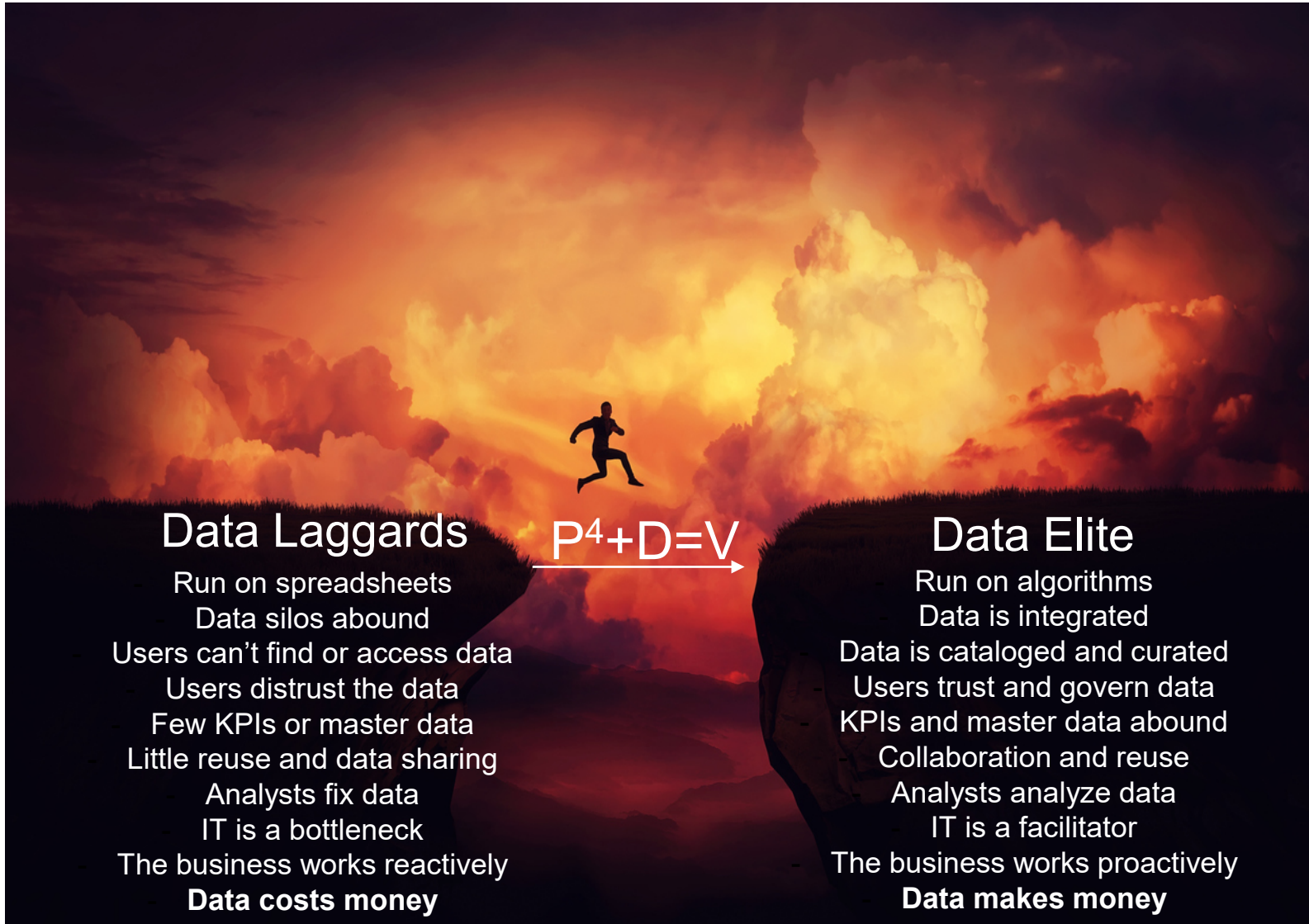


The Future of Data and Analytics: Game-Changers on the Horizon

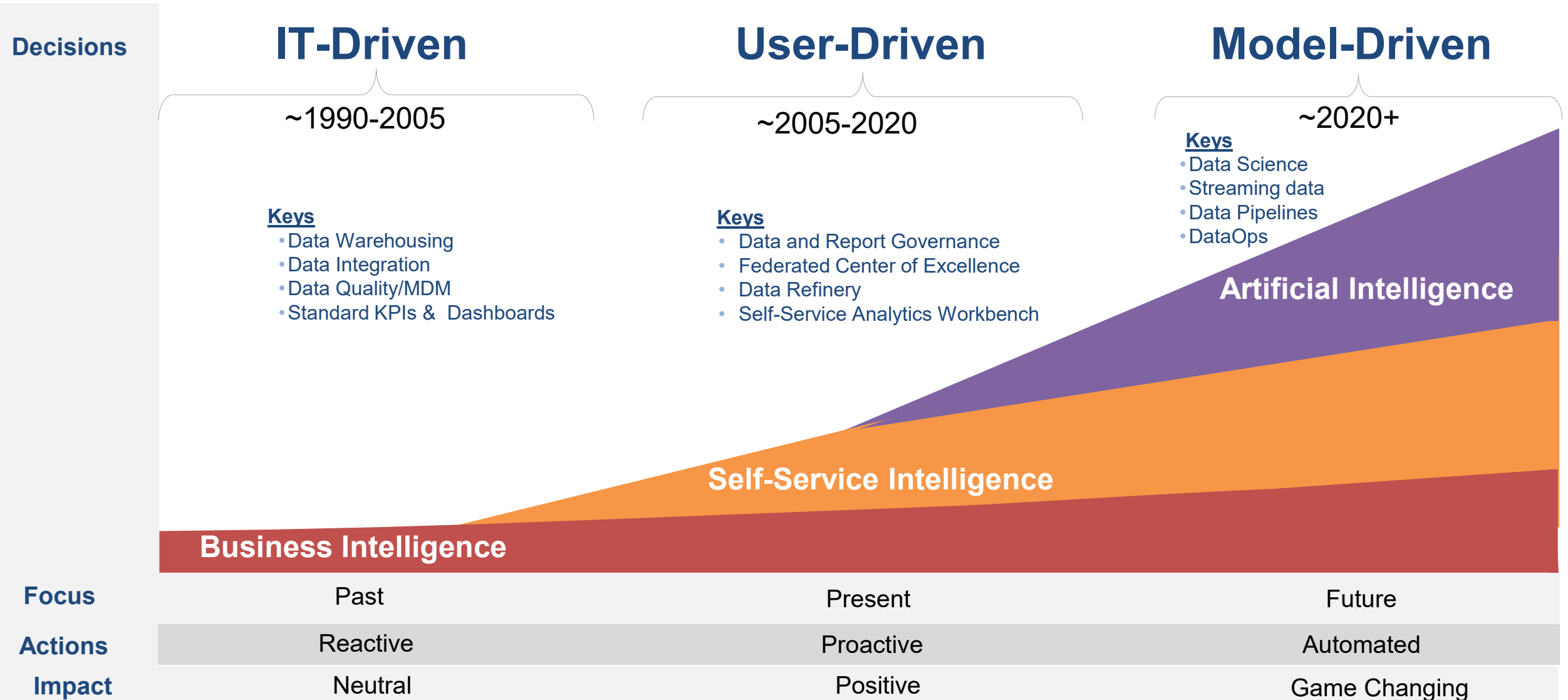
Wayne Eckerson

March 9, 2021

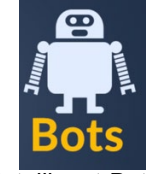


By 2025, there will be a nearly unbridgeable chasm between Data Laggards and Data Elites.

The question is: "How do you cross the divide?"



Evolution of Intelligence



Intelligent Bots



Autonomous cars

Depth and Breadth of Data

Autonomous Intelligence

AI models act independently with upfront human input.

Augmented Intelligence

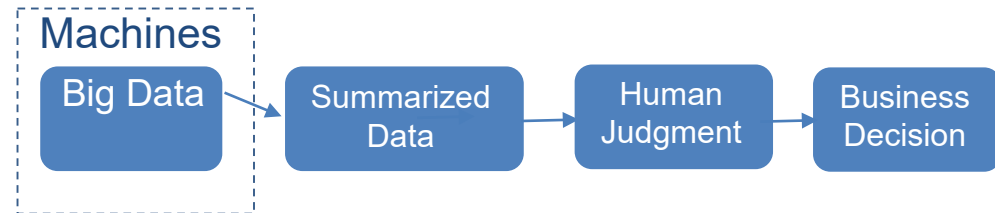
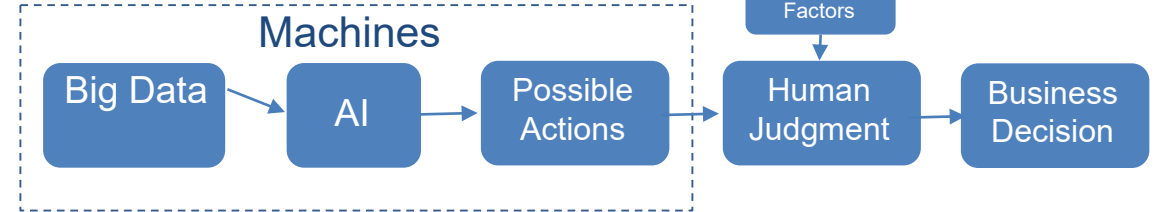
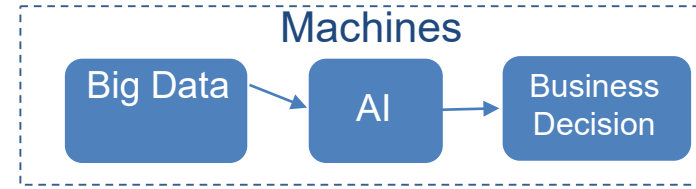
Humans take actions assisted by input from AI models.

Business Intelligence

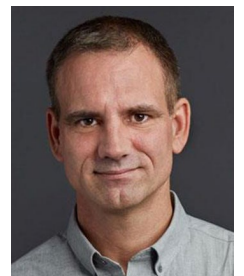
Humans use reports and analysis tools to make decisions.

Human Intelligence

Human judgement and actions based on personal experience.

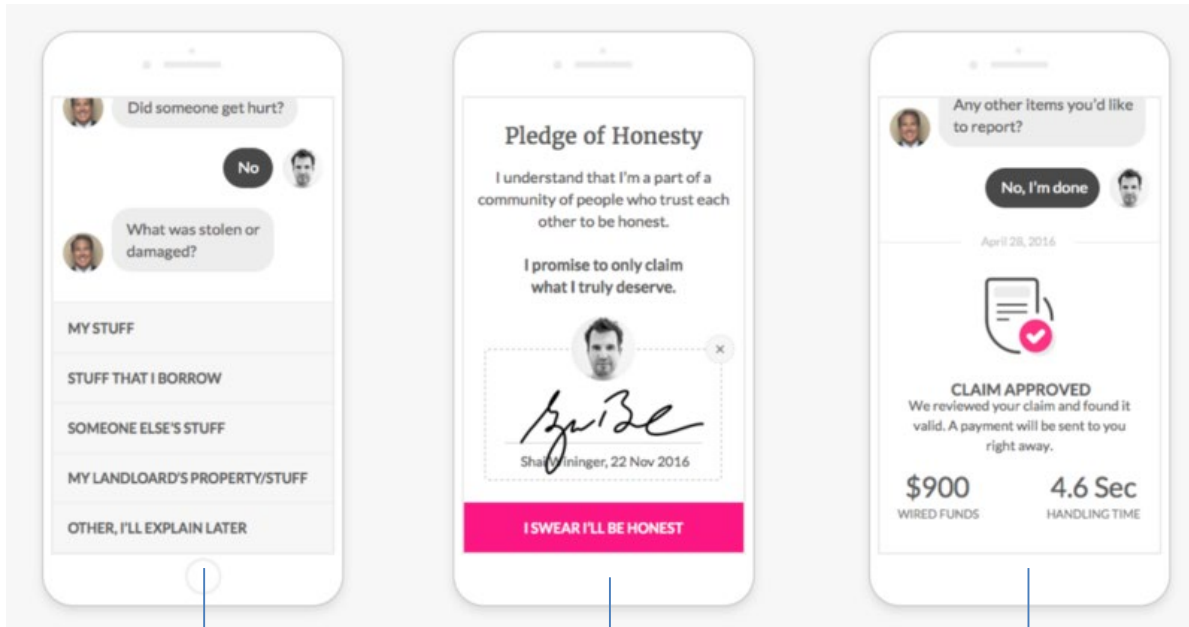


“To fully leverage the value contained in data, companies need to bring artificial intelligence (AI) into their workflows and, sometimes, **get us humans out of the way**. We need to evolve from **data-driven to AI-driver workflows**.”



Eric Colson
Chief Algorithms Officer, Stitch Fix

Lemonade's "AI Jim" bot processes claims



NLP with key word assists guides the "conversation".

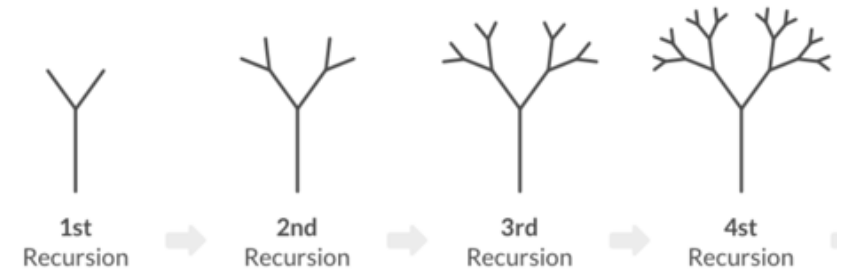
Community norms and pledges reduce fraud

Runs 14 fraud models; Pays 50% of claims automatically.

Lemonade updates its algorithms on average 8x daily: pricing, claims, coverage, service, etc.

More Data, Less Risk

- "Policy of one" (micro pools)
- More data, more precision

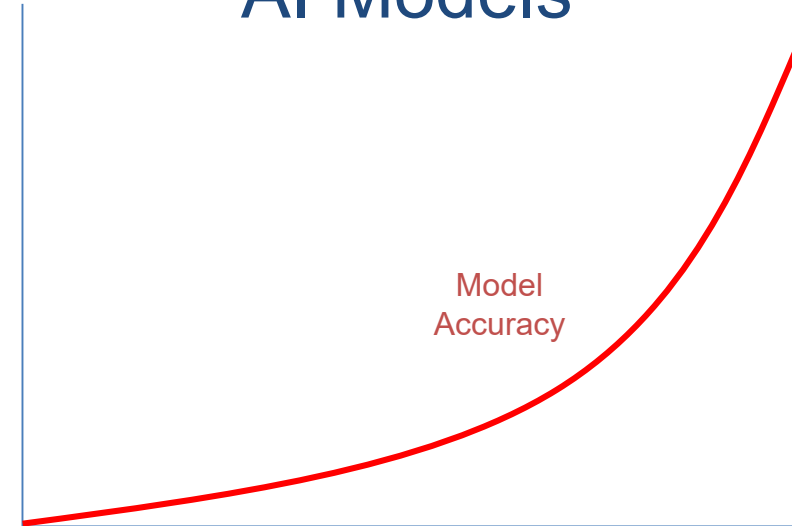


Lemonade collects 2,000 to 4,000 data points per customer versus 20-40 for most insurers.

- Faster quotes
- Lower prices
- Faster claims
- Happier customers

AI Models

Attributes
(correlated data fields)



Data
(data values)

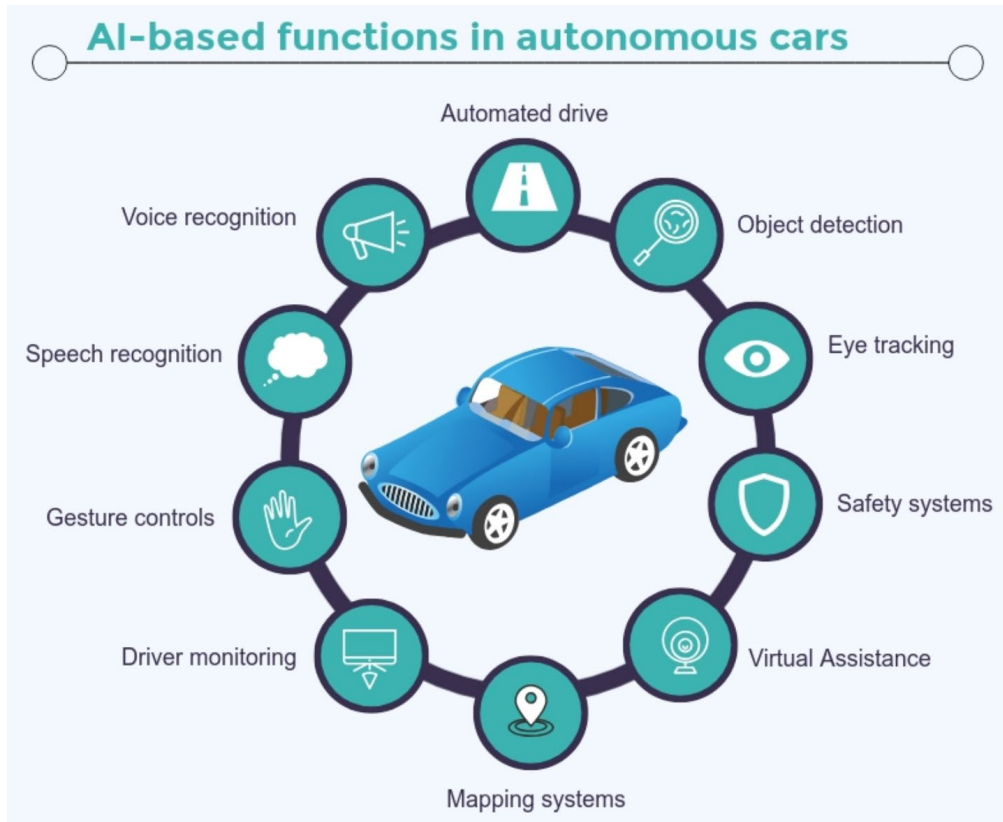


Peter Norvig
Director of Research
Google

“More data beats clever algorithms, but better data beats more data.”

What's the state of data at your company?

By 2025, AI will reach an annual value of **\$215 Billion** in the automotive industry.*



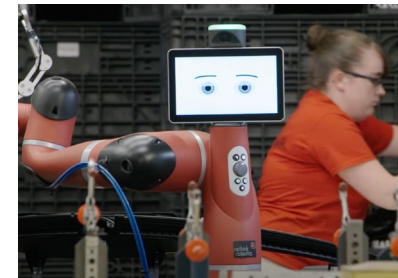
* Rick's Cloud, Citing Market Research from McKinsey, NVIDIA, IHS Markit

Generative Designs



AI generates 100s of potential designs to minimize mass and material while meeting engineering constraints— via **AutoDesk Fusion360**

Cobots in Manufacturing



Rethink's robotics work with humans tending machines, handling materials, performing tests, and packing finished products.

AI for Dealerships



Dealers are using software packages with AI/ML to better target sales and marketing spend.

AI Adoption

”A small share of companies—from a variety of sectors—are attaining outside business results from AI, potentially widening [the gap between AI power users and adoption laggards](#).”

-- McK

**The state of
AI in 2020**

November 17, 2020 | Survey

AI Infusion

Companies are building AI into every kind of product at an accelerating rate.



“Can an older company join the Data Elite?”

“Moving from data-driven to AI-driven is the next phase in our evolution.... The more efficient organizations will survive at higher rate. Since it’s hard to for many companies to adapt to changes in the environment, we’ll see the emergence of new companies that combine both AI and human contributions from their work, and build them natively into their workflow.”

Harvard Business Review



Eric Colson
Chief Algorithms Officer
Stitch Fix

[What AI-Driven Personalization is Making Looks Like Like](#), July 8, 2019

“Not Really!”

This is not to say data science is destined for failure at older, more mature companies, though it is certainly harder than starting from scratch. **Some companies have been able to pull off miraculous changes...**

Harvard Business Review

[Curiosity Driven Data Science](#), Nov 27, 2018



“Yes!! But it takes:

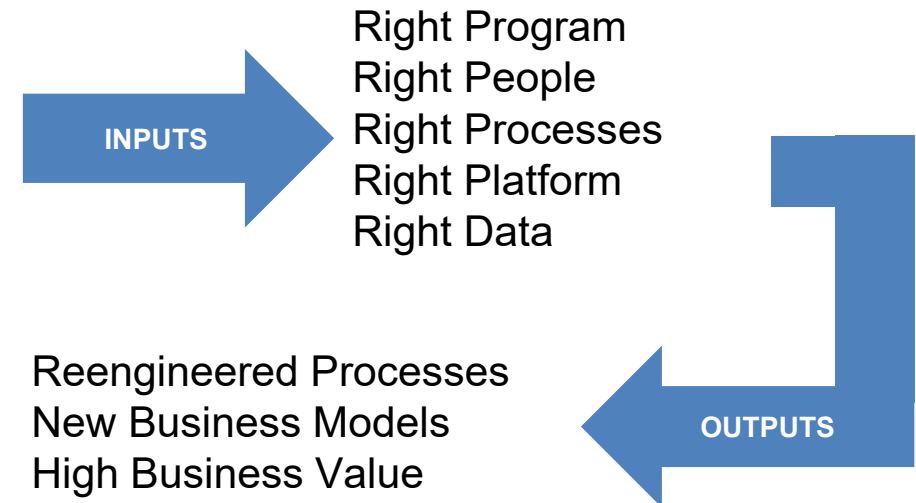
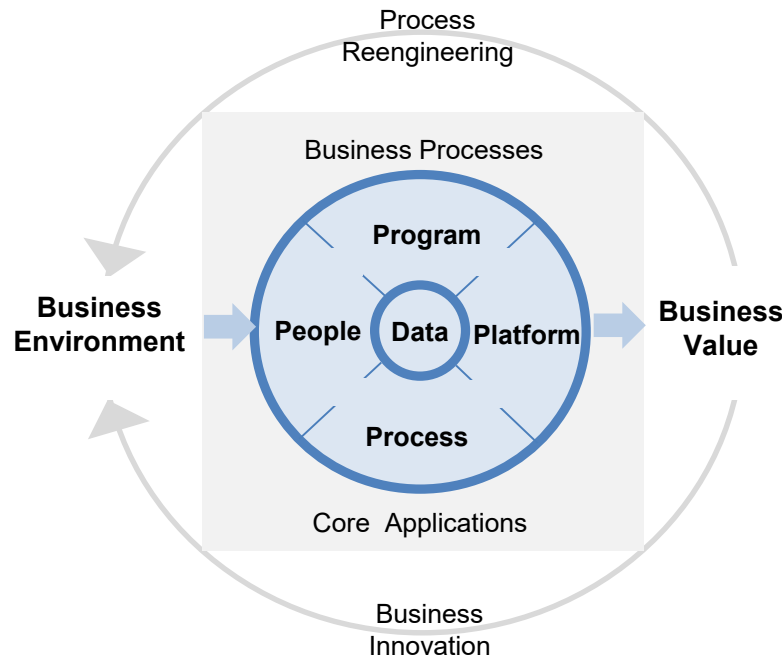
1. A bonafide commitment from top executives
2. Large investments of time and money
3. An enterprise commitment to governing data
4. Strong technical know-how and infrastructure
5. An effective partnership between business and analytics
6. A cultural makeover – “soft stuff is the hard stuff”



Wayne Eckerson
President



(P⁴ + D = V)
Eckerson Group
Capabilities Model



A little bit of magic...



...Game Changers

1. Business Monitoring

Hundreds of analysts examining millions of metrics in real-time

2. DataOps

Faster, better, cheaper data development

3. Self-Service Workbench

Unified analytics platform that eliminates data backlog

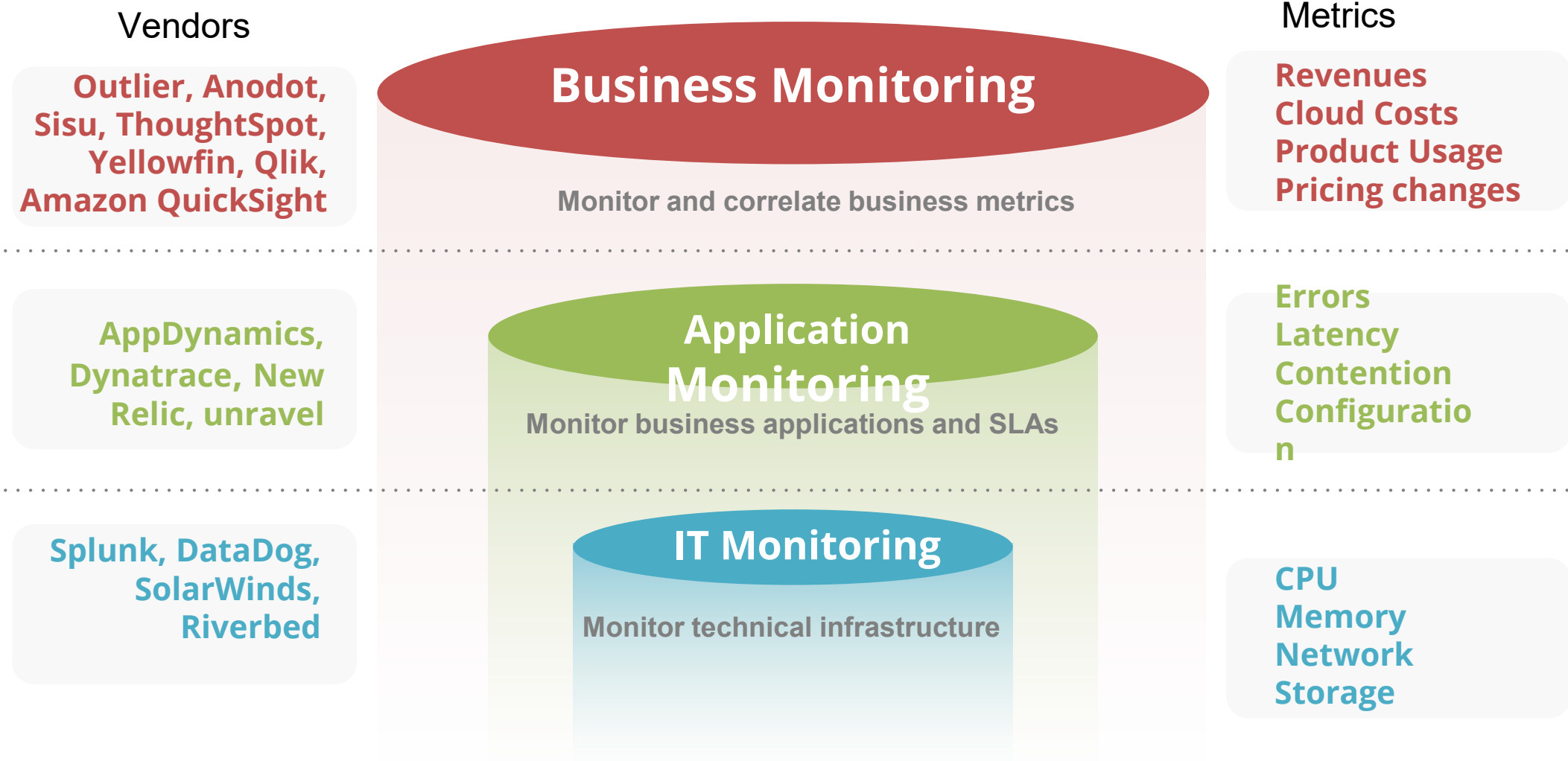
4. Data Exchanges

Eliminate the pain of finding, vetting, purchasing, and integrating third party data

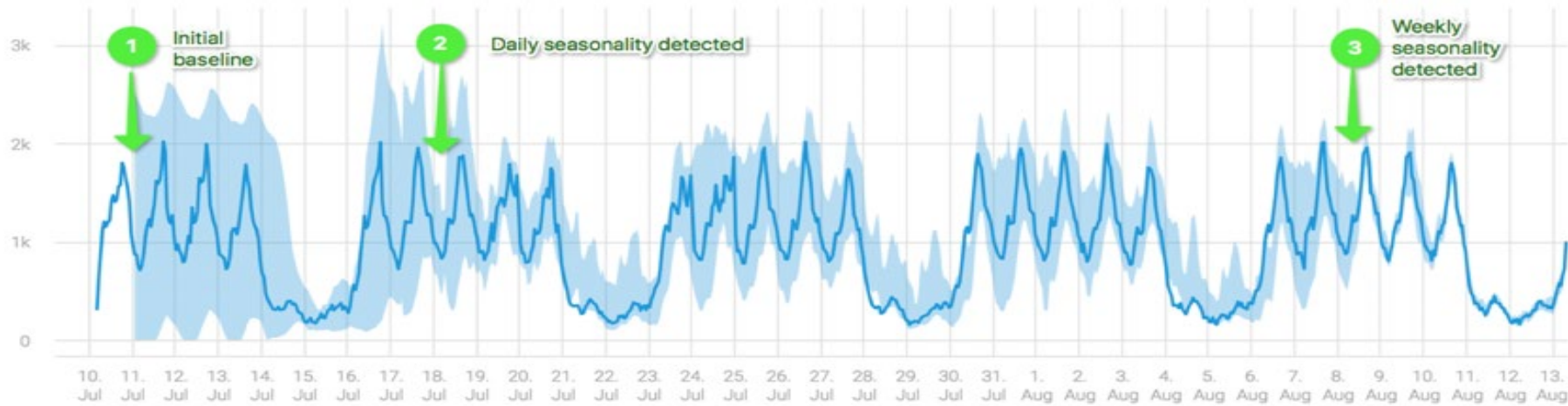
5. Knowledge Graphs

Rich semantic models that turn data silos into data fabrics and support rich queries.

1. Business Monitoring



Learning System

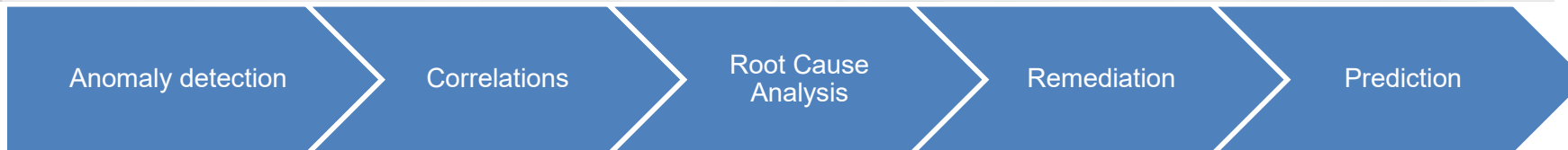
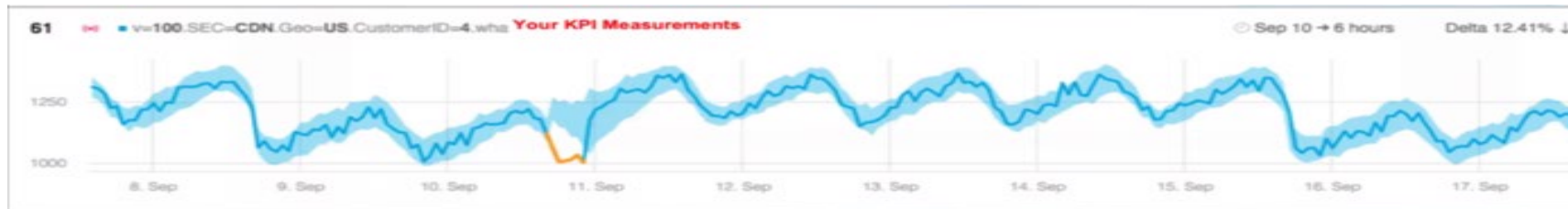


Ideal for:

- Operational analytics
- Large volumes of transactional data
- Real-time data

Use Cases:

- Customer Experience
- Revenue Protection
- Partner Monitoring
- Usage Monitoring



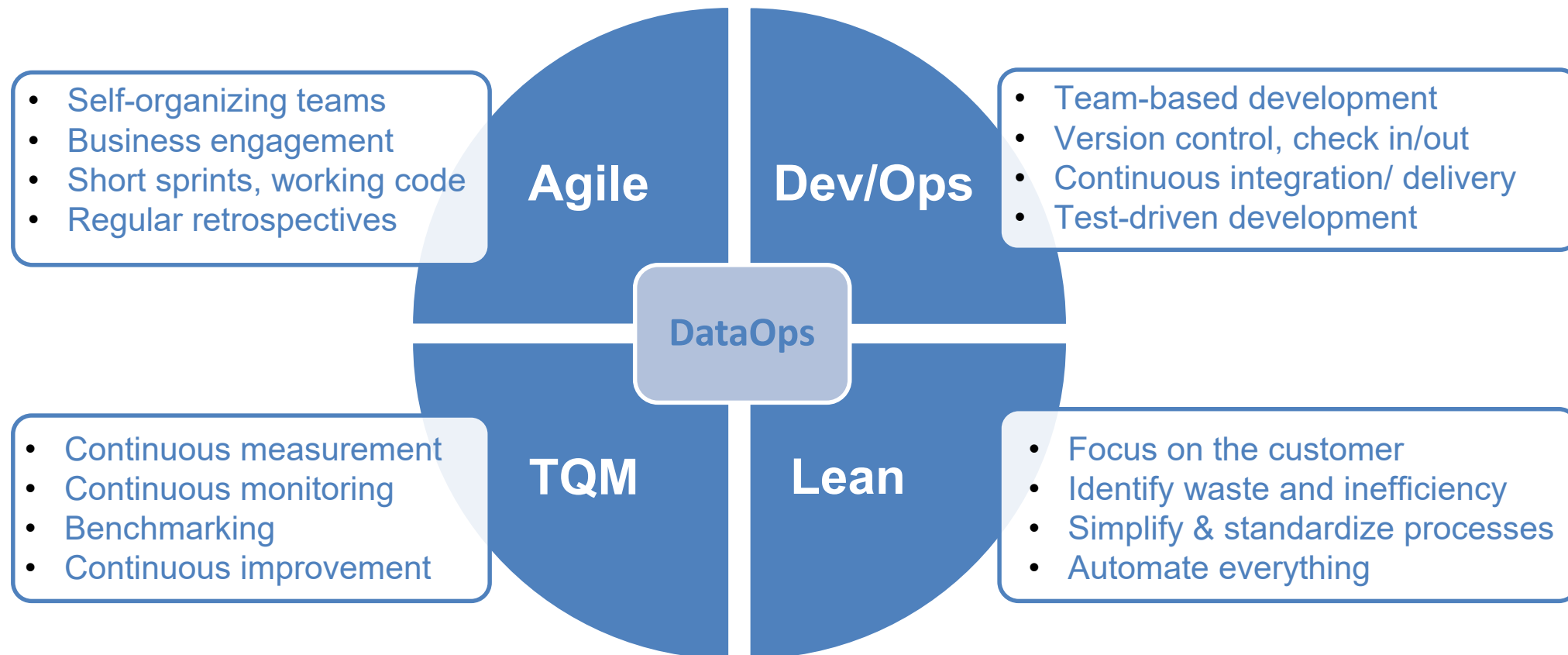
Intelligent Alerts

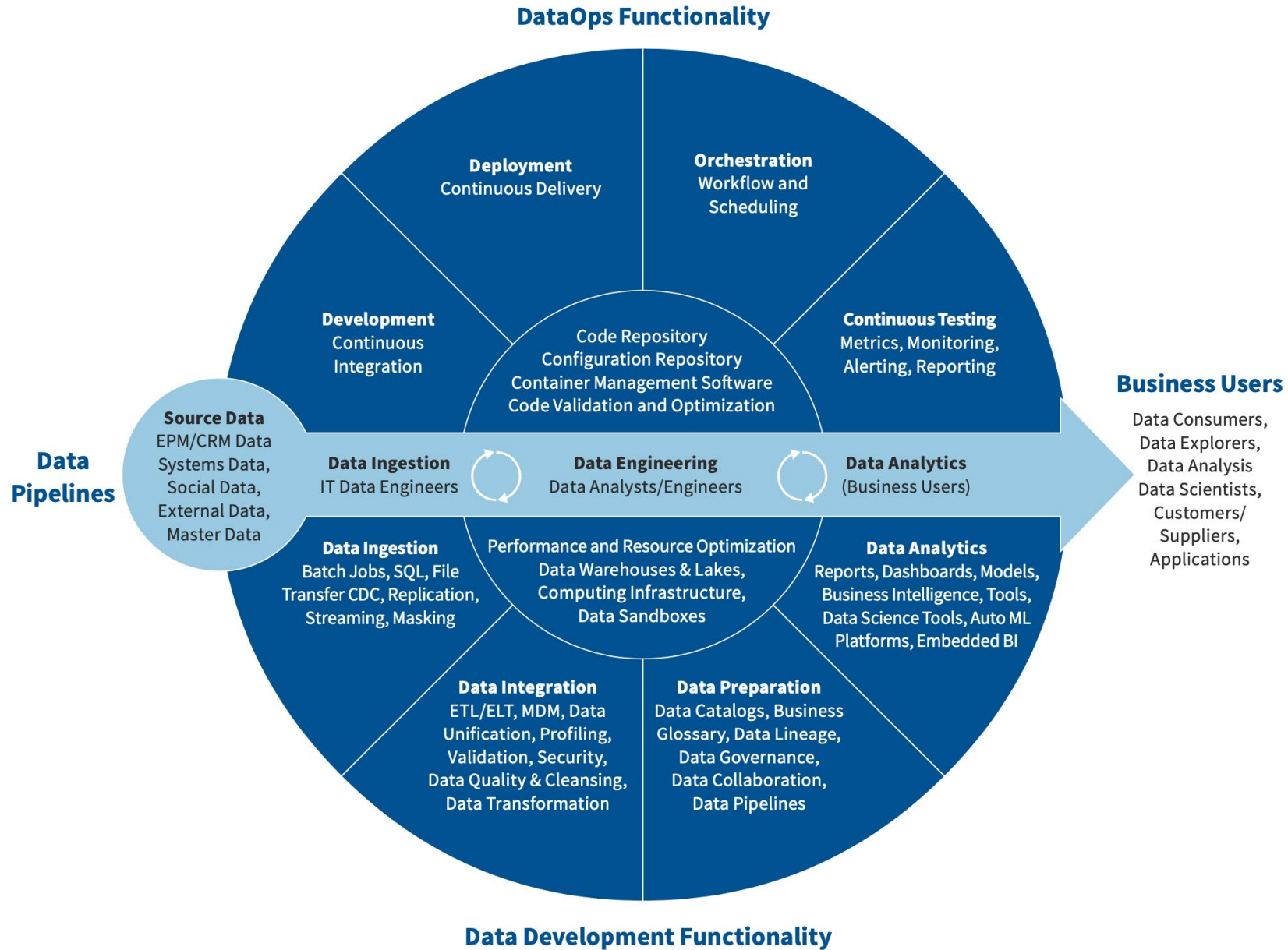
Automated Decisions

DataOps = Data Operations

Applies rigor of software engineering to the development and execution of data pipelines.

Creates a Culture of Continuous Improvement

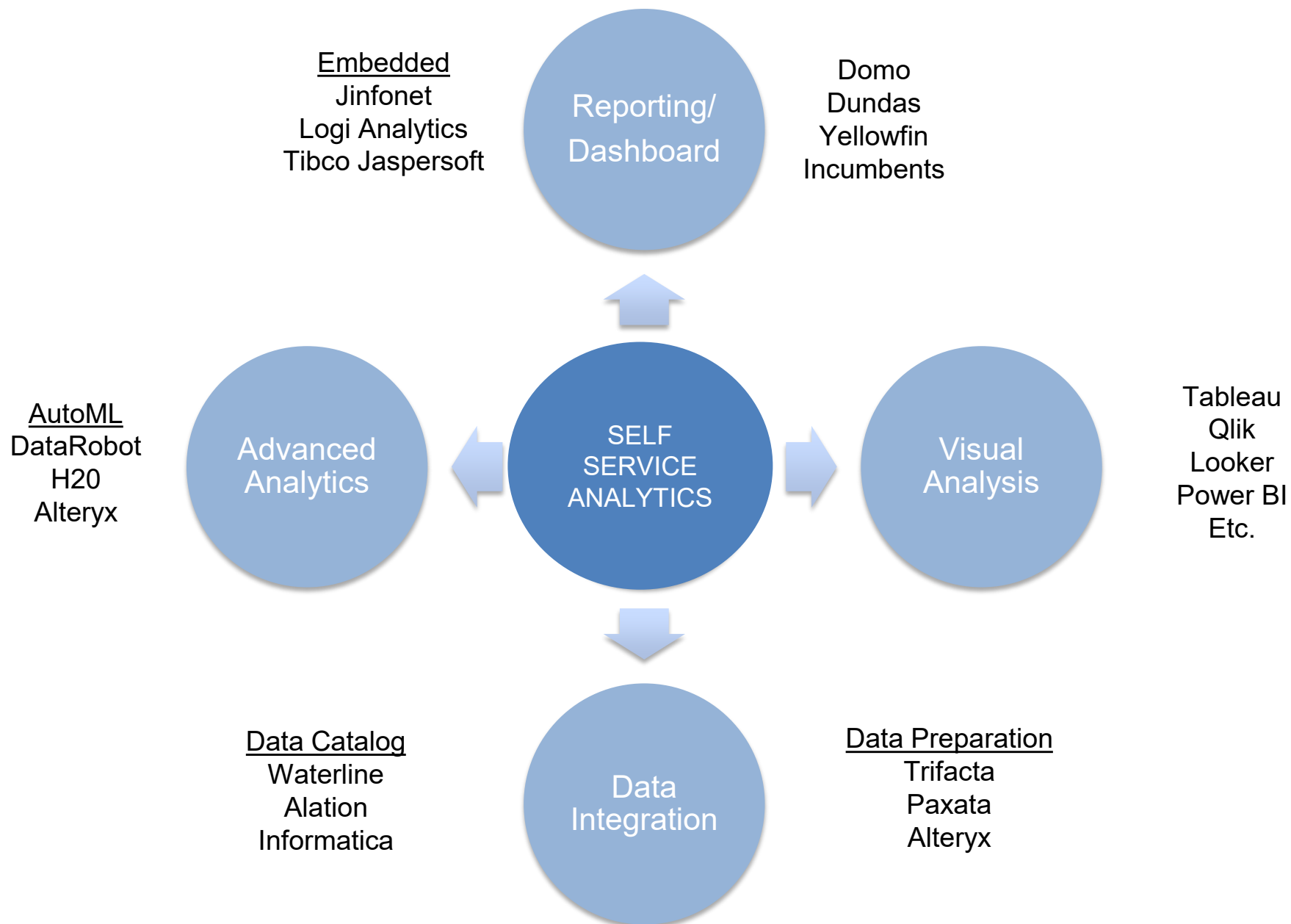




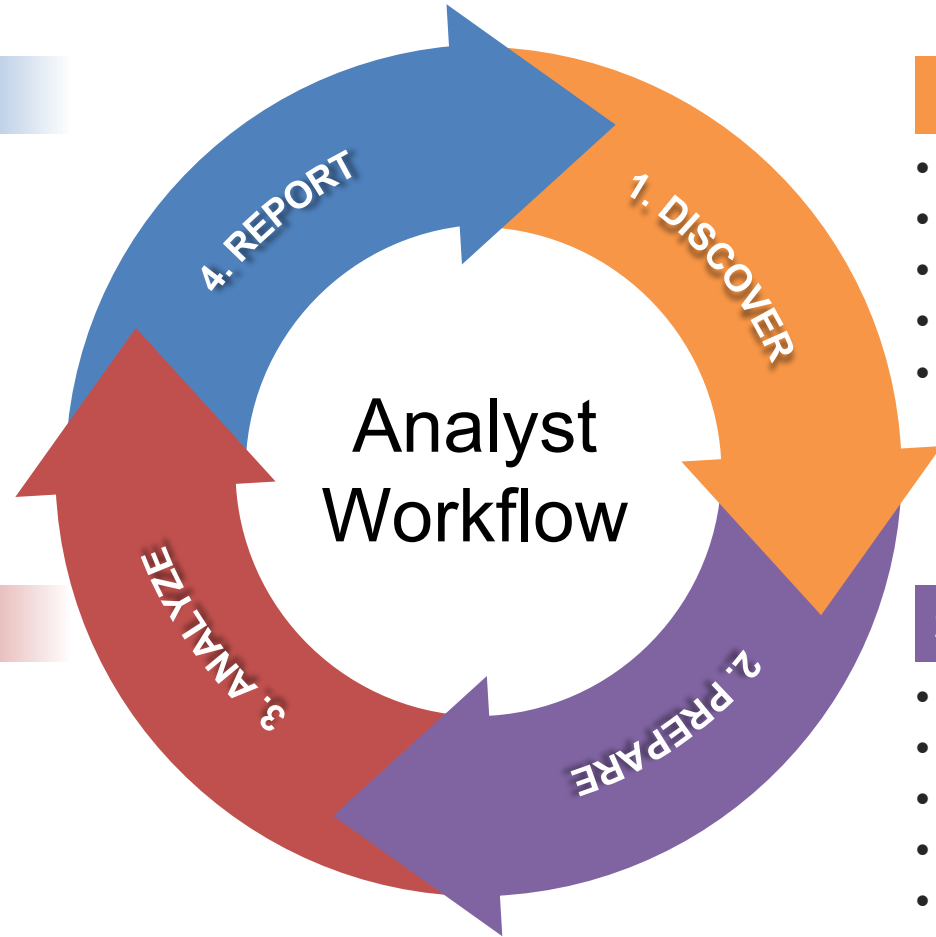
1. Team-based development
2. Increase capacity
3. Foster greater reuse
4. Increase cycle times
5. Reduce data defects

Deliver on the promise of
“faster, better, cheaper.”





Business Question



4. Report

- Publish
- Productionize
- Govern
- Share
- Embed

BI Tools

1. Discover

- Search
- Profile
- Sample
- Validate
- Query

**Data Catalog/
Business Glossary/
Data Virtualization**

3. Analyze

- Group
- Filter
- Sort
- Visualize
- Model

**Visual Analysis/
AutoML**

2. Prepare

- Query
- Clean
- Join
- Calculate
- Enrich

Data Preparation

Platform Convergence

Discover + Business Glossary

- Alation
- Waterline
- Informatica
- Collibra

Prepare + ETL/Data Pipelines

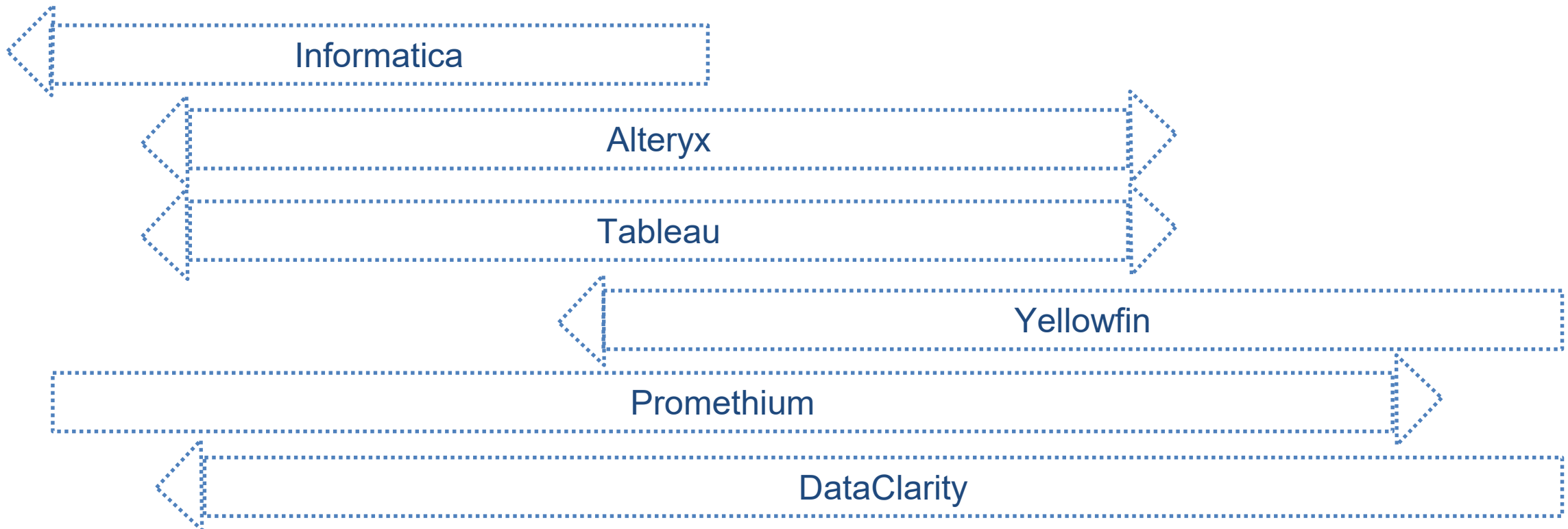
- Trifacta
- Alteryx
- Incorta
- Paxata

Analyze + Machine Learning

- Tableau
- Power BI
- Sisense
- DataRobot

Report + Embedded Reports

- Domo
- BusinessObjects
- Yellowfin
- ThoughtSpot



DATA SUPPLIER

Weather
Geographic
Mobility
Demographics
Psychographics
Streaming
Machine
Industry Data
Facial data
Sounds
Images
Videos
Transactions
Social Media

- Data Broker
- Open Data Provider
- Industry Association
- Industry Distributor
- Enterprise



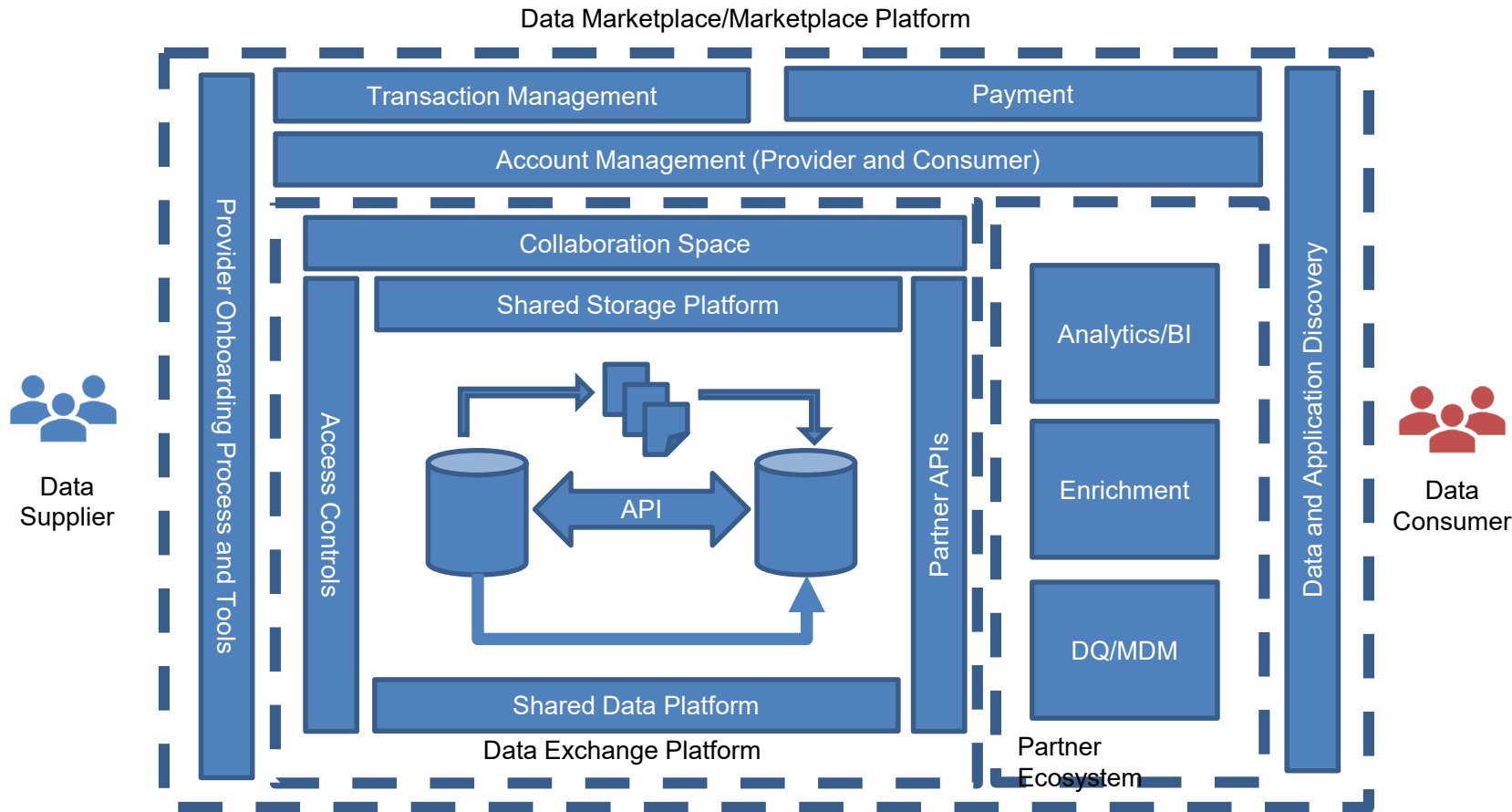
1. Peer-to-Peer Exchange
2. Private Exchange
3. Data Marketplace

- Data Exchange Platform
- Data Exchange Operator

DATA CONSUMER

Customers
Transactions
Interactions

- Enterprise
- Industry Distributor
- Industry Association
- Open Data Provider
- Data Broker



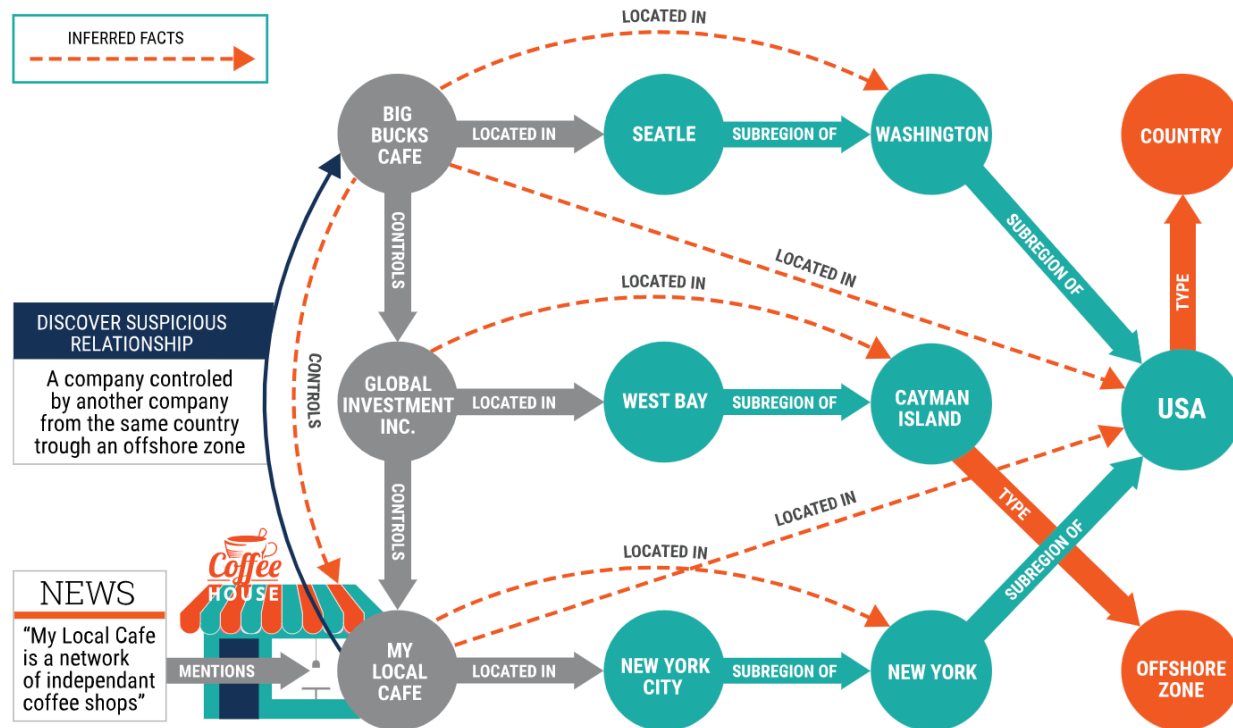
Key Features for Consumers:

- Searchable catalog
- Data transfer
- Data integration
- Asset filtering
- Data quality services
- Collaboration

Key Features for Suppliers:

- Asset management
- Access control
- Subscriptions management
- E-Commerce
- Selective sharing
- API integration
- Streamlined onboarding

A collection of interlinked descriptions of entities – objects, events or concepts. Descriptions enable people and computers to query the content and navigate the network of linked entities.



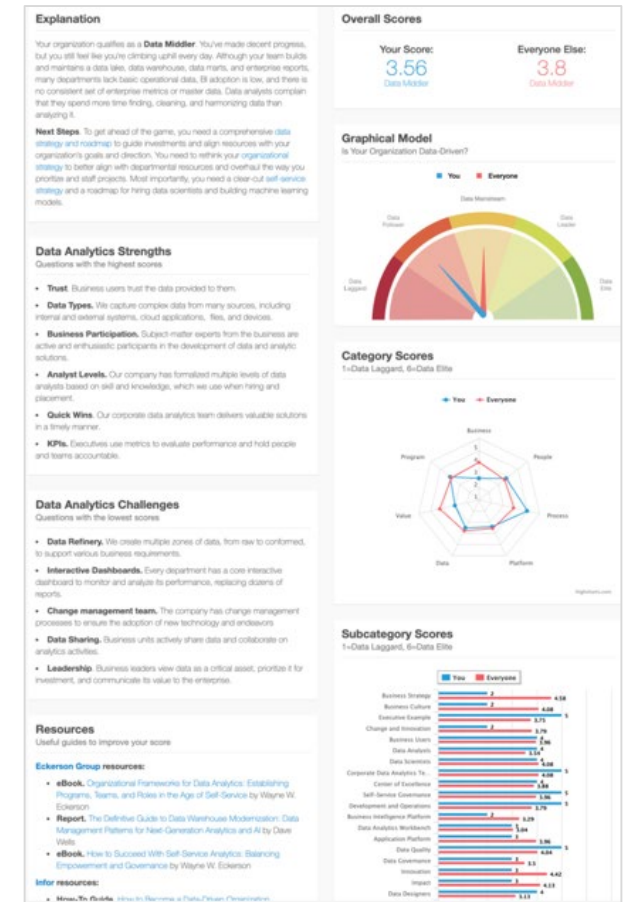
Use Cases for Analytics

- Data Fabric to Connect Silos
- Data Catalog Relationships
- Natural Language Queries
- Query Recommendations
- Recommendation Engines
- Data Enrichment for ML training
- Anti-Money Laundering
- Fraud Detection
- Clinical Research
- Drug Safety Analytics

From Ontotext: <https://www.ontotext.com/knowledgehub/fundamentals/what-is-a-knowledge-graph/>

Eckerson Group Benchmark Service With Laggard/Leader Maturity Model

- Divide between laggards and leaders
 - *AI-driven companies will dominate*
 - *All companies benefit from AI infusion*
- To cross the divide:
 - *You need robust data strategy and culture*
 - *Consider “game changers”*
 - Business Monitoring
 - DataOps
 - Self-Service Workbench
 - Data Exchange
 - Knowledge Graphs



10 Categories; 30 Subcategories;
200 Questions

Eckerson Group

RESEARCH

CONSULTING

EDUCATION

Best in class thought leadership reports, articles, and webinars

Strategy and design work to create modern data programs and platforms.

More than 30+ educational courses taught at your site

Recent Consulting Clients

