



# The Power of Data in Motion

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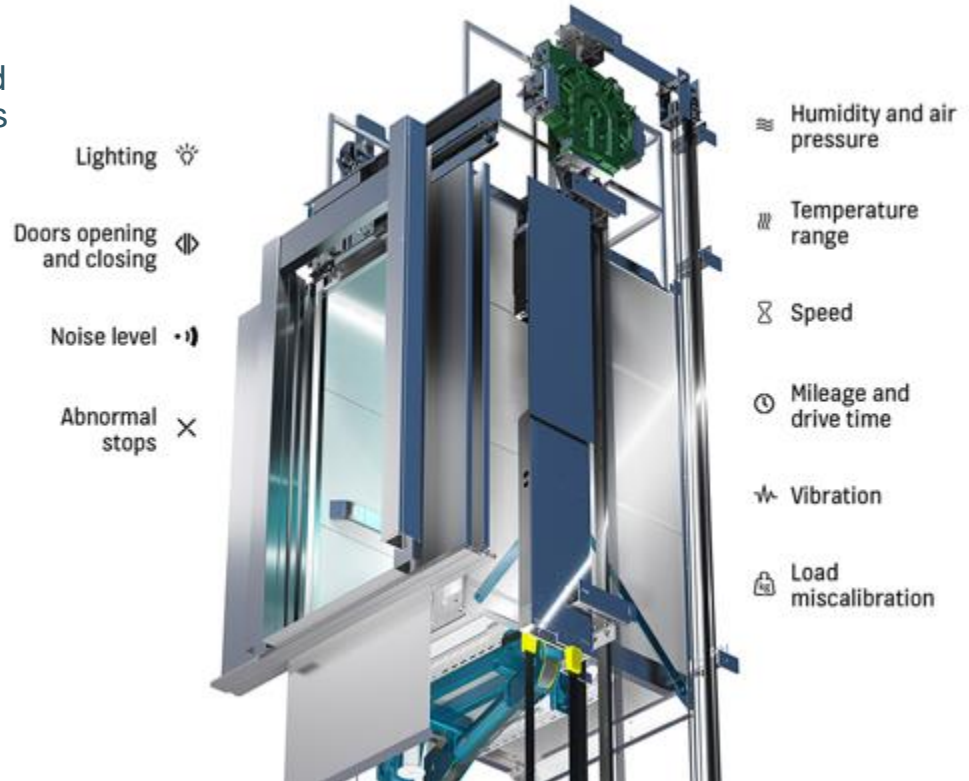
# IBM Watson Elevator Commercial



# Not as simple as UP and DOWN!

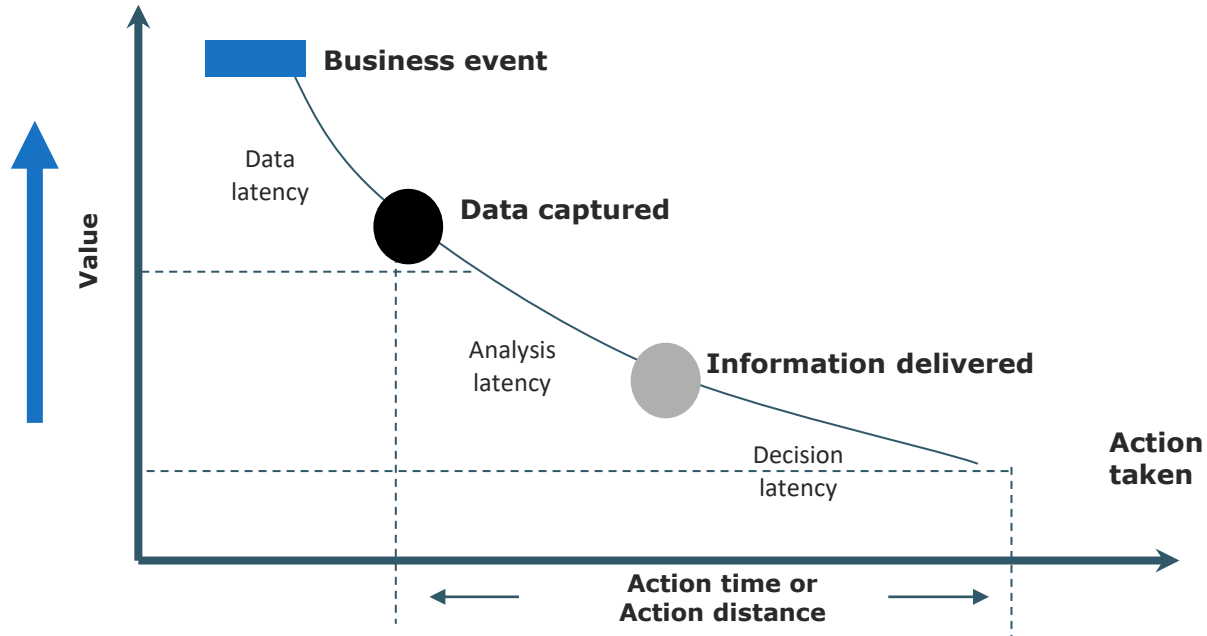
Multiple IoT sensors along with Data Science to monitor the Safety, Comfort and Maintenance of an Elevator which prevents downtime and adds to the elevator's longevity.

IDEALLY: Cameras and Scales detect elevator capacity to prevent stopping at every floor.



# DATA DECAYS!

What does “real-time” mean to you?



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# GROWTH OF DATA STREAMING EXPONENTIAL

Data overload with more connected devices

41.5B

More than 41.5 billion connected IoT devices are expected to be active by 2025. Majority of that will be in industrial and automotive sectors.

Source: Worldwide Global DataSphere IoT Device and Data Forecast, 2019-2023 (IDC #US45066919, May 2019)

79 ZB

By 2025, there will be 79ZB of data created by billions of IoT devices, causing organizations to re-evaluate their data governance, retention, and usage policies.

Source: IDC FutureScape: Worldwide IoT 2020 Predictions

40%

By 2024, 40% of manufacturers will use field asset IoT data to intelligently diagnose issues and resolve autonomously, improving unplanned downtime by 25%.

Source: IDC FutureScape: Worldwide IoT 2020 Predictions

## CURRENT STREAMING ANALYTICS INVESTMENT

35.8%

Only 35.8% of companies are invested in streaming analytics. 60.2% percent of them are still stuck on traditional historical analytics.

## STREAMING PLATFORM VALUE

76%

76% of companies say that streaming platforms are important for their current needs, but 89% say that they are important for their future needs as well

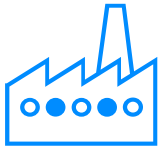
Source: A study conducted by Forrester Consulting on behalf of Cloudera, October 2019  
Base: 157 manager-level and above decision makers with responsibility for streaming analytics

# TODAY'S NEEDS FOR DATA STREAMING

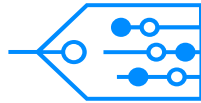
## Gain Competitive Advantage

“Many leading enterprises realize that real-time analytics — the analytics of the present — is an incredible **competitive advantage** because they can act now to *serve fickle customers, fix operational problems, power internet-of-things (IoT) apps, and respond decisively to competitors.*”

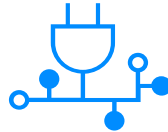
Forrester



Supply Chain  
impacts  
manufacturing



Customer 360  
Predict  
buying pattern



Utilities  
prevent power  
outage



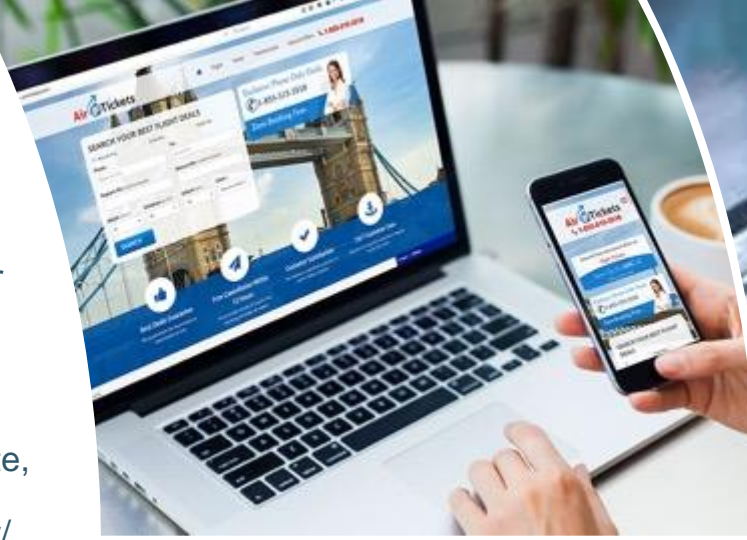
Telecoms deliver  
continuous  
QoS



Reduce  
cyber  
threats

# Smart Airline

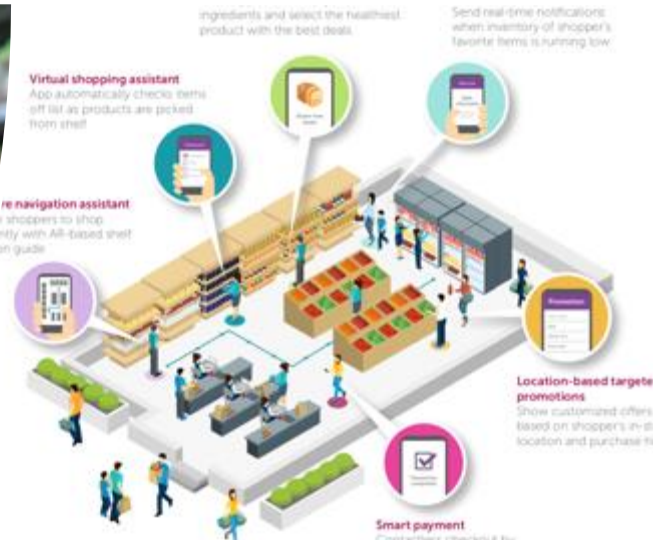
- Automated upgrades for premiere passengers
- Notification of flight schedule changes
- Notification of airline gate, boarding, baggage tracking & arrival gate w/ baggage claim location
- Mobile device entertainment, Wi-Fi & food and beverage purchase
- Real-time weather adjustments
- Automated rebooking for premiere passengers due to flight delays and cancellations





# Smart Grocery

- Real-time inventory tracking between in-store and online
- Robots detect product inventory to assist with restocking
- Sensors assist with security, lighting, moisture & humidity
- Proximity sensors assist with capacity & path tracking for staff scheduling
- AR to assist with locating sale products with real-time coupons and offers
- Weather influenced stocking & product placement



# Smart Logistics

- Tracking and analyzing stock & shipments
- Sensors, cameras and robots prevent theft & fire
- Sensors maintain temperature & humidity
- GPS and Satellite tracking for fleet management for delivery time & accuracy along w/ driver safety & compliance
- Weather rerouting to prevent driver downtime & cargo waste
- Provide customers real-time updates on shipment status





# Smart Agriculture

- Real-time weather adjustments
- Robotics perform routine operations
- Soil monitoring & water management
- Drones for field maintenance & livestock monitoring
- Climate change analysis
- Smart greenhouse can adjust light level, and air & soil moisture/temperature



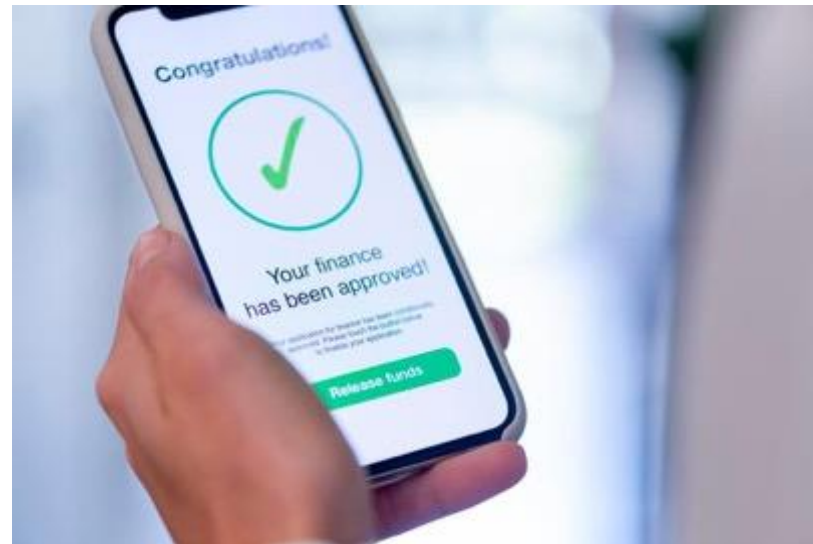
# REAL TIME CREDIT RISK CLOUDERA DATAFLOW AND WATSON MACHINE LEARNING IN THE PUBLIC CLOUD

**Use Case:** Maria is requesting a credit line extension from her bank's mobile app. In the past this sort of decision involve paper forms and could take weeks.

**Challenge:** Traditional cluster required constant tweaking to keep up with changing data volumes, analytics were run in an overnight batch and thus decisions were slow

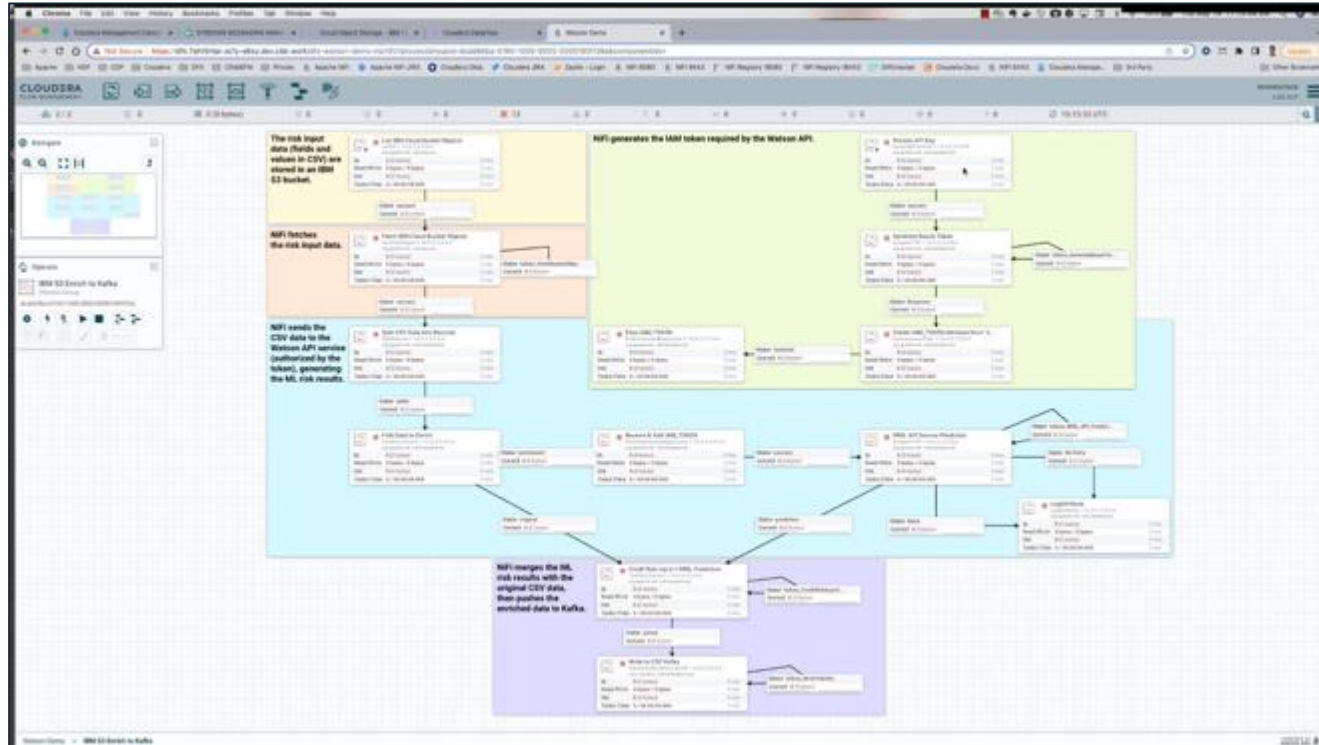
**Solution:** Deploy NiFi data collection flows, automatically scale as needed, utilize massively parallel WML instances to service inbound requests

**Benefits:** Reduced time to action, reduced operational overhead and infrastructure cost through auto-scaling, higher customer satisfaction



# DEMO: Real-time credit approval AI

## Cloudera Data Flow and Watson Machine Learning, Better Together



# KEY DIFFERENTIATORS

**Stream to Cloud** – Extend the same on-premises streaming capabilities to the cloud with full support for multi-cloud and hybrid cloud models



**400+ pre-built processors** – Only product to offer such comprehensive connectivity to a wide range of data sources from edge to cloud



**Democratize access to real-time data** – Enable data analysts and other personas to quickly build streaming applications with just SQL



**Enterprise-Grade Security & Governance** – Deploy your streaming applications with confidence and trust with unified security and governance across the entire platform

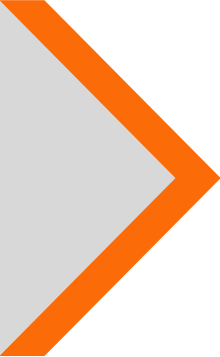


**Comprehensive streaming platform** – Only vendor to offer a open and comprehensive streaming platform for real-time data ingestion and processing to produce prescriptive and predictive analytics



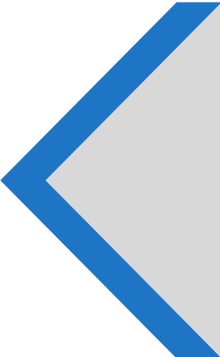
# CLOUDERA'S DATA-IN-MOTION SERVICES

## What does Cloudera's Data-in-Motion Services Offer?



Cloudera's data-in-motion portfolio offers services to collect, distribute and analyze streaming data so customers gain key insights for immediate actionable intelligence.

## How do IBM and Cloudera work better together?



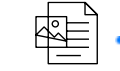
IBM's advanced data & AI capabilities accelerate data-driven decision making across hybrid and multi-cloud environments with common security and governance

# IBM Data Fabric

## Simply put...it provides simplicity!

- **Data-in-Motion:** flow management along with stream processing and analytics need to be unified with streams messaging capabilities ensure a sustainable, scalable, and adaptable end-to-end streaming architecture.
- **Data-at-Rest:** extends leading data environments with deeply integrated services such as governance, virtualization, reporting, deployment and management.

### Data Sources, Types & Domains



Business Apps



Custom Apps



Point of Sale



User Behavior



IoT



Devices

### Data-in-Motion

DISTRIBUTE

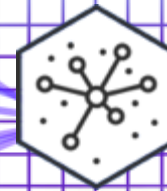
COLLECT

BUFFER

ANALYZE

STORE

*Any Data, Any Cloud, Anywhere*



### Data and AI Outcomes



Customer Centricity



Operational Agility



Total Quality Management



Continuous Improvement



Support Critical Services



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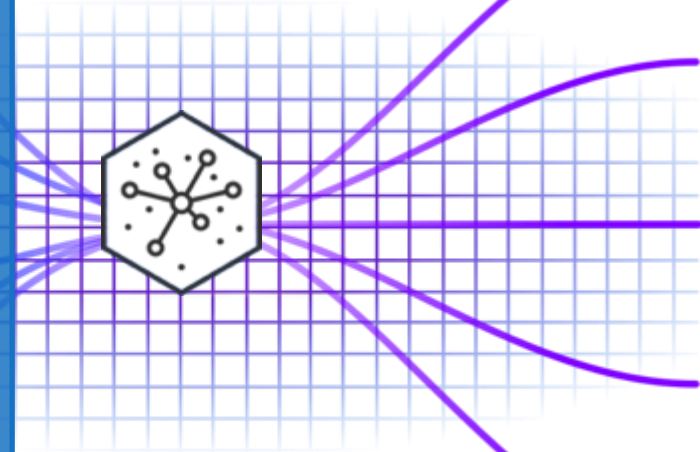


Devices

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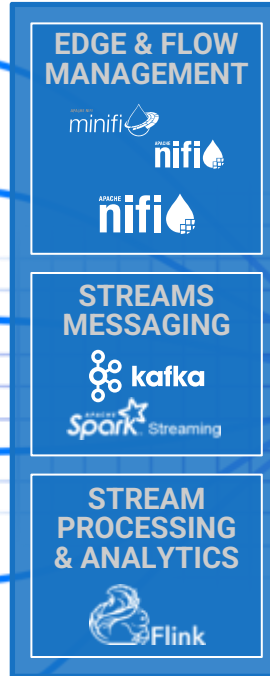
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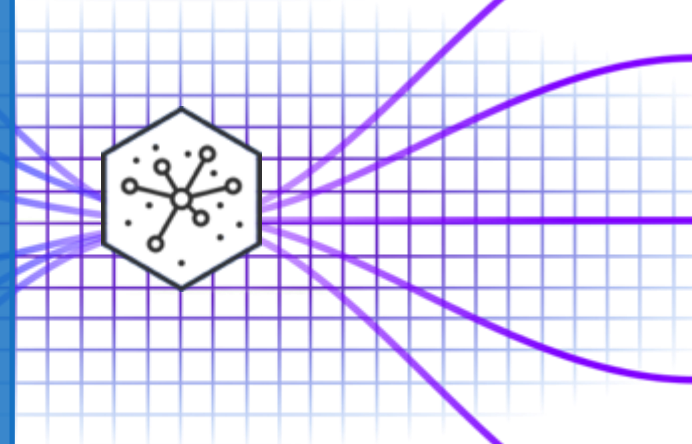
### Data Sources, Types & Domains



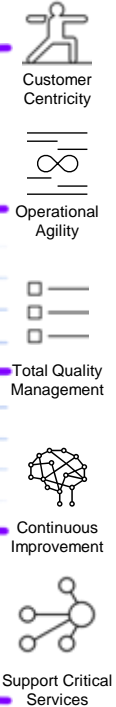
### Data-in-Motion



*Any Data, Any Cloud, Anywhere*



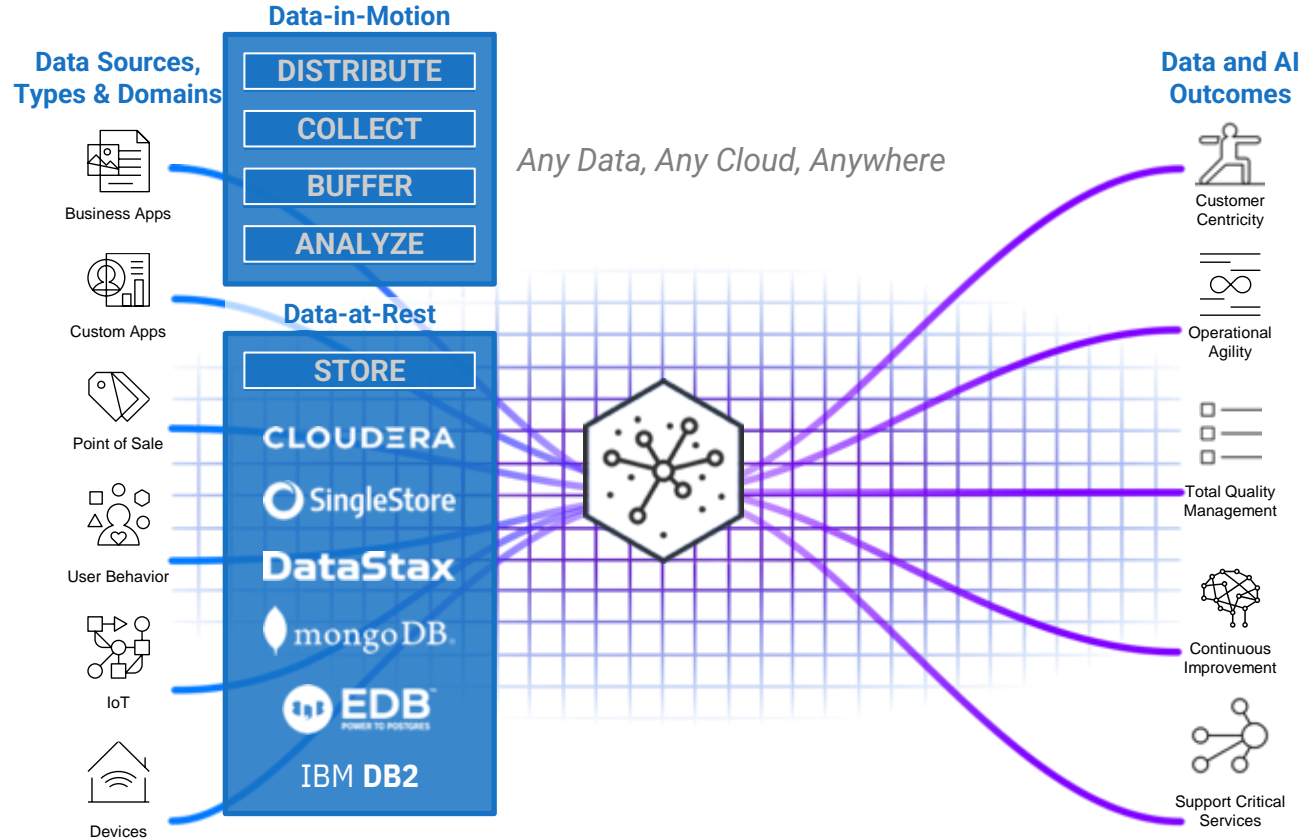
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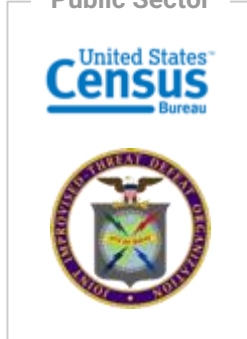


# CLOUDERA DATAFLOW CUSTOMERS

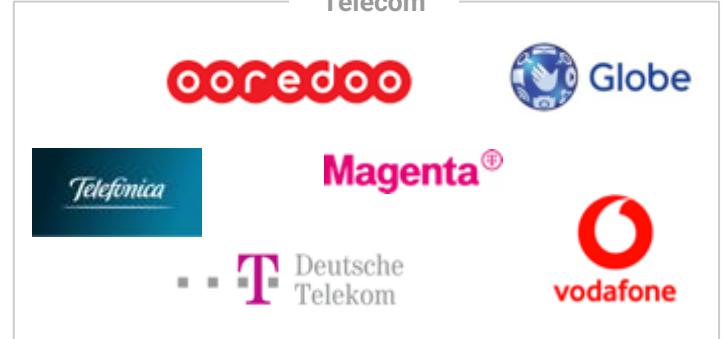
## Healthcare



## Public Sector



## Telecom



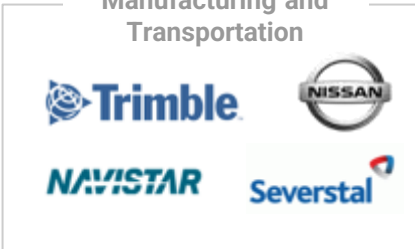
## Technology



## Banking, Finance and Insurance



## Manufacturing and Transportation



## Travel & Leisure



## Utilities/O&G



## Int'l Gov



# Common challenges in becoming a data-driven enterprise



## 1. Legacy Systems

Outdated architectures and fragmented data platforms can't keep up with escalating business demands



## 2. Limited inhouse talent

Lack of customer expertise in key areas relating to digital transformation, data platforms, Machine Learning and AI



## 3. Planning & Strategy

Building a well-defined data strategy is crucial for a successful transformation. The early decisions are important

# SmartDiscovery - Focused on starting the journey

## Embracing the Cloudera & IBM Partnership

What do your customers **want to know?**

1

Where am I within my data journey?

2

Where do I need to be?

3

How can I get there?

4

Where do I start?

5

What value will I get from this transformation?

What concepts do we consider when assessing a **modern data architecture**?



### Data Lakehouse

Unification of data lake & data warehouse (multifunction analytics)



### Data Fabric

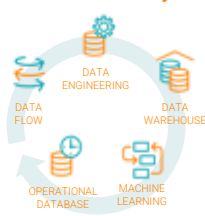
Orchestration distributed data & analytics



### Data Mesh

Domain ownership & data as a product

### The Data Lifecycle



# SmartDiscovery - Focused on starting the journey

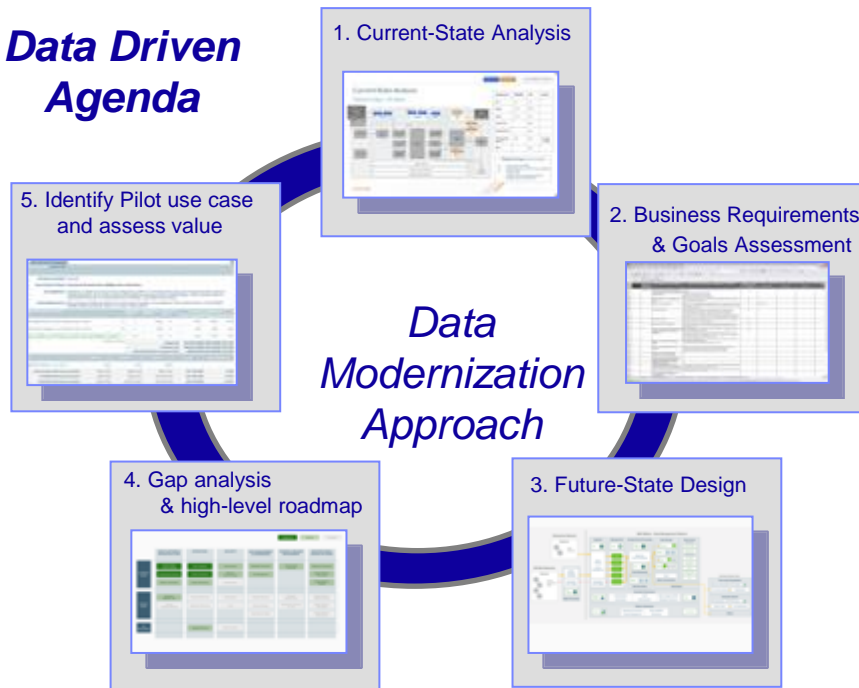
## Services Package Overview

Work with customers to provide the professional services and training required to **define a modern data architecture & roadmap to start the journey**

### Duration, Pricing, & Contracting

Customer Price	Duration: 3 weeks Estimated Price: \$133,632 USD + T&E Contracted through Order Form
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### Data Driven Agenda



# Thank You For Joining!

Get An Offer

## ***Smart Discovery Workshop***

Work with customers to provide the professional services and training required to define a modern data architecture & roadmap to start the journey

Stay Connected

## ***IBM OEM & Strategic Partnerships Community***

Join our community to stay connected with our events, announcements, product feature discussions and more.

Your Direct Contact

## ***Contact [jerry.green@us.ibm.com](mailto:jerry.green@us.ibm.com)***

If you have more questions or would like to discuss about collaborating with us.

The screenshot shows the IBM Community homepage. At the top, there's a navigation bar with 'IBM Community' and a search bar. Below the navigation bar, a large banner reads 'Welcome to the IBM Community' with the tagline 'Together, we can connect via forums, blogs, files and face-to-face networking.' A blue button labeled 'Find your community' is on the left. On the right, there's a search bar for 'This Community' and a link to 'Join us in Las Vegas! 11-14 September 2023'. Below the banner, there are three main sections: 'Welcome!' featuring a profile of Jerry Green, 'IBM Security' with a link to 'X-Force Threat Intelligence Index', 'Security' with a link to 'IBM at RSA Conference', and 'Sustainability' with a link to 'Sustainability Community Changes'. At the bottom, there's a blue banner for 'Join the IBM Community Call' with a date of '11 March 2023 11:00 AM ET' and a photo of a person.

