

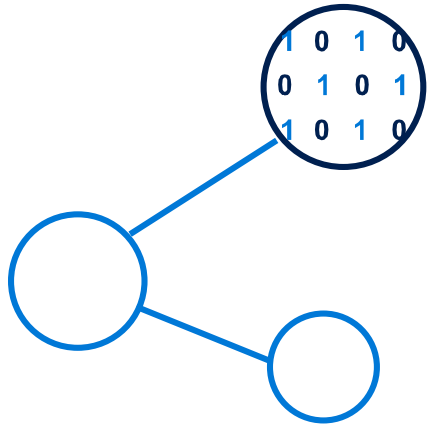
Cortana Intelligence Suite Workshop



Agenda

Topic	Duration (Min)	Time
Welcome and Breakfast	30	8:30 AM - 9:00 AM
Cortana Intelligence Suite Keynote	60	9:00 AM - 10:00 AM
Overview of lab exercises	20	10:00 AM - 10:20 AM
Exercise 1: Building a Machine Learning Model	90	10:20 AM - 11:50 AM
Lunch	40	11:50 AM - 12:30 PM
Exercise 2: Develop Azure Data Factory Pipeline	20	12:30 PM - 12:50 PM
Exercise 3: Develop Data Factory Pipeline for Data Movement	20	12:50 PM - 1:10 PM
Exercise 4: Operationalize ML Scoring with Azure ML and Data Factory	20	1:10 PM - 1:30 PM
Exercise 5: Summarize Data Using HDInsight Spark	60	1:30 PM - 2:30 PM
Exercise 6: Visualizing in Power BI	30	2:30 PM - 3:00 PM
Exercise 7: Deploy Intelligence Web App	20	3:00 PM - 3:20 PM
Exercise 8: Cleanup of Azure resources	10	3:20 PM - 3:30 PM

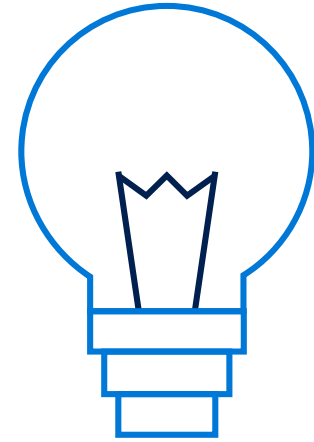
Business is being transformed by three trends



Big Data



Cloud

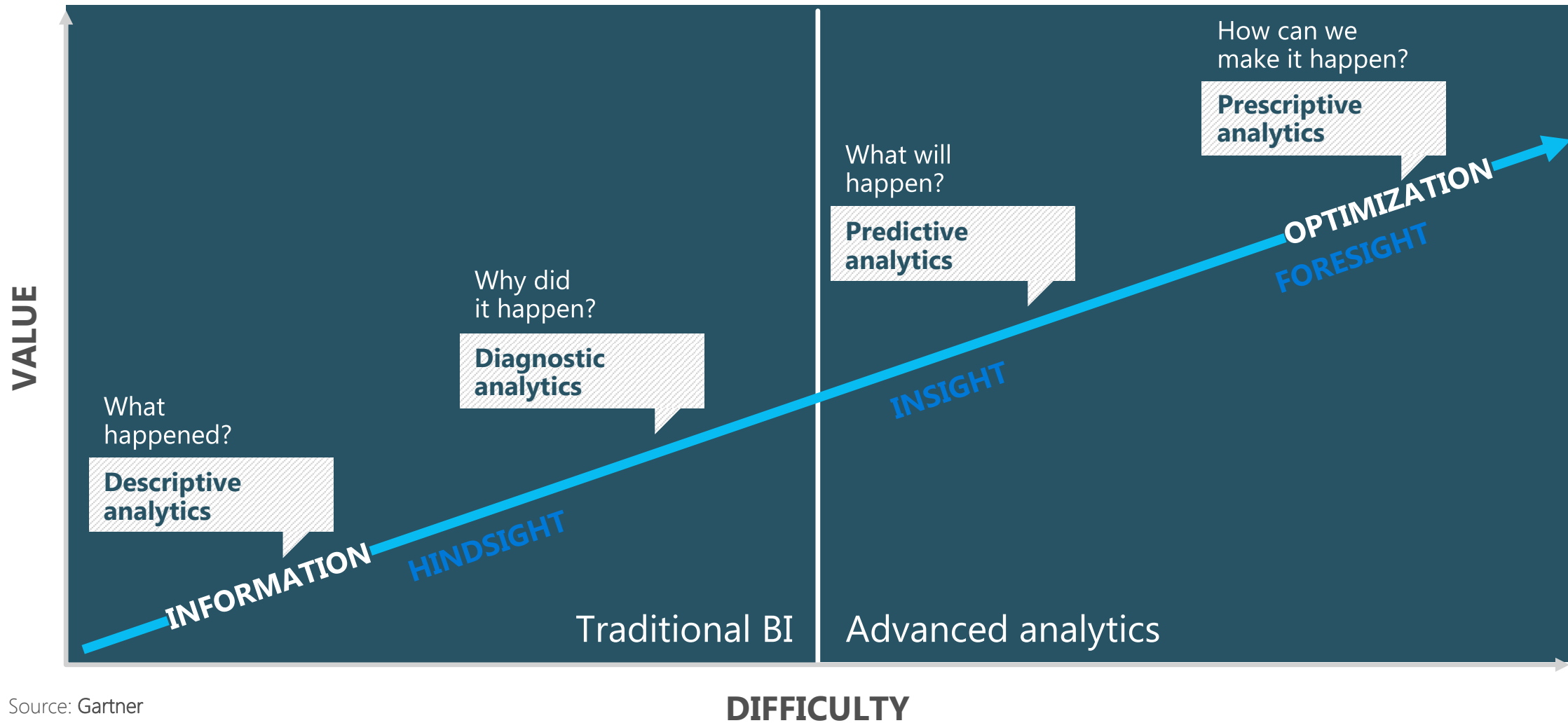


Intelligence

The future of analytics



Advanced Analytics



Here are some examples of how our customers are staying ahead



Improving visibility and making accurate predictions with **remote monitoring**



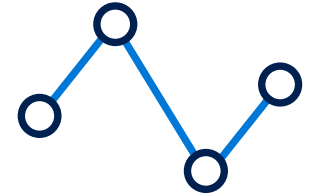
Getting the right products to the right places with **inventory management**



Offering customers exactly what they want, when they want it, with **personalization**

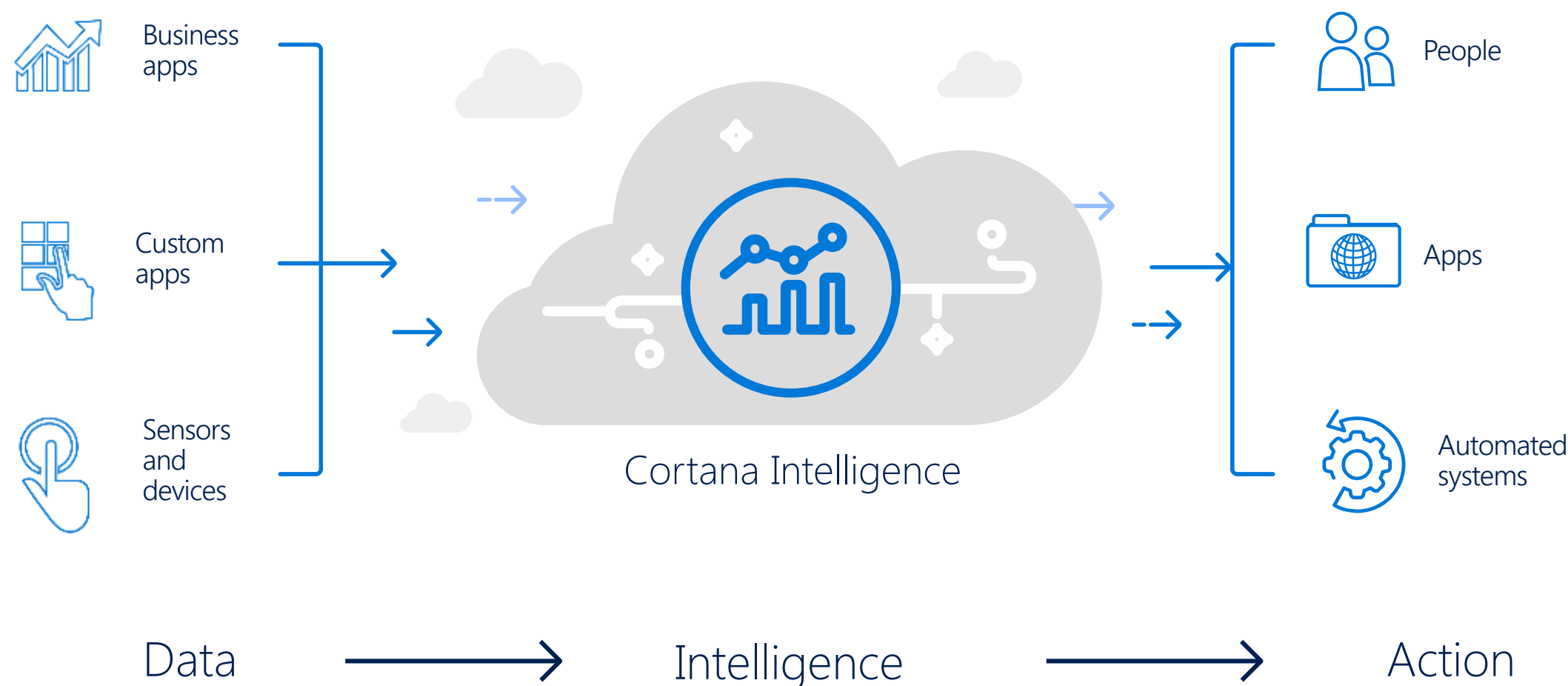


Fixing problems proactively before they start with **predictive maintenance**

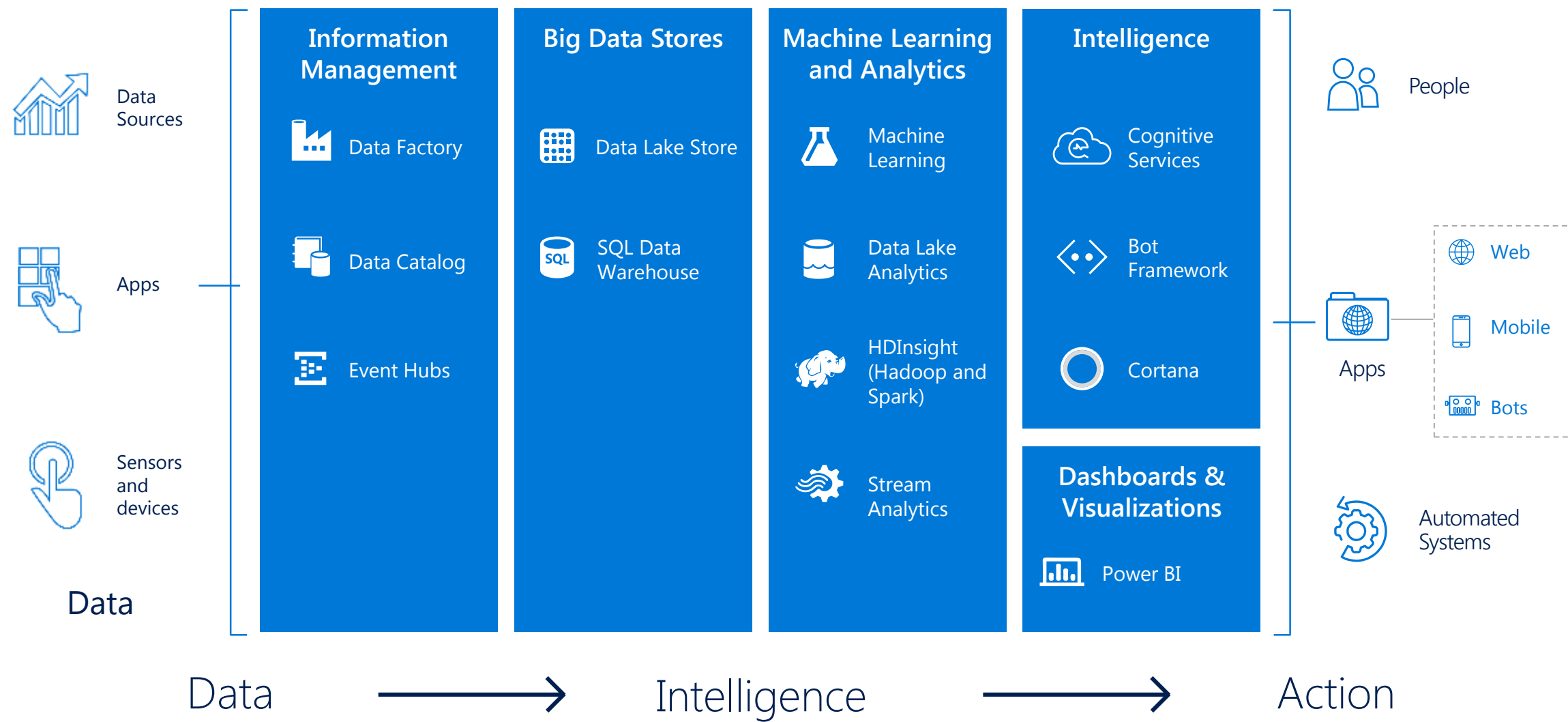


Exploring new business opportunities with **data-driven services**

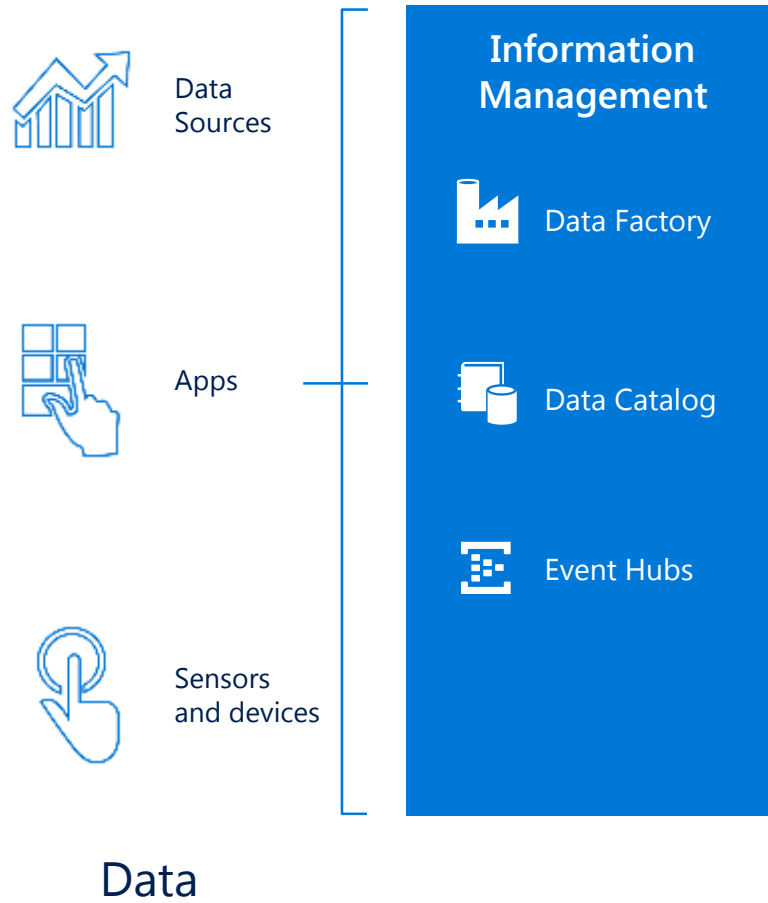
Cortana Intelligence Suite



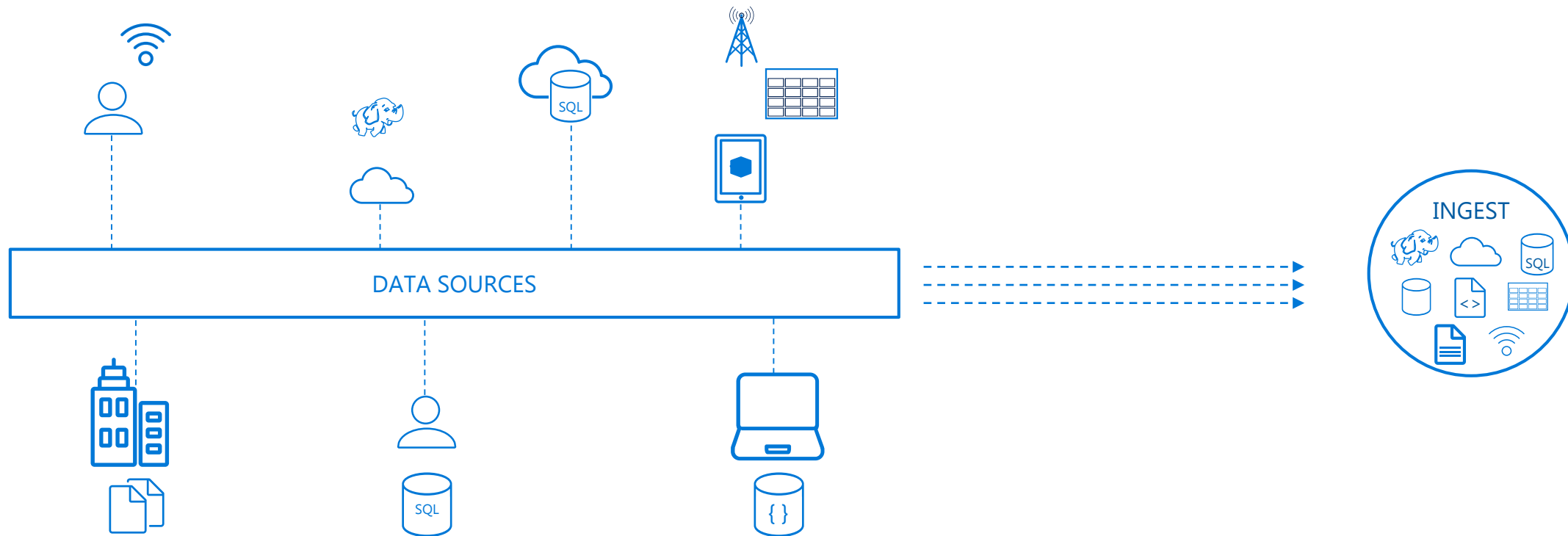
Transform data into intelligent action



Information Management



Compose and orchestrate data services at scale



- Create, schedule, orchestrate, and manage data pipelines
- Visualize data lineage
- Connect to on-premises and cloud data sources
- Monitor data pipeline health

- Automate cloud resource management
- Move relational data for Hadoop processing
- Transform with Hive, Pig, or custom code

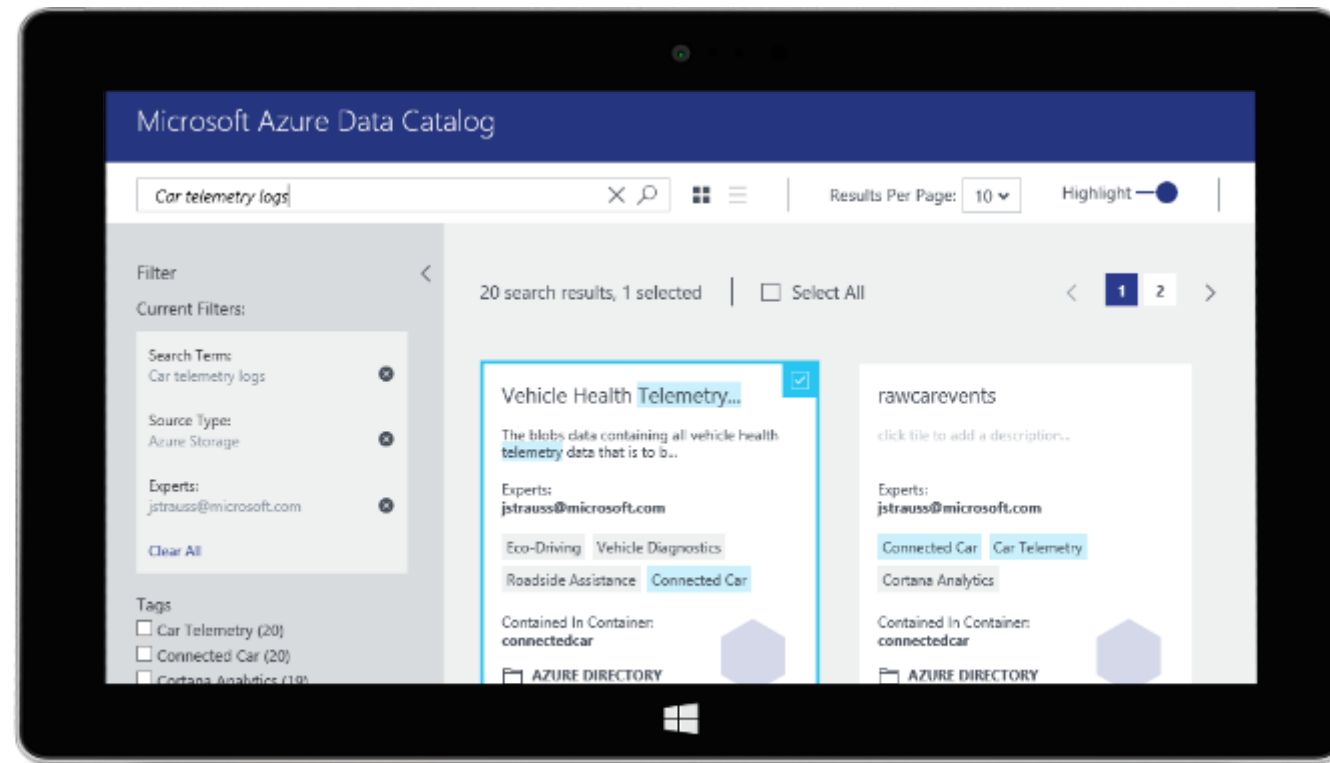
Get more value from your enterprise data assets

Information Management

 Data Factory

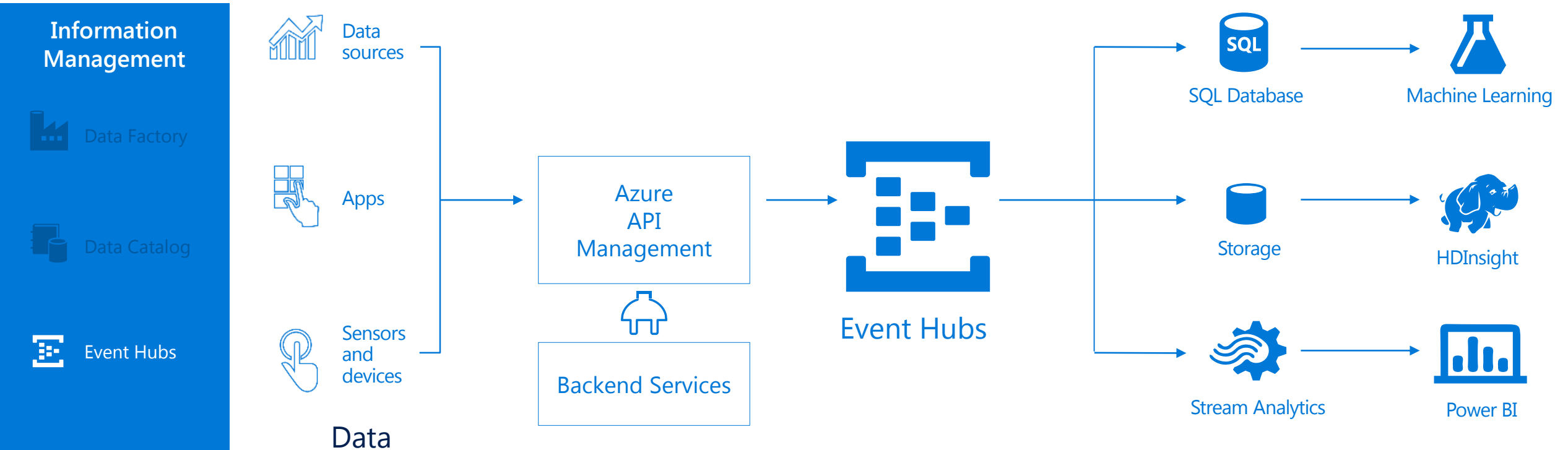
 Data Catalog

 Event Hubs



- Spend less time looking for data, and more time getting value from it
- Register enterprise data sources, discover data assets and unlock their potential, and capture tribal knowledge to make data understandable
- Bridge the gap between IT and the business, allowing everyone to contribute their insights, tags, and descriptions
- Intuitive search and filtering to understand the data sources and their purpose
- Let your data live where you want; connect using tools you choose
- Integrate into existing tools and processes with open REST APIs

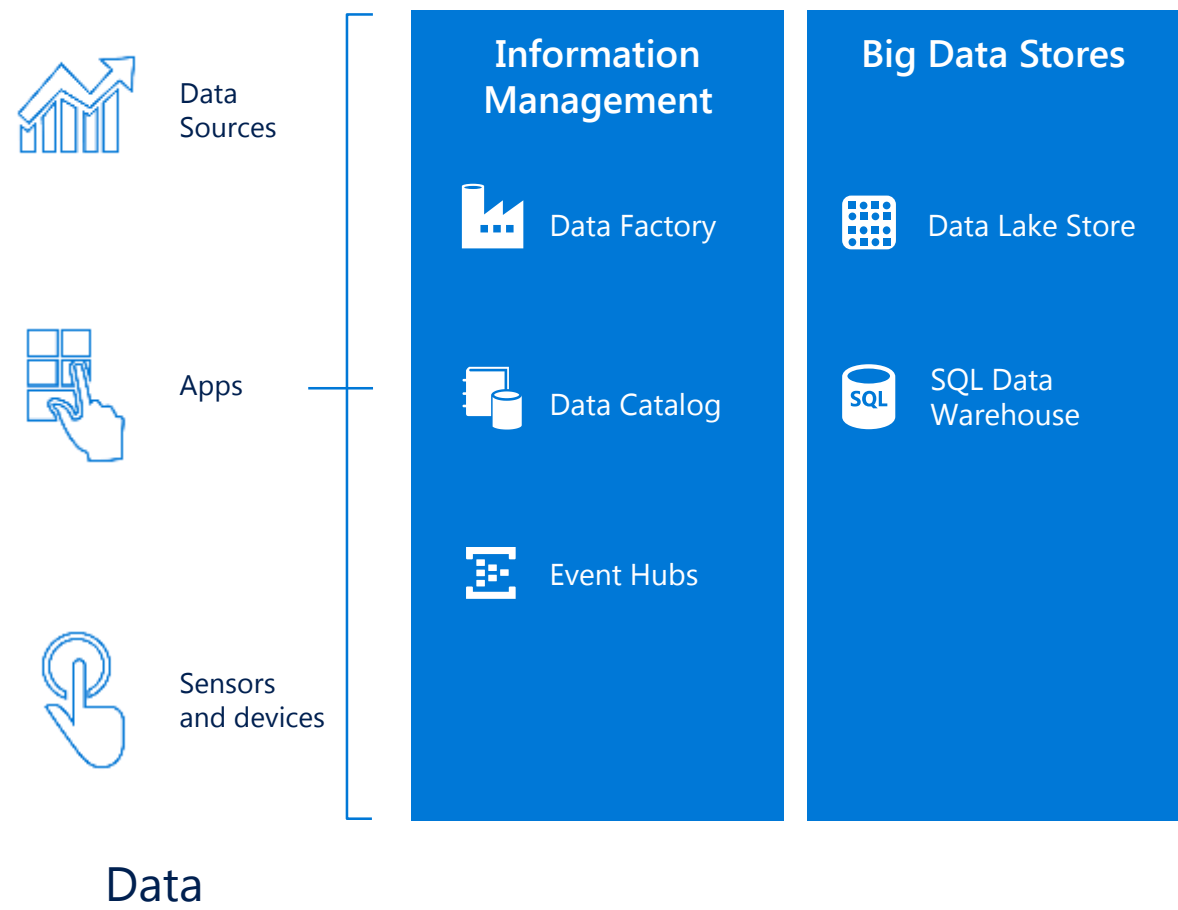
Ingest events from websites, apps and devices at cloud scale



- Log millions of events per second in near real time
- Connect devices using flexible authorization and throttling
- Use time-based event buffering
- Get a managed service with elastic scale

- Get a managed service with elastic scale
- Reach a broad set of platforms using native client libraries
- Pluggable adapters for other cloud services

Big Data Stores

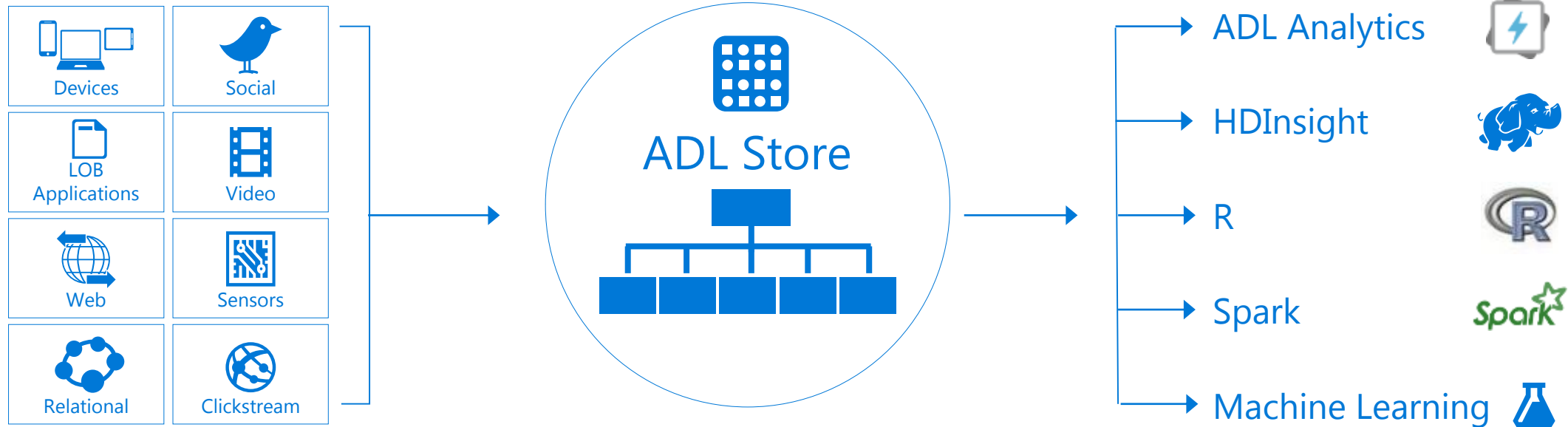


A hyper-scale repository for big data analytics workloads

Big Data Stores

 Data Lake Store

 SQL Data Warehouse



- A Hadoop Distributed File System for the cloud
- No fixed limits on file size
- No fixed limits on account size
- Unstructured and structured data in their native format

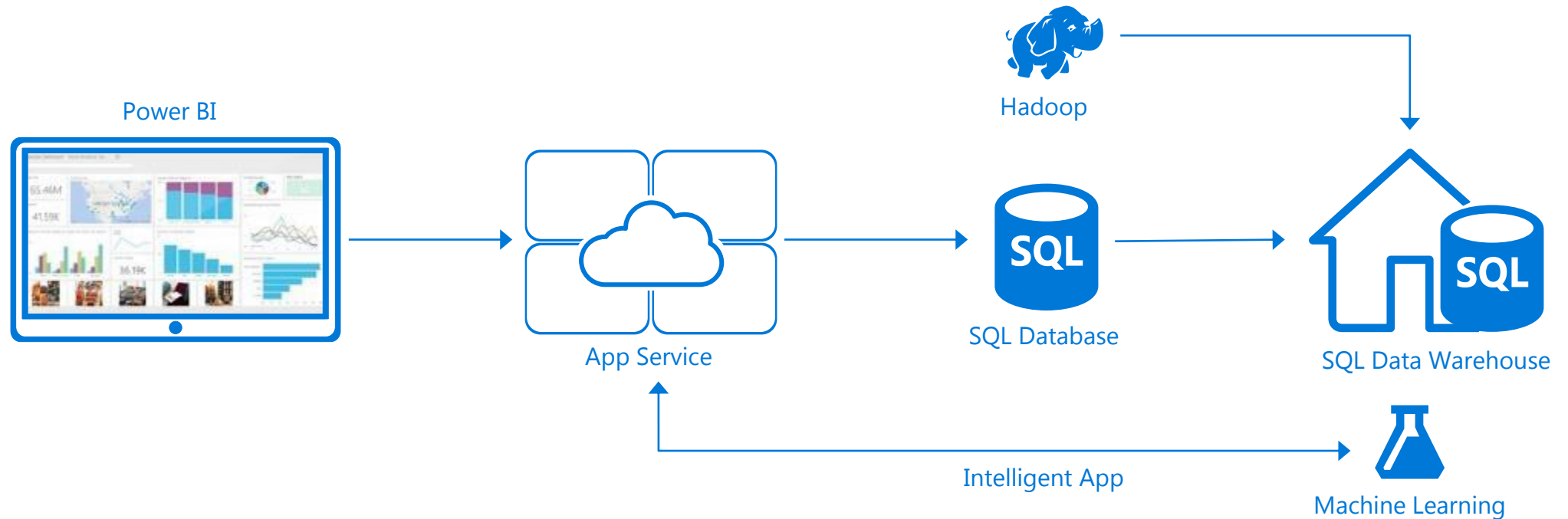
- Massive throughput to increase analytic performance
- High durability, availability, and reliability
- Azure Active Directory access control

Elastic data warehouse as a service with enterprise-class features

Big Data Stores

 Data Lake Store

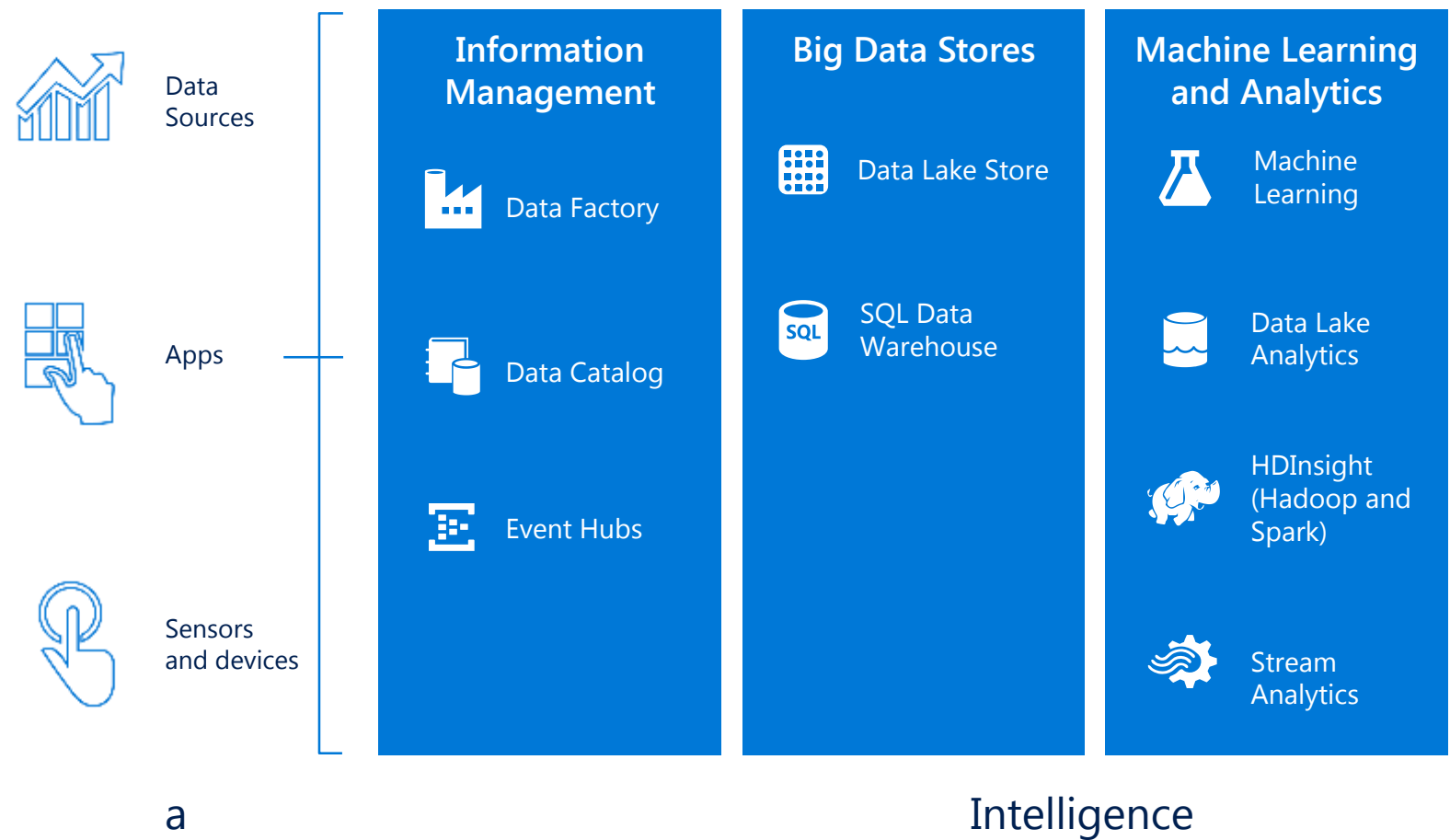
 SQL Data Warehouse



- Petabyte scale with massively parallel processing
- Independent scaling of compute and storage—in seconds
- Transact-SQL queries across relational and non-relational data

- Full enterprise-class SQL Server experience
- Works seamlessly with Power BI, Machine Learning, HDInsight, and Data Factory

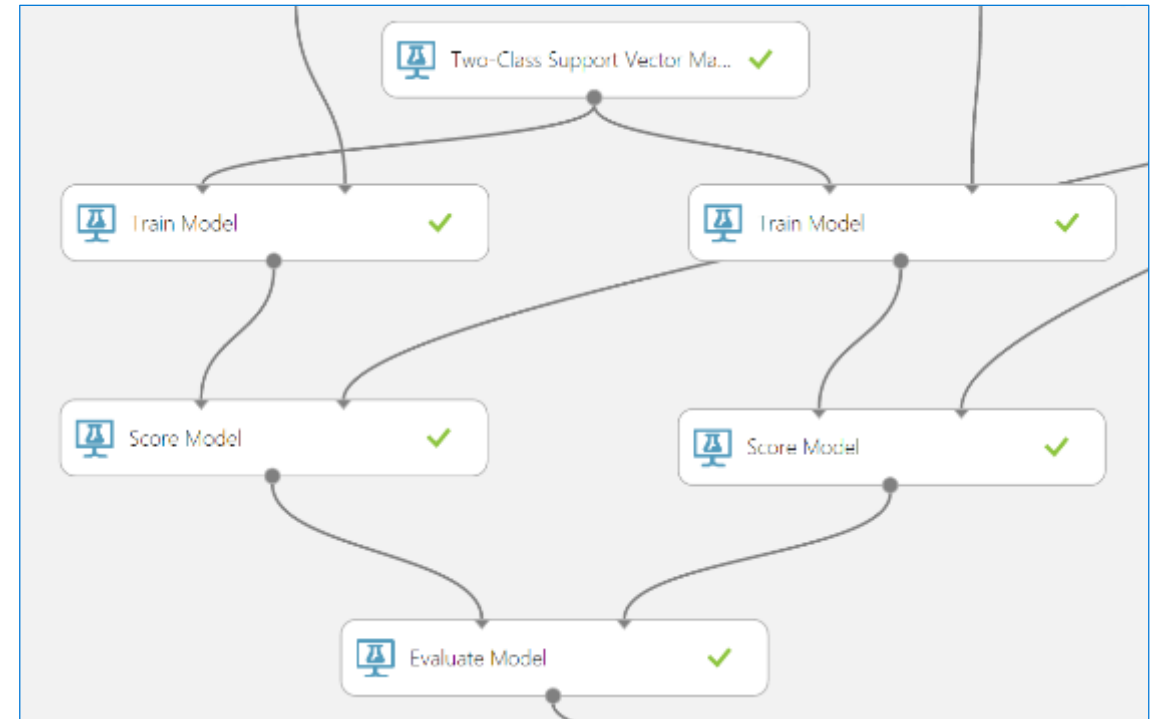
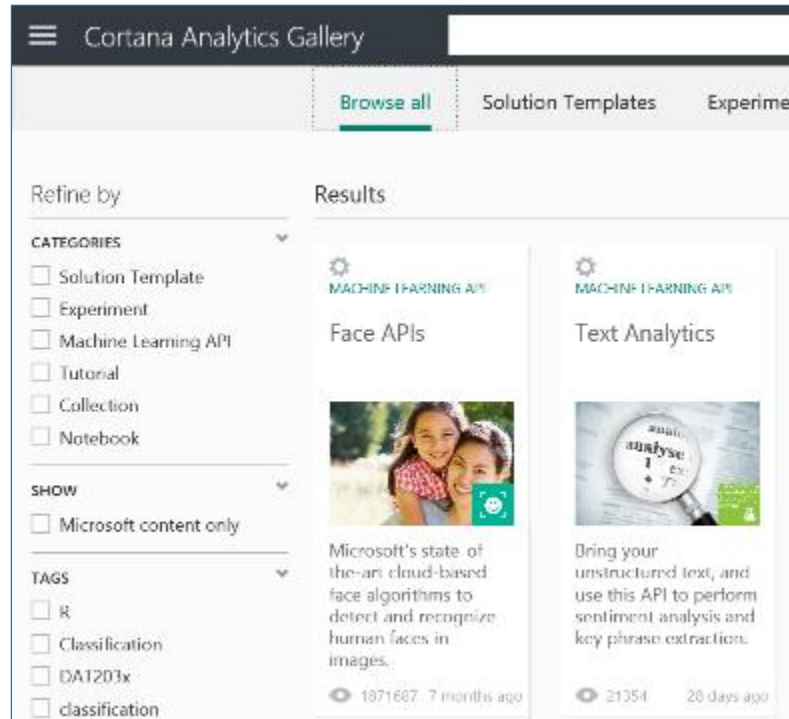
Machine Learning and Analytics



Easily build, deploy, and share predictive analytics solutions

Machine Learning and Analytics





- Machine Learning
- Data Lake Analytics
- HDInsight (Hadoop and Spark)
- Stream Analytics



- Simple, scalable, cutting edge. A fully managed cloud service that enables you to easily build, deploy, and share predictive analytics solutions.
- Deploy in minutes. Azure Machine Learning means business. You can deploy your model into production as a web service that can be called from any device, anywhere and that can use any data source.
- Publish, share, monetize. Share your solution with the world in the Gallery or on the Azure Marketplace.

Big data analytics made easy

Machine Learning and Analytics

-  Machine Learning
-  Data Lake Analytics
-  HDInsight (Hadoop and Spark)
-  Stream Analytics



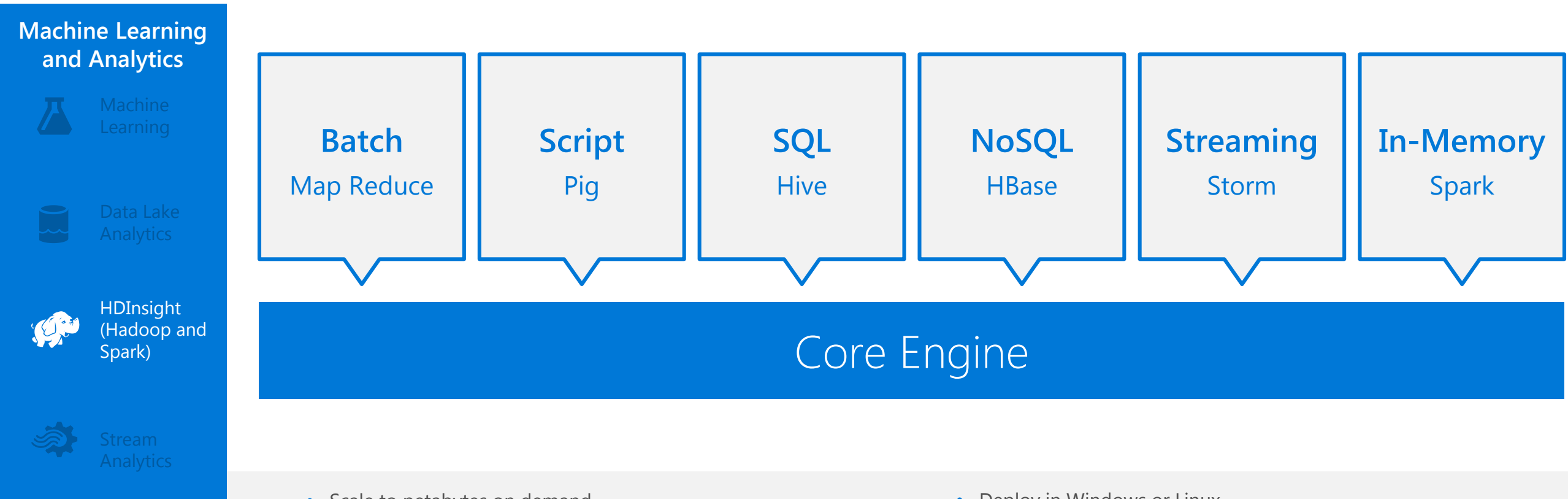
Data Lake Analytics



- Analyze data of any kind and size
- Develop faster, debug and optimize smarter
- Interactively explore patterns in your data
- No learning curve—use U-SQL, Spark, Hive, HBase and Storm

- Managed and supported with an enterprise-grade SLA
- Dynamically scales to match your business priorities
- Enterprise-grade security with Azure Active Directory
- Built on YARN, designed for the cloud

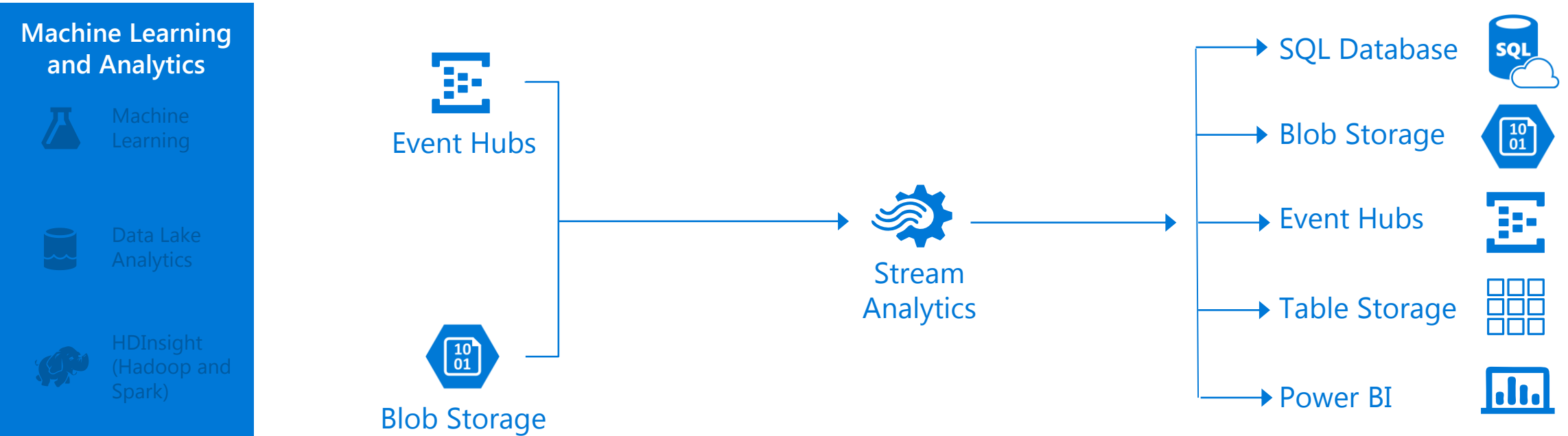
Comprehensive set of managed Apache big data projects



- Scale to petabytes on demand
- Process unstructured and semi-structured data
- Develop in Java, .NET, and more
- Skip buying and maintaining hardware

- Deploy in Windows or Linux
- Spin up an Apache Hadoop cluster in minutes
- Visualize your Hadoop data in Excel
- Easily integrate on-premises Hadoop clusters

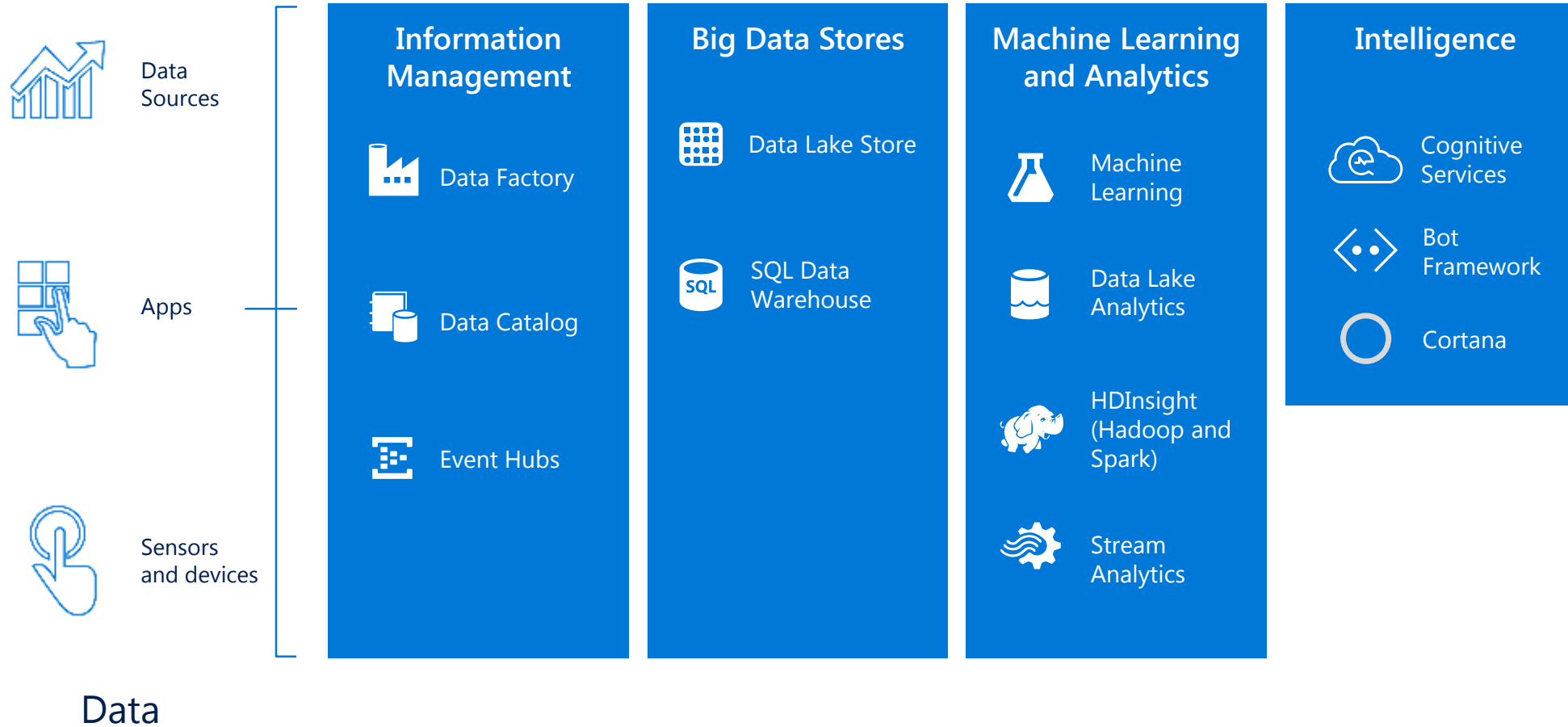
Real-time stream processing in the cloud











- Perform real-time analytics for your Internet of Things solutions
- Stream millions of events per second
- Get mission-critical reliability and performance with predictable results

- Create real-time dashboards and alerts over data from devices and applications
- Correlate across multiple streams of data
- Use familiar SQL-based language for rapid development

Intelligence



Build applications that understand people

<div>Intelligence</div> <div> Cognitive Services</div> <div> Bot Framework</div> <div> Cortana</div>	 Vision	 Speech	 Language	 Knowledge	 Search
	Computer Vision	Speaker Recognition	Text Analytics	Academic Knowledge	Bing Search API
	Face	Speech	Bing Speller	Entity Linking Service	Bing Image Search API
	Emotion	CRIS	Web Language Model	Knowledge Exploration Service	Bing Video Search API
	Video		Linguistic Analysis	Recommendations	Bing News Search API
			Language Understanding Intelligent Service		Bing Auto Suggest API

- Faces, images, emotion recognition and video intelligence
 - Spoken language processing, speaker recognition, custom speech recognition
 - Natural language processing, sentiment and topics analysis, spelling errors
- Complex tasks processing, knowledge exploration, intelligent recommendations
 - Bing engine capabilities for Web, Autosuggest, Image, Video and News

Your bots – wherever your users converse

Intelligence



Cognitive
Services



Bot
Framework



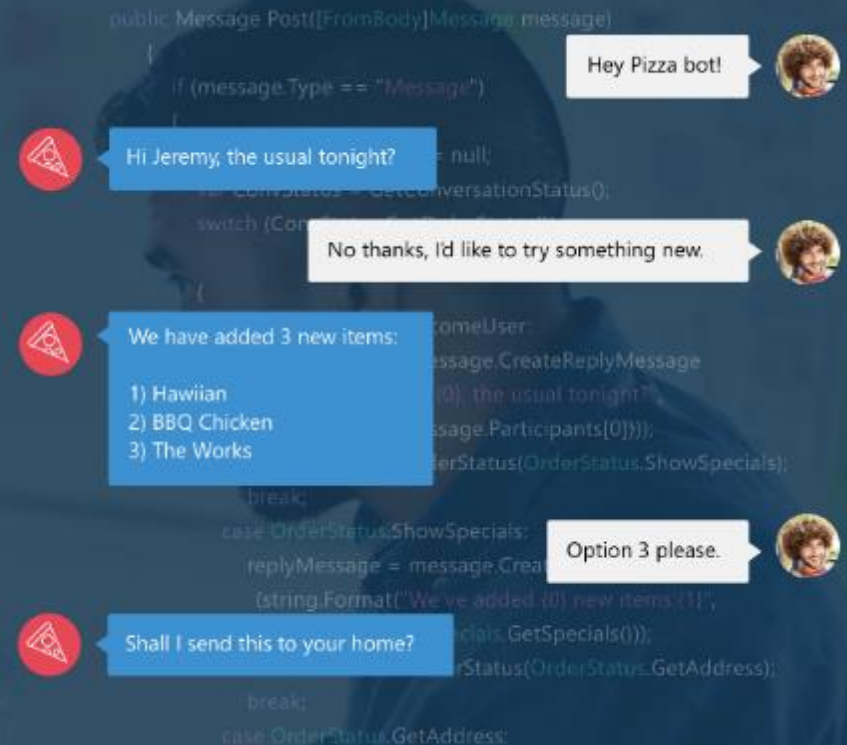
Cortana

Microsoft Bot Framework

Your bots — wherever your users are talking.

Build and connect intelligent bots to interact with your users naturally wherever they are, from text/sms to Skype, Slack, Office 365 mail and other popular services.

Get started



- Bot Connector Service: A service to register your bot, configure channels and publish to the Bot Directory. Connect your bot(s) seamlessly to text/sms, Office 365 mail, Skype, Slack, Twitter, and more.
- Bot Builder SDK: An open source SDK hosted on GitHub. Everything you need to build great dialogs within your Node.js or C# bot
- Bot Directory: A public directory of bots registered through the Bot Connector Service. Discover, try, and add bots to conversation experiences

Get things done in more helpful, proactive and natural ways

Intelligence



Cognitive
Services



Bot
Framework



Cortana



Here are some of the
things I can help you with...

Cortana for Consumers (today)

With the Cortana Intelligence Suite

Answers

Public reference data answers – *"How far is it from Los Angeles to San Francisco?"*

Answers from organizational data in Power BI
"What were our biggest deals that closed last month?"

Predictions

Event predictions – *"Who do you think is going to win the Germany Italy game?"*

Integration with prediction solutions
"Which of our customers are most likely to churn in the next quarter?"

Monitoring & Alerts

Flight status, traffic conditions, changes in weather, ...

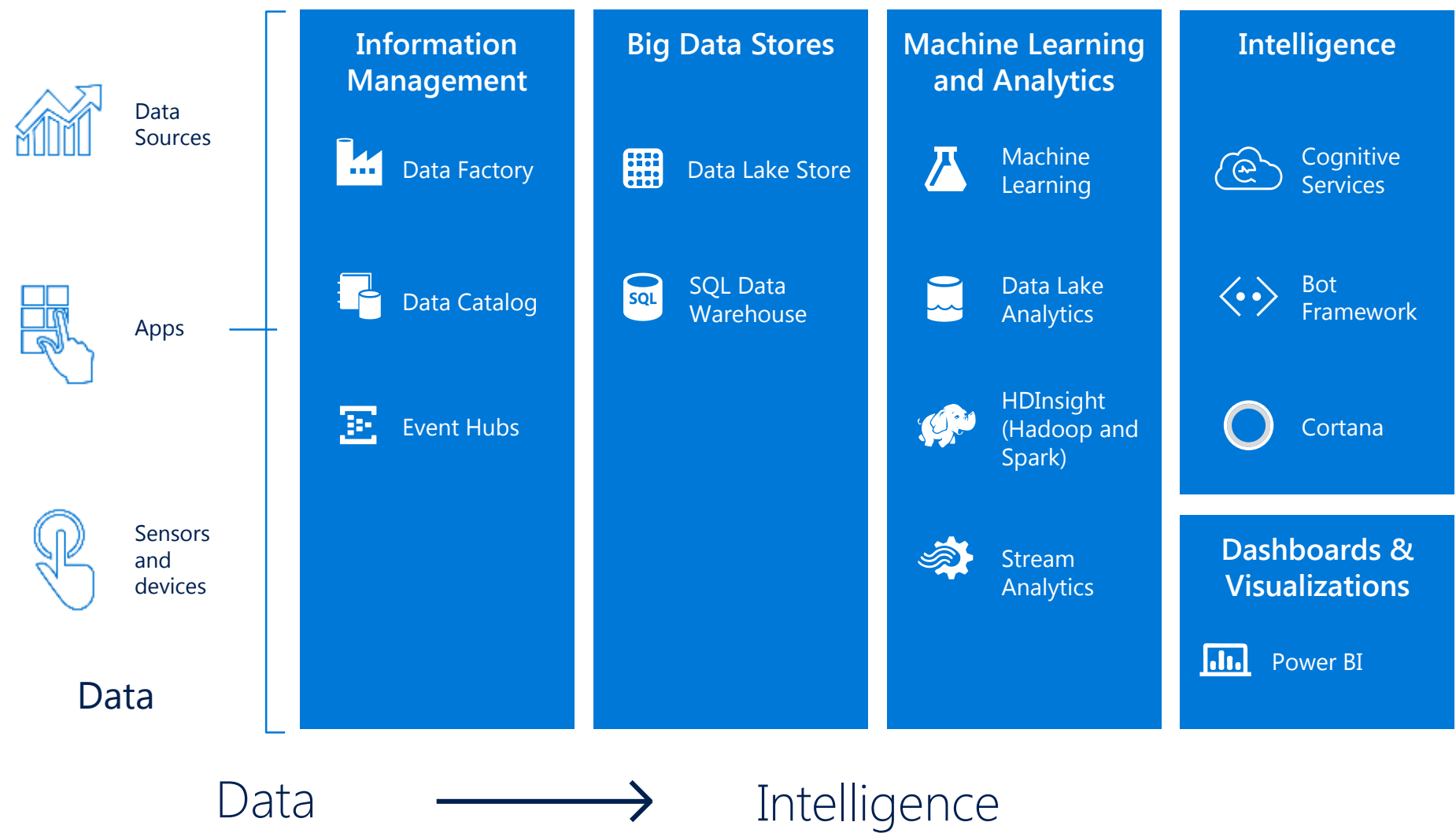
Monitoring KPIs and preemptive alerting
"Alert me if this customer ever has a 90% chance of churn in the next 30 days"

Task Completion

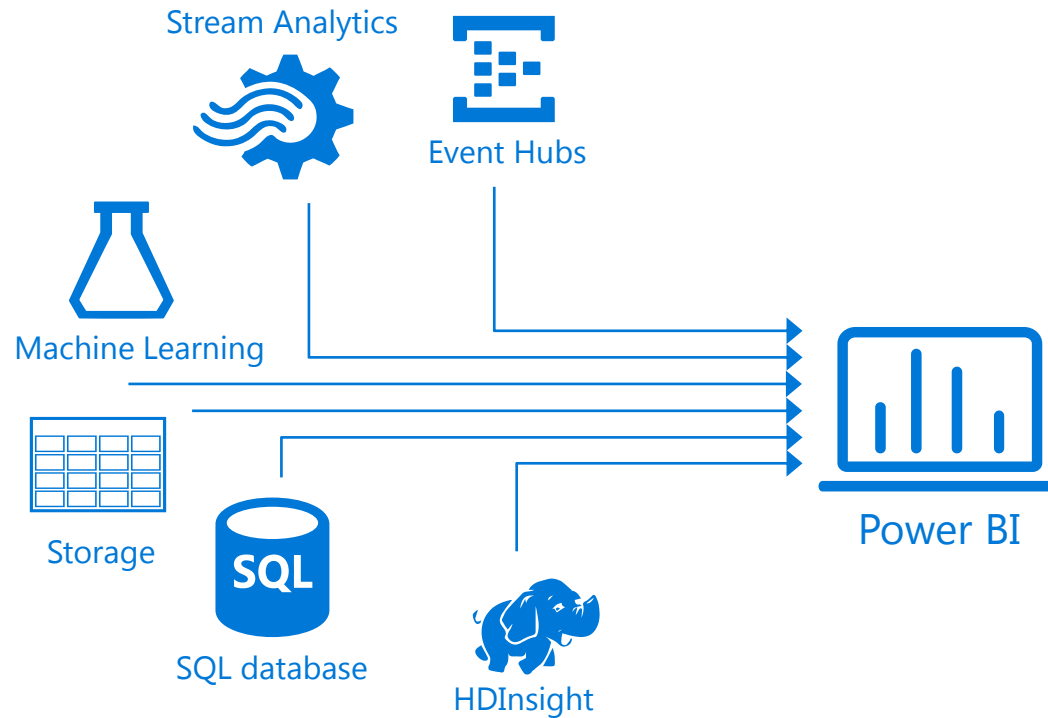
Setting reminders, scheduling meetings, getting directions, ...

Line of business process integration
Assistance with expense report submission on-time within policy

Dashboards & Visualizations



Keep a pulse on your business with live, interactive dashboards



Dashboards & Visualizations



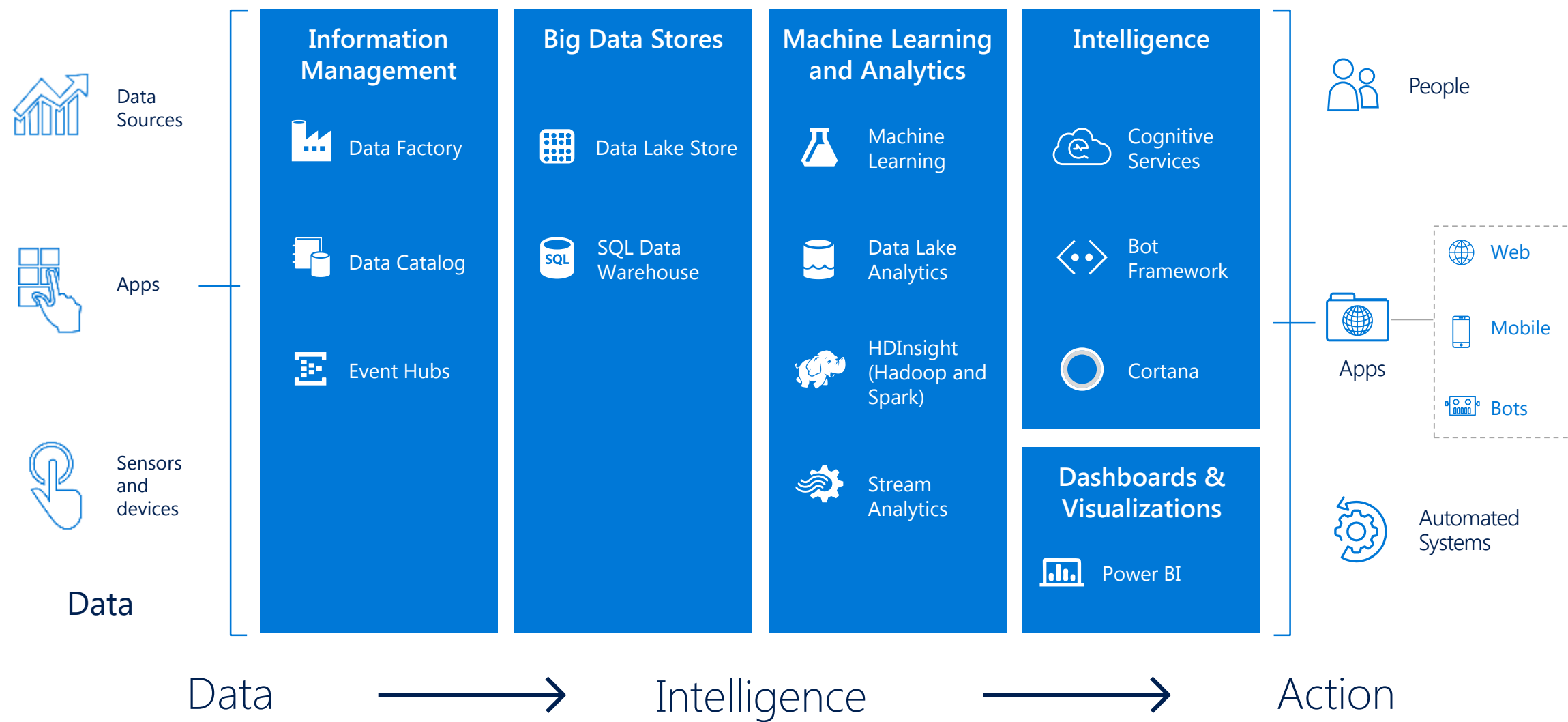
Power BI

- Analytics for everyone, even non-data experts
- Your whole business on one dashboard
- Create stunning, interactive reports
- Drive consistent analysis across your organization
- Embed visuals in your applications
- Get real-time alerts when things change

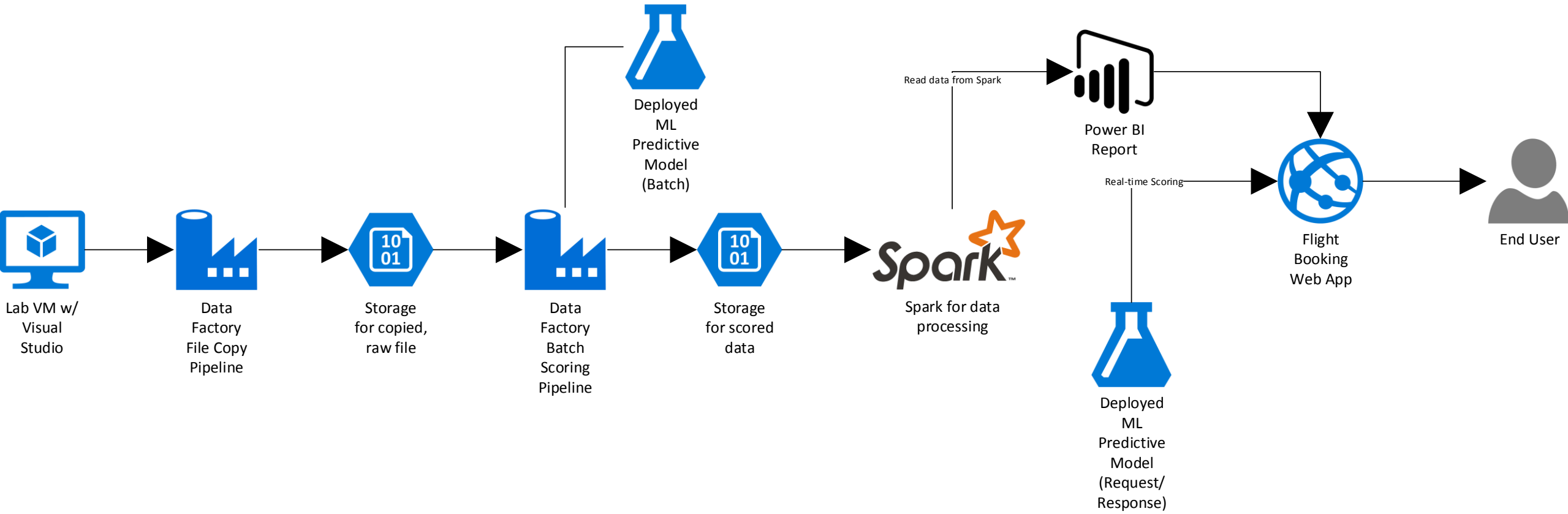


Microsoft

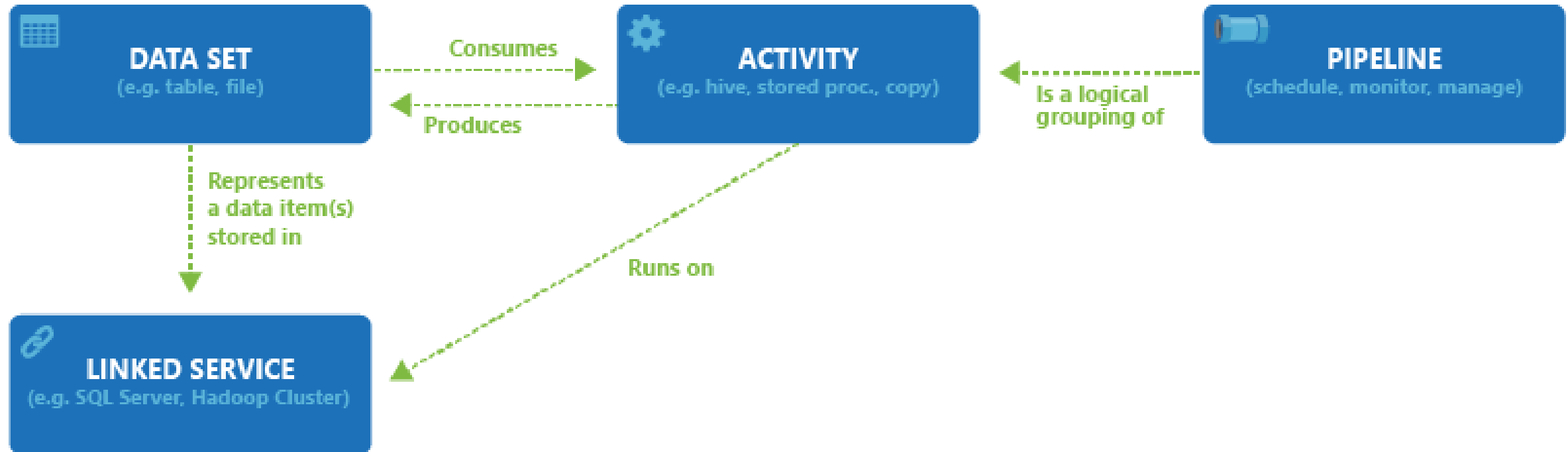
Transform data into intelligent action



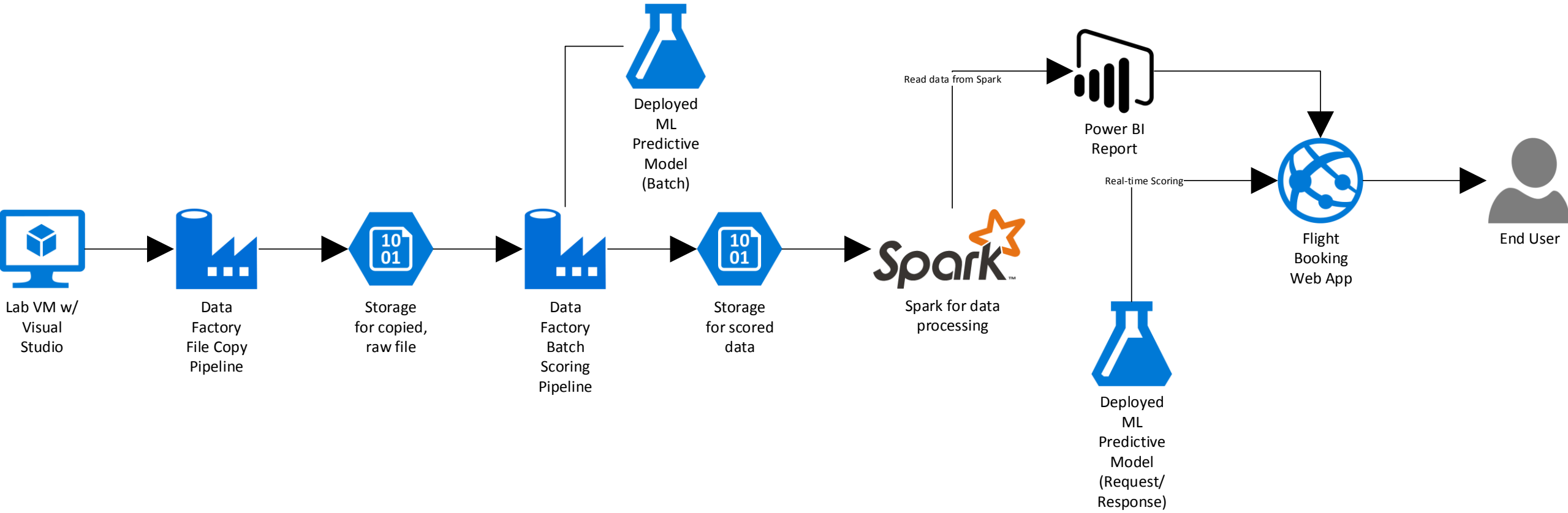
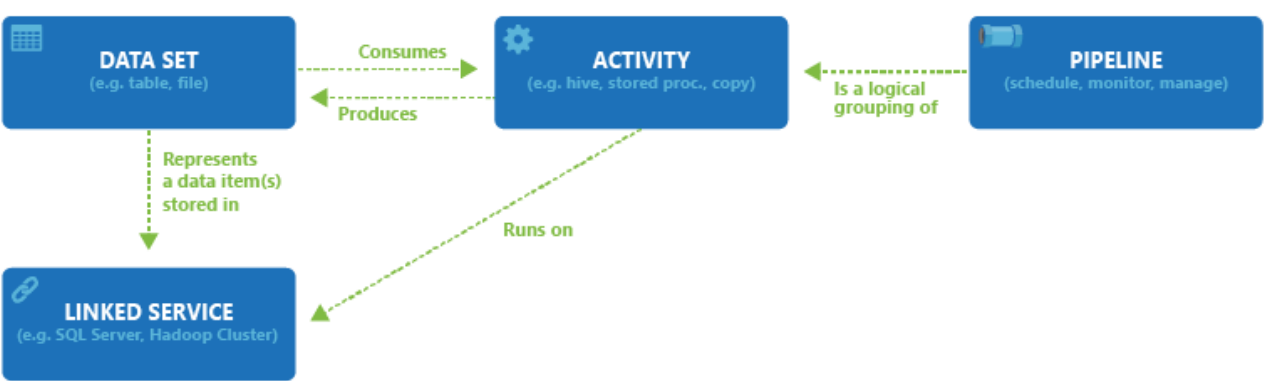
Lab Architecture



Azure Data Factory Concepts



Azure Data Factory Concepts





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