Insights-driven Businesses – The next frontier in the data journey

Featuring

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Michele Goetz
Principal Analyst
Forrester Research

AEROSPIKE

Srini Srinivasan
Co-Founder /
Chief Development Officer

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Agenda

- **Forrester Research** on System of Insight
- **Aerospike** on Data Architectures required for Insights-driven Businesses
- Discussion
- Q&A

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Insights-driven Businesses

The next frontier in the data journey

Michele Goetz, Principal Analyst

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What You Will Learn

- The anatomy of System of Insight
- The data architecture to derive real-time actionable insights
- A few key enterprise business cases that can derive benefits

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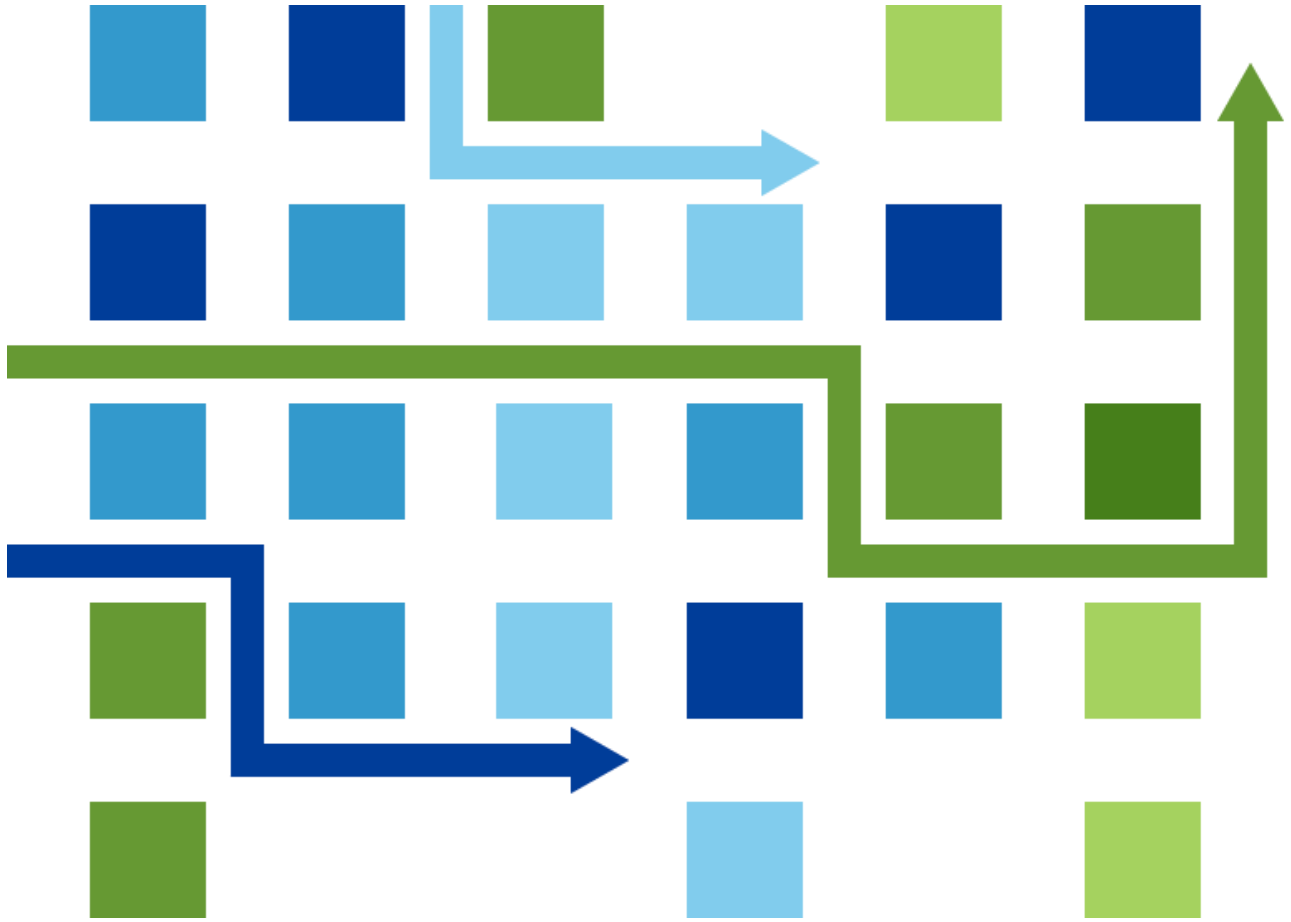

61%

Companies expanding their digital investment

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Digital forces enterprises to be Insight-Driven

Insights-Driven

Data-Driven

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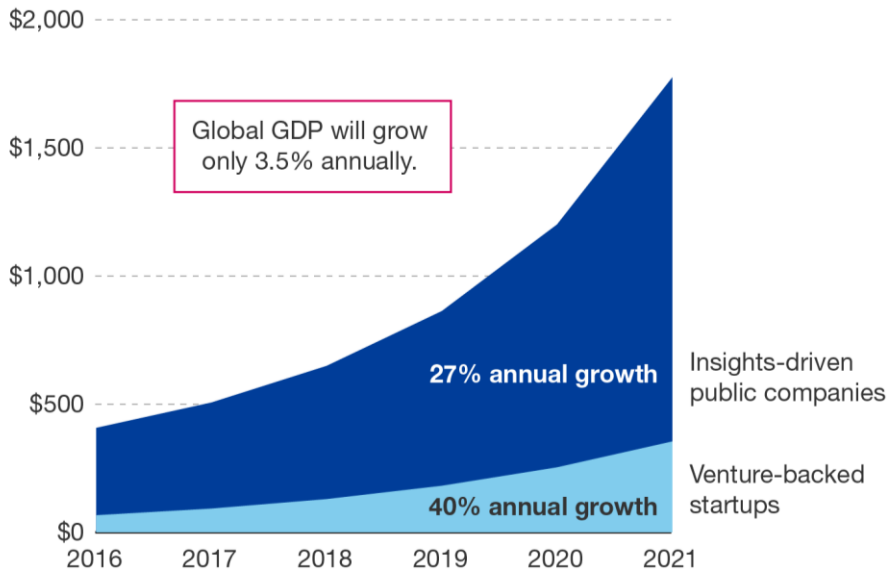
Insights-Driven Business Will Grow Eight To 10 Times Faster Than The Global Economy

Revenue forecast of insights-driven businesses
($ billions)



Note: The data point for public companies in 2016 is actual revenue; all other data points shown are estimates or projected figures.

Source: Economic Intelligence Unit, Morningstar, and PitchBook Data

130848 Source: Forrester Research, Inc. Unauthorized reproduction, citation, or distribution prohibited.

Source: “Insights-Driven Business Set The Pace For Global Growth”

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Unilever achieves 2-4% uplift in revenue in 2 cities

Harness AI to interpret patterns across weather, traffic, social, store behavior, purchasing

Optimized store level inventory, promotions and pricing

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De-risk wells: Cost reduction to bring drill online up to $1.2M

- Machine learning on 2000k variables/4 TB data in 2 seconds
- Global and location specific integration, aggregation, and services
- Device vulnerability managed by reporting and exceptions

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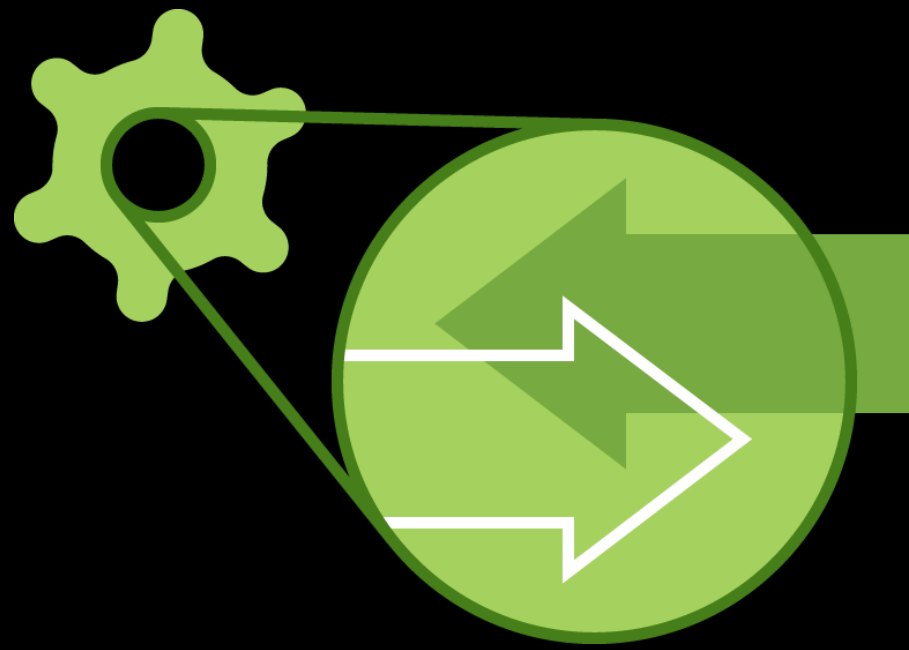
One-third of enterprises will take their data lakes off life support in 2018

No purpose was defined
Poor business adoption



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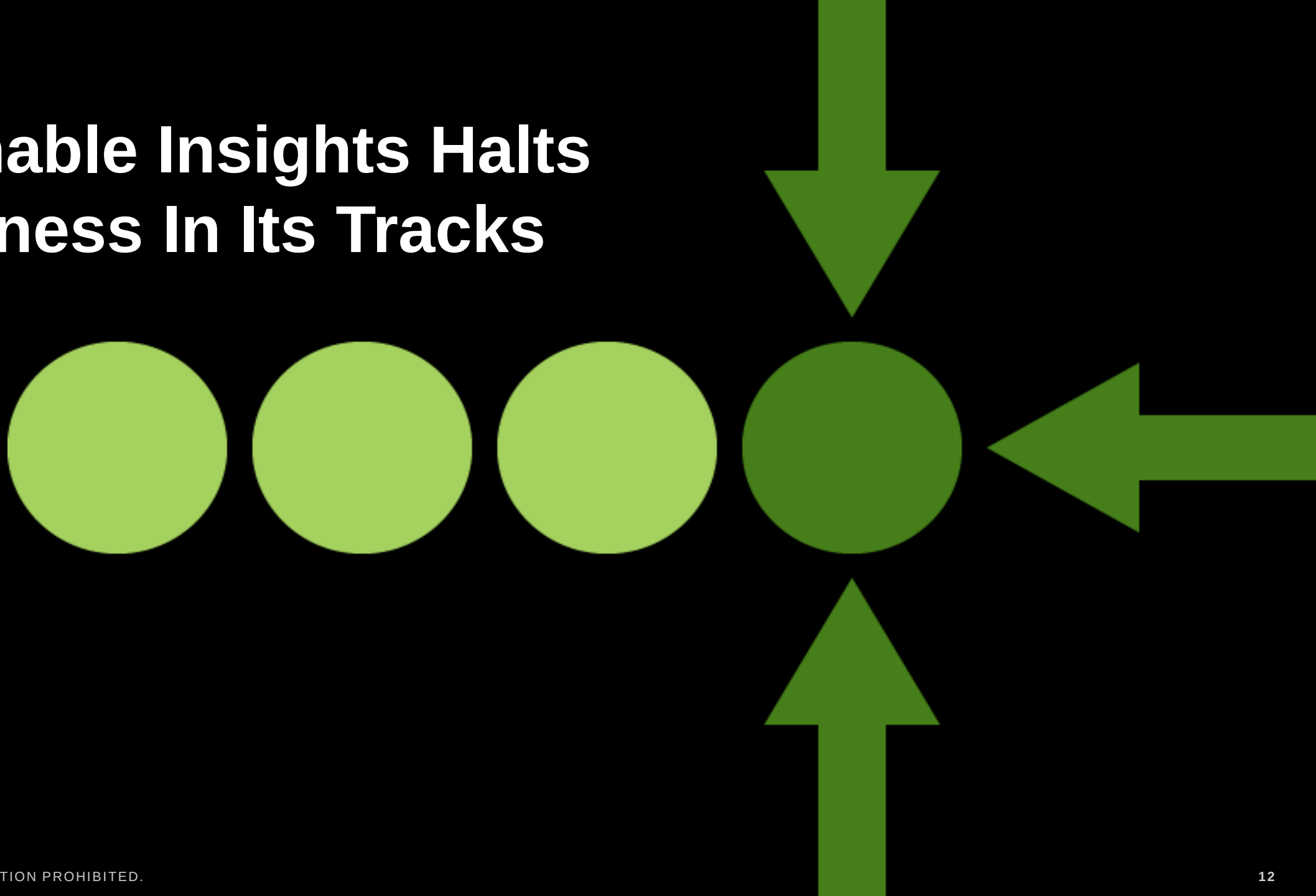
Perishable Insights Halts Business In Its Tracks



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Understand when insight is needed, relevant and irrelevant

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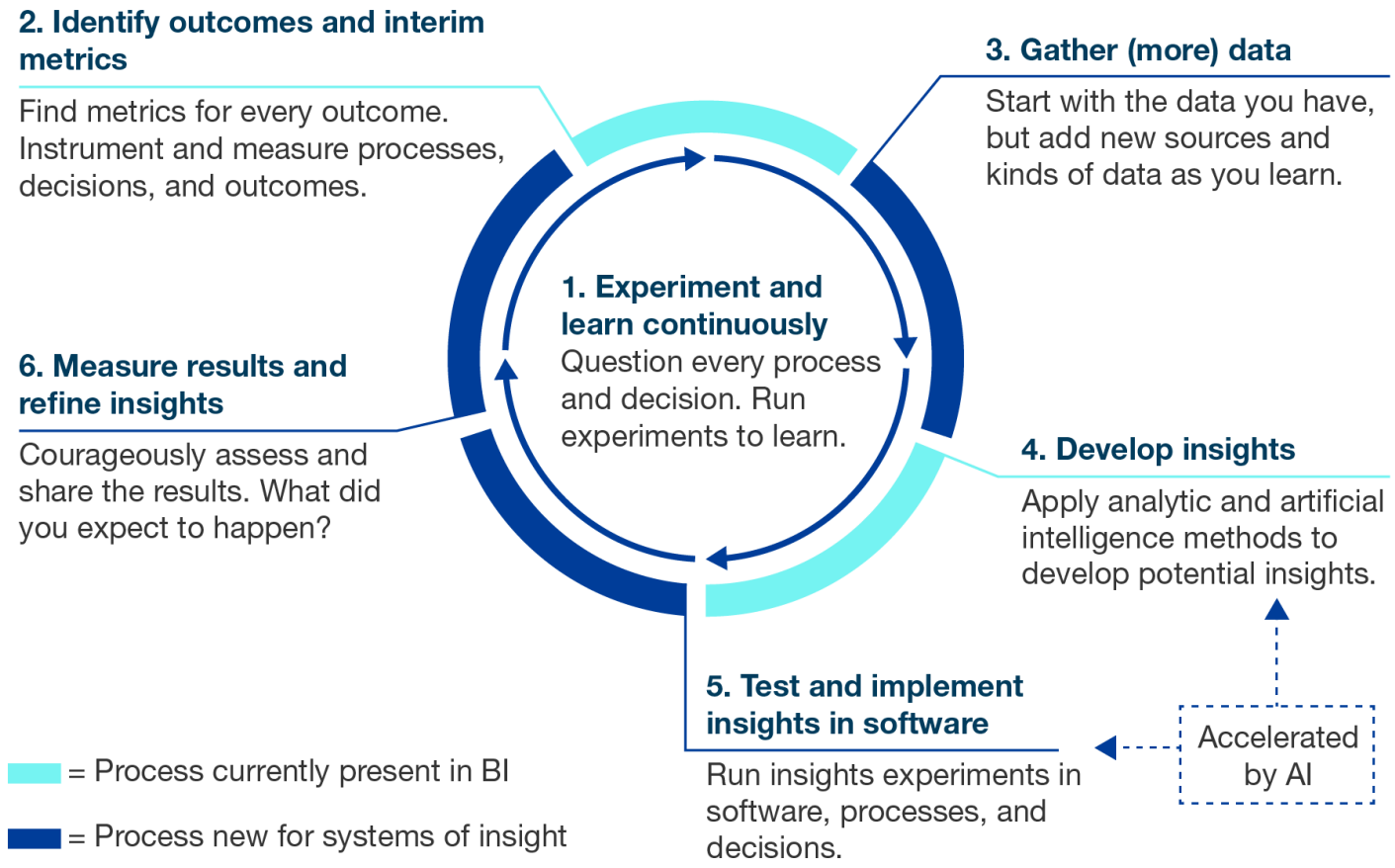
Design your Systems of Insight to speed insight to action to results



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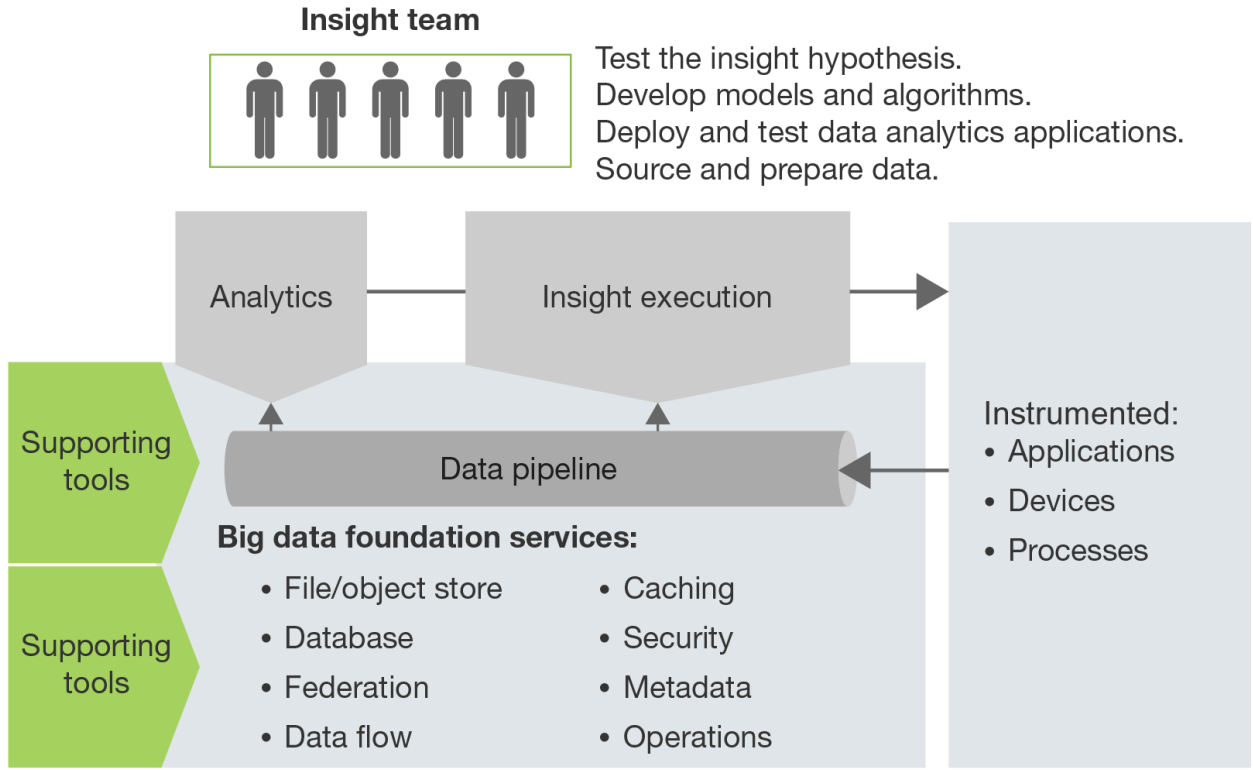
5 COMMON ELEMENTS OF A SYSTEM OF INSIGHT

1. Instrumented applications that implement insight and measure outcomes
2. A data flow pipeline to continuously capture and evaluate real-time data
3. A compute engine for analytic heavy lifting
4. An insight-to-execution framework that delivers insights to processes and applications
5. A big data fabric that can let your system grow and flex



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For tomorrow (today)

- Know your business needles – design your system of insight around business outcomes
- Architect for the right speed lane – avoid perishable insights by knowing when they are most influential
- Close the loop – bring data and analytics together to continuously test, learn and improve results

Data architecture for Insights-driven Businesses

Srini Srinivasan

Co-Founder / Chief Development Officer

Overview

- System of Insight - A Spectrum
- System of Insight Platform - Data Components
- Real-time Insights - What does it entail?
- Reference Architecture for Real-time Insights
- Key Trends

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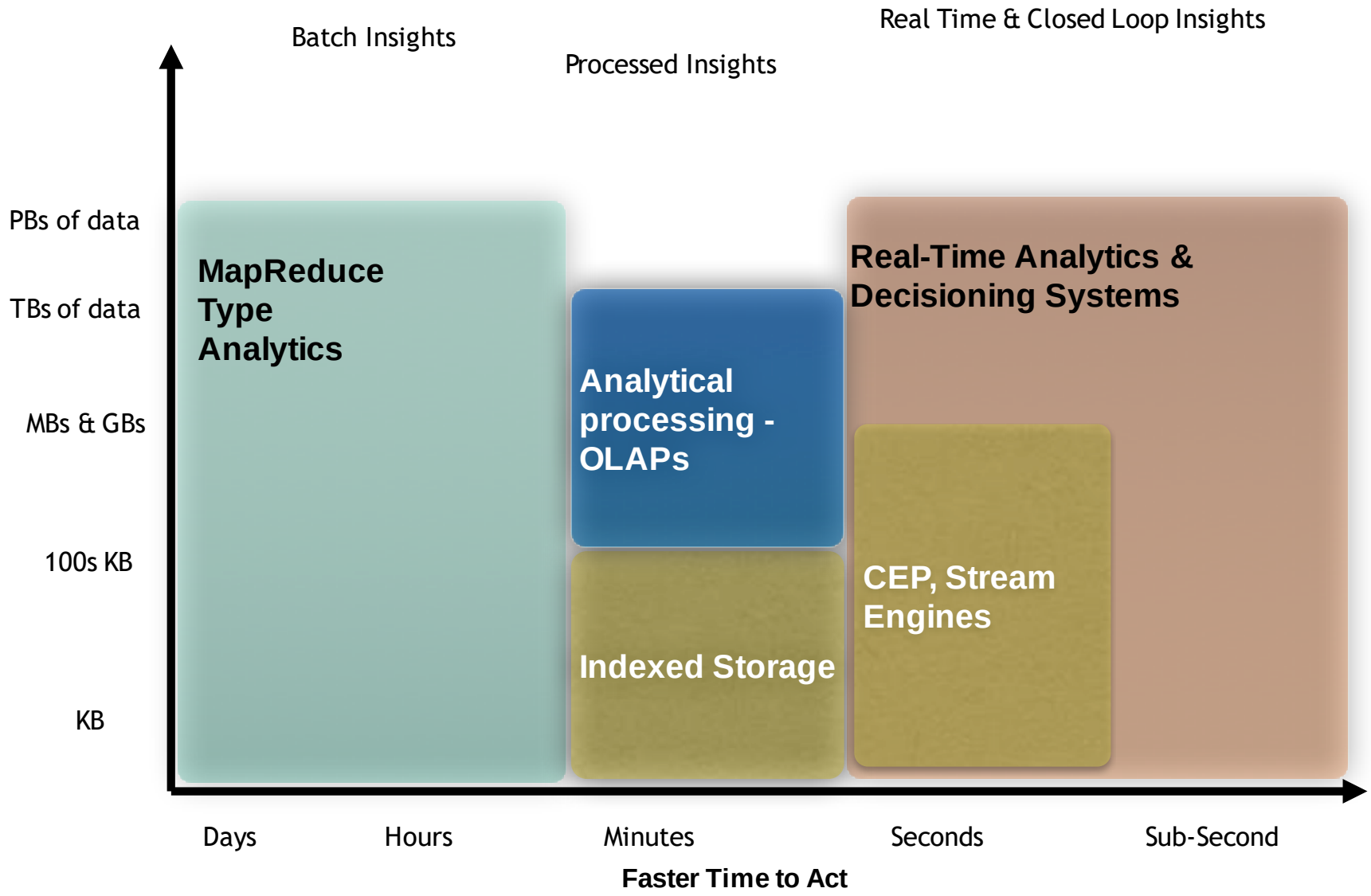
Spectrum of Insights - Size and Time



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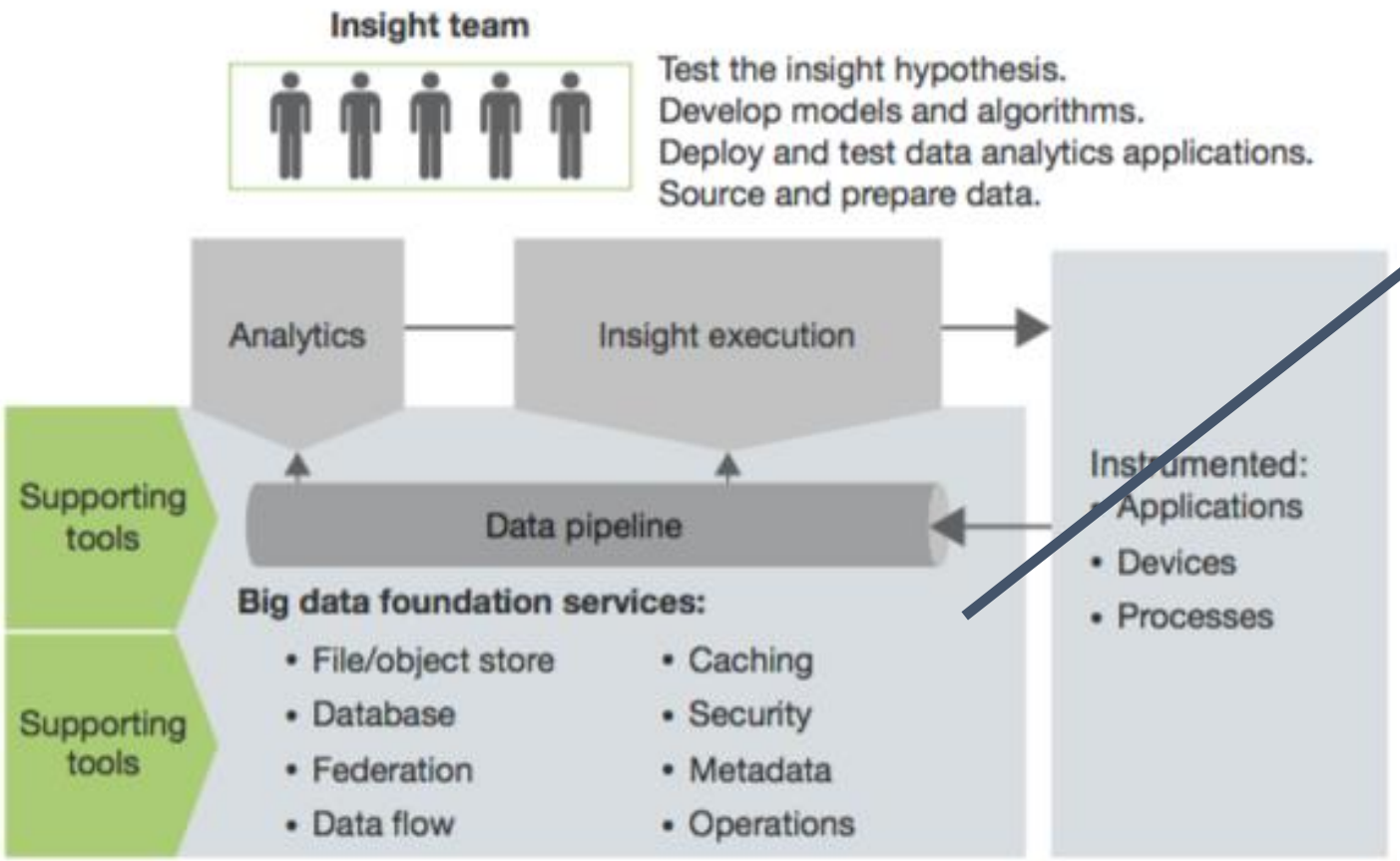
Platform - Data



Source: Forrester Research

Database that

- scales yet predictably performing for large sets of data
- can deal with both big and fast data sets
- lower tco

Data pipeline that can interoperate with the above database

AI / ML powered decisioning engine for analytics

Visualization and / or push framework for closed-loop decisions

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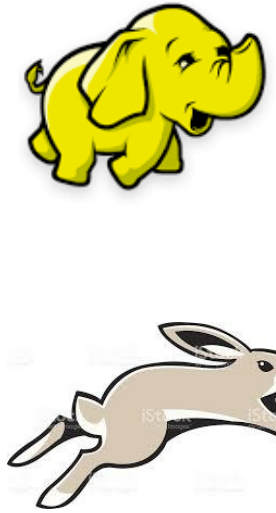
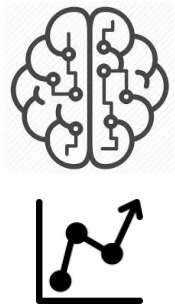
Real-time Insights - What does it entail?

Variety of Sources & Data



Both Low velocity & High velocity data



Decisioning using AI/ML & Traditional methods

Insights can be visualized, pushed through channels, or even Bot driven

Insights Team Acting in Real-time

Closed Loop

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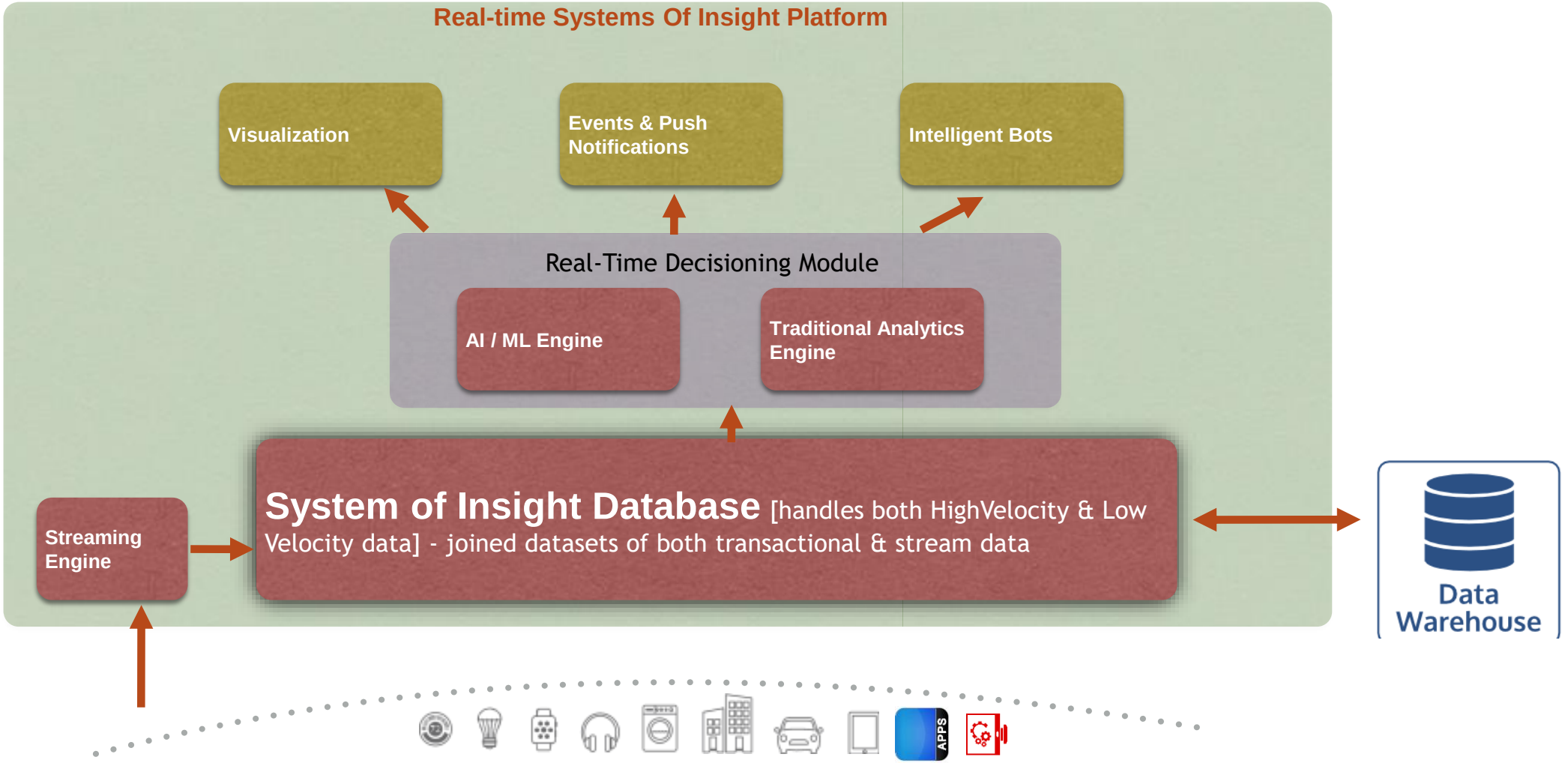
Reference Architecture for Real-time Insights



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Key Trends

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Trends that are driving database innovation, powered by the need to support the combination of transactional & stream data processing

1. Extreme low latency improves customer experience across multiple channels to increase revenue (using both online and offline AI/ML)
2. Easy deployment using distributed auto-scaling on bare metal and cloud enables 24X7 operations with high throughput and high availability
3. Cacheless systems (e.g. Hybrid-Memory Architecture) leverage advanced storage technology (NVMe, 3D XPoint, etc.) to reduce TCO
4. Databases with high performance and strong consistency to support transactional and real-time analytics applications on a system of record
5. Highly interoperable with other enterprise systems to support visualization, message buses, applications, bots, etc.

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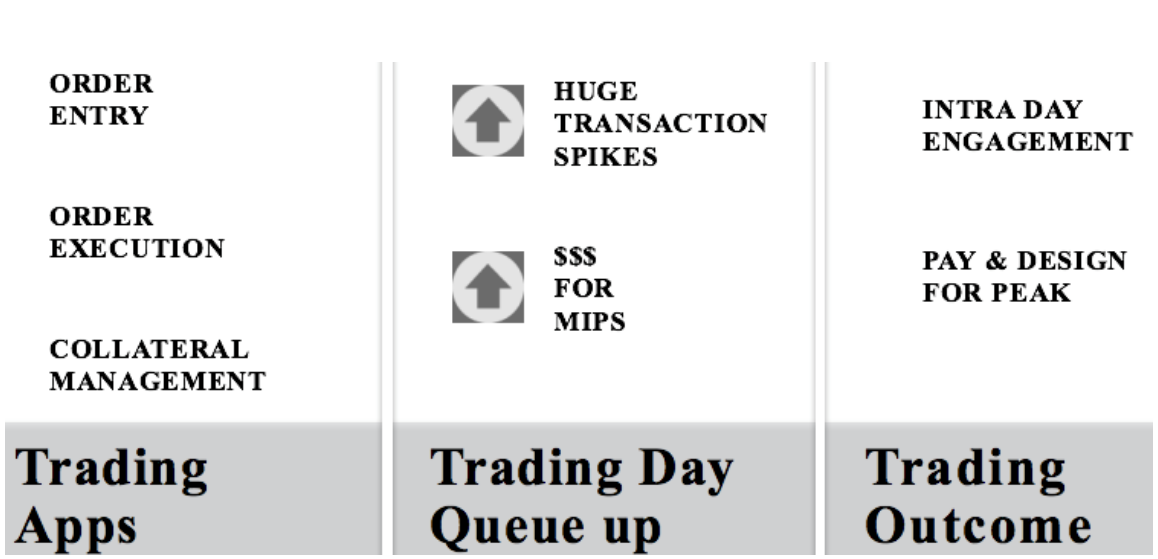
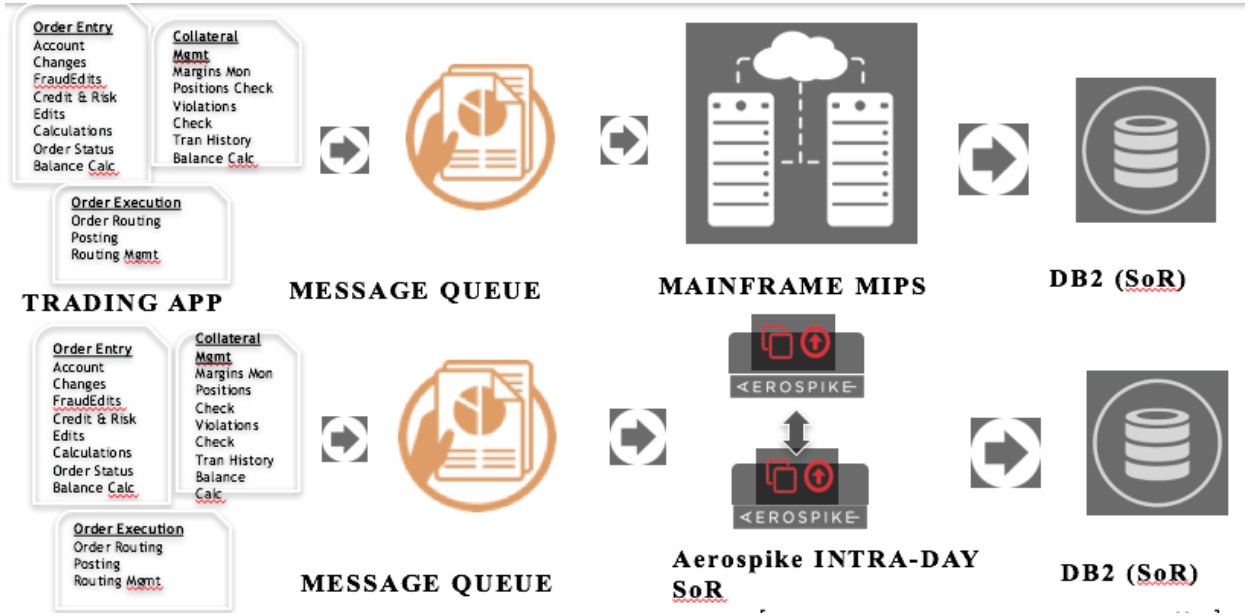
Case 1: Real time Risk Management for Capital Markets





Offloading Mainframe MIPS cycles during trading hours, processing insights on combined trade stream data and historical customer data for risk monitoring in real-time

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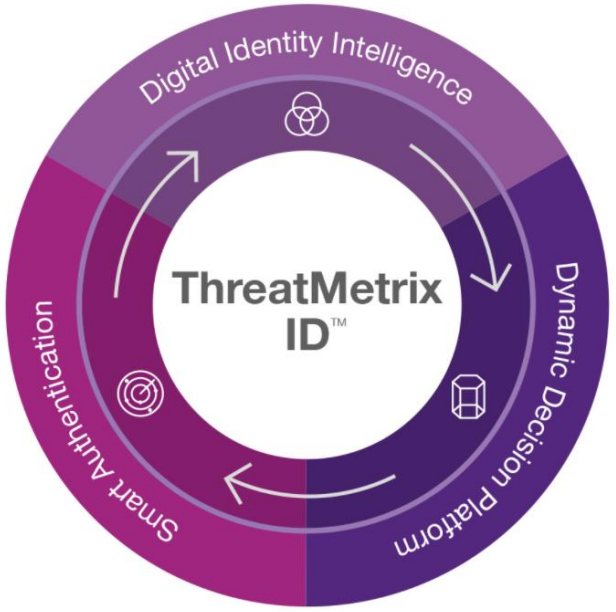
Case 2: Real-Time Digital Identity Check

ThreatMetrix™ provides Digital Identity API as a service to finance, retail, e-commerce & payment businesses



Processes about 50+ million transactions / day in about 135 countries - focused on false positive reduction & fraud prevention - they commit extreme SLAs to their customers

It is all the more important to keep the cost of transaction low with out impeding SLA commitments.

The platform depends critically on predictable database performance

Analyzing millions of transactions across billions of devices in realtime, for digital businesses to enhance fraud prevention

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Questions?

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