Microsoft | 2017 Microsoft Cloud and Hosting Summit

Digital Transformation@work

Empowering Together

Digital Transformation @ work

Empowering Together

Data Platform Overview and Strategy

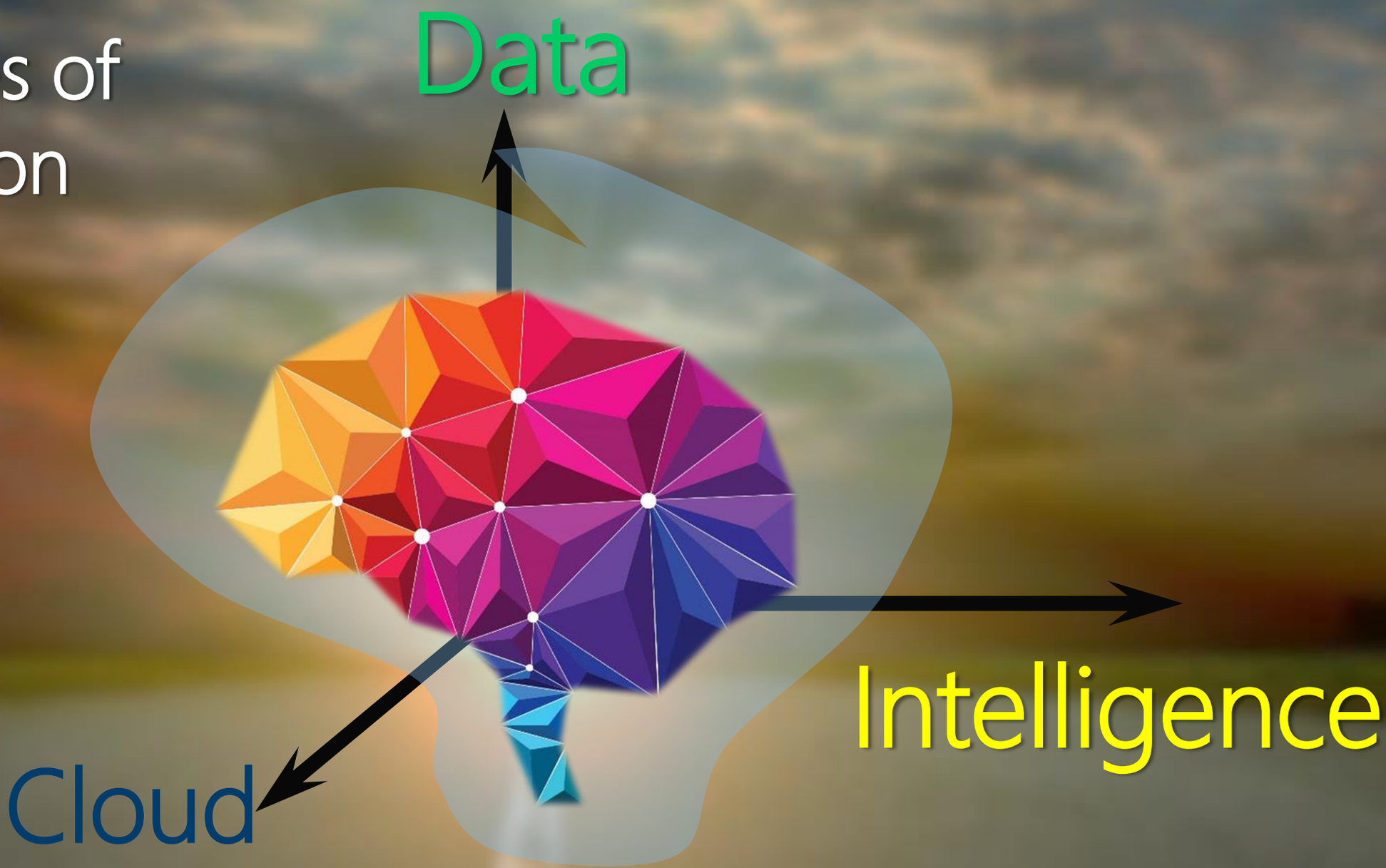
Joseph Sirosh

CVP, Data Platform

@josephsirosh

Cloud + Data + Intelligence
empowering every device on the planet

Our 3 axes of innovation



Intelligence in Every Software

SQL Server + R

Microsoft R Server

Hadoop + R

Spark + R

Cognitive Toolkit

Cortana

Azure Machine Learning

Cortana Intelligence Suite

R Tools/Python Tools for Visual

Azure Notebooks (JuPyTer)

Cognitive Services

Bot Framework

Office 365

HoloLens

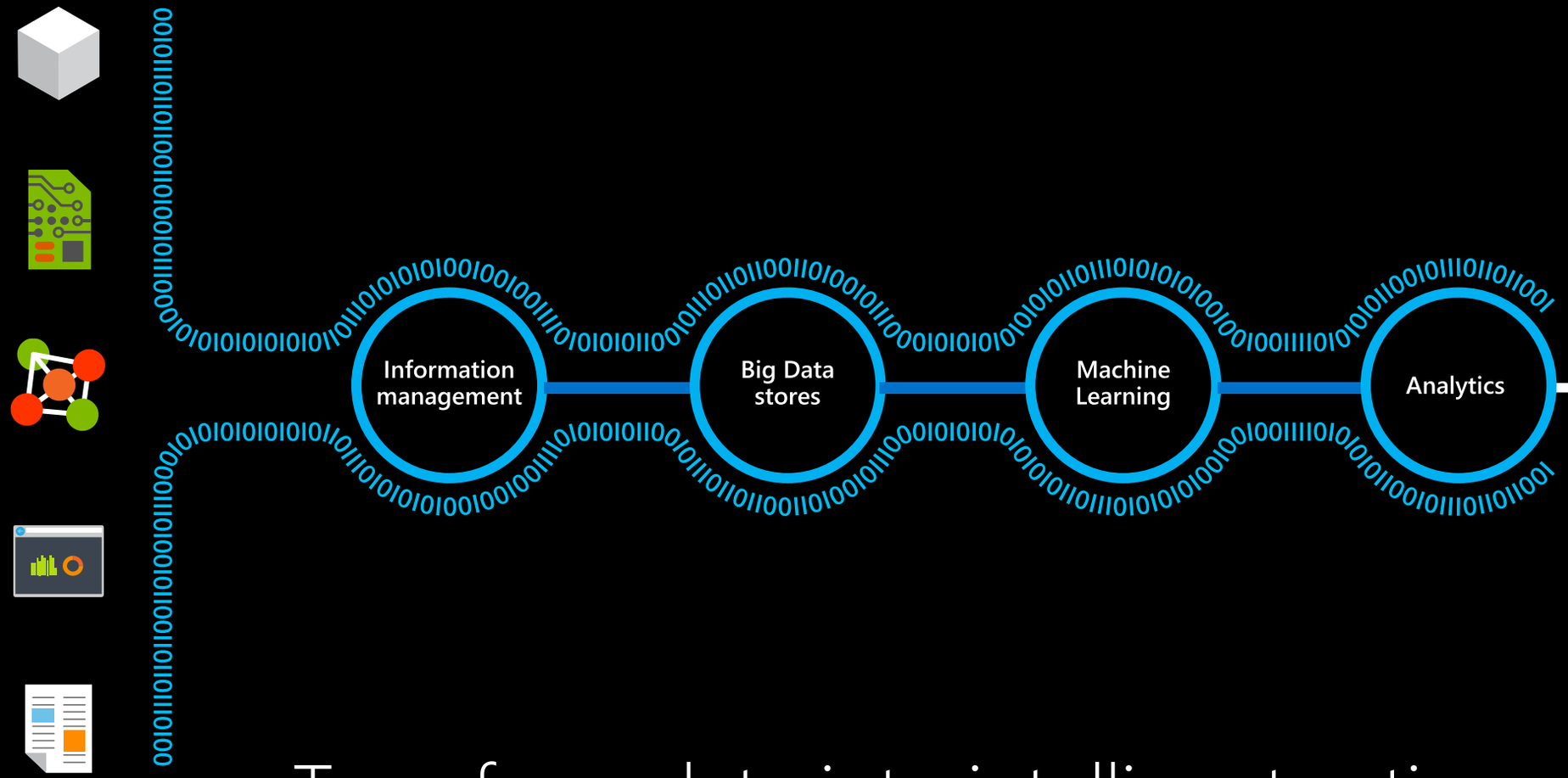
Bing

Skype

Xbox 360

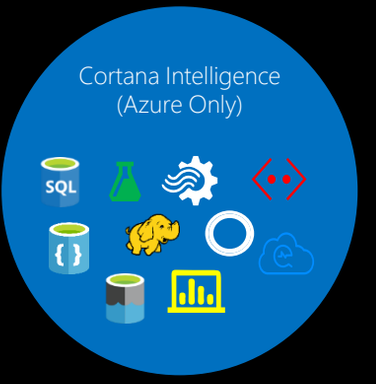
Dynamics 365

Data Platform Products



SQL Server (On-Prem & Cloud)

R Server (On-Prem)



Transform data into intelligent action

Five Gartner Magic Quadrants

Industry Challenger in Data Integration Tools

Industry Leader in Operational Database Management Systems

Visionary Leader in Advanced Analytics Platforms

Industry Leader in Data Warehouse and Data Management for Analytics

Industry Leader in Business Intelligence

Data Platform: THE ROAD AHEAD

1. Intelligent Operational DBMS

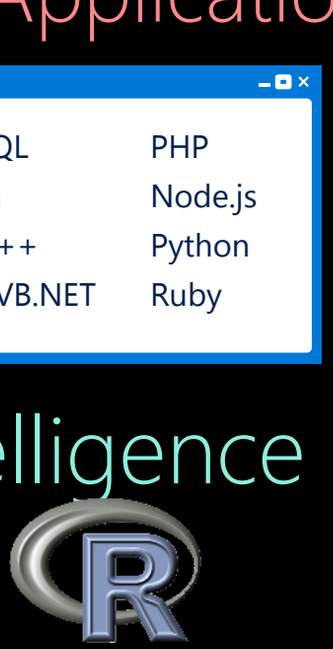
Any Application

T-SQL	PHP
Java	Node.js
C/C++	Python
C#/VB.NET	Ruby

Intelligence DB

Choice of OS

Windows Server



Any Data

101
001
010
010

Deploy Anywhere

SQL Server 2016

SQL Server 2016

Platform for Data-Driven Intelligence

SQL 2016 Programming Capabilities

	Enterprise	Standard	Express
In-database Analytics (R)	✓	✓	✓
In-memory OLTP & DW	✓	✗	✗
Operational Analytics	✓	✗	✗
Compression & Partitioning	✓	✗	✗
PolyBase	✓	✗	✗
Always Encrypted	✓	✗	✗
Row-level Security & Data Masking	✓	✓	✗

SQL 2016 Programming Capabilities

Service Pack 1

	Enterprise	Standard	Express
In-database Analytics (R)	✓	✓	✓
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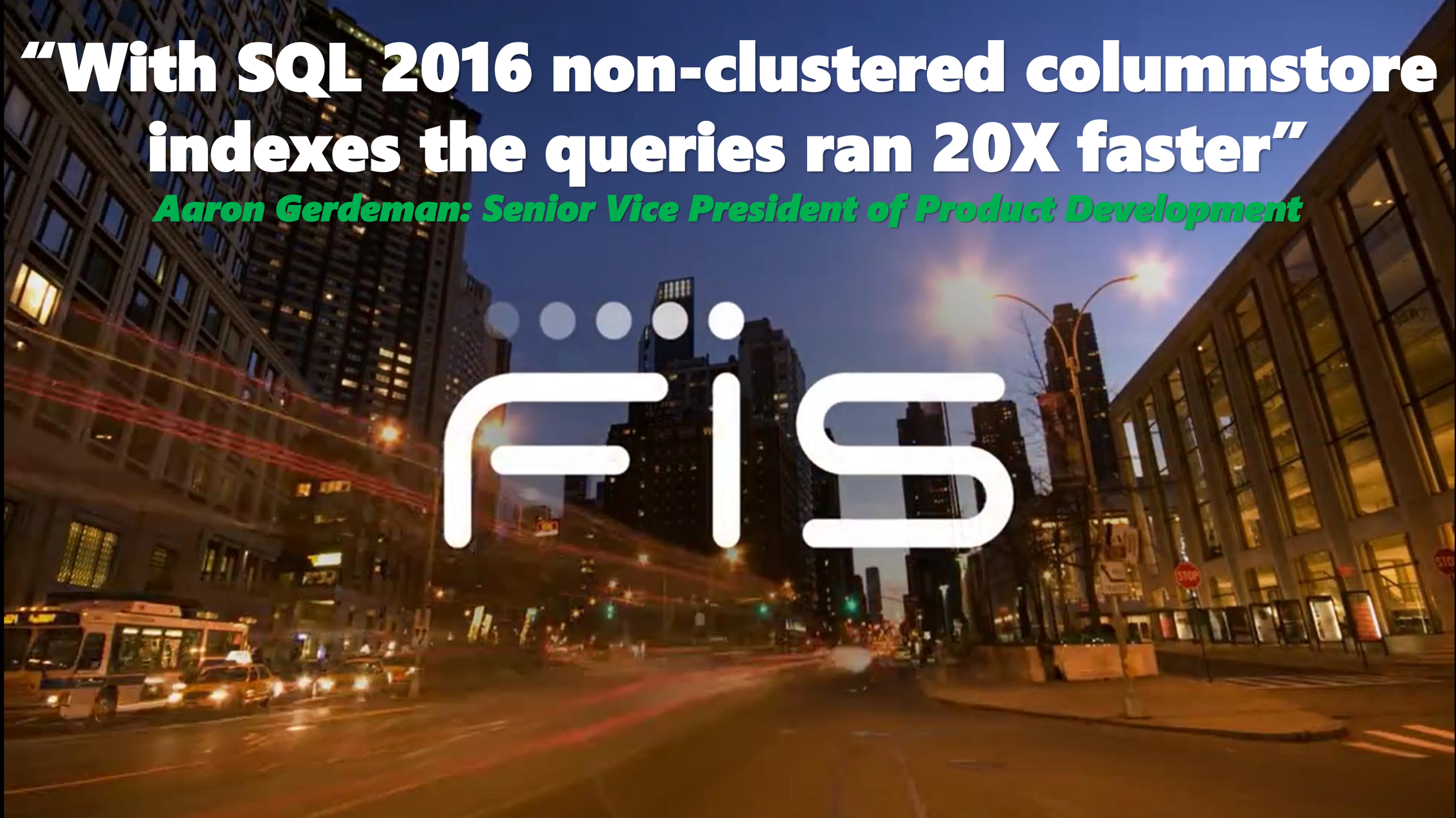
2016 Industry Leader

2 years in a row

&

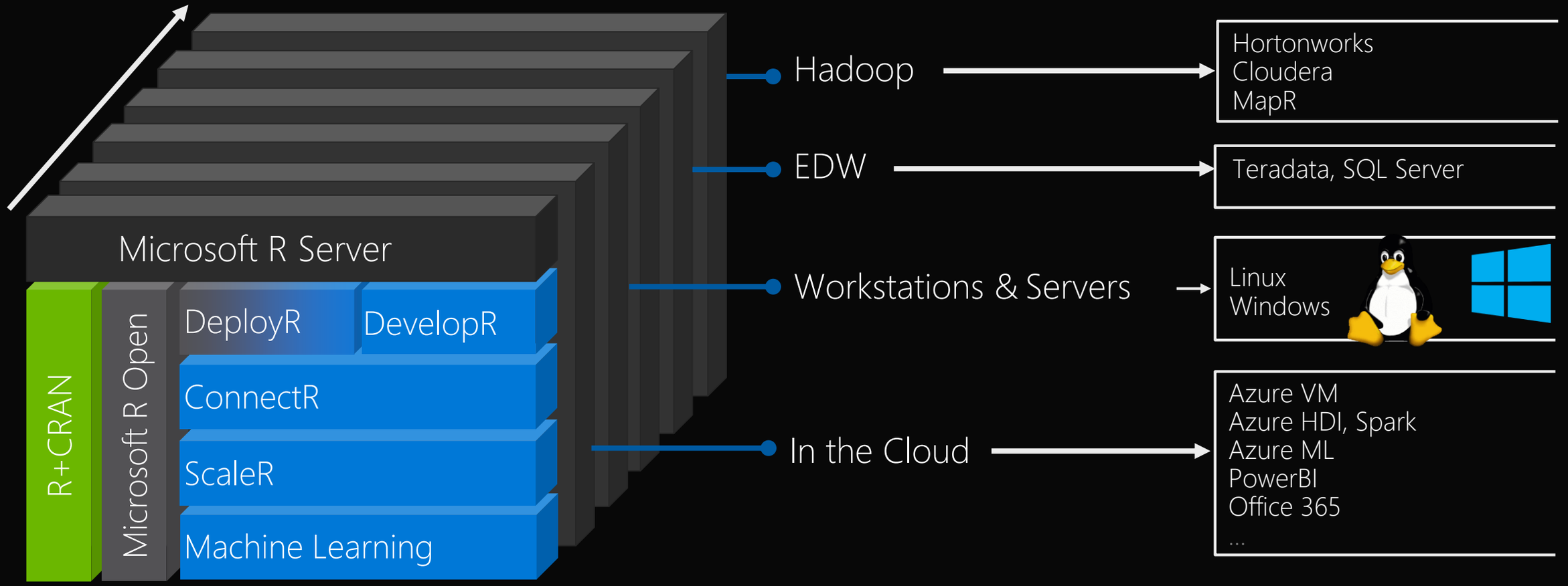
DB-Engines DBMS of the Year 2016.


“With SQL 2016 non-clustered columnstore indexes the queries ran 20X faster”
Aaron Gerdeman: Senior Vice President of Product Development
FIS

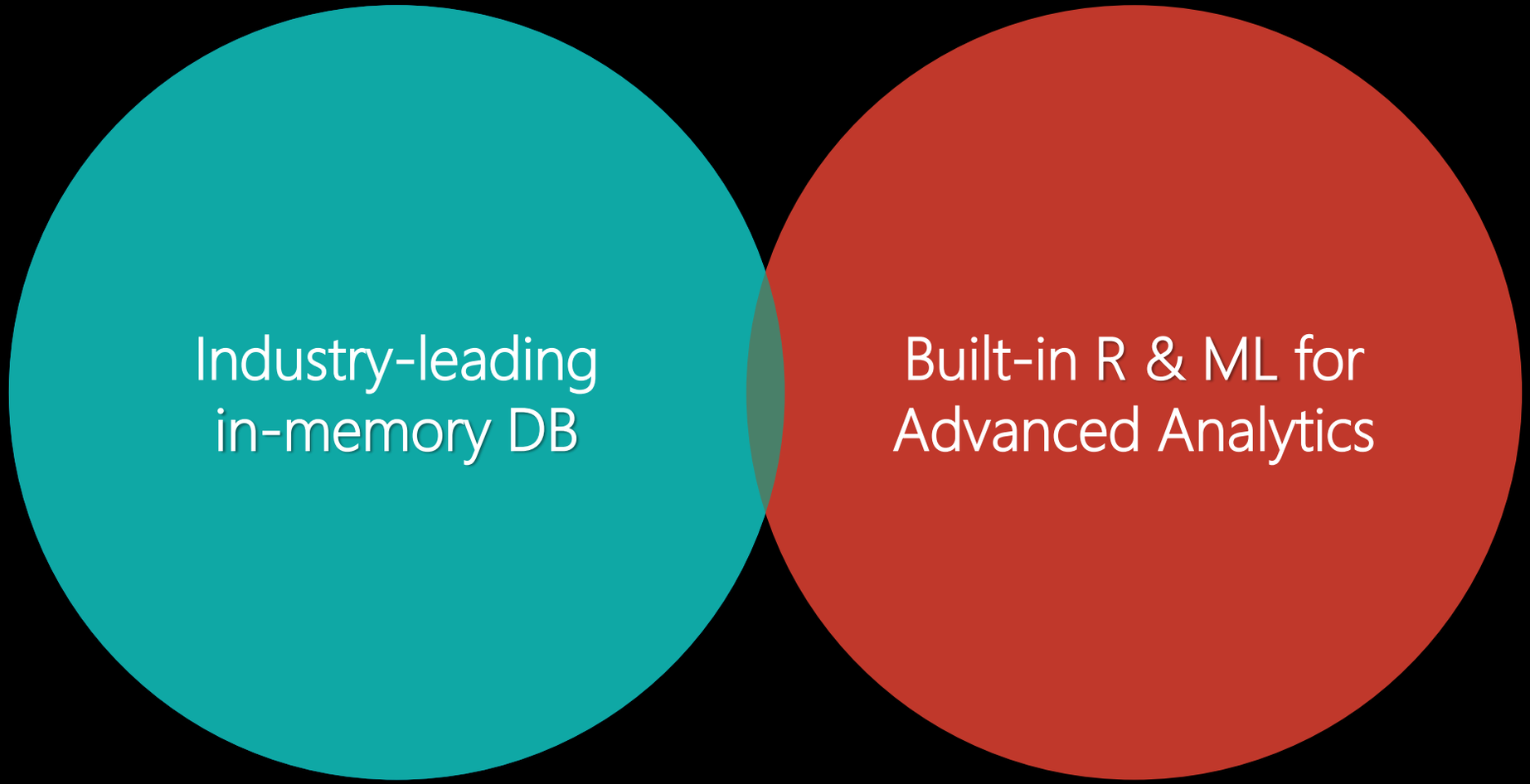
Produbanco Chooses SQL 2016

- **< 2 minute DR** during eruption of volcano Cotopaxi
- **99.57%** of online banking processes execute in **<1s**
- **80%** the execution time of monitoring queries reduced by Column-store indexes

2. Microsoft R Server: Cross Platform Analytics



Transactions + Predictive Intelligence



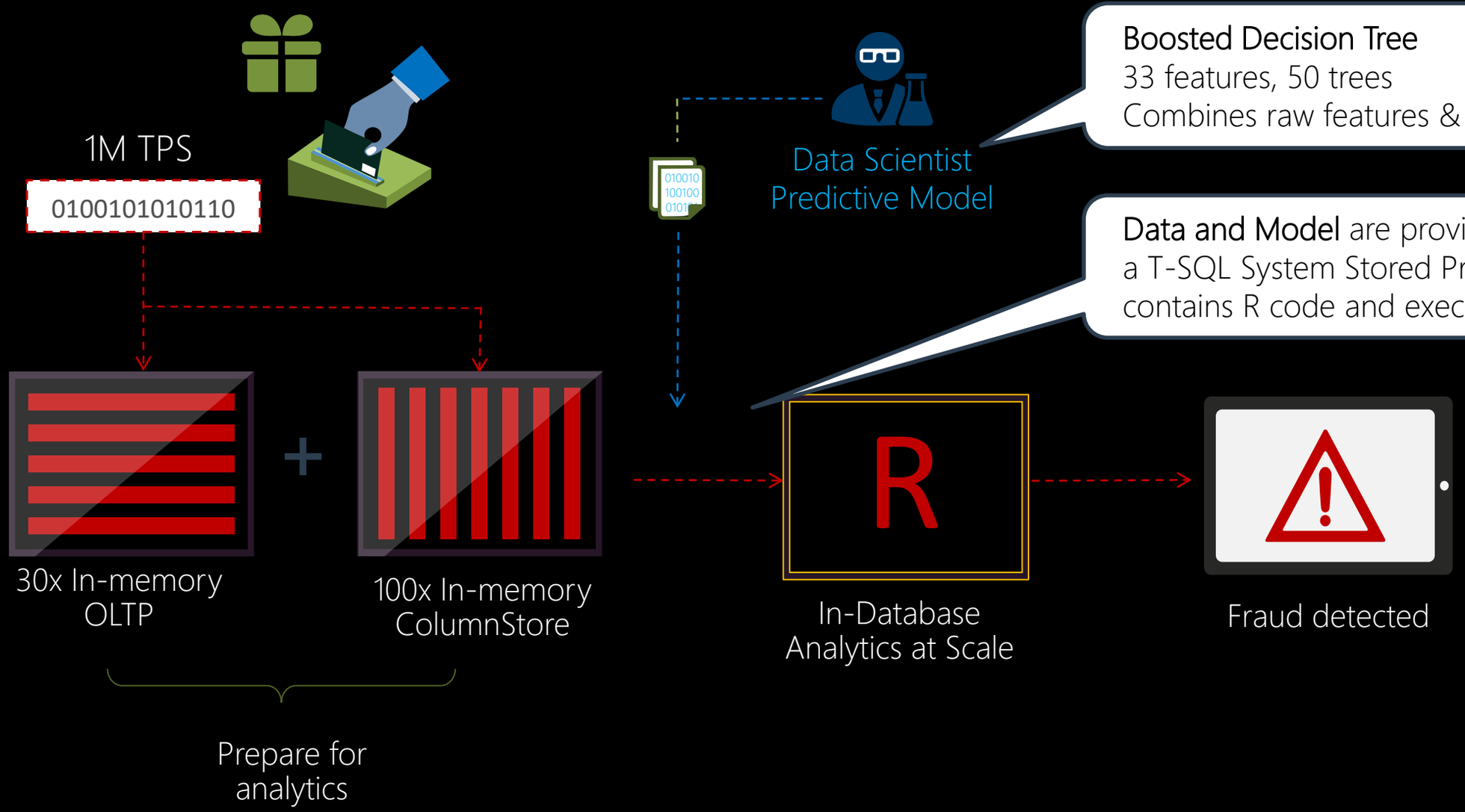
Machine Learning @

1,000,000+

predictions per second

using SQL Server 2016

High Speed Fraud Detection Example



SQL Server 2016

20M | 15S

1,300,000+ loans/sec

Not Just Intelligence.

Game-changing performance!

3000% *faster R pipeline:* MasterCard

700% *faster queries:* Global ERP

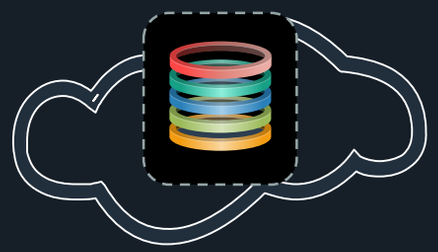
190% *faster queries:* Tableau

250% *reduction in execution time:* KPMG

Intelligence DB Implementations

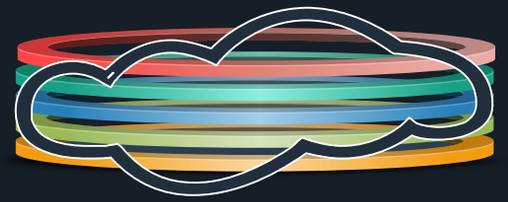
SQL Server + R

On-Premises



SQL Server + R

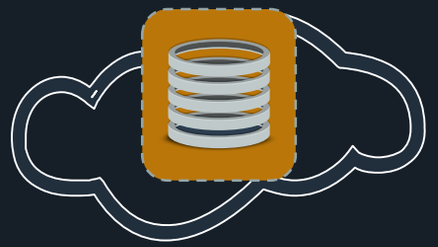
IaaS



Azure

SQL DB + R

PaaS



Data Science VM

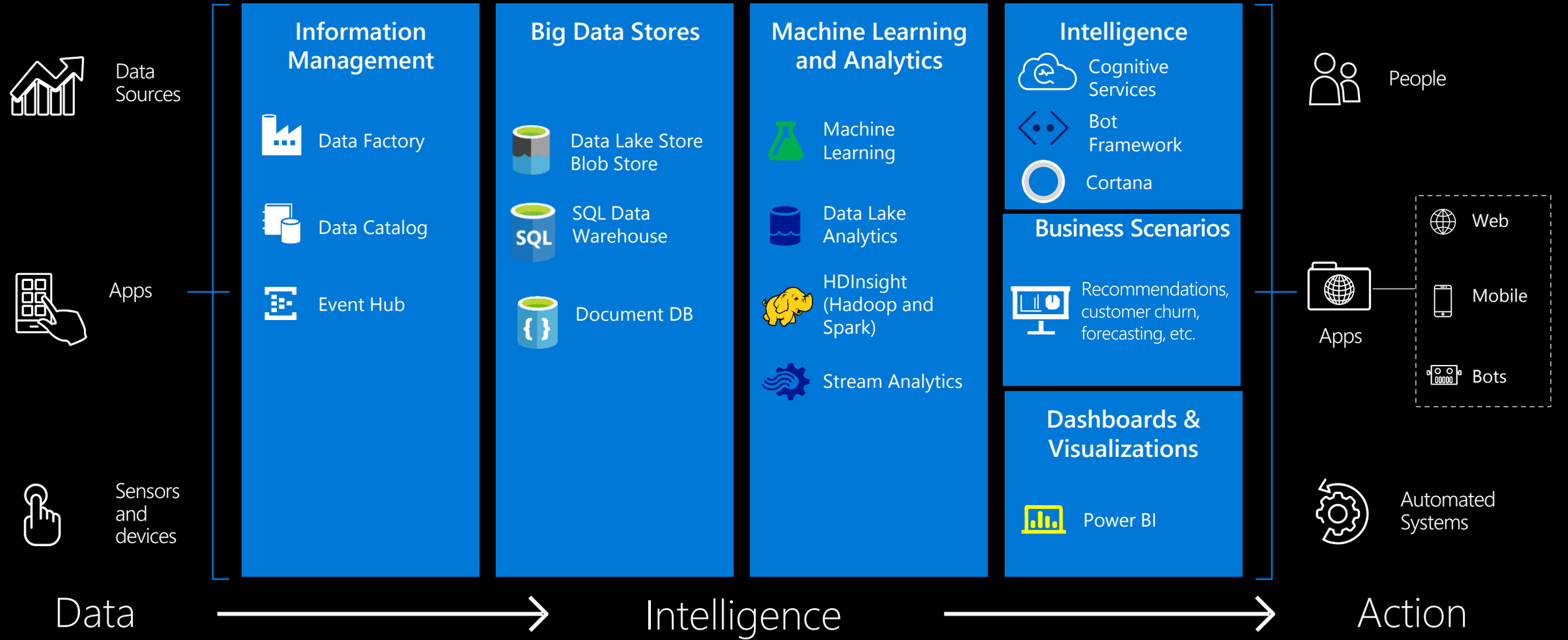
+ SQL Server

DEMO: SQL Server on Azure Stack

Luis Carlos Vargas Herring
Principal PM, SQL Server

3. Cortana Intelligence Suite

"Office 365 for Intelligence"



Partner Showcase

Neal Analytics

Business Focus	Work back from **profit drivers** to the actionable issues on which data science can provide insight or governance
Modern technical infrastructure	We focus on **cloud-based analytics:** economy, secure sharing of results, advanced functionality and on-demand capacity
Data Engineering & Data Science Expertise	Our **experience** spans structured, semi-structured and streaming data sources; our data science staff includes Ph.D.'s, engineers, and MBA's
Deep Microsoft Experience	Our practice exploits Microsoft Platforms; and we take full advantage of **our proximity and Gold Partner status** to remain current and participate in previews
Technology Transfer	**We transfer our data models** to your staff and provide training on any part of the tool chain you require

David Brown
Sales Director
DavidB@NealAnalytics.com

Neal Analytics Experience: Arca Continental Bottler

Soft Drink Bottler increases profitability by optimizing SKU Strategy

ARCACONTINENTAL

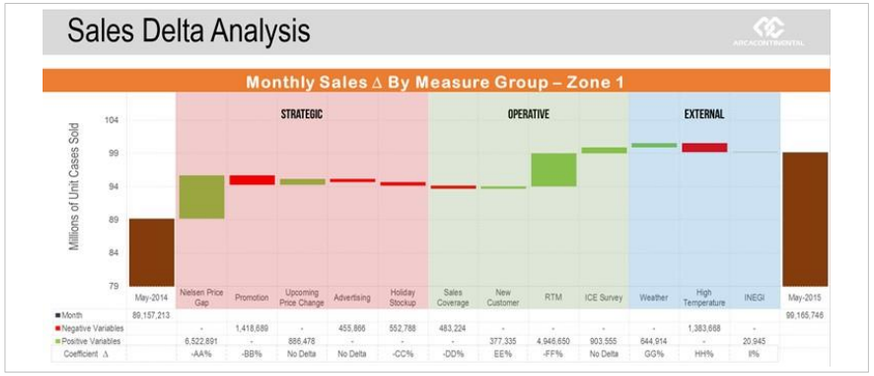
Project "Why"

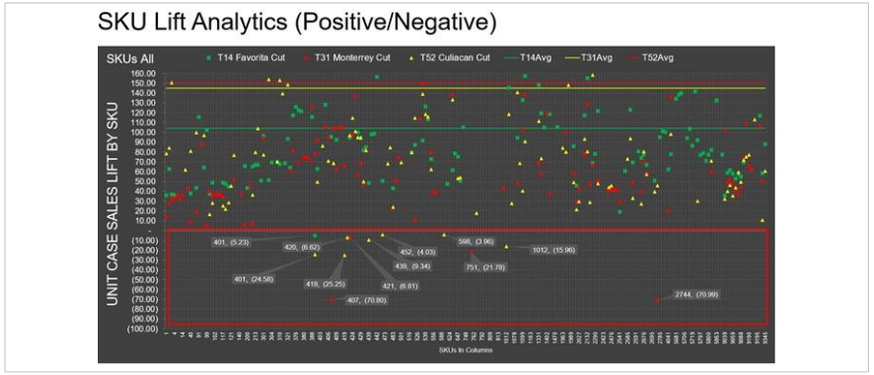
"When we started with this project, we were searching for new and improved ways to serve our clients and consumers while boosting profitability. We needed to better use the data we already had and gain a more comprehensive understanding of sales variations and correlations between multiple variables."

Lizeth Refugio Salas
Revenue Growth Management Chief, Arca Continental

"Over time, this advanced analytics solution with its statistical approach to big data will transform the way we take business decisions through all business processes."

Ruben Dario Torres Martinez
IT Manager, Arca Continental





Sales Driver Analysis

- Understand sales impact and influence of 95+ internal and external variables
- Differentiate sales drivers across markets and geographies
- Optimize strategic and operational business decisions

Sales Delta Analysis

- Answers the question "what caused sales variance?"
- Identify and quantify which variables contributed to sales variance
- Determine which business functions need to be optimized

SKU Lift Analysis

- Identify SKU's with negative sales lift (cannibals)
- Optimize SKU distribution
- Increase sales and profitability by dropping SKU's that hurt sales

SKU Optimization using Machine Learning

All Sales Data

Territory A

Territory B

Territory C

Bulk Retailer

Extra Large Outlet

Grocery

Large Outlet

Food & Drink

Medium Outlet

Conv. Stores

Small Outlet

Micro Outlet

Sales Data for Large Grocers in Territory B

10101
01010
00100

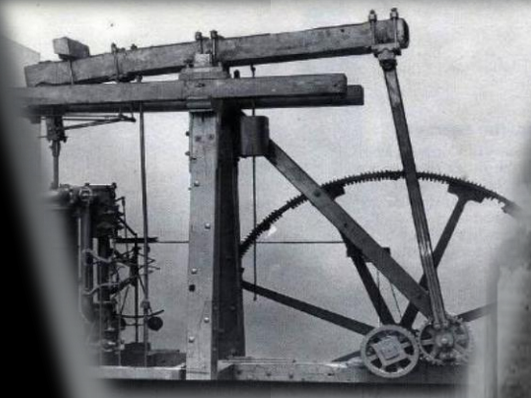
010011 01001101 01000001 0101001

Machine Learning Model

Ordered List of the Best and Worst SKUs for Large Grocers in Territory B

Call to Action

- Join the Data Platform breakout today afternoon
- Deploy SQL Server 2016. Explore and implement new features and enhancements.
- Enhance your data practices by adding intelligent services and analytics



James Watts'

Steam Engine

Industrial Revolution

Intelligent Cloud

Intelligence Revolution

1769 1780s . . . . . TODAY 2020s . . .

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