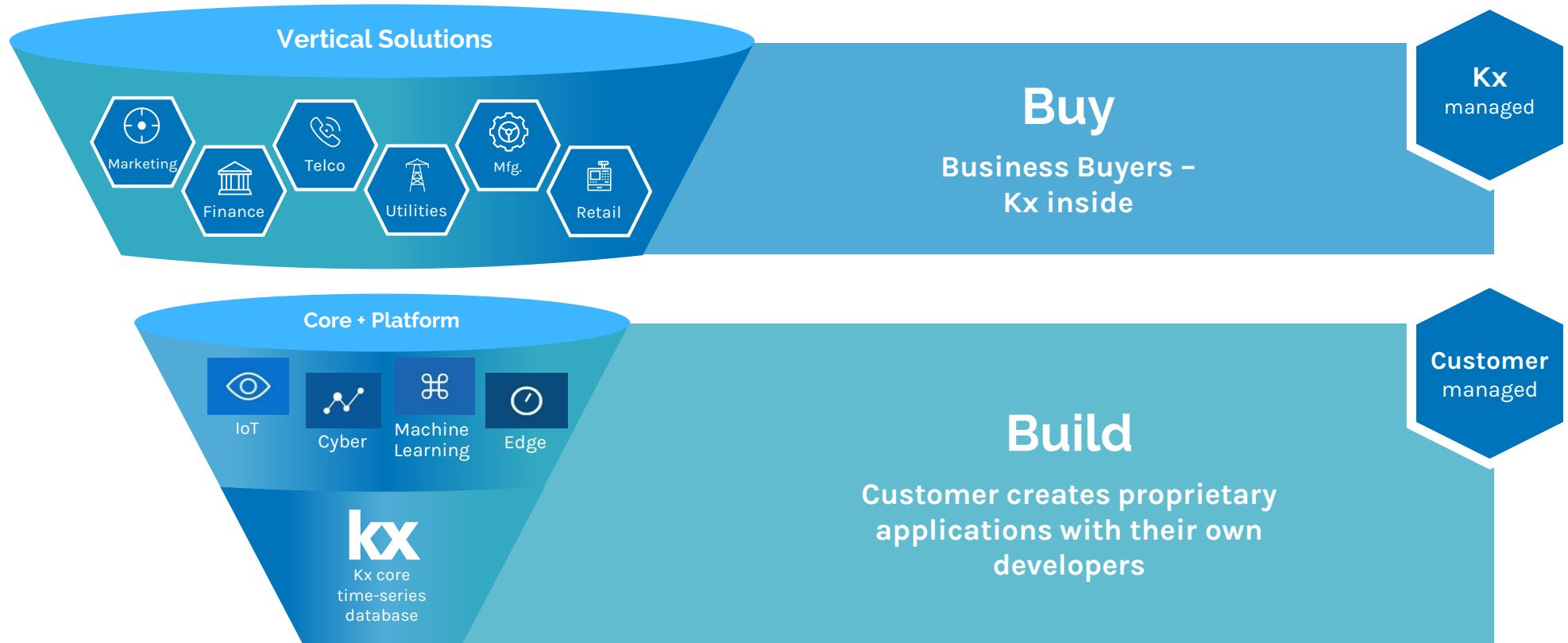
75% of cloud-native application development will utilize IMC

By 2021,

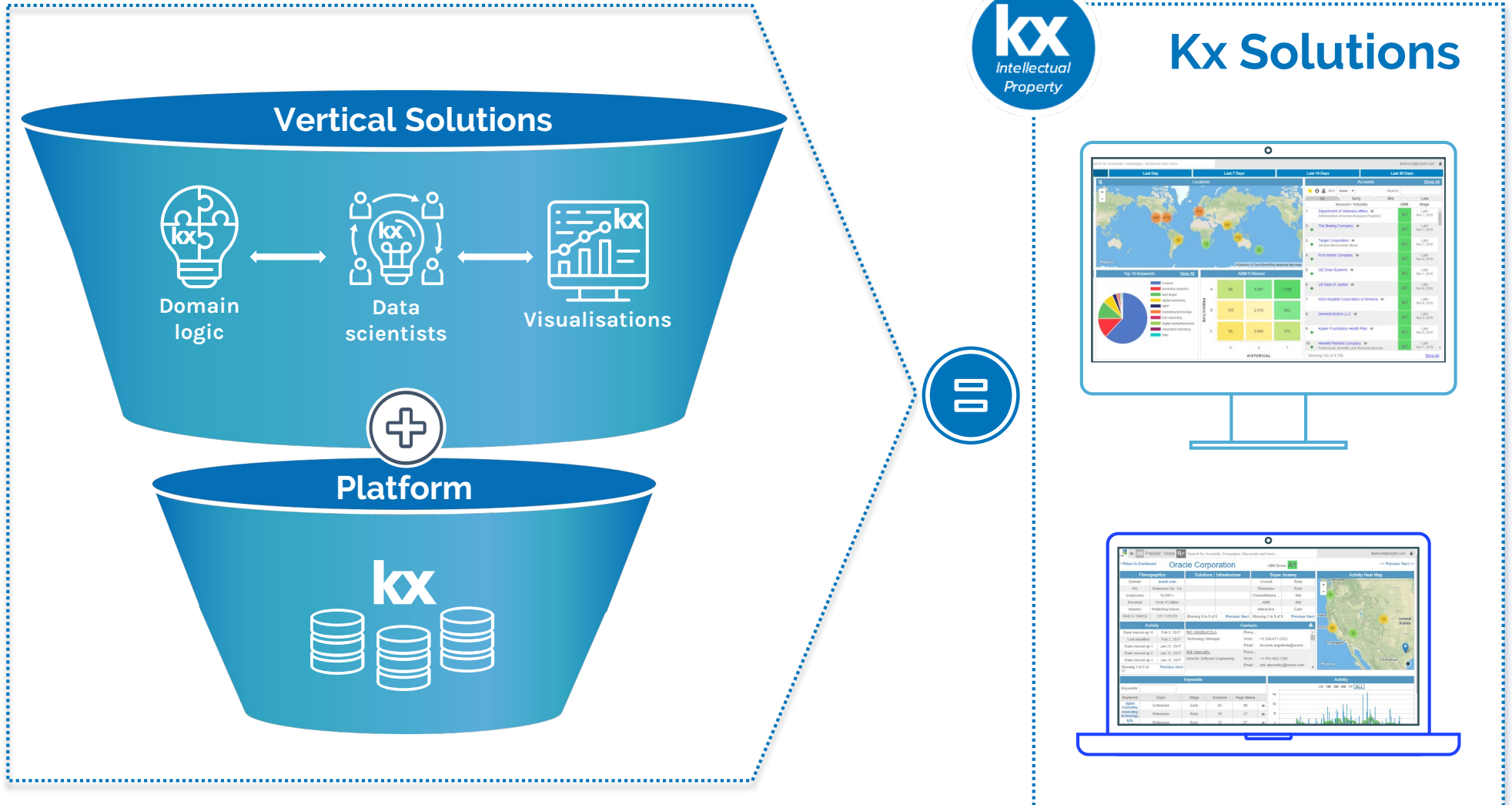
AI augmentation will generate \$2.9 trillion in business value and recover 6.2 billion hours of worker productivity



>> Kx technology – “it’s about time”



>> Single unified platform

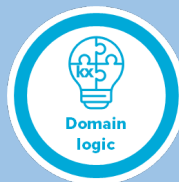


Platform

building proprietary applications
with their own developers

\$51 bn

IDC forecast for database systems



Solutions

buying Kx managed and supported
applications

\$100s bn

Total addressable market for vertical
and horizontal applications

CORE MARKETS FinTech and MarTech



HSBC



J.P.Morgan



EMERGING MARKETS Utilities, Industry, Other

FINGRID





SESSION 1



JAMES CORCORAN
Head of Kx Solutions

Kx technology

Core strengths,
competitive advantage,
roadmap



JON ROBSON
Executive Director

FinTech

Solutions, customers
and growth drivers



HUGH HYNDMAN
SVP, IoT Solutions

Industry

Creating disruption
in sensor analytics

SESSION 2



KEVIN CUNNINGHAM
President, MRP Prelytix

MarTech

Competitive strengths,
business model, future
development



PAT BRAZEL
Chief Revenue Officer

Sales strategy

Success to date and
winning in new markets



BRIAN CONLON
Chief Executive Officer

Wrap up

Business priorities

Break between sessions

First Derivatives plc

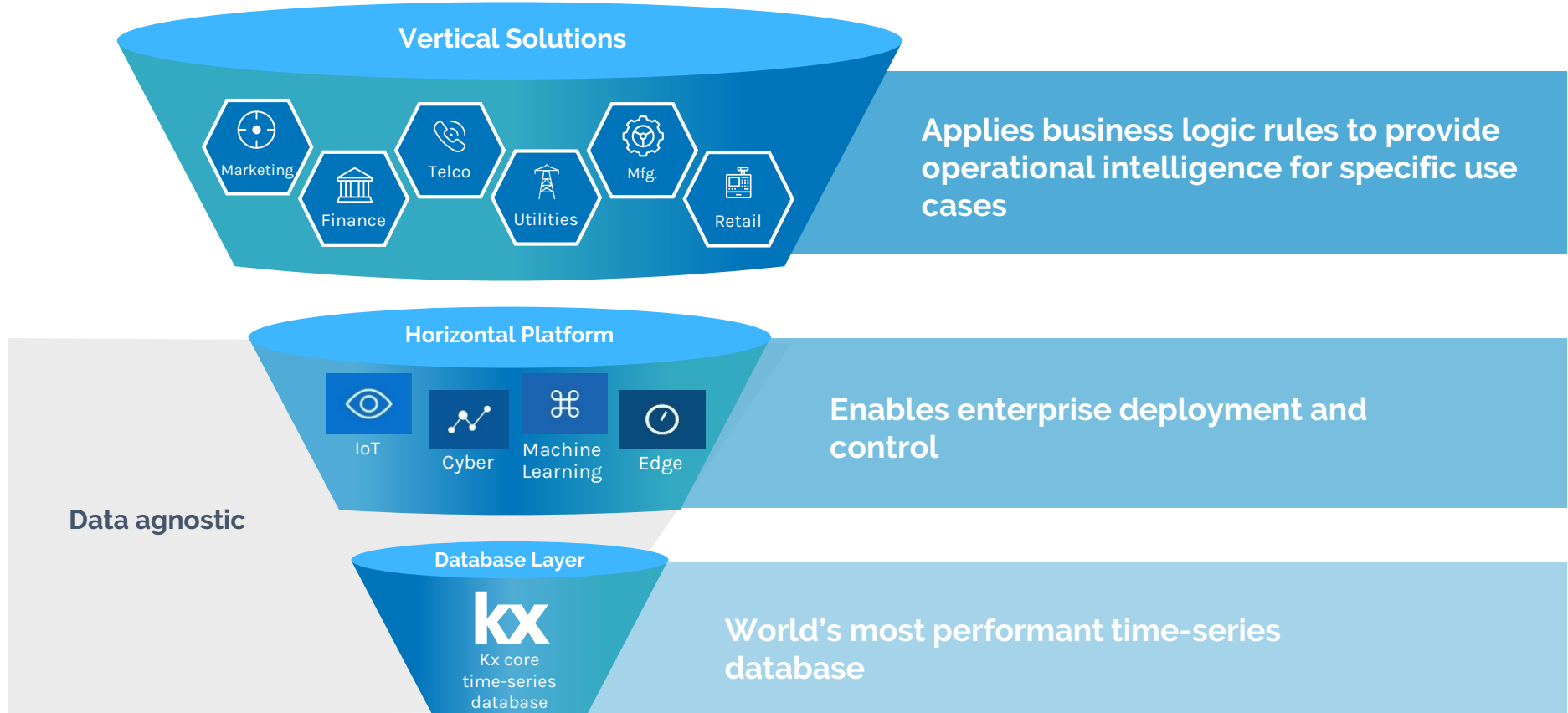
Kx Technology

James Corcoran
Head of Kx Solutions



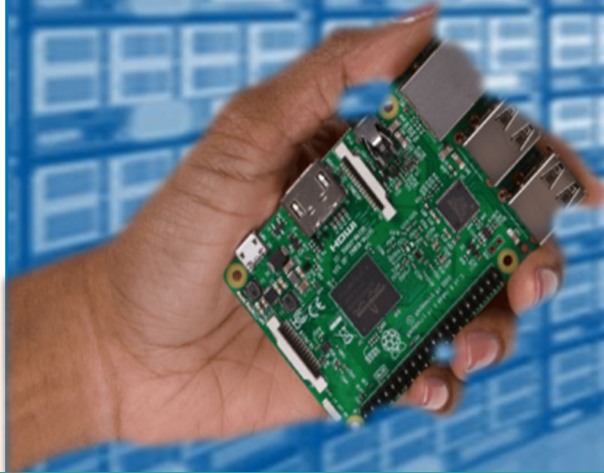
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>> Kx – a complete high performance technology stack



From Chip to Edge to Cloud

- World's most performant time series technology.
- Over a 130,000 times smaller code base than a competing open source product



Performance

A single core of Kx provides the equivalent performance of hundreds of competitor cores, providing huge operational and TCO benefits



Power

Lower total cost of ownership, less hardware required impacting overall TCO particularly in power costs



Scale

Small code base, highly optimized, highly efficient and fully scalable enabling to work on Chip, at Edge or in Cloud.



Kx – the original big data solution



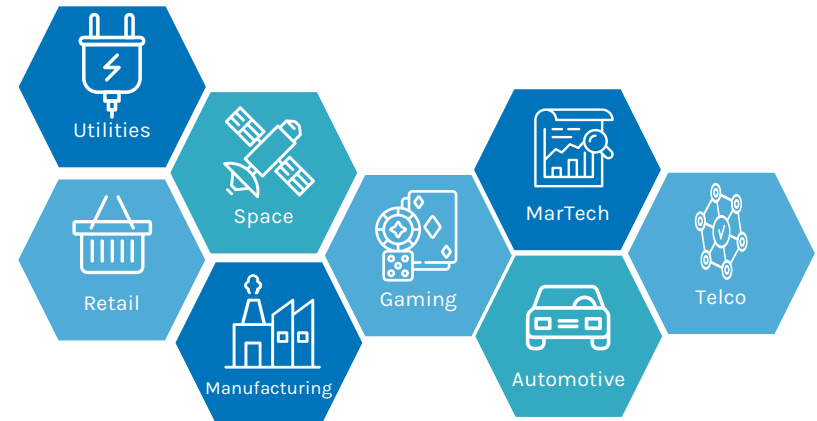
ORIGINAL MARKET FinTech



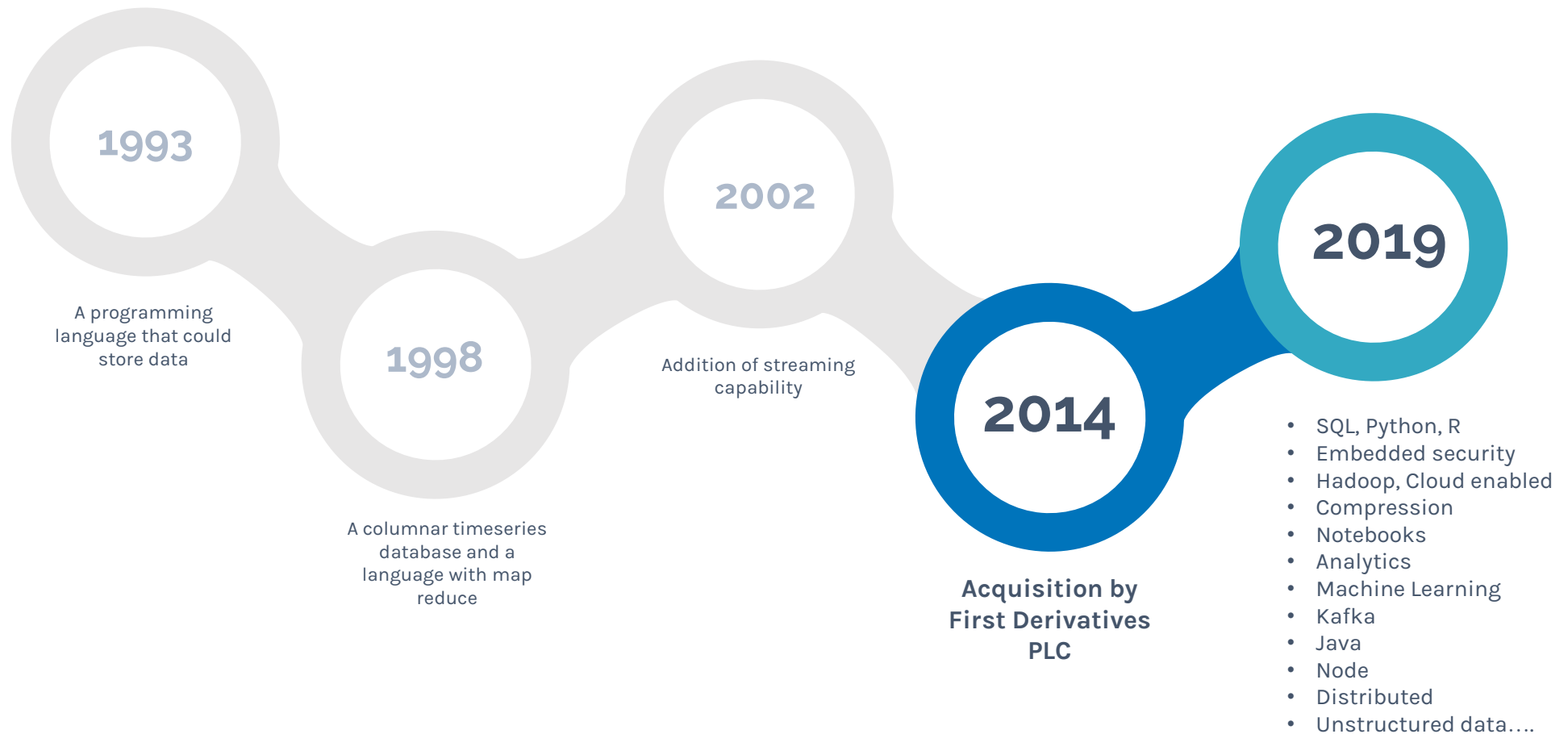
Philosophy was to solve a specific business need:

“How to store & analyse a massive time-series data stream in real time”

EMERGING MARKETS MarTech, Industry, Other



- ▶ Now, timeseries data is common - and the philosophy is the same
- ▶ All data is bigger and faster—and that won't stop





The world's leading time-series database



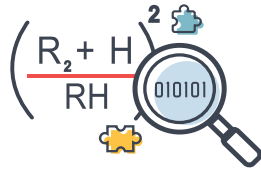
STAC is the only recognised independent benchmark
for time-series data in Finance.



Holds the world record for **15** out of **15**
tests for in-memory compute



Holds the world record for **33** out of **41**
tests for massive data at rest



Only database selected by any cloud
provider for benchmarking (Google)

First database to use Intel Optane storage
(next generation)



Kx holds all records on this storage.



60,000,000

events per second at live installation.

Closest competitor claims
500,000 per second.



150,000,000

events per second
under test
at the moment.



Published transitive comparisons
from a popular test indicated
kdb+ was

Up to 400x faster

than an equivalent sized
Influx or Cassandra cluster



Current POC installation is projecting a

95% reduction

in electricity costs

(from \$3,000,000 per year to \$150,000)

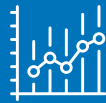
As a result of less hardware needed than
competitor we are replacing.



Kx – a complete enterprise platform



Application
development



Real-time data
visualizations



Application
DevOps



Suite
of APIs



Data
Exploration



>> Benefits of deploying Kx enterprise platform

COST REDUCTION

Database costs increase rapidly as data sets become larger and latency increases in importance. Kx delivers higher performance and a lower TCO than competing solutions

EASE OF USE

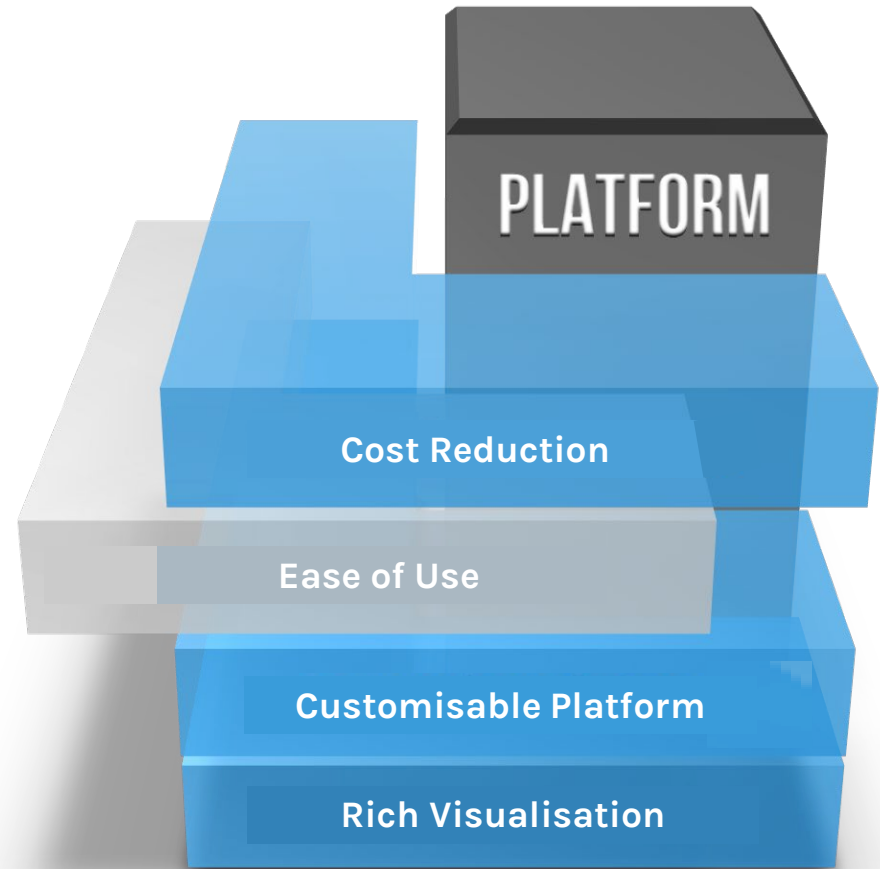
The platform provides real-time data transformation, exploration and discovery, enabling users to manipulate massive datasets without programming through the use of a point and click interface

CUSTOMISABLE PLATFORM

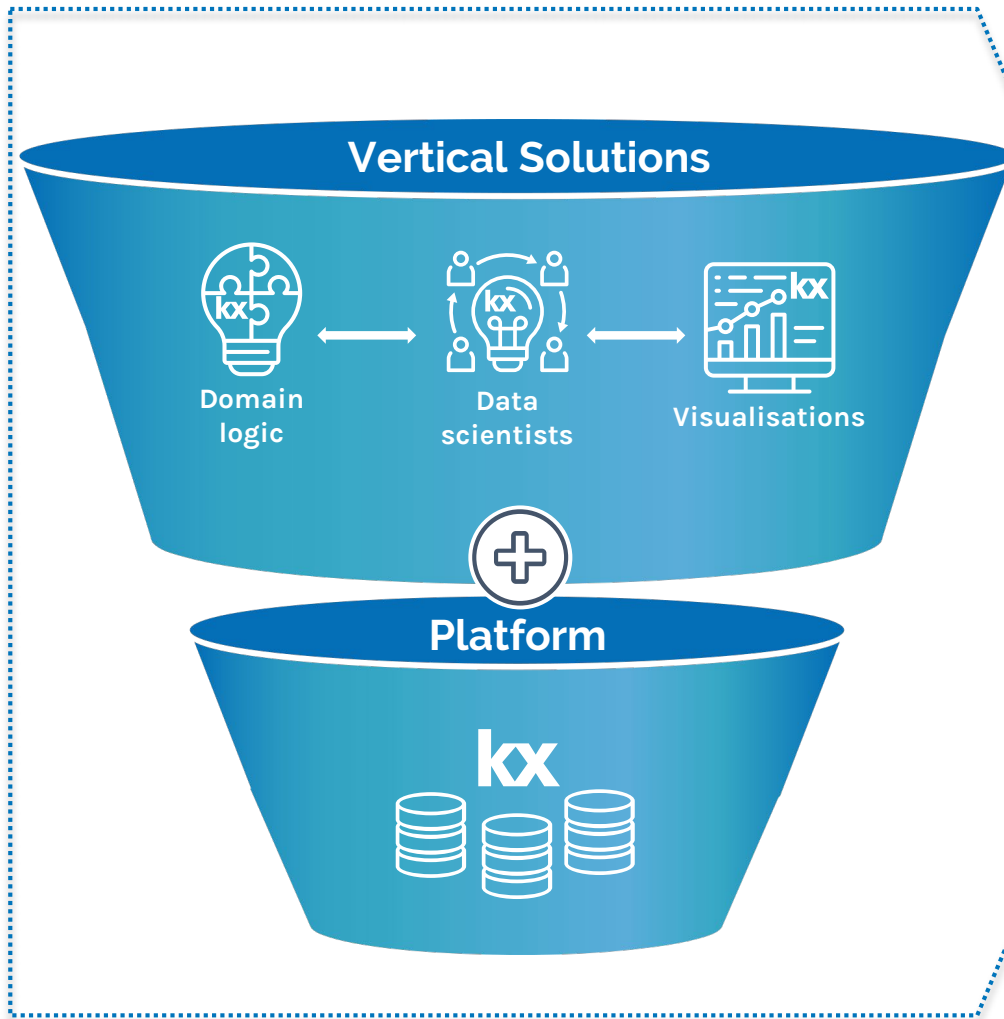
Enterprises can deploy Kx on premise, in the cloud or as part of a wider Big Data architecture and can rigorously manage their application landscape. The platform fuses real time and historical data from multiple sources

RICH VISUALISATION

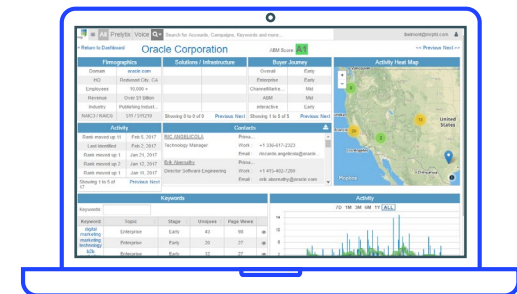
Dashboards for Kx provides rich visualization of real-time streaming, intraday and historical business data. Content can be displayed through a wide range of innovative widgets, enabling detailed filtering, aggregation and drill down



>> Kx platform enables rapid solution development



Kx Solutions



Key themes

- Continuous feedback and enhancement from field projects
- Leverage latest Kx Machine Learning libraries
- Best-of-breed front ends



SURVEILLANCE

- New scenarios
- Advanced analytics
- Global coverage
- Align to regulations



UTILITIES

- Smart meter analytics
- Usage forecasting
- Customer behaviour
- Network monitoring



MANUFACTURING

- Fault and anomaly detection
- Real-time plant performance
- Predictive maintenance

+ martech, telecoms, healthcare, cybersecurity, telemetry, space.....



Multiple deployment options



The image displays two overlapping screenshots of cloud marketplaces. The background screenshot is from the Google Cloud Platform, showing the 'kdb+' product page with a '30-DAY' trial badge and a 'LAUNCH' button. The foreground screenshot is from the AWS Marketplace, showing the 'kdb+' product page with a '30-DAY' trial badge and a 'LAUNCH' button. The AWS Marketplace page includes a 'Product Overview' section with a description of kdb+ as a time-series database and a 'Highlights' section with bullet points.

Google Cloud Platform

Select a project

kdb+

Kx System

30-DAY

Fast and flexible

LAUNCH

Runs on

Google Compute Engine

Type

Virtual machines

Single VM

Overview

kdb+ time-series database is at the forefront of high-performance streaming, real-time and historical analytics. Its unified, elegant q language includes first-class tables, functions and time-series features. Its tiny footprint efficiently scales vertically and horizontally.

Product Overview

kdb+ time-series database is at the forefront of high-performance streaming, real-time and historical analytics. Its unified, elegant q language includes first-class tables, functions and time-series features. Its tiny footprint efficiently scales vertically and horizontally.

Highlights

- Kx technology is designed for high performance in computing.
- Our native support for time-series data is a rare capability.

aws marketplace

Categories Delivery Methods Solutions Migration Mapping Assistant Your Saved List Partners

kdb+

By: Kx Latest Version: kdb+ v3.6

Fast and flexible column-oriented data processing system

Linux/Unix

5 stars (0)

Overview Pricing Usage Support

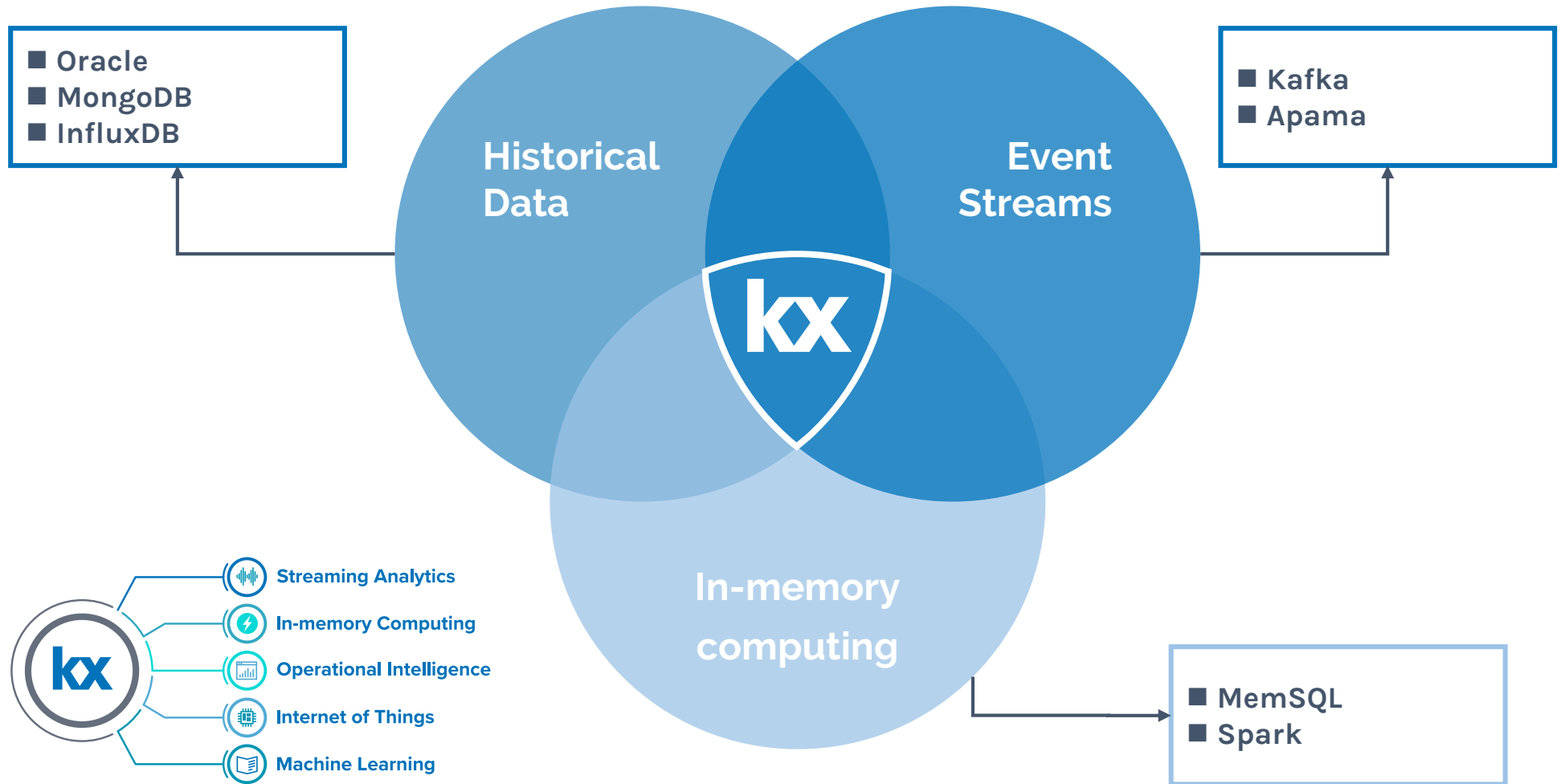
Product Overview

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- Our native support for time-series data is a rare capability.

| Version | Latest Version |
|-----------|----------------|
| kdb+ v3.6 | kdb+ v3.6 |





Could a competitor replicate Kx?



They would need to ignore all open source and current accepted best practice



They would need design patterns that are not released outside of Kx and not known by anyone else



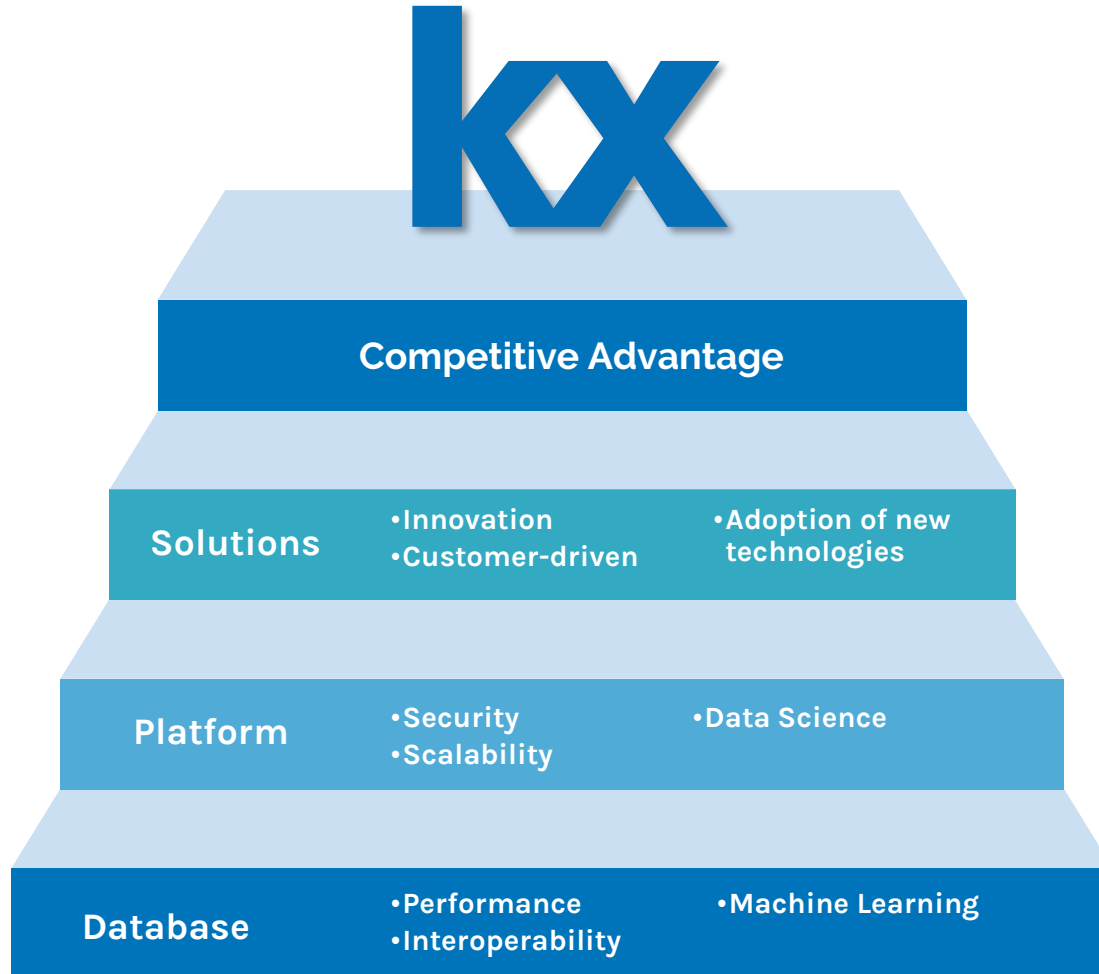
They would need to develop an optimised enterprise platform



They would need to establish a reputation for performance, scalability and being robust



Kx - continually ahead of the competition



Key themes

- Cyber security
- Machine learning
- Cloud
- Blockchain
- Natural Language Processing

>> Key summary messages

1

The kdb+ database is the smallest and fastest in the world – delivering environmental benefits

2

Kx is a single integrated platform from database to application, enabling easier development, deployment and support

3

The Kx platform enables us to be fast to innovate, and allows all our solutions to benefit from core R&D

4

The result is superior performance and TCO benefits for all our customers



First Derivatives plc

FinTech

Jon Robson
Executive Director

Peter Moylan
Head of EMEA sales

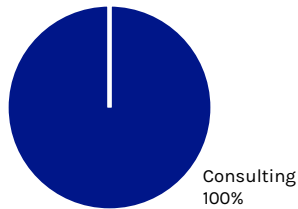


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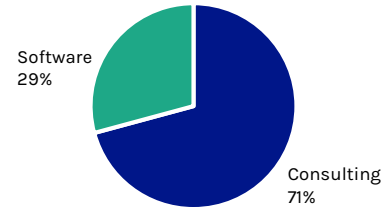
FinTech – a high-growth software business for FD



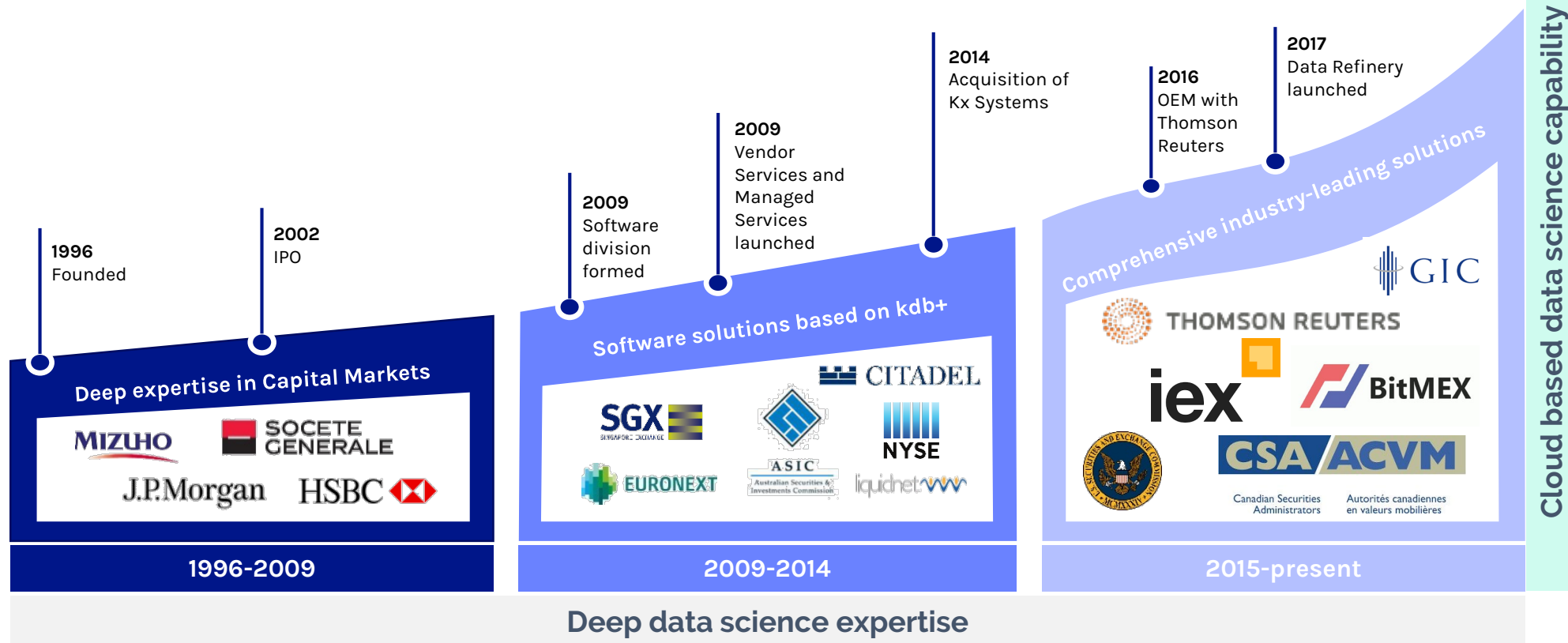
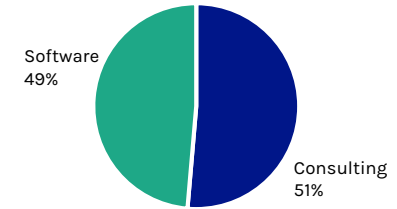
Revenue % - 2002

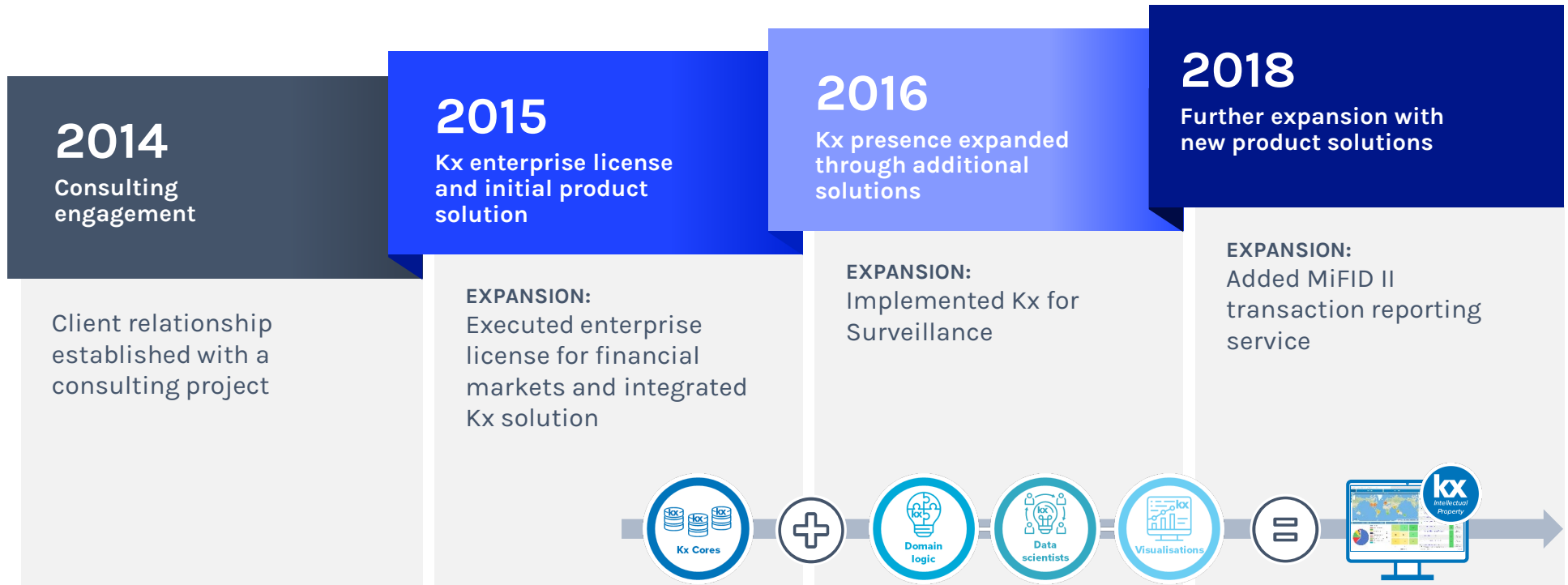


Revenue % - 2012



Revenue % - H1 2019





6x increase in revenue from 2015 to 2018



>> Client data challenges generate demand for Kx



Mass of real-time & historic data

Regulatory Scrutiny

Cost Pressure

Data quality



Problems with the validity, accuracy, timeliness and completeness of data

Complexity



Data is fragmented and does not provide the whole picture of operations

Integrity



Multiple reconciliation issues cause issues over data trust and integrity

Scalability



I am unable to explain things like risk measurement or report to my regulator

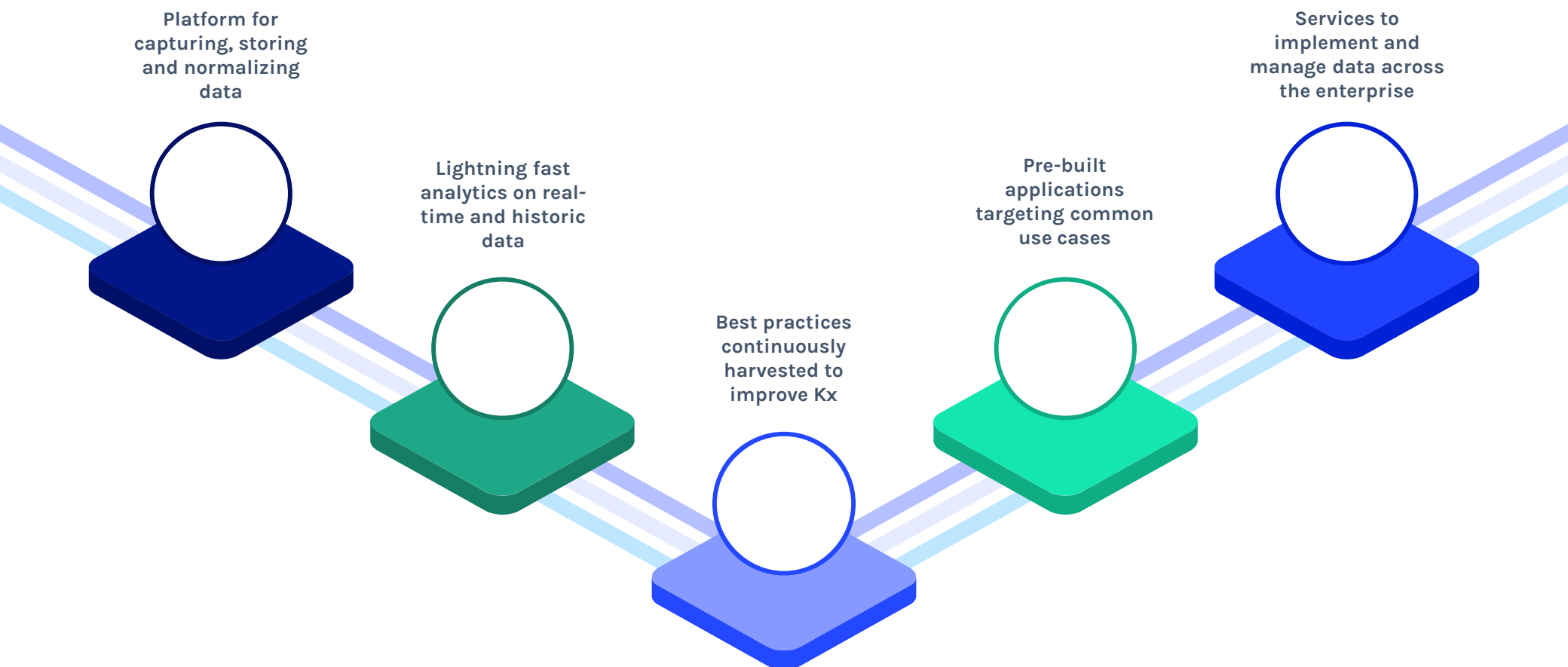
Integration



Mismatches in legal & counterparty data with transaction & instrument data



Kx powerfully solves big data challenges





>> FinTech growth potential for Kx is significant



Multiple sales of packaged applications



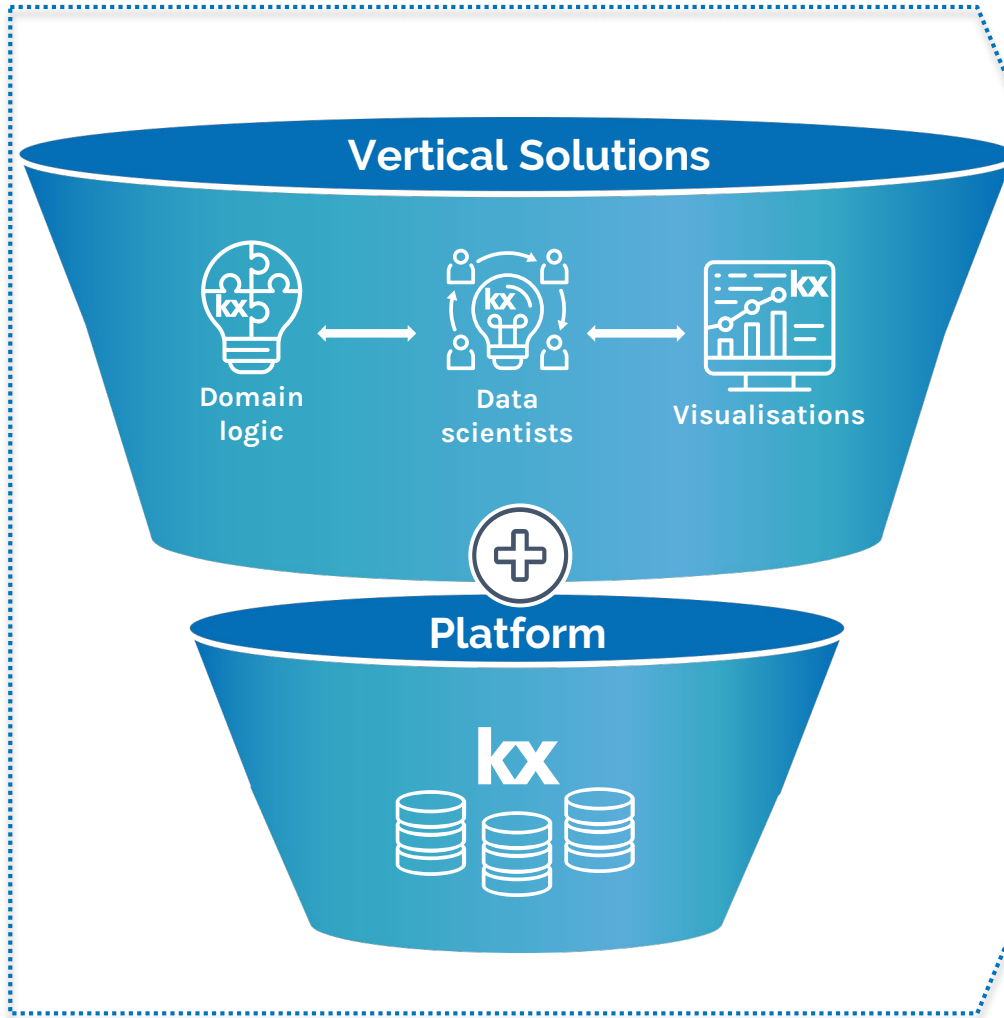
New regulatory initiatives



Adoption of cloud



Machine learning and AI innovation



Kx Solutions

Kx for Surveillance

- Tailored for banks, brokers, exchanges and regulators
- Extensive library of scenarios

Kx for Regulation

- Extensible, data-driven reporting solutions for prudential, conduct-related, and other market structural reforms

Kx for Flow

- Market Neutral FX Trading
- Direct Access to deep pools of liquidity

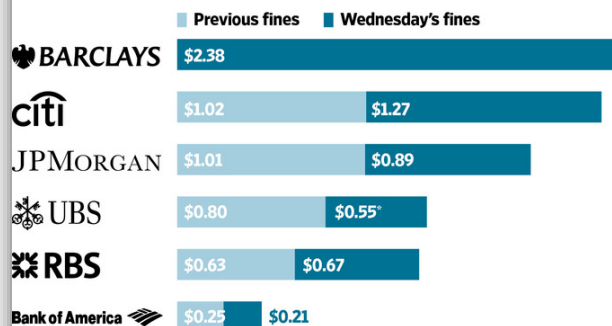
Kx for Analytics

- Real-time, streaming and historical data
- Pre-built analytics for profitability analysis, best execution & TCA

Regulatory response is a primary client driver

Penalty Phase

Total global bank fines for foreign-exchange probes, in billions



*Also includes Libor probe

Sources: Justice Department, New York State Department of Financial Services, Federal Reserve, Commodity Futures Trading Commission, Office of the Comptroller of the Currency, U.K. Financial Conduct Authority, Swiss Financial Market Supervisory Authority

THE WALL STREET JOURNAL.

"TD Bank Fined \$52.5 Million:

the bank failed to file timely suspicious activity reports related to nearly \$1 billion worth of suspicious transactions"

Banking Info Security, Sep-2012

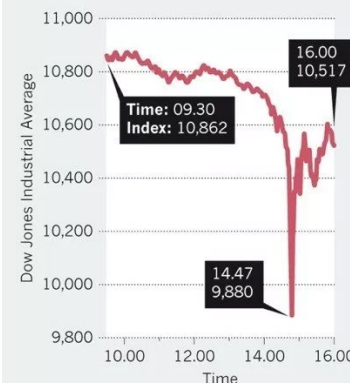
"HSBC to pay \$1.9bn in US money laundering penalties:

HSBC has confirmed it is to pay US authorities \$1.9bn (£1.2bn) in a settlement over money laundering, the largest paid in such a case."

BBC News, Dec-2012

FLASH CRASH

On 6 May 2010, the market value of the Dow Jones Industrial Average index fell by 9%, but recovered in minutes. High-speed trading algorithms were in part to blame.



Other Wrong 'Uns

August 2012

\$440 m KNIGHT CAPITAL'S LOSS

NYSE: \$440 million loss for trading firm Knight Capital Group because of reactivation of a disused computer software



May 2012

FACEBOOK DEBUT

Nasdaq: Technical error left investors in the dark, resulting in losses



DERIVATIVE TRADE HALTS

NSE: Traders were unable to exit positions after an erroneous order cancellation request and a simultaneous technical glitch; no derivatives orders could be executed



April 2012

WRONG FIFTY ORDER

A wrong 'Sell' sent Nifty futures crashing from 5338 to 5000, triggering stop losses which accelerated the fall and extended investor losses



'BUY' TURNS 'SELL'

The same day a large Infosys Nifty futures 'Buy' order was wrongly punched as 'Sell'



Trades Gone Awry at 9.50 am

The fall of Nifty 50 components after Emkay Global's punching error

| | Price (₹) | % Chg over Prev Close | Volumes Traded |
|-----------------|-----------|-----------------------|----------------|
| Bharti Airtel | 216 | -20.00 | 347515 |
| Larsen & Toubro | 1307 | -20.00 | 290104 |
| Infosys | 2061 | -20.00 | 153987 |
| HDFC | 631 | -20.00 | 860650 |
| HDFC Bank | 505 | -20.00 | 344033 |
| ICI Bank | 867 | -20.00 | 308920 |
| Reliance Inds | 682 | -20.00 | 361180 |

Prabhakar

Glitch resets multiple Nasdaq tech stocks to same price

Amazon, Microsoft and Apple among equities converging at \$123.47 after data error



Fines imposed by the UK Financial Conduct authority (FCA) in 2014 for 'FX business practises'





Kx for Surveillance



What it is and what it does

Analyses market and trading data to identify anomalies for further investigations by compliance staff in banks, exchanges and regulators



Why customers buy it

To ensure the integrity of markets (exchanges and regulators) and to avoid reputational and financial damage (banks)



Why FD is better

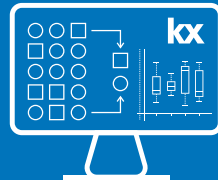
Flexible alert system, real-time capability and ease of market reconstruction / order book replay, comprehensive feature set, AI capability



Kx for RegTech– commercial success



Numerous global banks, exchanges and regulators as customers e.g.



Charging related to processing requirement
e.g. per asset
class, per geography for banks



Annual recurring license



Strong pipeline
of potential new clients



What it is and what it does

Automates the Consolidated Audit Trail (CAT) reporting requirements for banks, under which they will be obligated to file daily reports on equity and option trading and face punitive fines for errors



Why customers buy it

CAT is mandated by the SEC and while banks could develop internally, they lack internal resource and have reduced appetite for the risk involved in self-build



Why FD is better

Banks already store data in Kx; FD's deep domain expertise has enabled development of a comprehensive CAT solution out of the box



Kx for the Consolidated Audit Trail (CAT)



Kx for CAT is an interesting opportunity



Kx for Consolidated Audit Trail



1,650 organisations with CAT reporting responsibilities



Targeting top 150 based on data volume and reporting complexity



Expected range of value \$500k to \$2m per annum per client

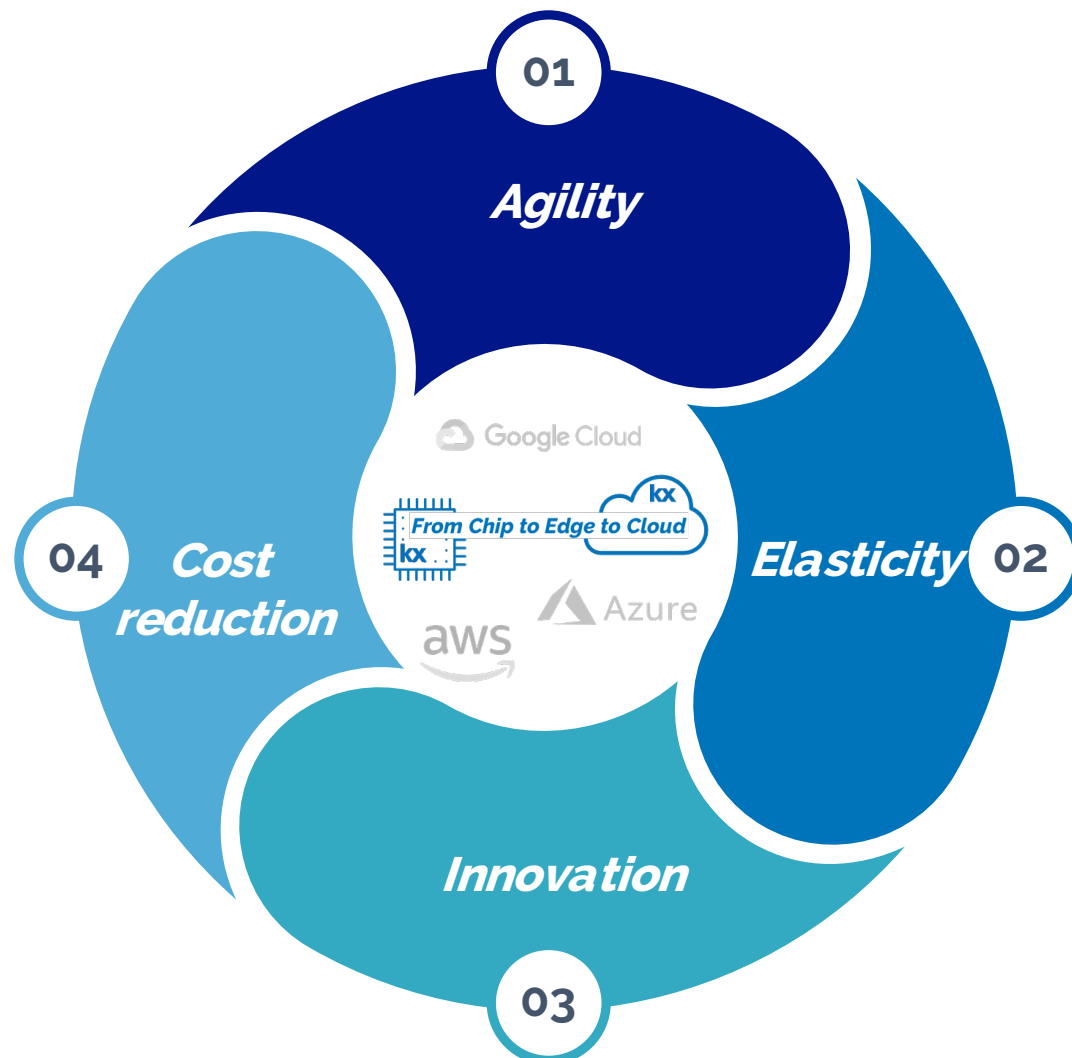


Competition from bank internal development



CAT is an essential 2020 project

Cloud adoption - drivers





Data refinery – clean data in the cloud



What it is and what it does.

A high-performance low-latency data processing platform providing flexible real-time access to data enabling users to execute queries and get responses in milliseconds, not hours



Why customers buy it

It is designed to automate the data management and processing burden and let them concentrate instead on exploiting the potential of their data



Why is FD better

Unrivalled speed at scale, all asset classes supported, comprehensive functionality, ad hoc query capability, best in class visualisation



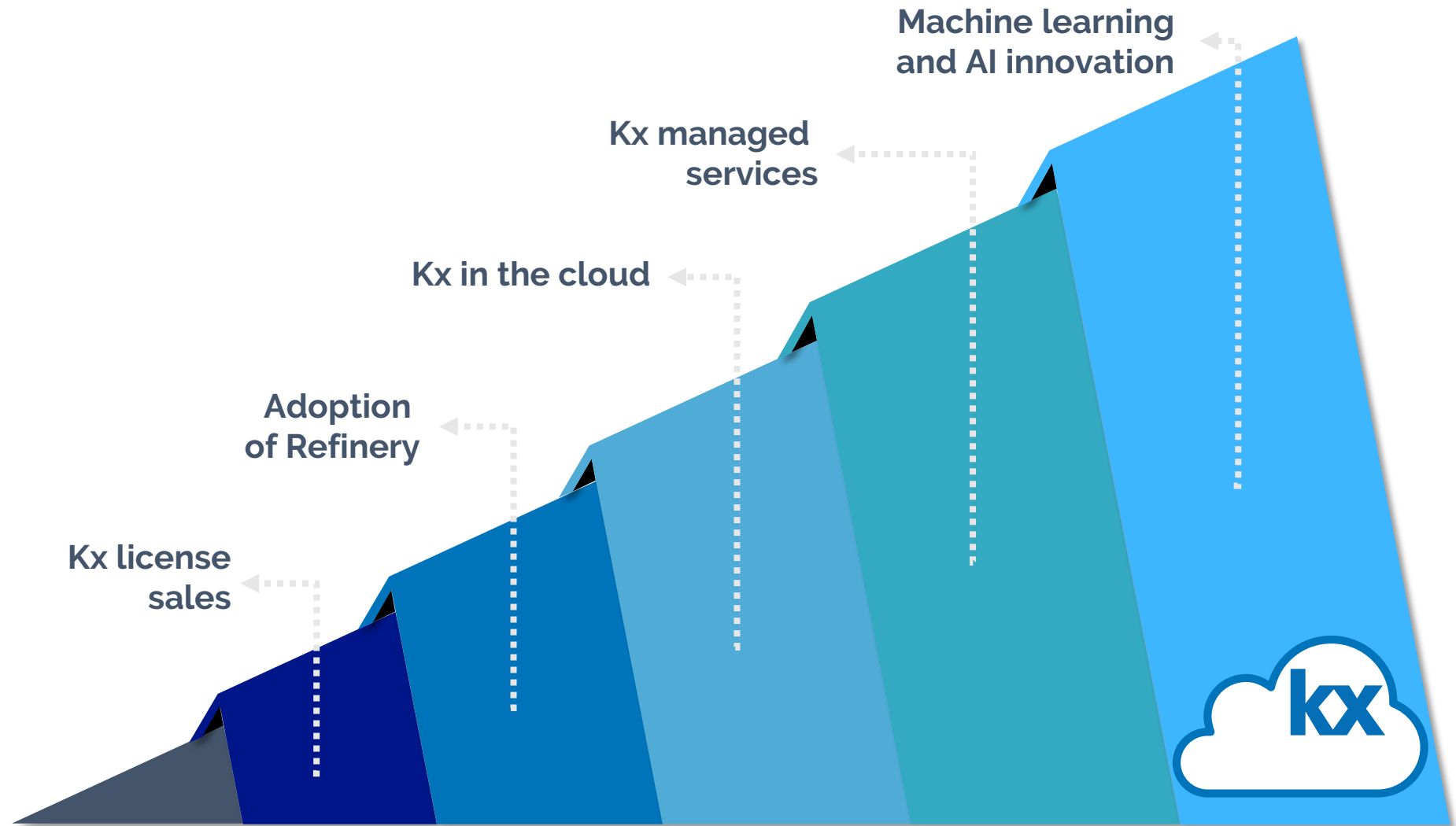
**Simplify Data Management
with Kx Data Refinery**



Matthew Hampson, Deputy Chief Digital Officer, Nomura

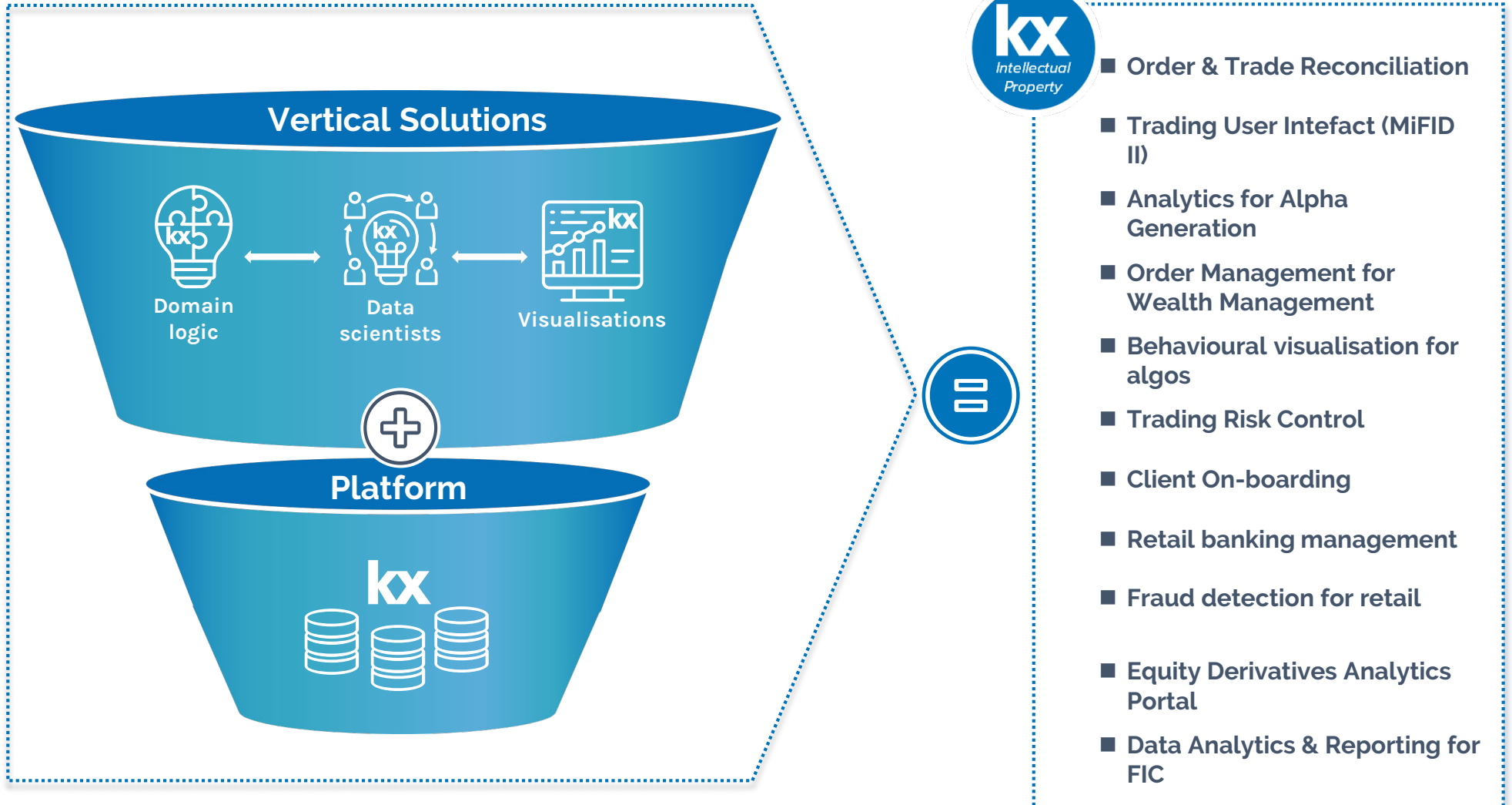


>> Kx in the cloud will drive continued strong growth

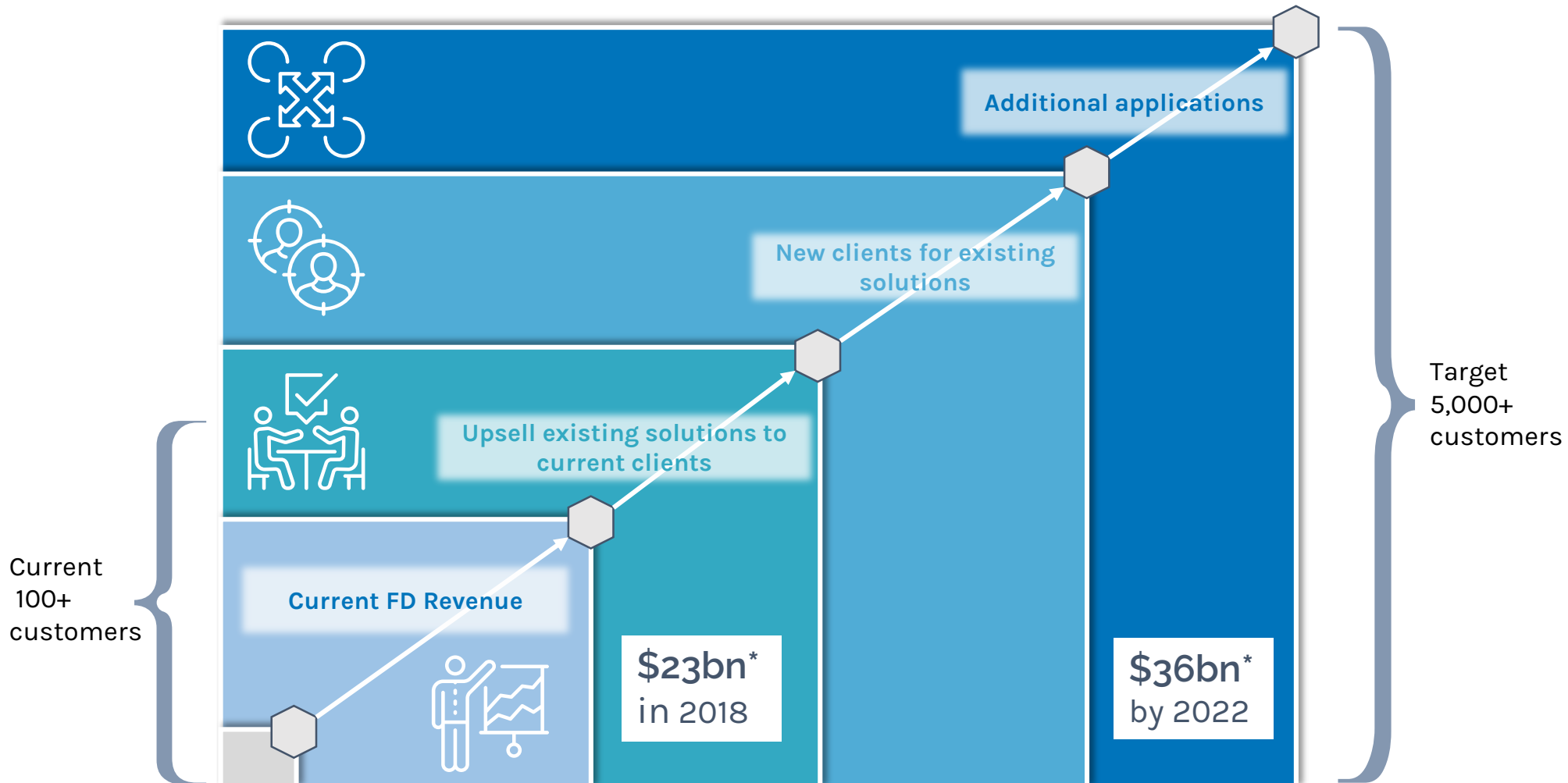




Potential FinTech applications



>> Massive expansion potential for Kx in FinTech



First Derivatives plc

Kx for Sensors Industrial Vertical

Hugh Hyndman
Director,
Industrial IoT Solutions



www.firstderivatives.com



>> Industry goals



Improve quality



Increase yield



Reduce scrap



Increase uptime



Lower costs



>> Data challenges to meet goals

-
- Traditional sources
 - New sources
 - Ingest non-stop
 - Increase frequency
 - Combine OT/IT
 - Store it all!

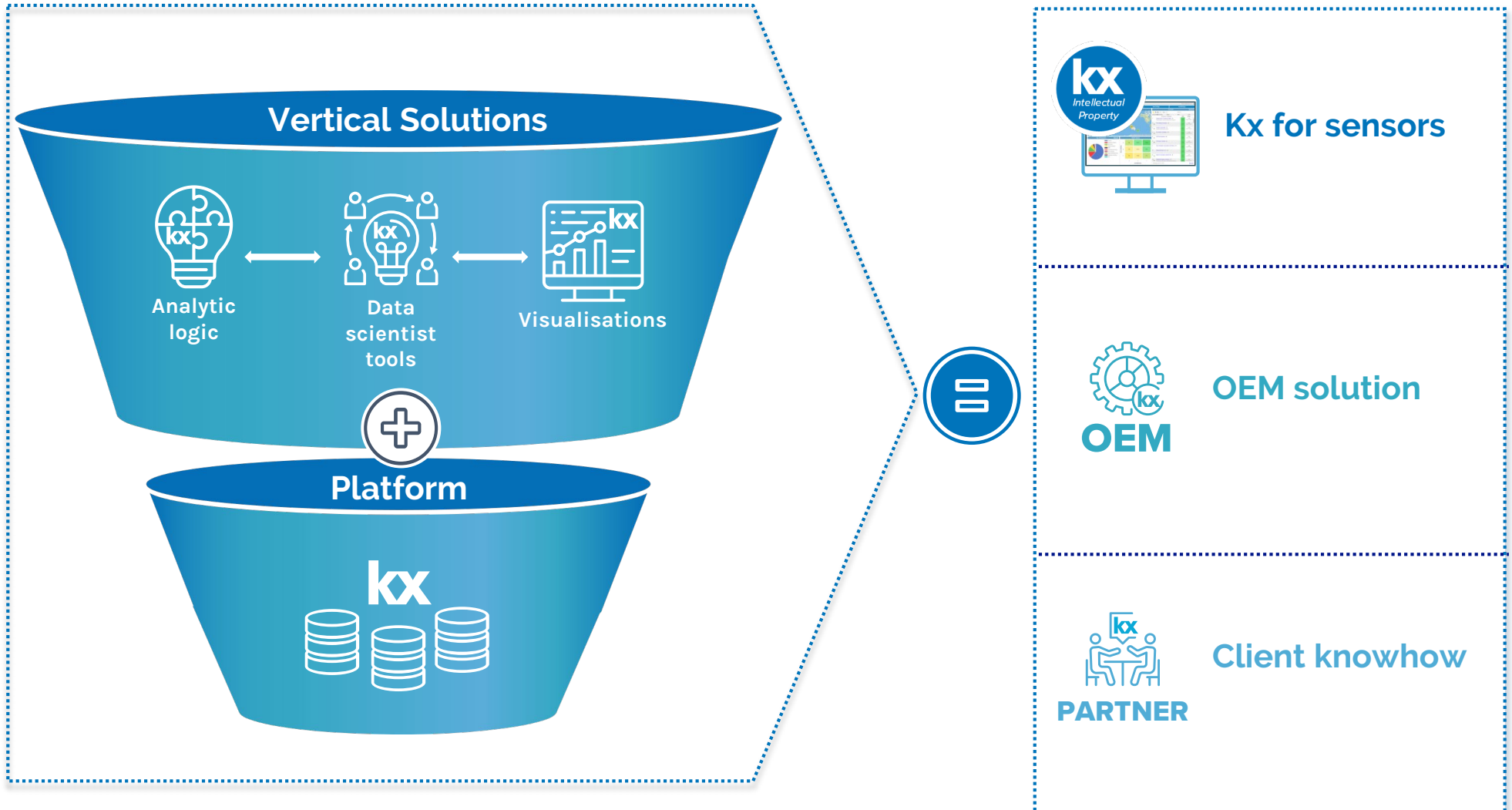
Increase the use of sensors



Increasing challenges for existing systems

- 
- Data frequency
 - Sensor variation
 - Low latency requirements
 - Data volumes
 - Data loss
 - Responsiveness
 - Data retention
 - Costs
 - Infrastructure

>> The answer – Kx for Sensors





Kx for Sensors - competitive advantages



Unmatched sensor data
volumes and queries

Scales horizontally and
vertically



Low-latency for process
control and predictive
analytics



Solutions for deployments
in factories, utilities or
cloud



Fault tolerant operations
(24 x 7)

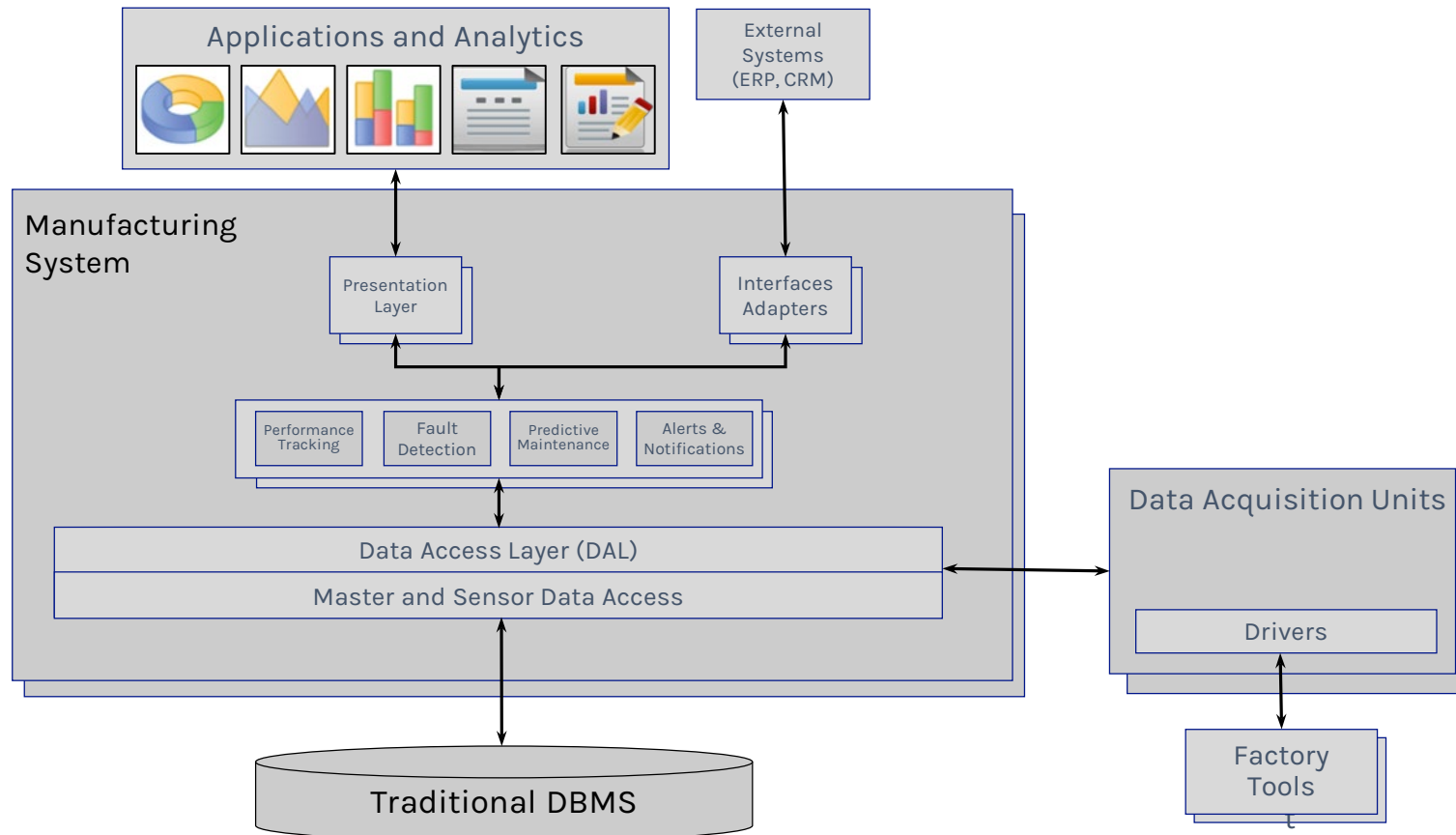


Simple integration with
existing systems

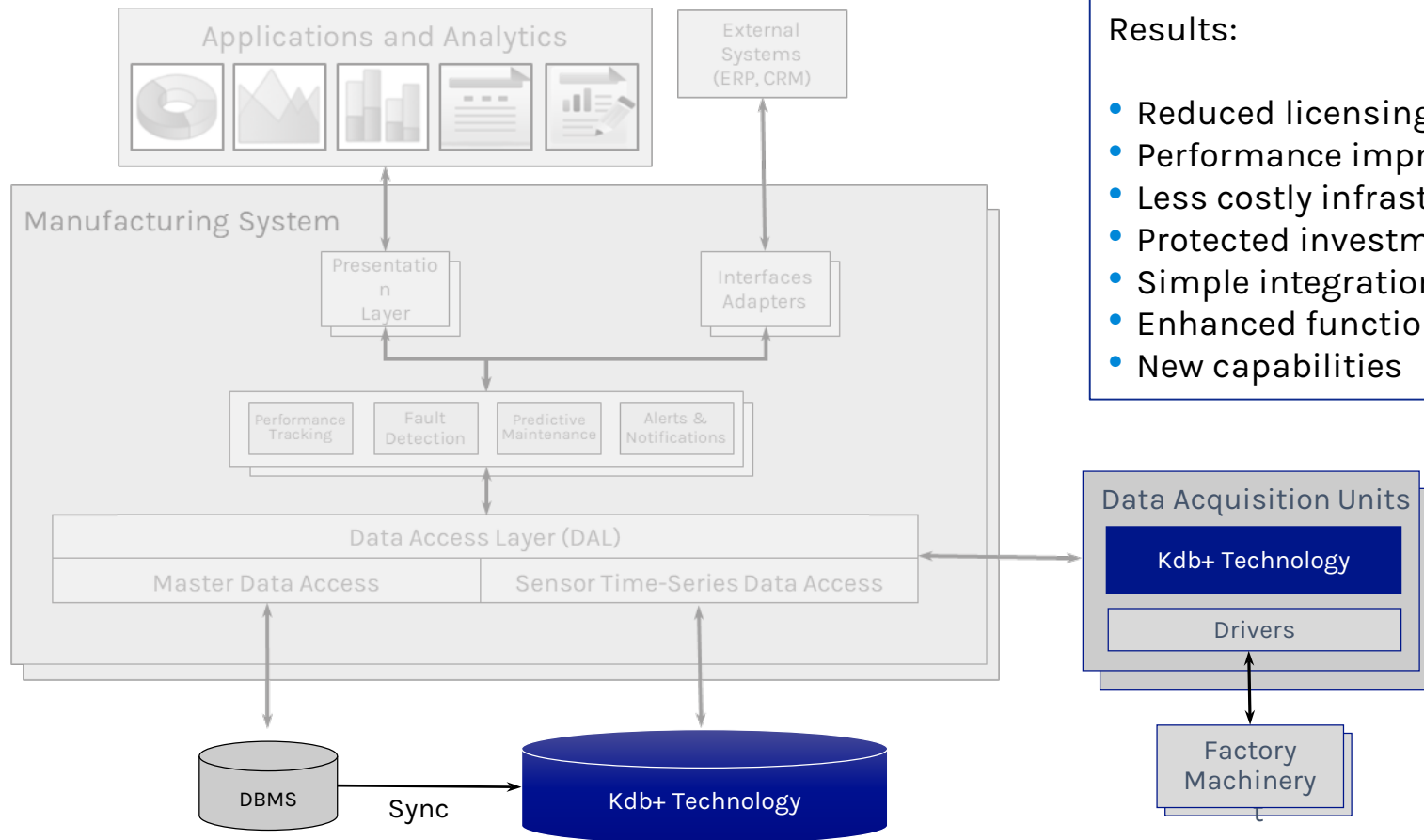




Existing Systems (before Kx for Sensors)



Existing Systems (after Kx for Sensors Integration)



Results:

- Reduced licensing
- Performance improvement
- Less costly infrastructure
- Protected investment
- Simple integration
- Enhanced functionality
- New capabilities



Powering factories and process control

Business Problem

A high-tech manufacturer of healthcare products needed a system to determine product quality in less than 100 milliseconds



Injection Molding Machine

Kx for Sensors Solution

1. Ingest data from 1000 sensors
2. Apply models to determine quality test
3. Control machine to accept/reject component

Results



Applied ML to
Quality checks



Enabled
Machine Control



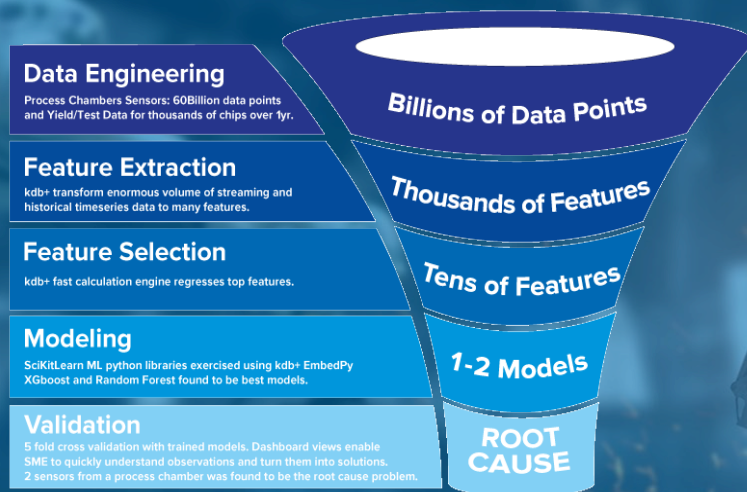
Improved
Product Quality



Machine learning to identify equipment issues

Business Problem

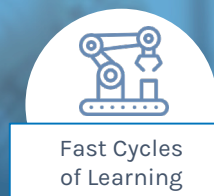
A semiconductor fab had a chronic yield problem originating from a complex films process



Kx for Sensors Solution

1. Extracted historical tool data
2. Provided dashboards for data visibility
3. Integrated ML tools
4. Provided Kx data scientists
5. Enabled quick analysis iteration
6. Identified small voltage variance in relay switch

Results

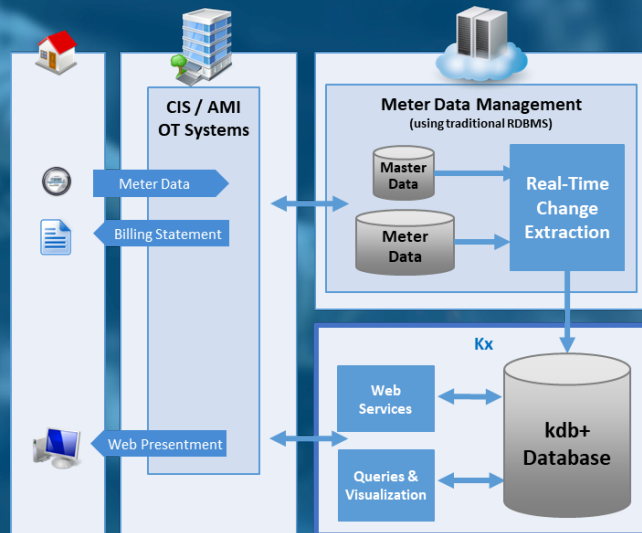




Seamless enterprise integration

Business Problem

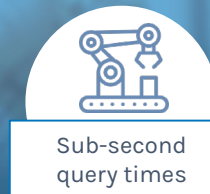
Challenge providing processed meter data to utilities in timely manner, with growing volume and variety of data retrieval and analytics requests.



Kx for Sensors Solution

1. Migrated 7 years of history
2. Supported millions of sensors
3. Trillions of data points
4. Established real-time OT synchronization
5. Exposed enterprise-wide web services
6. Enabled ad-hoc analysis
7. Improved response from days to minutes

Results

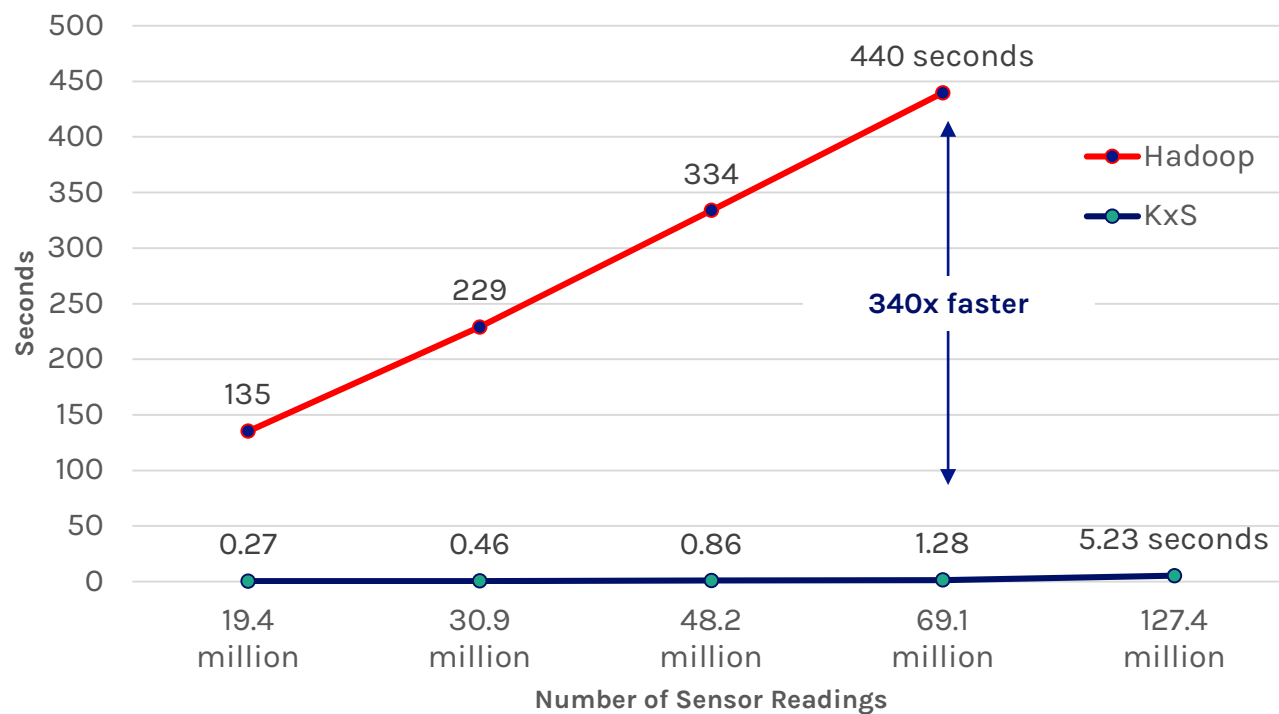


Provide access to smart meter data for utilities, end customers and third party application providers.



Kx for Sensors vs Hadoop

Historical Sensor Readings Queries



Note: Datastore of 60 billion sensor data points

Hadoop

Servers: 12

Memory: 128GB / 64GB

CPU: 24 cores each

**1/12 of the
Infrastructure**

Kx for Sensors

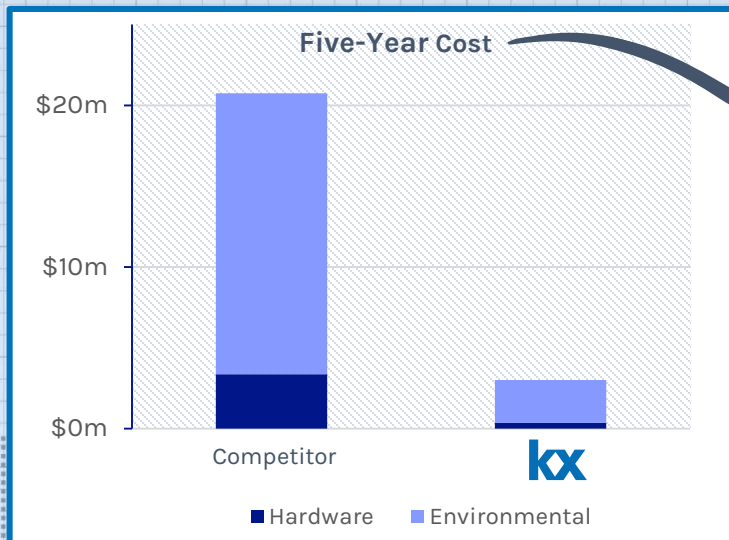
Servers: 1

Memory: 128GB

CPU: 16 cores



Kx for Sensors provides disruptively low TCO



Cost Savings vs Leading Competitor

Hardware

(including maintenance & support)

85%

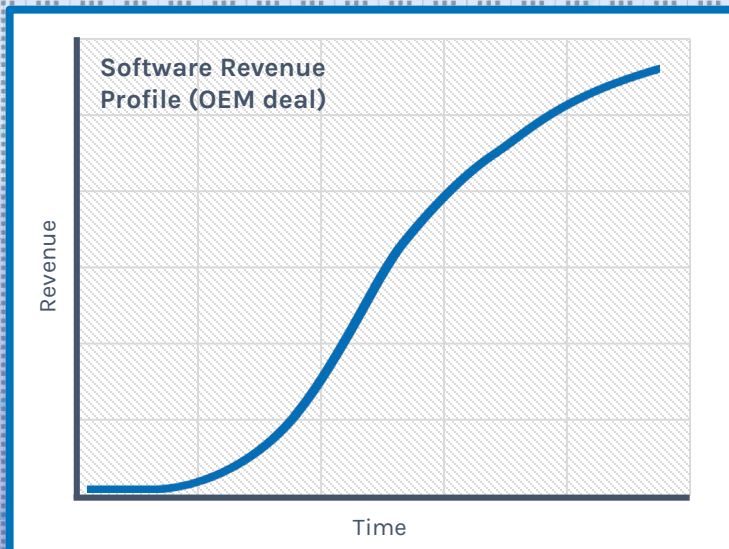
Environmental

(power, cooling, space)

90%

Data Volumes

- 5,000 tools (factory equipment)
- 3,000 sensors per tool
- 150 million sensor readings/sec ingestion
- 77 TB/day storage (compressed 15TB/day)
- Concurrent 1,250 queries/sec
- 6 months data retention (2.7 PB)





Recent OEM and contract wins



FORTUNE
500
Company

Division of a public equipment manufacturer – 250+ installations

- OEM agreement for rollout over the next 3 years to both their service organization and direct customers
- Kx for Sensors replaces well-known DBMS
- Most direct customers will require 9 months of testing before promoting to production systems. This is normal

BIS^Tel

South Korean smart manufacturing solution provider

- OEM agreement to embed Kx in their range of solutions for their global customer base
- Kx for Sensors replaces well-known DBMS
- First deployments expected during Q1 2019

Survalent.

Utility system management Solution provider

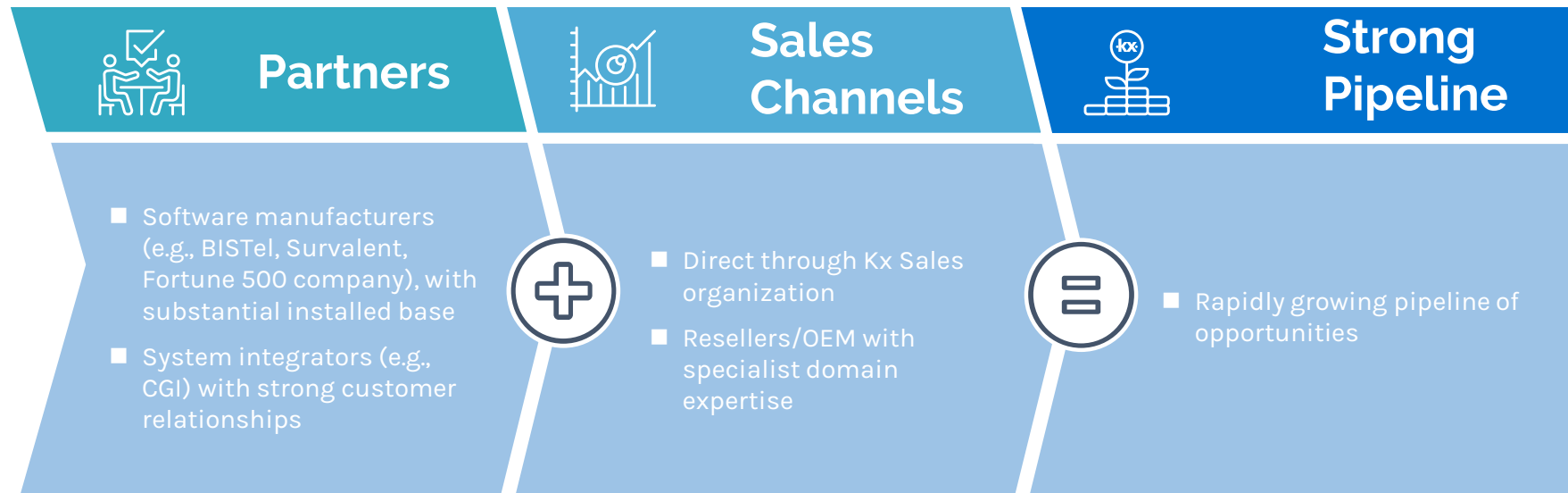
- OEM agreement to augment the functionality in Survalent's solutions
- Generates royalty-like revenue as take up begins across customer base of 600+
- Product launched to market at Distributech 2019 in January

FINGRID

National transmission system operator

- Partnership win in conjunction with CGI
- Kx for Sensors powering a next-generation electricity information exchange for Finland
- Challenges facing Fingrid replicated across the industry

Kx for Sensors / Industrial Vertical



\$34bn*
in 2018

Manufacturing market scale

\$54bn*
in 2022

Source: IDC 2018 Worldwide Semiannual Big Data and Analytics Spending Guide (August 2018)

First Derivatives plc

MarTech

Kevin Cunningham
President, MRP Prelytix



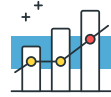
www.firstderivatives.com



Evolving B2B Buyer Journey

- Evolving buyer pattern changing the way enterprises sell
- 98% of B2B buyers research online before buying
- 50% of sales go to the first sales contact

\$3.5bn*
in 2018



End-to-End ABM Delivers Return on Predictive Output

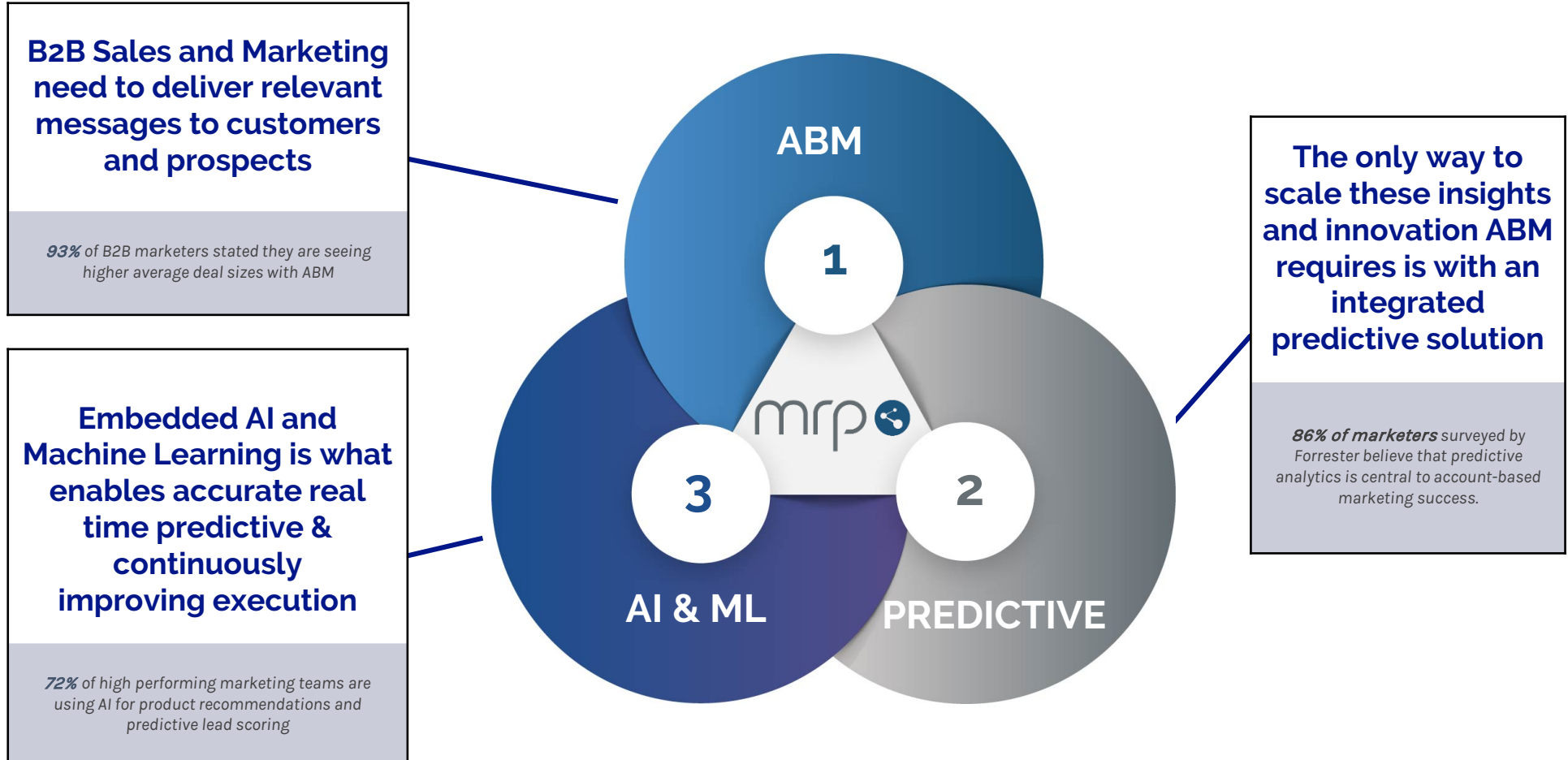
- Aligns marketing and sales team to target high potential clients
- Market need for proven solutions – today, only 9% of marketers have the proper tools for successful ABM strategies
- Sellers are challenged to meet the complex demands of B2B buyers



Predicting Buyer Intent

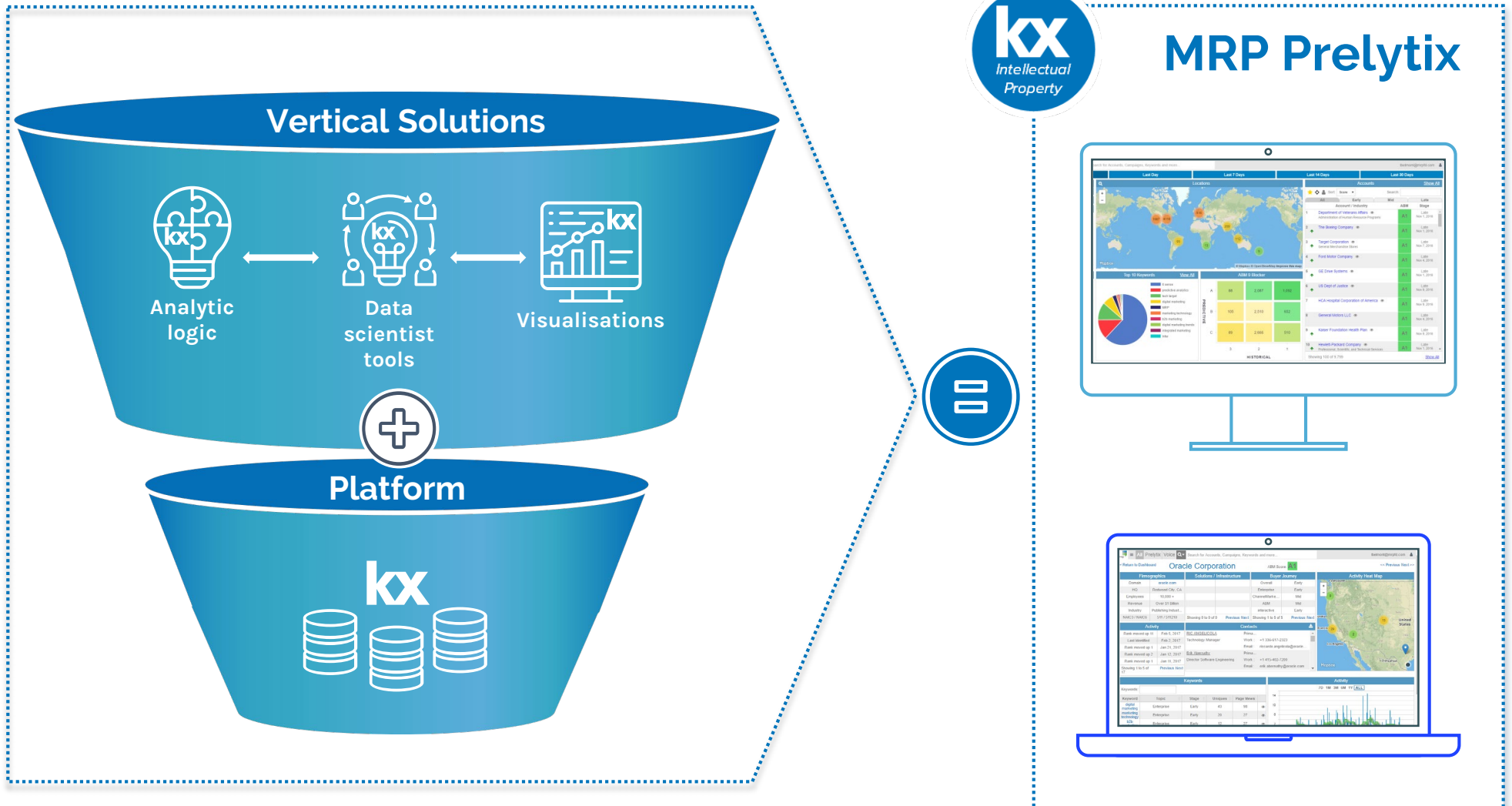
- The adoption of B2B predictive analytics in marketing is growing quickly
- Predictive expected to grow 27.4% CAGR from \$3.5bn to \$12.4bn in 2022
- Pulling through predictive output is the challenge

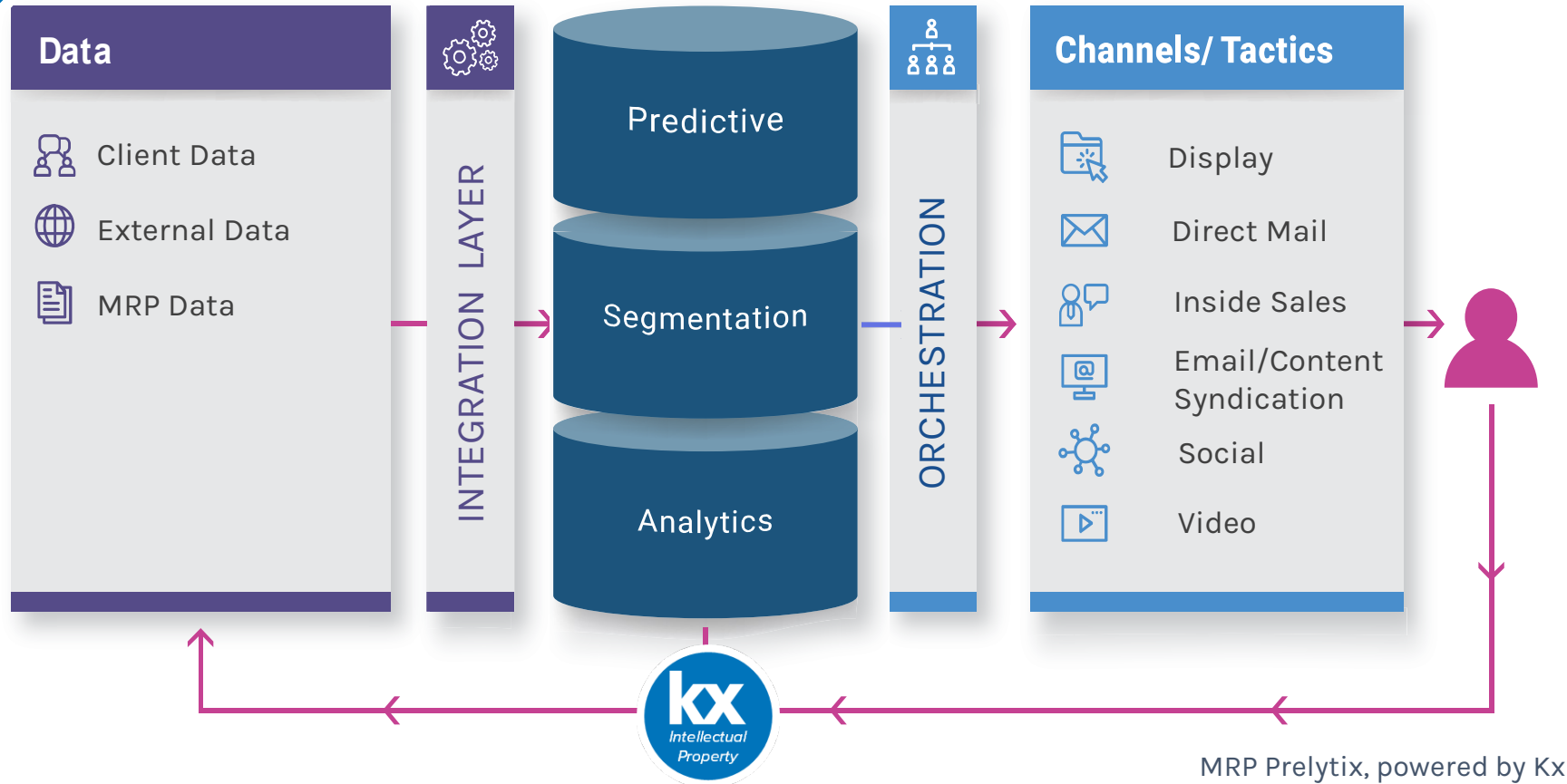
\$12.4bn*
by 2022





Kx for MarTech - MRP Preltyx







Data



Client Data



External Data



MRP Data



Client Data

- Website visits and content consumption
- CRM
- Marketing Automation
- Current customers
- Client Surveys/Feedback

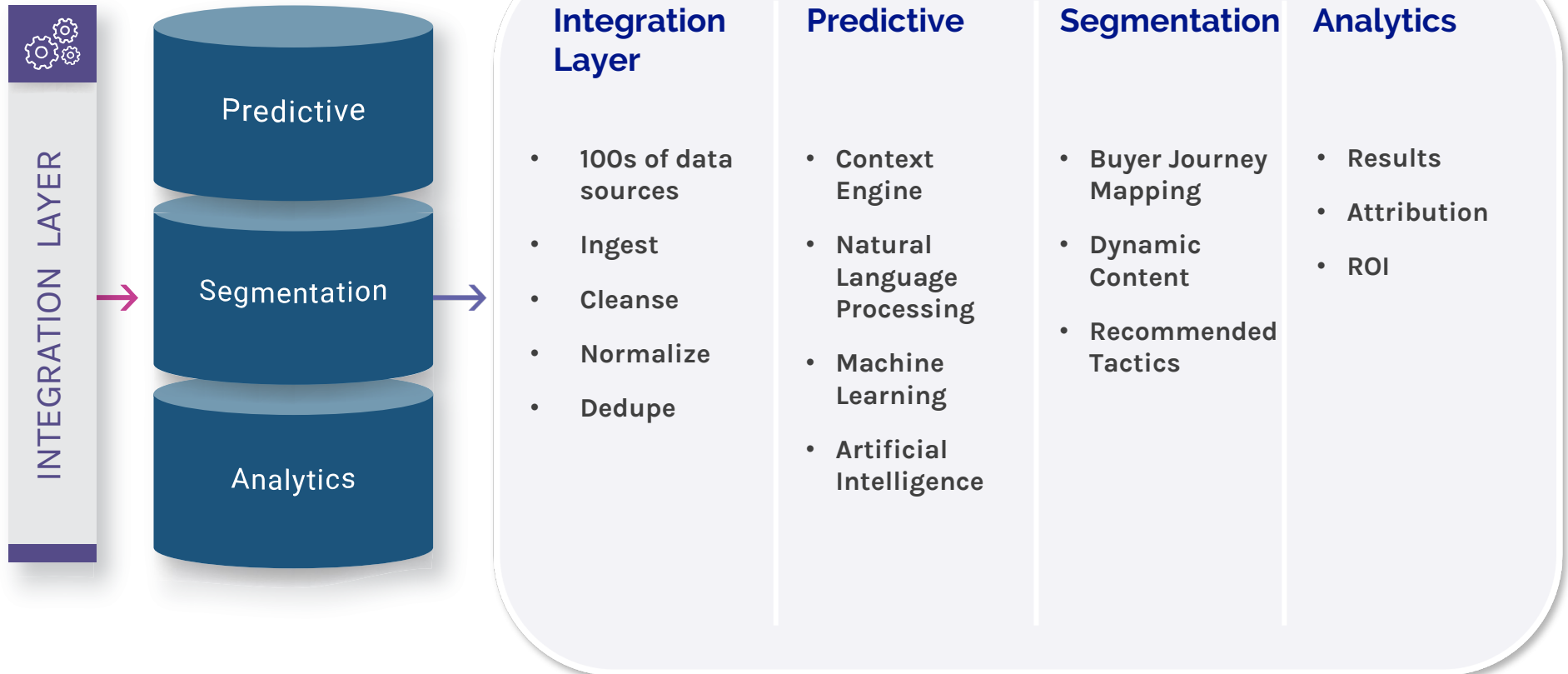
MRP Data

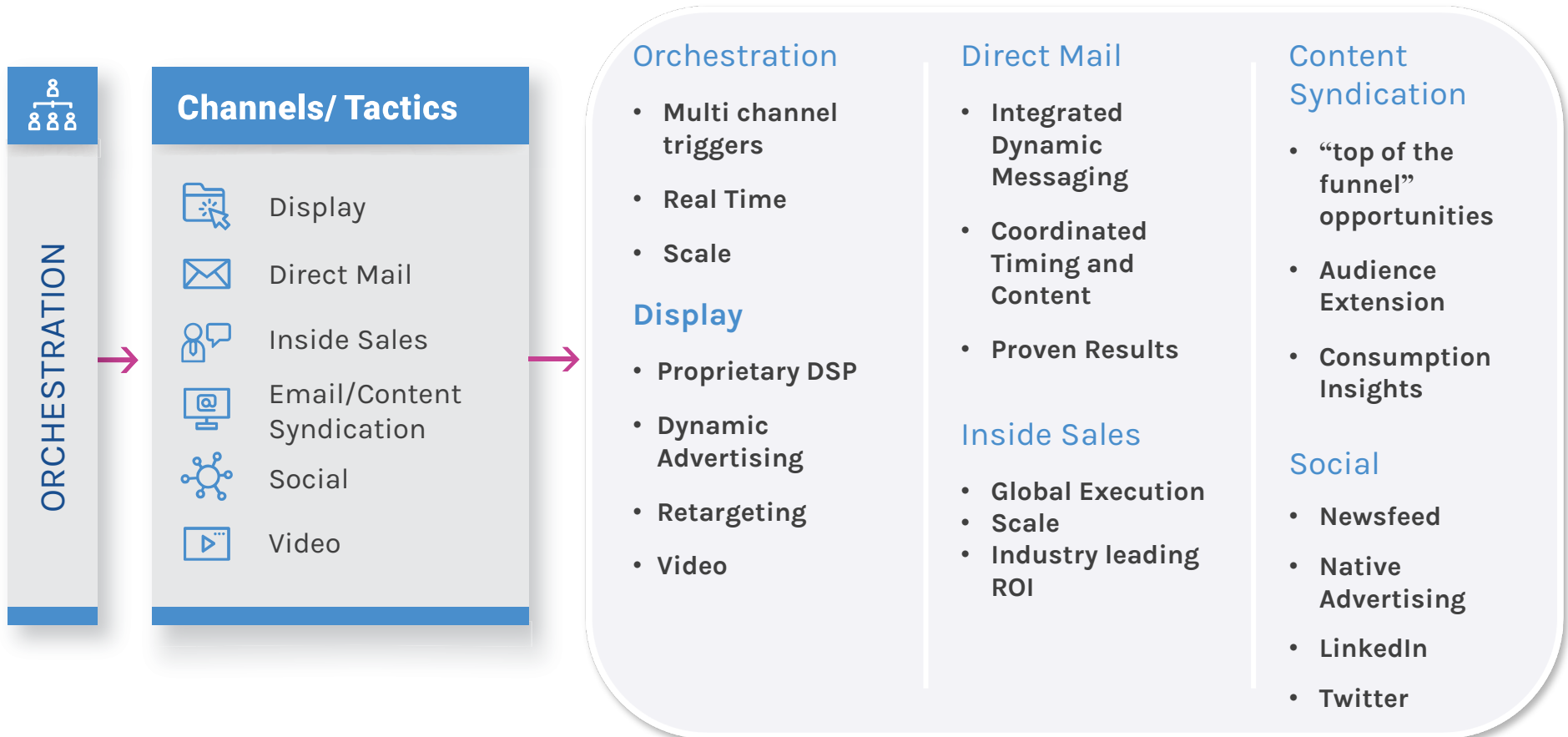
17 years – marketing execution

- Contact ability
- Firmographic
- Technographic

External Data

- Ad Impressions from DSP's
- Web Scraping
- News Articles
- Events
- Social







MRP named a leader in Forrester ABM wave



Forrester New Wave™: ABM Platforms, Q2 2018



Why MRP was named an ABM Leader:

- The most experienced, largest geo footprint, and is among the largest revenues of all ABM Platforms
- Success with sophisticated enterprise customers
- Unique ABM platform with actionable insights baked into the core, allowing clients to quickly action the highest value, truly personalized tactics in their ABM program
- Ultimate focus on Client Revenue Impact

“MRP *leads* with *AI-powered insights*, orchestration, and engagement. MRP leverages its *legacy in predictive analytics* to [...]create and execute *dynamic engagement* workflows.”

—FORRESTER®

>> Marquee client base



Key Metrics ⁽¹⁾:



Note: (1) Based on information as of 31/08/2018

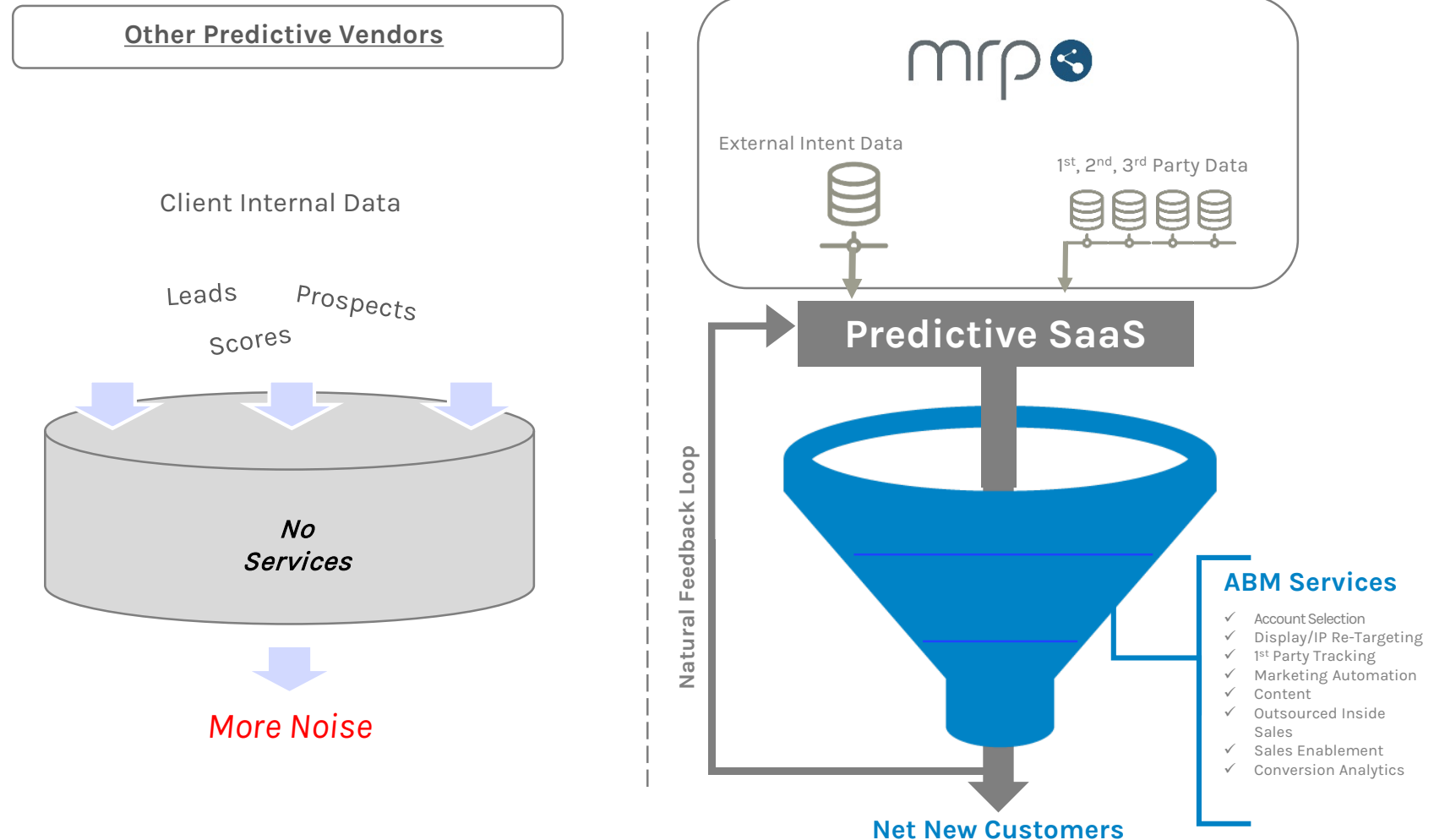
Competitive differentiation

| | competitor 1 | competitor 2 | competitor 3 | MRP | competitor 4 | competitor 5 | competitor 6 |
|----------------------------------|---|---|----------------------|---|---|--|--------------------------------|
| Expertise | Predictive analytics and data management platform | Predictive analytics and data management platform | Intent data provider | End-to-end Account-Based sales and marketing platform | Account-Based display advertising and sales enablement platform | Account-Based display advertising platform | Demand Marketing Orchestration |
| Global Operations | ✗ | ✗ | ✓ | ✓ | ✓ | ✗ | ✗ |
| Company Size (employees) | 142 | 98 | 104 | 650 | 321 | 169 | 196 |
| Insights | | | | | | | |
| Predictive Analytics | ✓ | ✓ | ✗ | ✓ | ✗ | ✗ | ✗ |
| Intent | ✗ | ✓ | ✓ | ✓ | ✓ | ✗ | ✗ |
| Data Management (CDP) | ✓ | ✓ | ✗ | ✓ | ✗ | ✗ | ✓ |
| Real-Time Data Processing | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✗ |
| Lead Management (L2A) | ✓ | ✓ | ✗ | ✓ | ✗ | ✗ | ✓ |
| Execution | | | | | | | |
| Multi Channel Orchestration | ✗ | ✓ | ✗ | ✓ | ✗ | ✗ | ✓ |
| Triggered, always on programs | ✗ | ✓ | ✗ | ✓ | ✗ | ✗ | ✗ |
| Full Funnel | ✗ | ✓ | ✗ | ✓ | ✓ | ✓ | ✗ |
| Channel - Display Ads | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ | ✓ |
| Channel - Content Syndication | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✓ |
| Channel - Direct Mail | ✗ | ✓ | ✗ | ✓ | ✗ | ✗ | ✗ |
| Channel - Inside Sales | ✗ | ✓ | ✗ | ✓ | ✗ | ✗ | ✗ |
| Analytics | | | | | | | |
| Cross-Platform ABM measurement | ✓ | ✓ | ✗ | ✓ | ✗ | ✗ | ✓ |
| Revenue attribution | ✗ | ✗ | ✗ | ✓ | ✗ | ✓ | ✓ |
| Cross-Channel impact measurement | ✗ | ✗ | ✗ | ✓ | ✗ | ✗ | ✓ |



Competitive differentiation

- MRP Preltyix, powered by Kx, makes sense of predictive big data in real time





Single stack accelerates development and simplifies support



mrp Prelytix Solution

Vertical Solutions



Platform



1

server

Typical number of servers deployed

100s

1

database

Unstructured and structured data

Multi

1

team

Speed of development

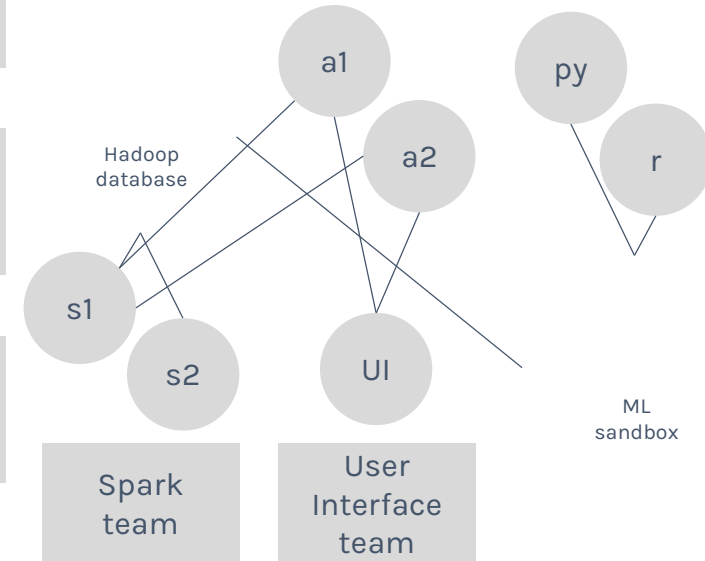
Many

Competitors

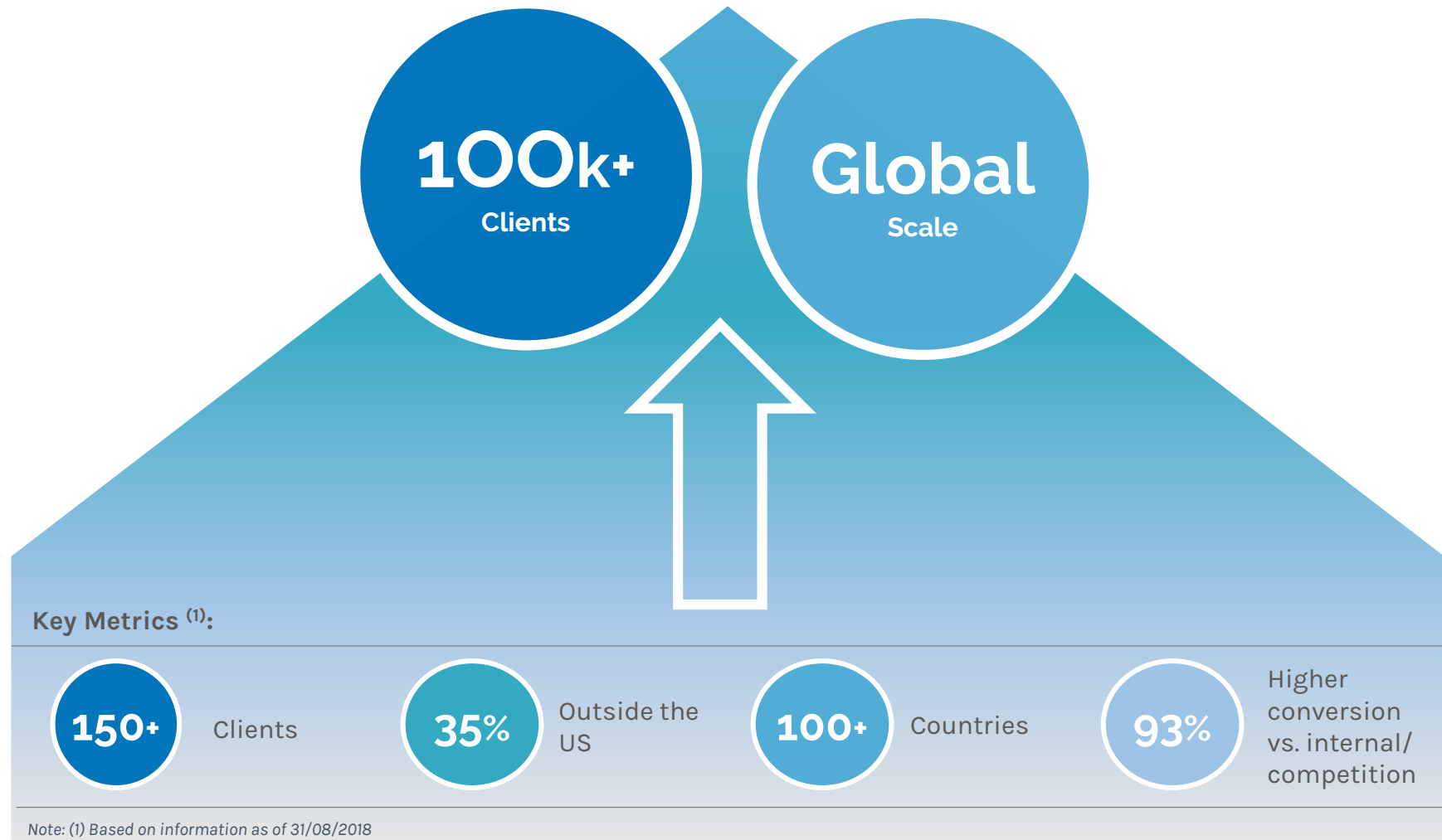
Hadoop team

Application team

Machine Learning Team



Potential :



First Derivatives plc

Sales strategy

Pat Brazel
Chief Commercial Officer



www.firstderivatives.com



FinTech: the route to market leadership



Kx technology

- Storage and analysis of high frequency time-series and streaming market data
- Enterprise platform
- Applications that provide competitive advantage and insight for clients



First Derivatives

- Deep capital markets expertise
- Sales energy
- Implementation, support and development



Kx is the market standard and sustains that advantage through constant investment and focus



FinTech: expanding opportunities



FinTech Expanding Opportunity

Streaming, high-frequency time-series data is becoming a mainstream challenge for banks, exchanges and regulators

Demand also growing in adjacent markets such as gaming and retail banking for:

- Fraud detection
- Anti-money laundering
- Bet-in-play markets



*Consolidating our market position while
expanding the market opportunity*



FinTech success: more than technology



Global customers
as references and case
studies

While we have some partnerships, our sales strategy is predominantly a direct sales model delivering over \$100m of revenue at current run rate



Local teams with local
relationships and domestic
domain knowledge

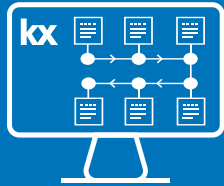


Ever deepening subject
matter expertise

Our USP,
the barriers to entry
and overall competitive
advantage grows



FinTech: 2019 pipeline focus



Surveillance



**Data
Refinery**



**Consolidated
Audit Trail**



**Machine
Learning**



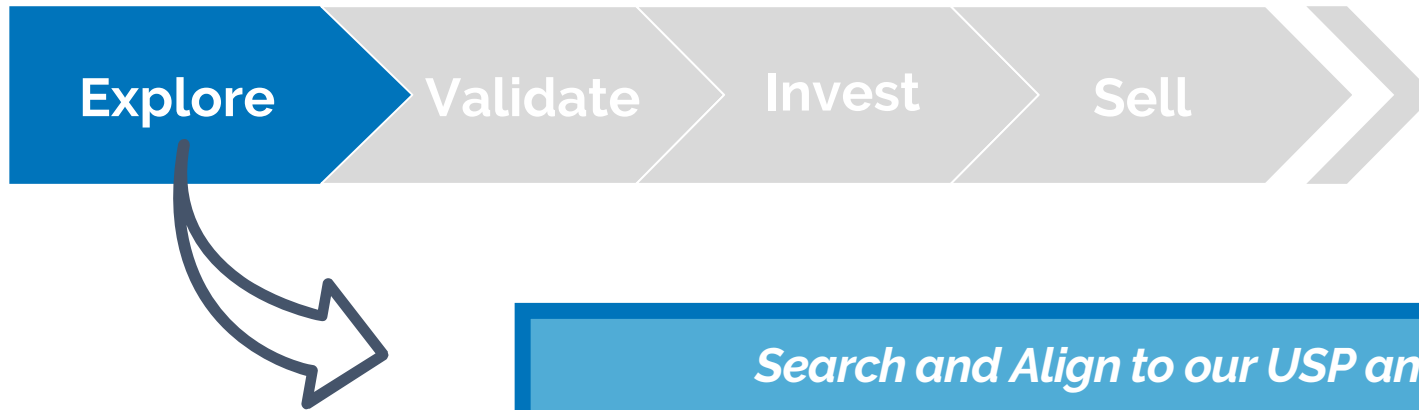
The opportunity

Volumes are exploding
Velocity is accelerating
Streaming, time-series
data is everywhere

Identifying the best markets

- Where do we have unique advantages?
- What order of magnitude is that advantage?
- Faster, cheaper?
- Enabling entirely new capabilities

In what sectors does that advantage generate value for our customers?



Search and Align to our USP and Value Add

- ▶ Business development in a broad range of verticals to identify early adopters
- ▶ Campaign with experienced In house lead generation teams armed with potential use cases
- ▶ MRP Preltyx to identify organisations already in “search and buy” mode

The goal:

- 1) Identify sectors which best satisfy the our criteria of **USP** and **Value**
- 2) Identify **external drivers** which accelerate early purchase decision



The first step to a commercial relationship

- ▶ PoC with real customer data - ideally but not necessarily paid for
 - Remove doubt
 - Build relationships
 - Develop domain expertise
 - Establish BANT
 - And if necessary Fail Fast
- ▶ Experienced PoC teams in Ireland and Canada
- ▶ Over 50 PoCs in the last 12 months
- ▶ History of success - almost all of our closed business involved an initial PoC



Pursue partnerships to increase capability and market opportunity

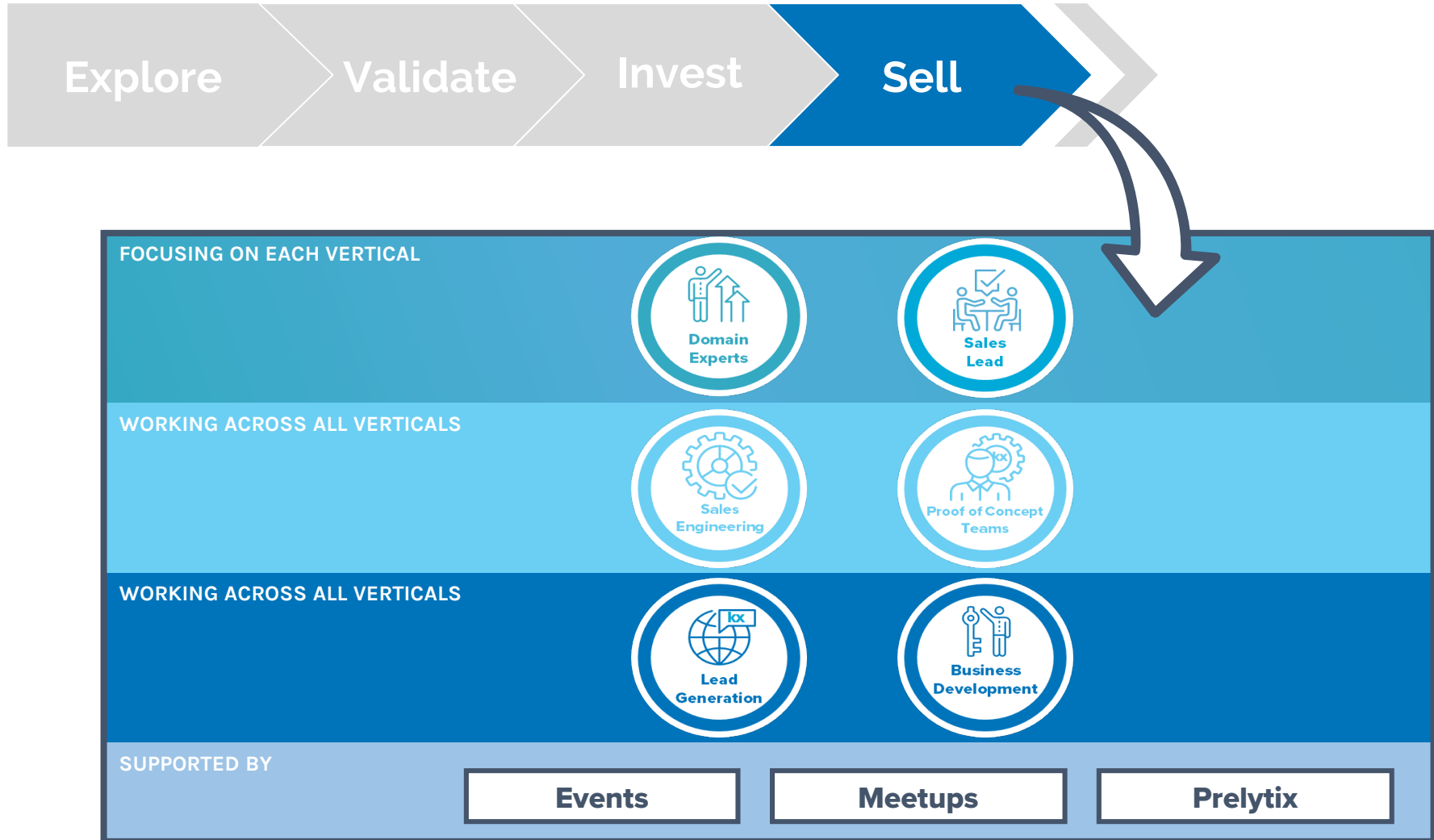
OEMs who embed our technology in the products

- Bistel
- Fortune 500 company
- Utilismart
- Survalent

Systems Integrators who resell our Technology

- CGI
- App Orchid

Rich Pipeline of new partners
in Cyber, Defense and Telco and Manufacturing





Finding domain experts and sales talent to exploit identified opportunities globally



Steve Forsythe
Head of Sales EMEA
Industry

Steven is an experienced director with a track record of achievement leading sales teams in telecoms, technology and software product markets.



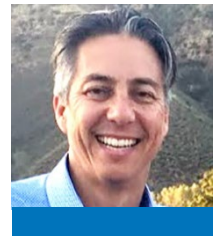
Kris Inapurapu
SVP, Silicon Valley

Kris is currently VP of Corporate and Business Development. Kris is responsible for growing the company's business in Silicon Valley and the broader West Coast region.



Przemek Tomczak
SVP, IoT & Utilities

Przemek has over 24 years IT and business leadership experience, implementing and operating big data analytics systems, transformation initiatives, consulting, outsourcing and risk management in the energy and utility industries.



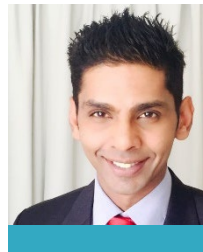
Bill Pierson
Semiconductors

Bill Pierson leads the Semiconductors and Manufacturing vertical as Vice President. Based in Austin, Texas, Bill held senior roles at Samsung, ASML and KLA. He has extensive experience in front-end manufacturing, process control and analytics.



Takeshi Tanimoto
Head of Sales Japan
Industry

Takashi oversees industry solutions and business development in Japan. He has over 20 years' experience in the enterprise software industry.



Neeraj Maskara
Head of Sales APAC
Industry

Neeraj is responsible for sales and business development across Asia. He has 20 years of experience in enterprise technology and a decade of experience delivering complex data management solutions.

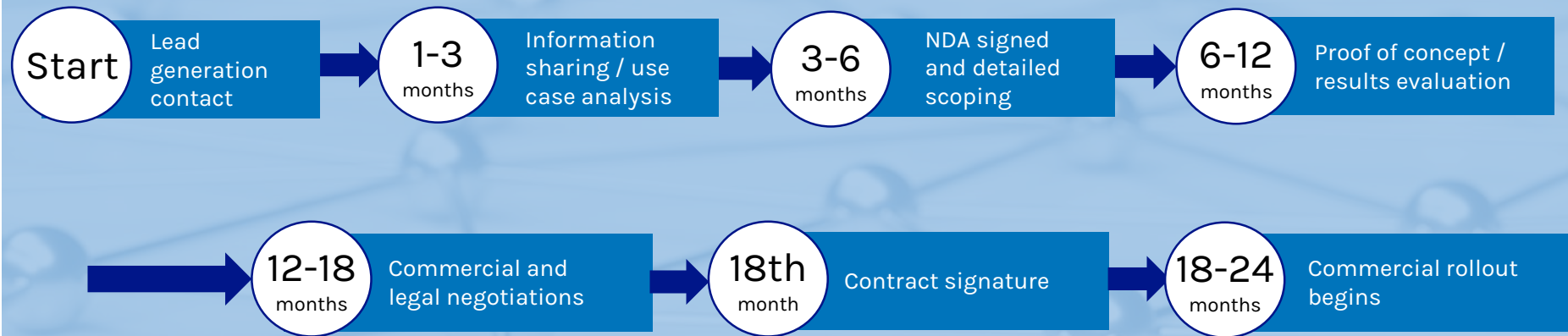


Paul Colgan
SVP, Telco

Paul has more than 10 years of senior management experience in both private and public multi-national tech companies. He joined FD as Head of Telco in Sept 2018.



>> OEM / major contract sales lifecycle in new vertical

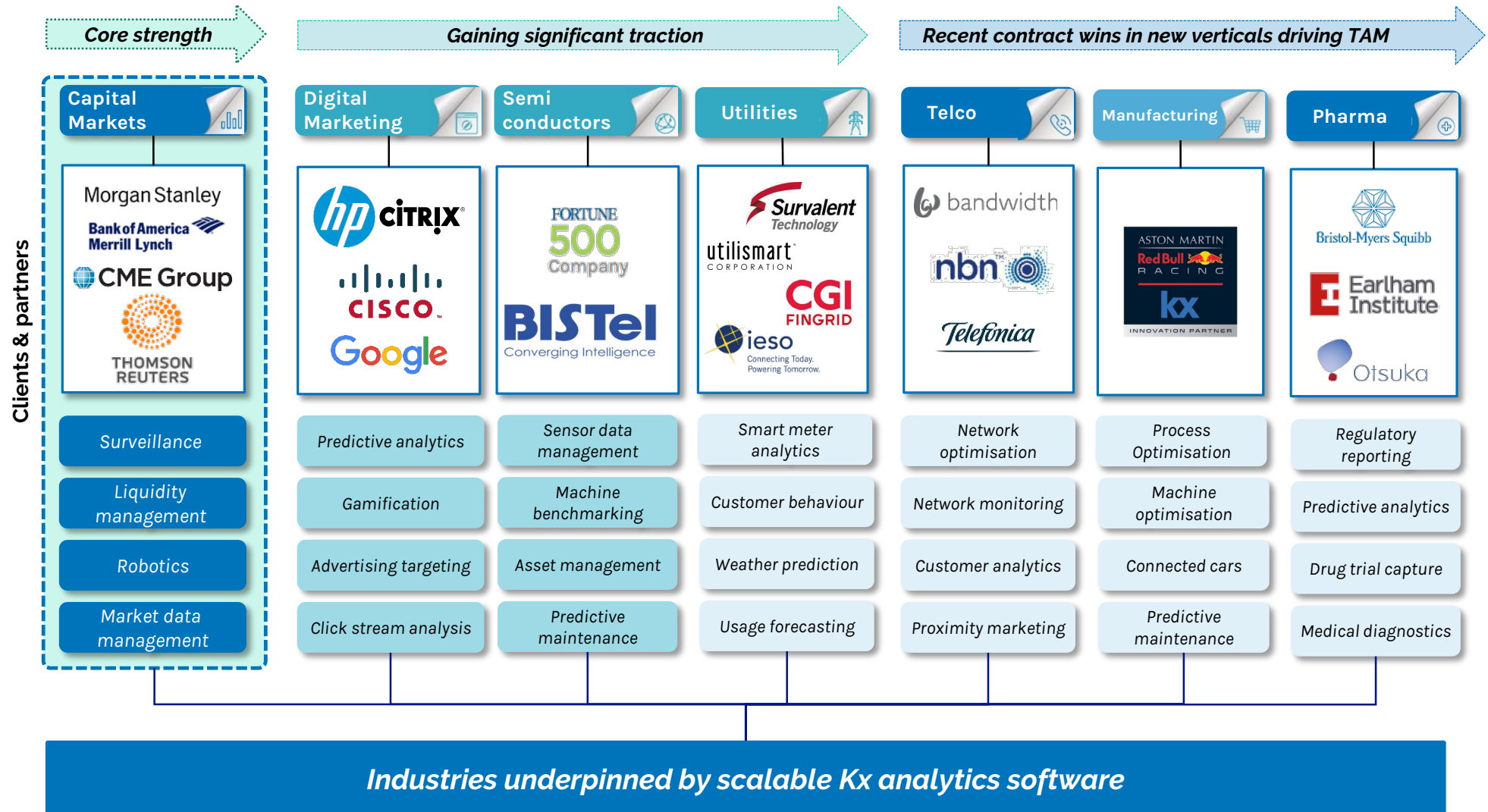


Subsequent contract lifecycles are expected to shorten as use cases become more defined and technical understanding increases

More than 50 Proofs of Concept completed in past 12 months



Expansion into new verticals increasing TAM





Growing the Kx ecosystem to drive revenue



Drive long-term, high margin software revenues by promoting Kx as a disruptive technology across multiple industries



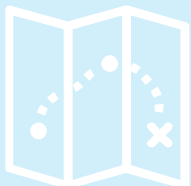
A range of initiatives geared to academia and designed to showcase our technology

We are building strong alliances with key industry players to leverage their brand and global sales reach



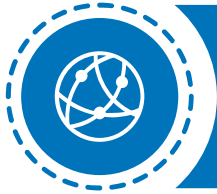
We bring the technology and our high-potential partners bring domain expertise. Together, we can deliver solutions to market fast

Working in partnership with leading organisations to provide innovative, new commercial products and services

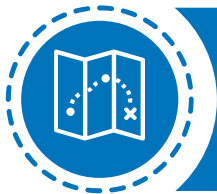




Pillars of success



Established market
standard for streaming
time-series technology



Established market
penetration process



Experienced and
motivated people



First Derivatives plc

Wrap up

Brian Conlon, CEO



www.firstderivatives.com



Where are we today?



Own the world's most performant time-series database technology



Opening up valuable new markets for sensor analytics across utilities, manufacturing and automotive



Established presence in FinTech and MarTech - combined \$150m revenue run rate



Growing opportunities resulting from increasing awareness of Kx across the technology industry



Priorities for FinTech



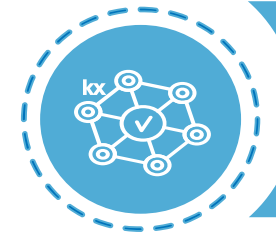
Cloud strategy

Supporting our clients as they transition their businesses



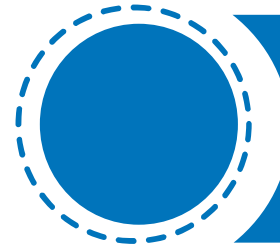
Kx Data Refinery

Helping our clients deploy a strategic data management solution to reduce complexity



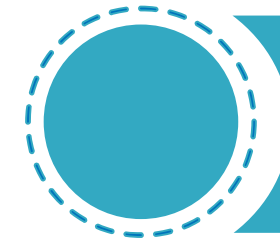
Growing applications

Using our domain expertise to promote existing applications and launch new solutions



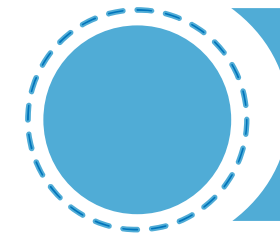
Growing subscription revenue

Making MRP a core element of our clients' sales and marketing strategy



Growing customer spend

Building out the functionality of the MRP platform



Opening new verticals

Extending our presence beyond global tech into other markets

>> Building on utilities and manufacturing successes



Deliver on our contract wins and partnerships to deliver revenue growth



Further develop our technology and domain partnerships



Use our reference client wins to continue to build our pipeline



Build applications for common problems across industries



Developing new vertical markets



Promoting awareness of Kx's performance capabilities across the technology industry



Constantly evaluating entry into new markets based on Kx's level of competitive advantage and size of addressable market



Evaluation process includes feedback from R&D and sales & marketing teams, proofs of concept and domain experts (internal, venture companies and technology partners)



Horizontal market opportunities





Research and development focus



Maintaining Kx's lead in performance and TCO



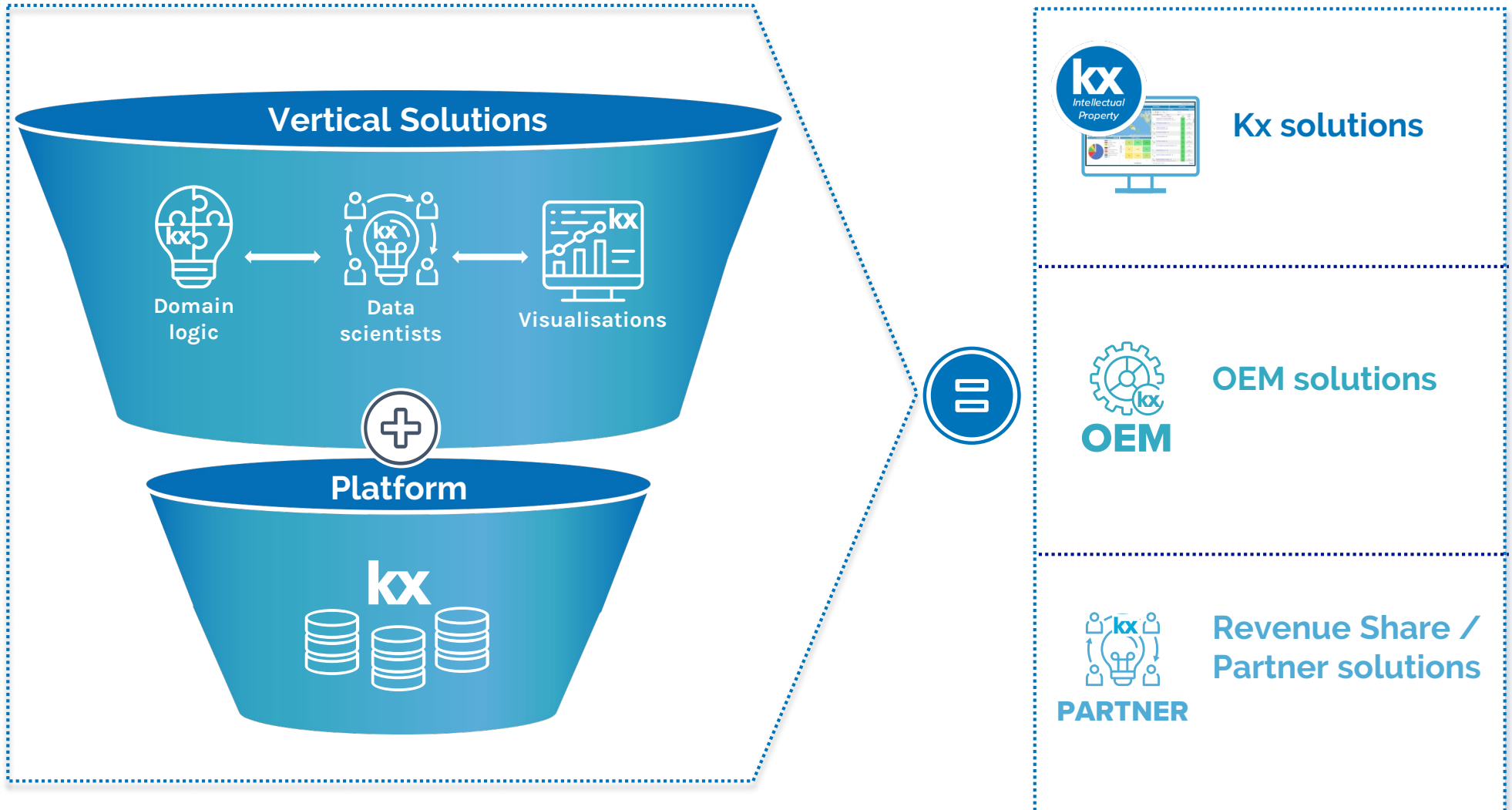
Making Kx easier to adopt and work with for partners and customers



Positioning Kx to benefit from industry developments e.g. AI and hybrid cloud



Single Unified platform - Building IP assets



Software TAM progression

Target clients 2015



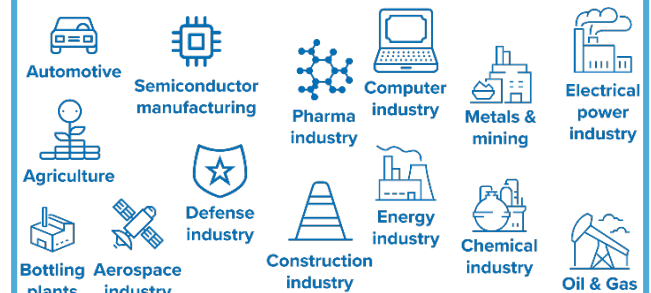
Focus on Financial Services

Target clients 2017



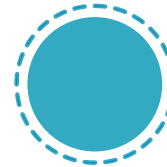
Adding MarTech Potential

Target clients 2019

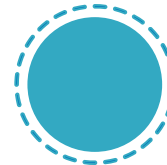




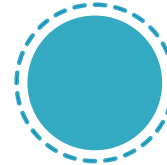
Our strategy is unchanged:



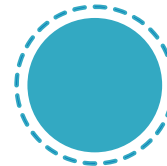
Continue to exploit Kx's leading position in FinTech and see the cloud and regulation as key growth drivers



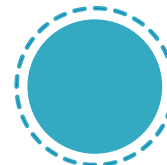
We see considerable scope in other markets and will focus on adding domain expertise through partnership and OEM agreements



Our ventures program is key to driving wider understanding of our technology and industry leadership



We will continue to invest to build our market position, focusing on long term recurring revenue growth



We have a lot to do but are very excited by the opportunities in our pipeline

Q & A

“ Understanding where you are and where you want to be; learning together; and remaining flexible and adaptable in implementation



First Derivatives plc

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For more information please contact us via our website or the above numbers