



Strategic Architect Forum 2015

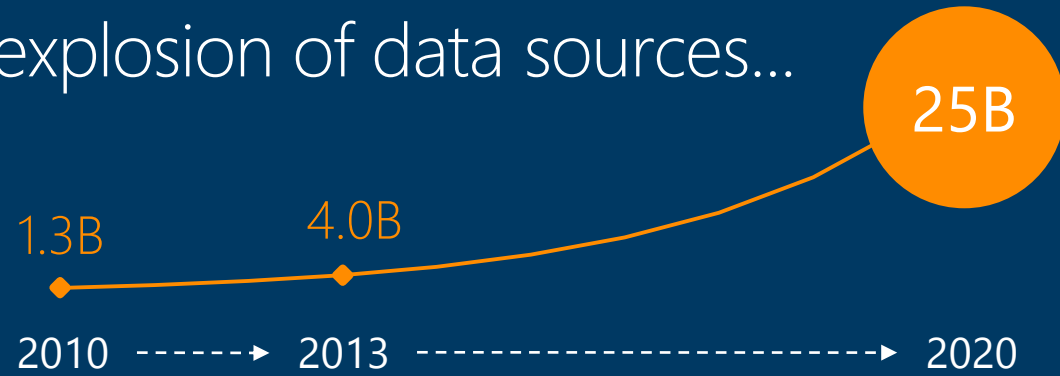
January 27th–28th, 2015 • Bellevue, WA – Westin

Session code:

Microsoft Data Platform: *Insights into Data*

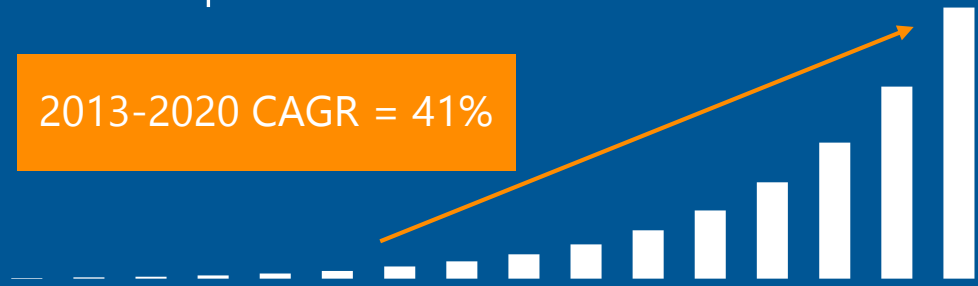
Nigel Ellis

The explosion of data sources...



...drives an explosion of data

2013-2020 CAGR = 41%



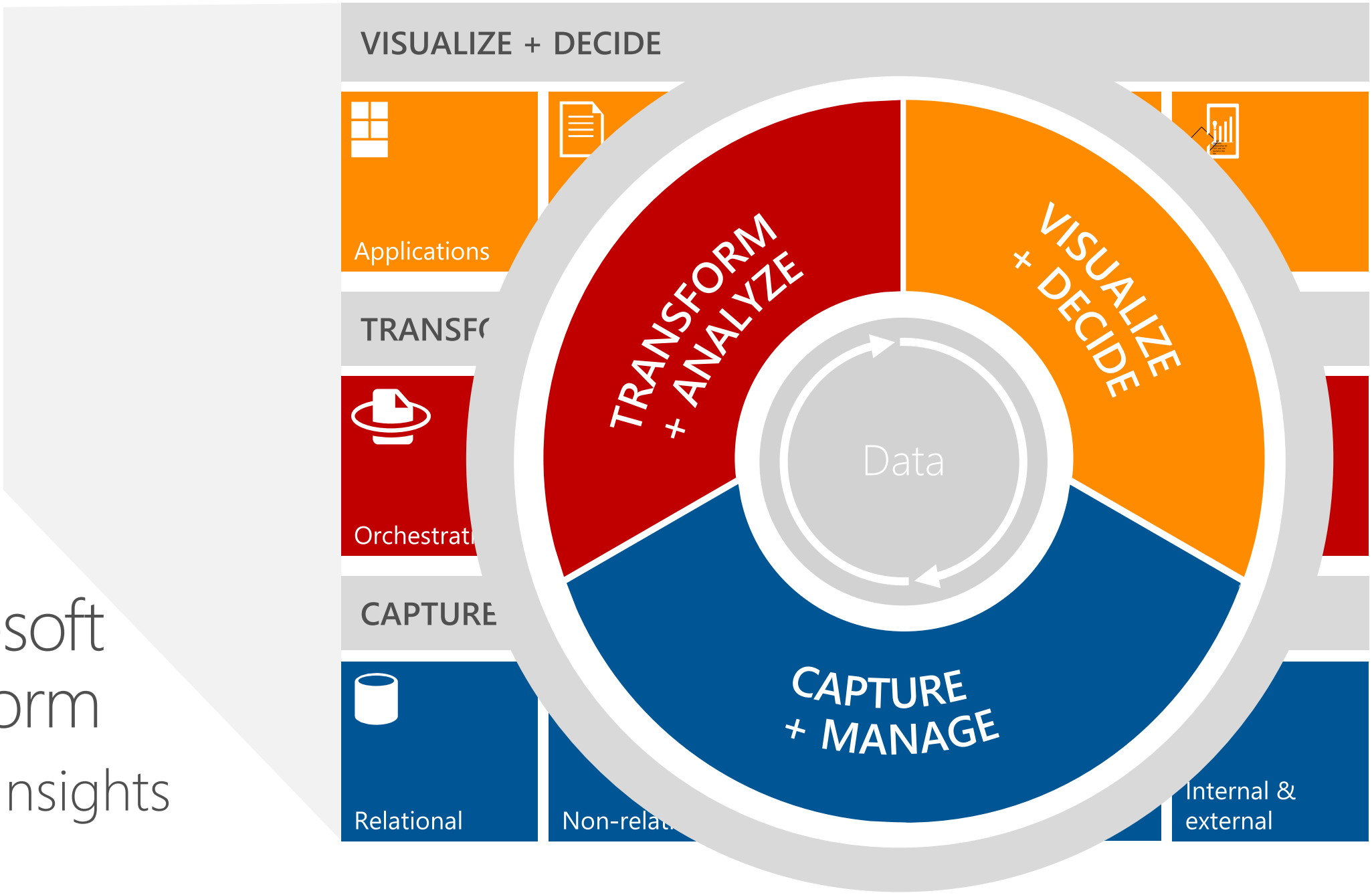
...which drives businesses to learn more

There's an opportunity to drive smarter decisions with data

\$ 1.6T

Data dividend

The Microsoft
data platform
Speed into Insights
and action



Data Dividends Opportunity

Information and Analysis

Behavior analysis:
sales tracking



Smarter insights to
improve performance



Real time fraud detection



Automation and control

Process optimization:
manufacturing control



Process optimization:
manufacturing control



Complex autonomous
systems: connected car



Building software-as-a-service apps

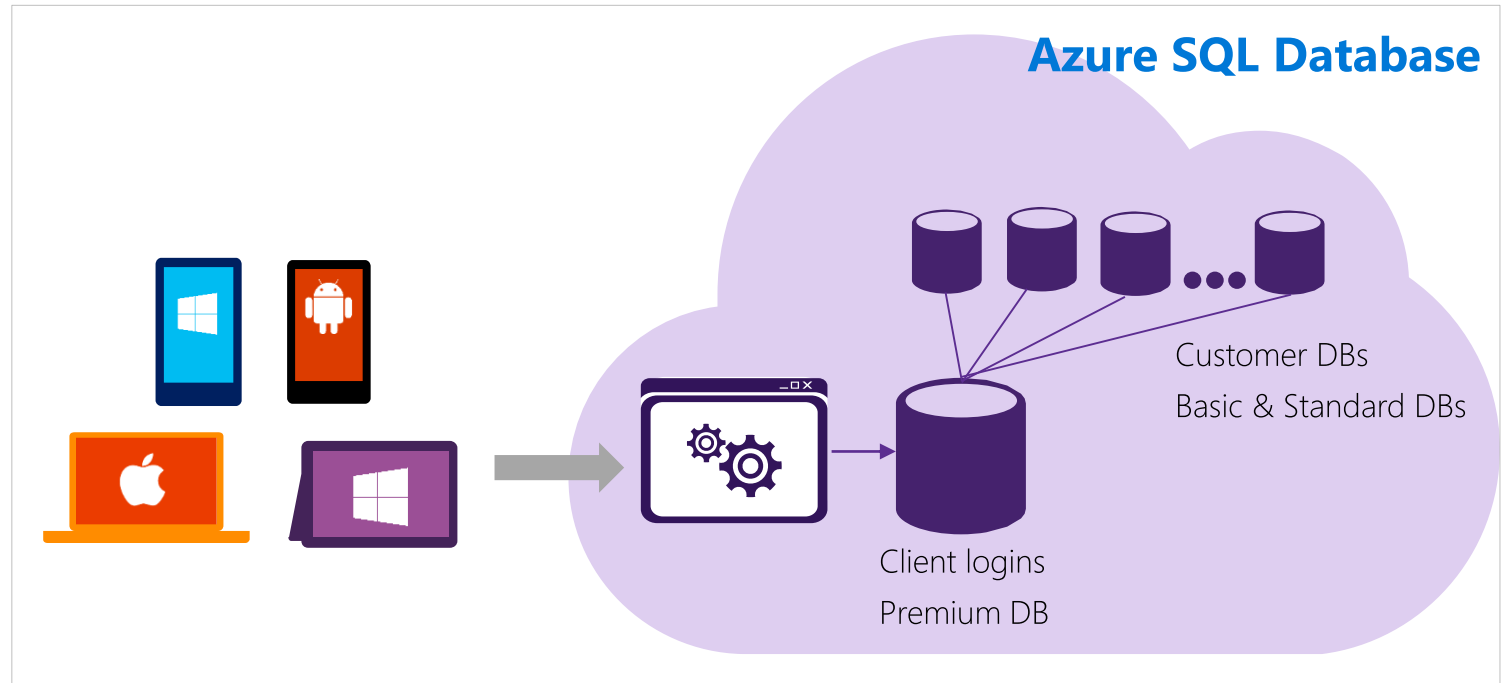


Key Benefits

Customer DB isolation

Near-zero administration

Elastic scale as customers grow



"Azure gives us the ability to scale up to thousands of databases as needed... Today, more than 50 percent of new product registrations at MYOB are for our cloud accounting solutions"

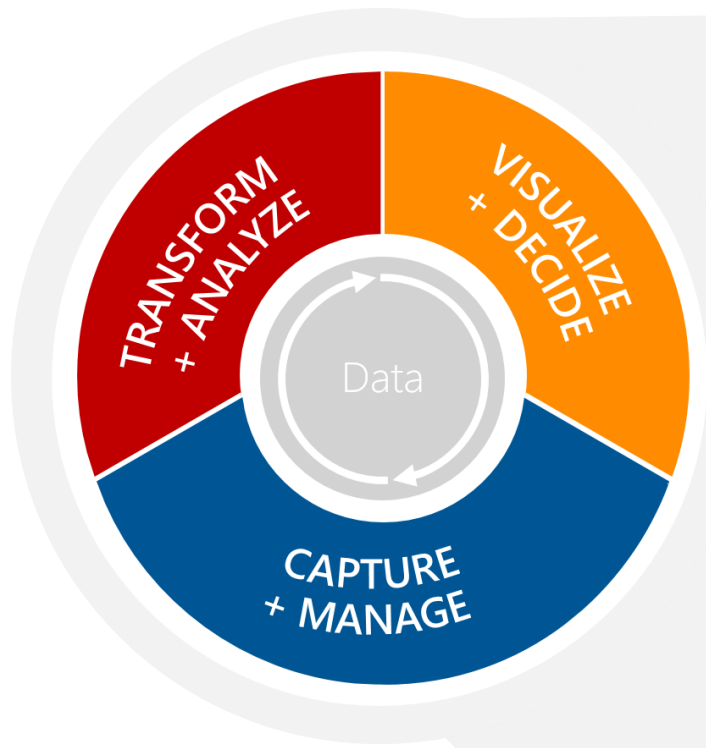
Simon Raik-Allen, MYOB

MYOB

Mission-critical performance

Cost-effective scale, 10s of thousands DBs

Accelerated testing & deployment



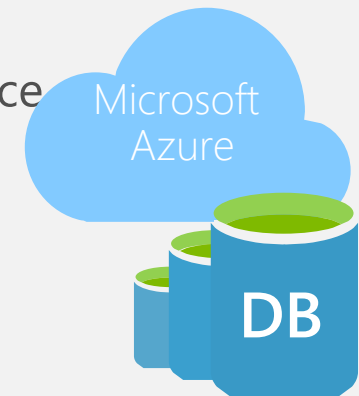
The Microsoft data platform

Capture + manage



Azure SQL Database

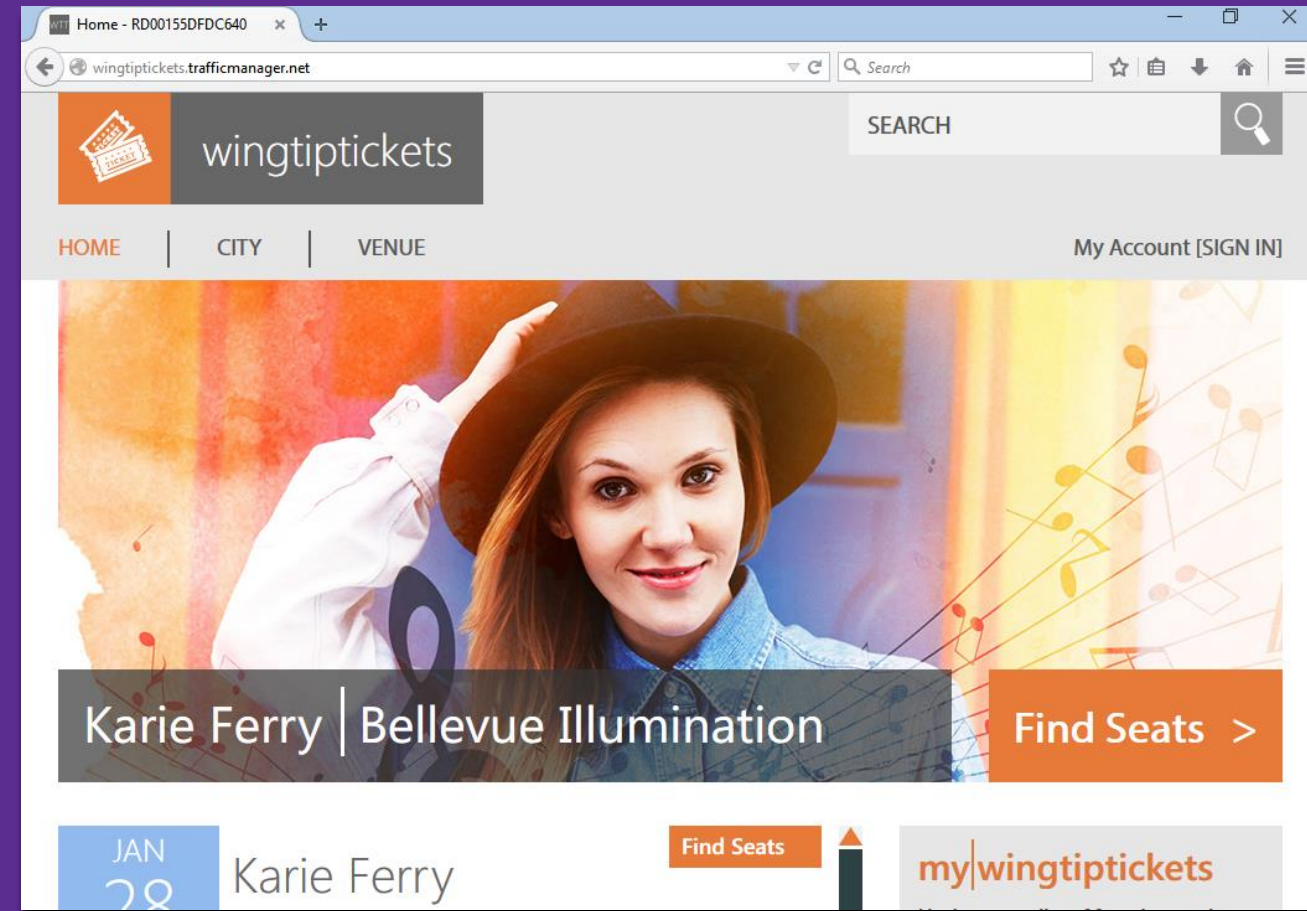
- ➔ 99.99% availability SLA
- ➔ Elastic Scale & Performance
- ➔ Business Continuity
- ➔ Familiar & Self Managed
- ➔ Hyper-scale across thousands of DBs



Services & Products - SQL Server , Azure SQL VM, Azure SQL DB, Document DB, Azure Search, Azure HDInsight , HBase, Storm

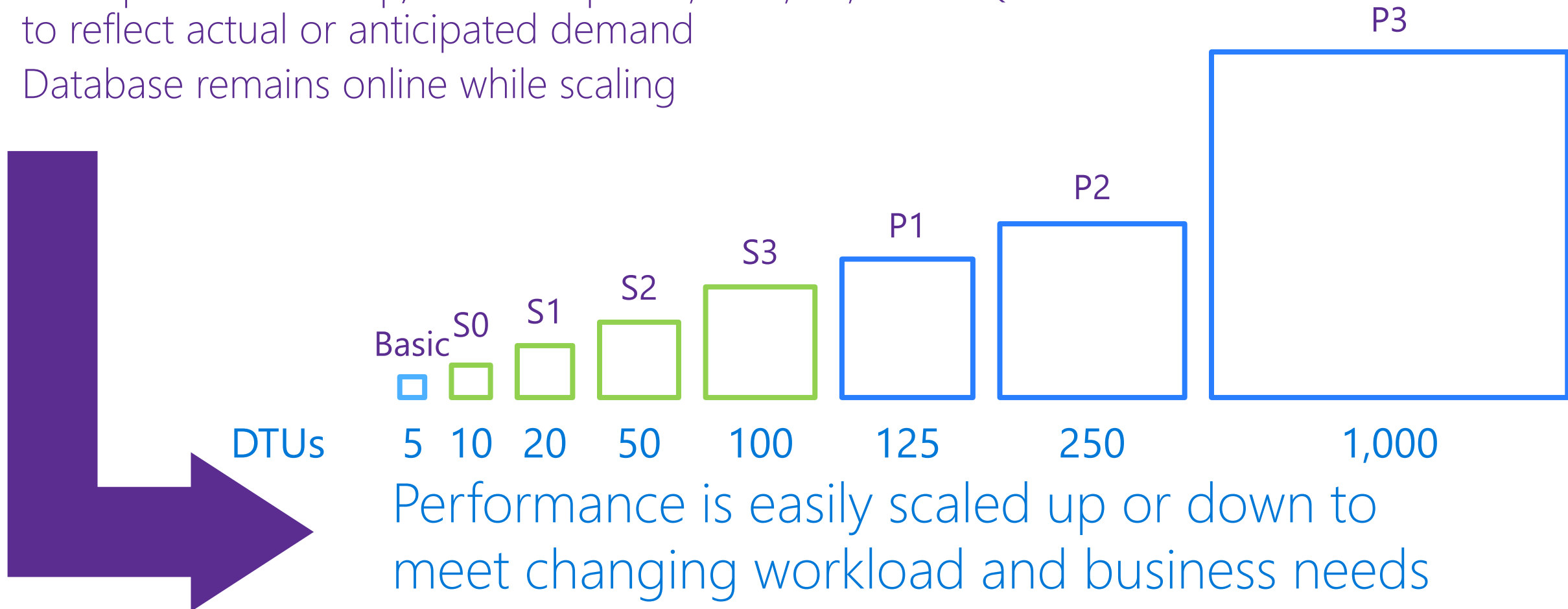
Demo

- Large event venue ticket distributor like TicketMaster
- Sells very large volumes (10,000+) of tickets in a short period of time (minutes)
- Most efficient to scale up and scale back rapidly
- Azure makes this possible very easily



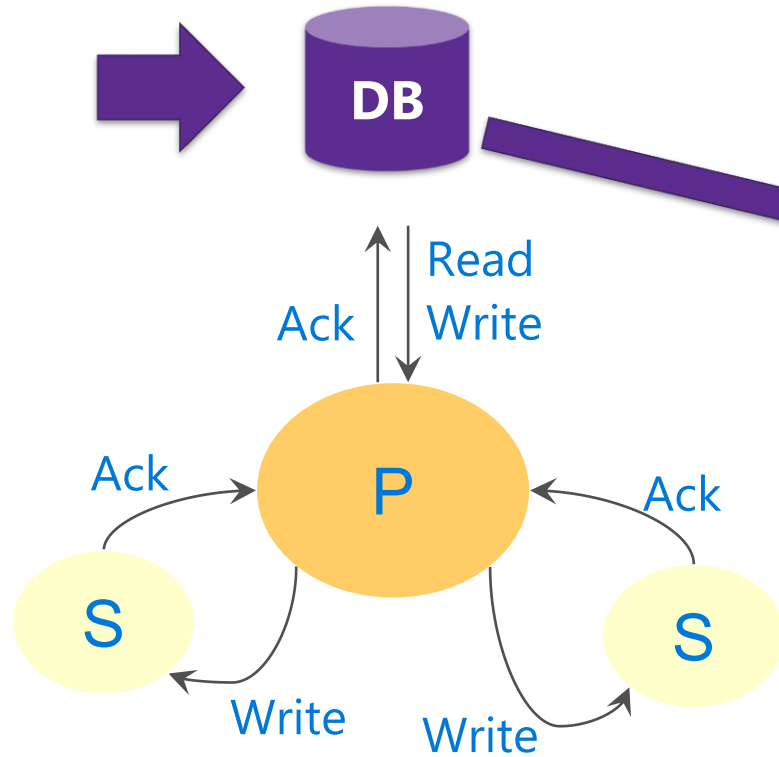
Scalable Performance

- Basic, standard, and premium provide increasing performance levels
- Relative performance is expressed in database throughput units (DTUs)
- Scale performance up/down via portal, APIs, PS, or T-SQL to reflect actual or anticipated demand
- Database remains online while scaling



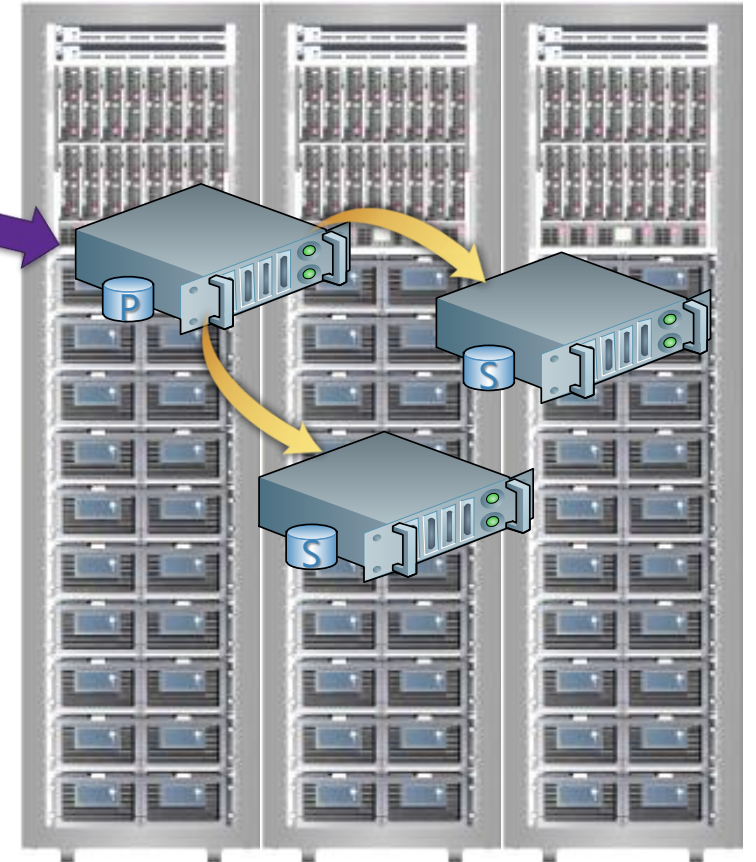
SQL Database: 99.99% SLA

Single logical database



Reads are completed at the Primary
Writes are replicated to secondaries

- Majority quorum up to 4 replicas
- Transparent automatic failover
- Uptime SLA of 99.99%
- Zero user or admin config



SQL Database: *Active Geo-Replication*

Self-service activation in Premium

Create up to four readable secondaries

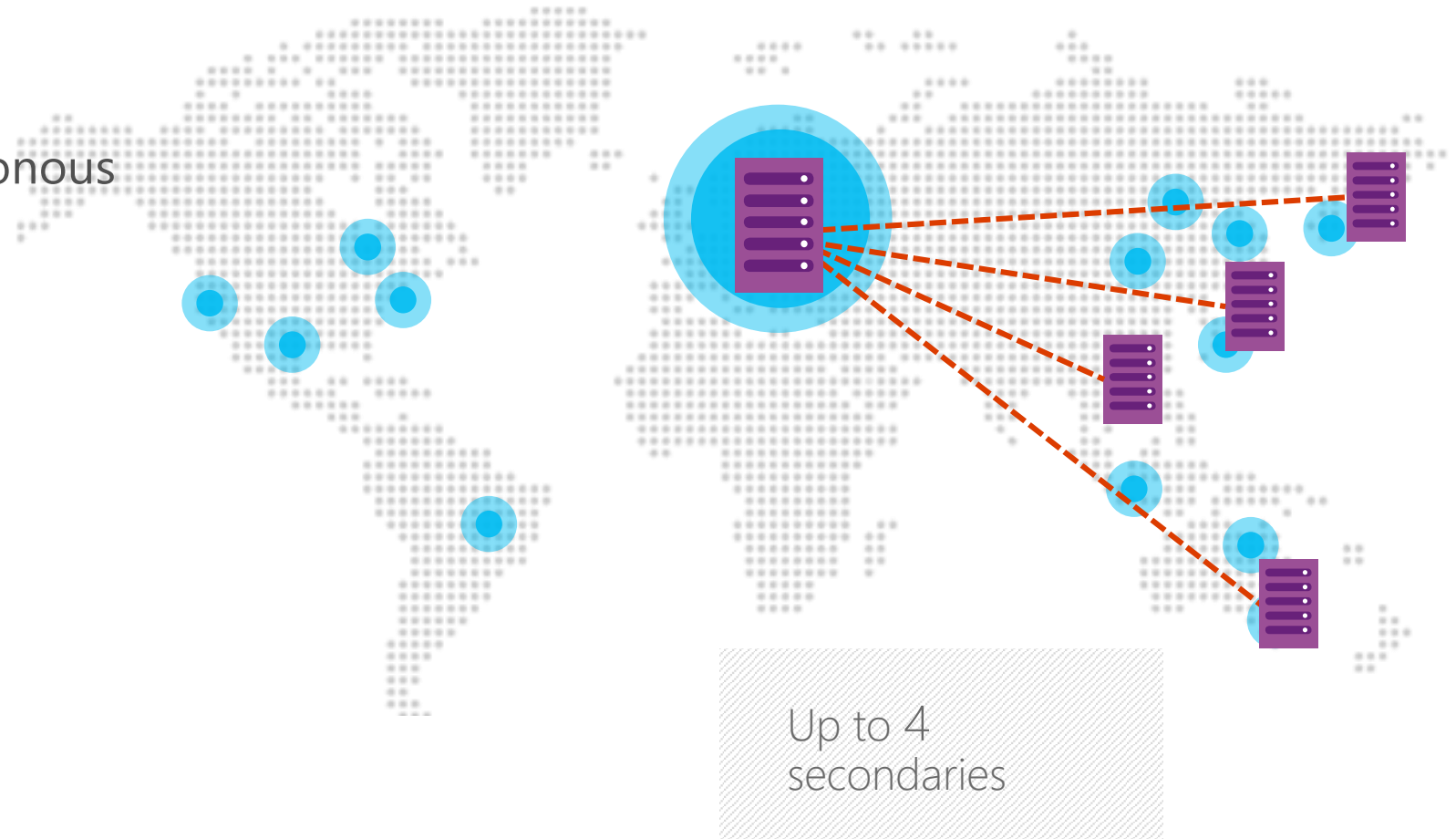
Replicate to any Azure region

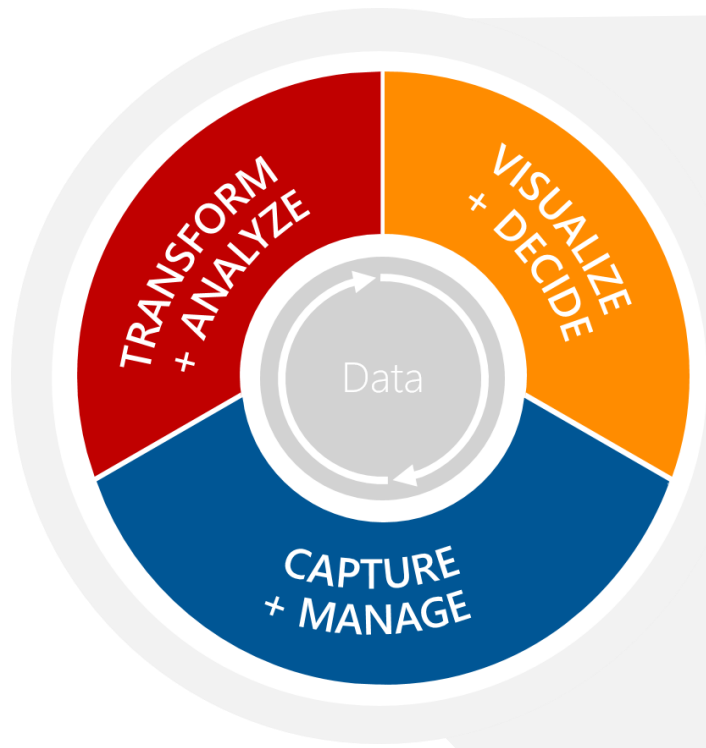
Automatic data replication, asynchronous

REST API, PowerShell, Azure Portal

RTC < 1H, RPO < 5min

Failover is customer driver





Transform + analyze



Complex event processing



Information management



Orchestration



Modeling



Machine learning

Azure Stream Analytics

- ➔ Real-time business Insights
- ➔ Stream millions of events per second
- ➔ Enables rapid development
- ➔ Reliability, performance & predictable results



The Microsoft data platform

Services & Products - SQL Server , Azure Data Factory, Azure Stream Analytics, Azure Machine Learning, ML Marketplace

Aerocrine

deployed a cloud analytics solution using Microsoft Azure data platform to increase reliability of their devices and help customers get better Asthma care.

Benefits



Transform business approach with deeper analysis into the device performance.

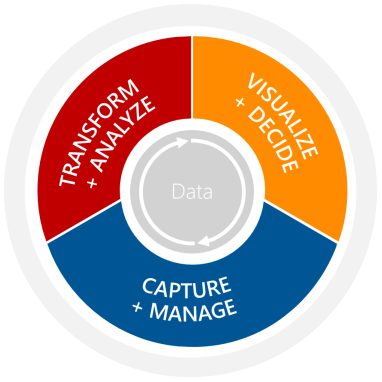
Proactively alerting customers to minimize device downtime

Helping Physicians deliver improved Asthma care

“ With the Microsoft Azure solution, we are getting much deeper analysis into our devices. That means we can better identify the trigger points that are affecting device performance. ”

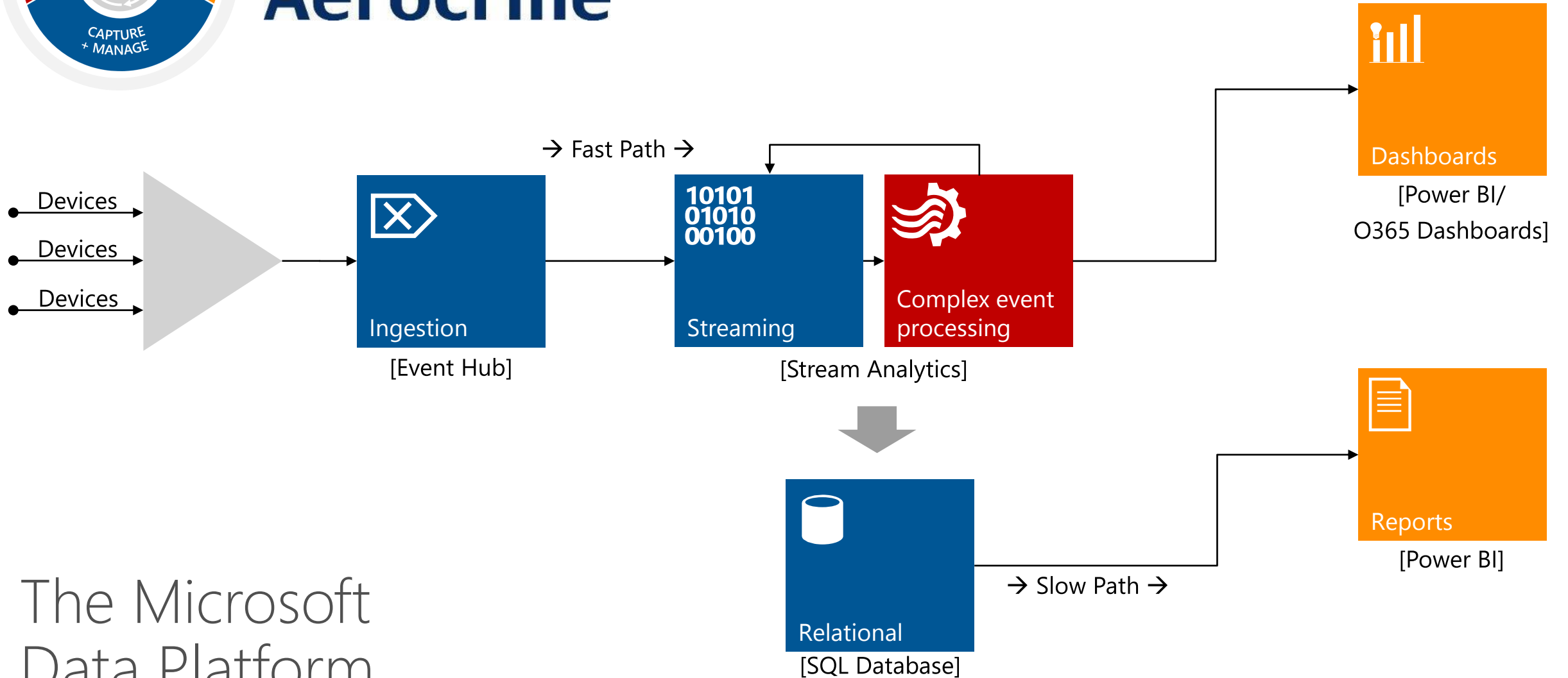
Anders Murman
CTO, Aerocrine AB

Aerocrine



Deeper data, better health

Aerocrine



The Microsoft
Data Platform

Azure stream analytics

Intake millions of events per second

Process data from connected devices/apps

Highly-scalable publish-subscriber ingestor

At variable loads

Scale that accommodates variable loads

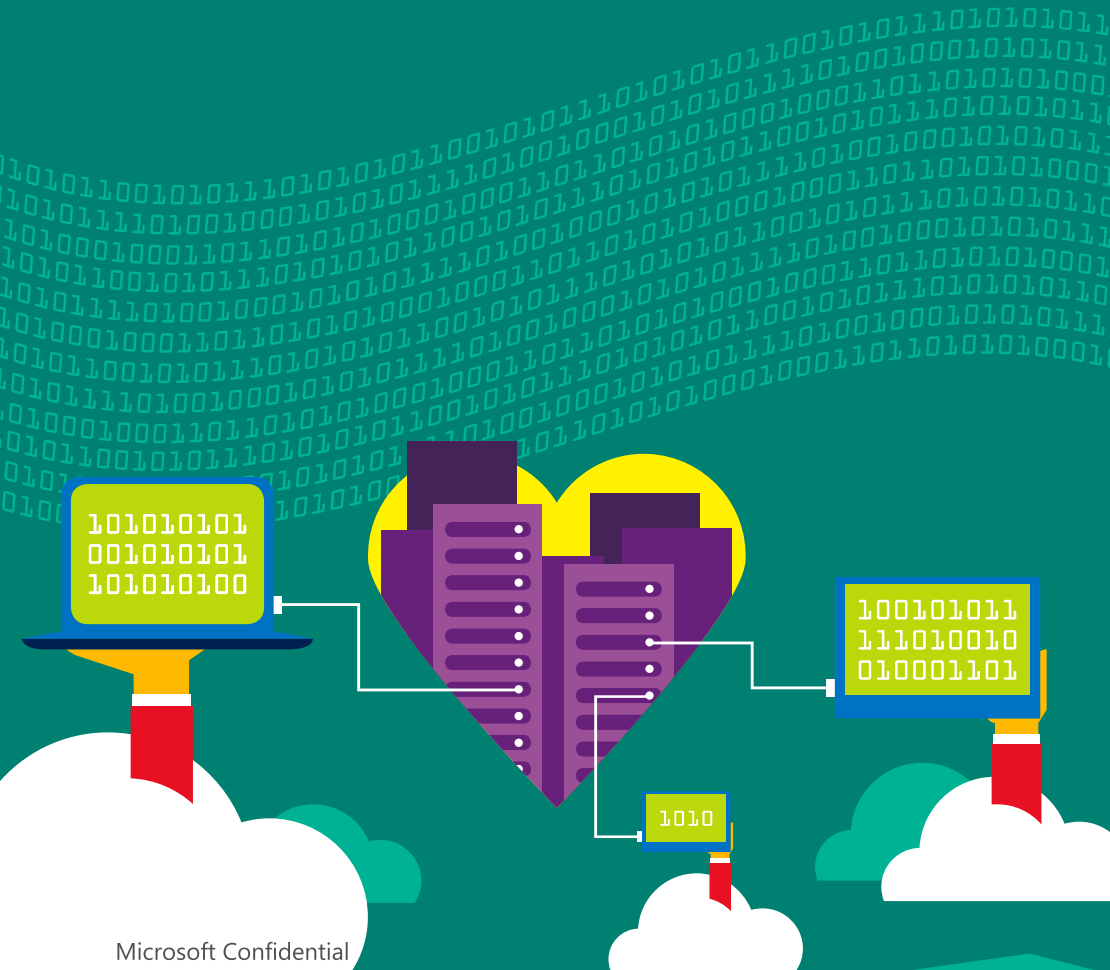
Preserves event order on per-device basis

Real-time analytics on continuous streams of data

Transform, augment, correlate, temporal operations

Detect patterns and anomalies in streaming data

Correlate streaming with reference data



Rapid development

Gaming Company Wants to Know Avg Purchase per Score every 5 minutes

Using an existing stream processing platform

1915 lines of code
including 1000 lines for windowing function

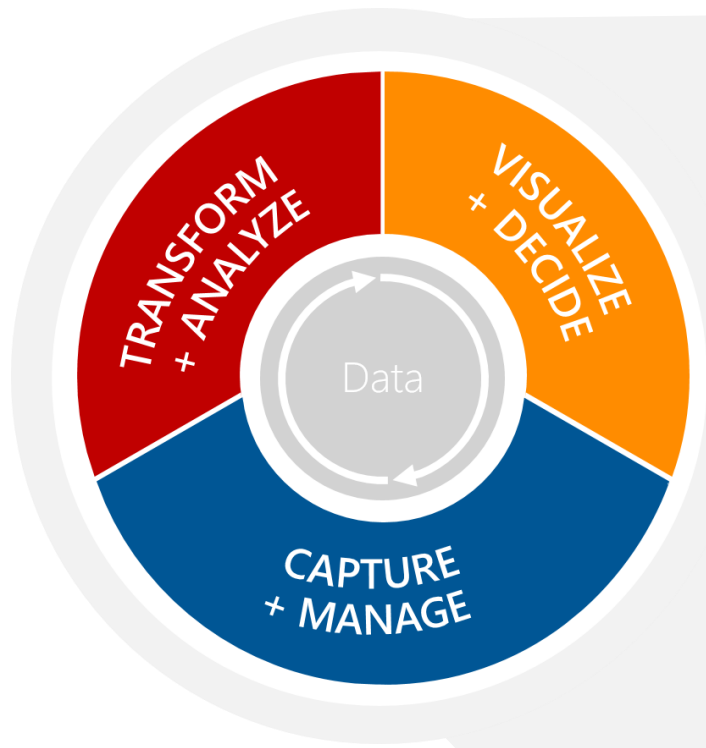
Microsoft Confidential

- Only SQL queries needed
- Developers uses declarative SQL commands
- Compared to other solutions that use lower-level procedural code

Gaming Company Wants to Know Avg Purchase per Score every 5 minutes

Using Azure Stream Analytics

```
SELECT Avg(Purchase), Score
FROM GameDataStream
GROUP BY TumblingWindow(5, Minute), Score
```

The Microsoft data platform

Visualize + decide



Dashboards



Reports



Applications



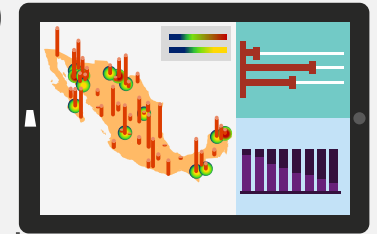
Natural language query



Mobile

Dash boarding Made Simple

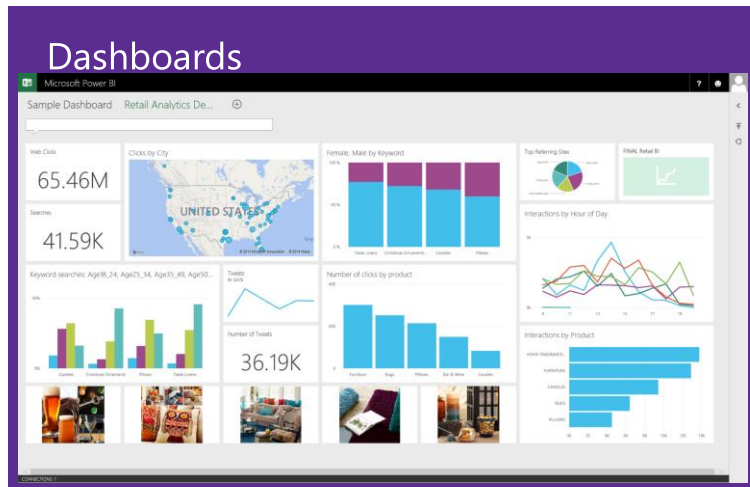
- ➔ Zero to Insight (< 5 minutes)
- ➔ Out of the box connectors for popular SaaS solutions
- ➔ Live dashboards , drill through reports
- ➔ Connect live to on-premises data



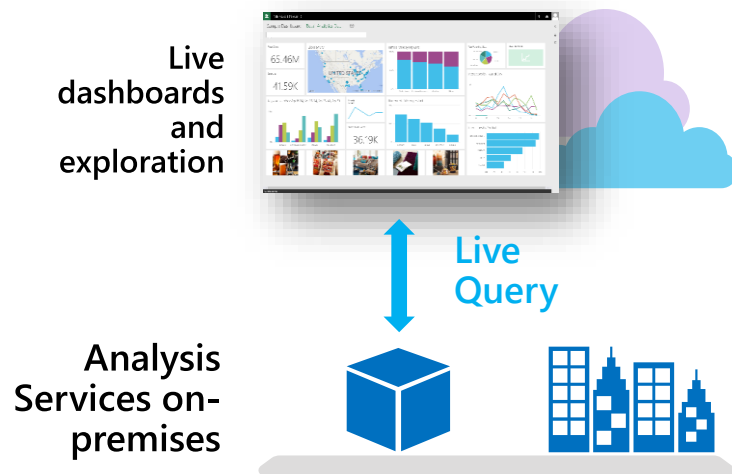
Services & Products – SQL Analysis Services, SQL Reporting Services, Power BI

Power BI update preview

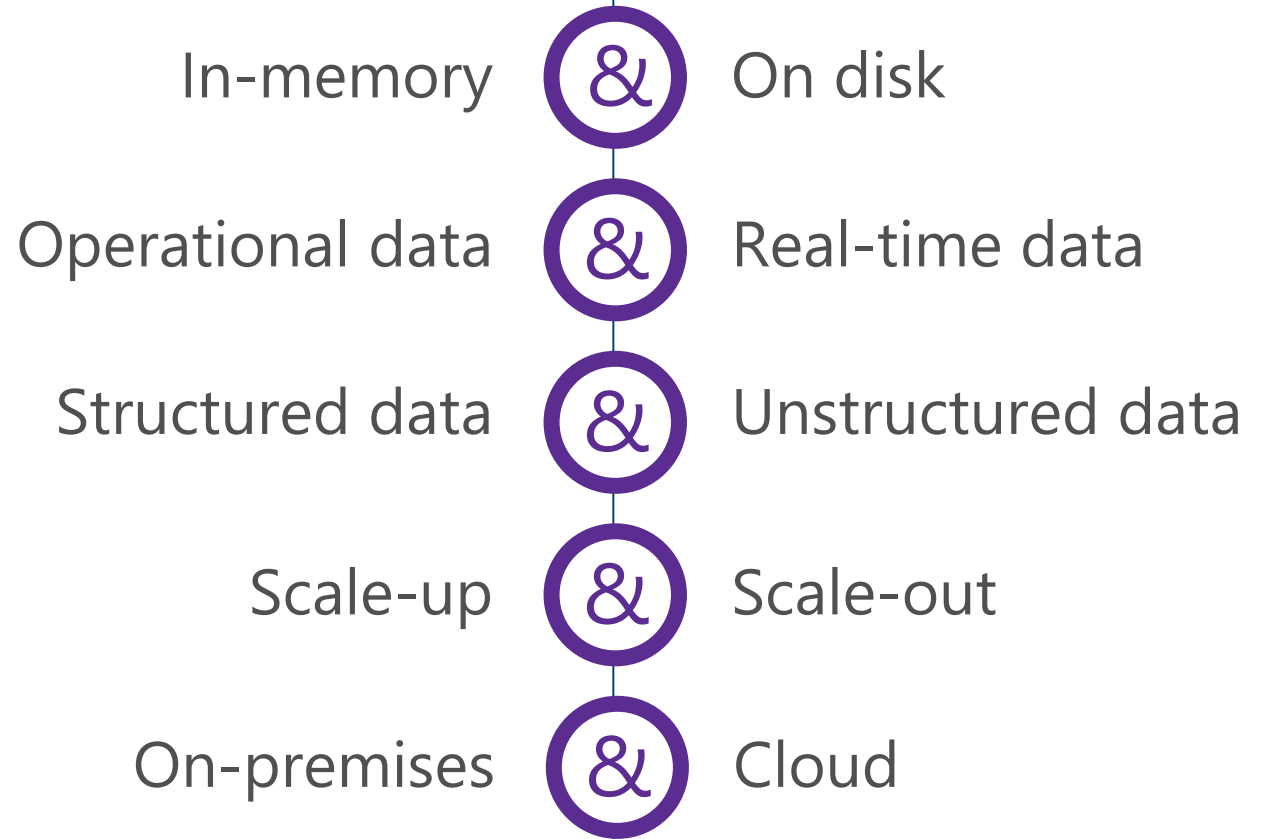
Live dashboards and interactive reports



- Interact with your data in minutes with built-in connectors and pre-built dashboard for SaaS apps
- Faster time to Insight with hybrid BI solution. Live query to Analysis services on-premises
- New Power BI designer enables business analysts to connect, model and visualize data
- Rich interactive support using Power BI for iPad
- Easy sign up @ <http://powerbi.com>



The data platform
from Microsoft allows
you to manage all
these data sources
& more



One comprehensive platform enables you to achieve more.

Be the hero of your data-driven business

