DRAFT SLIDES
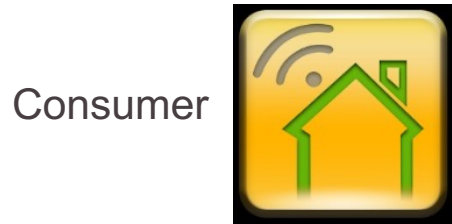
Leveraging Data Fabric to Streamline DataOps and Analytics

Noel Yuhanna

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Social

Consumer

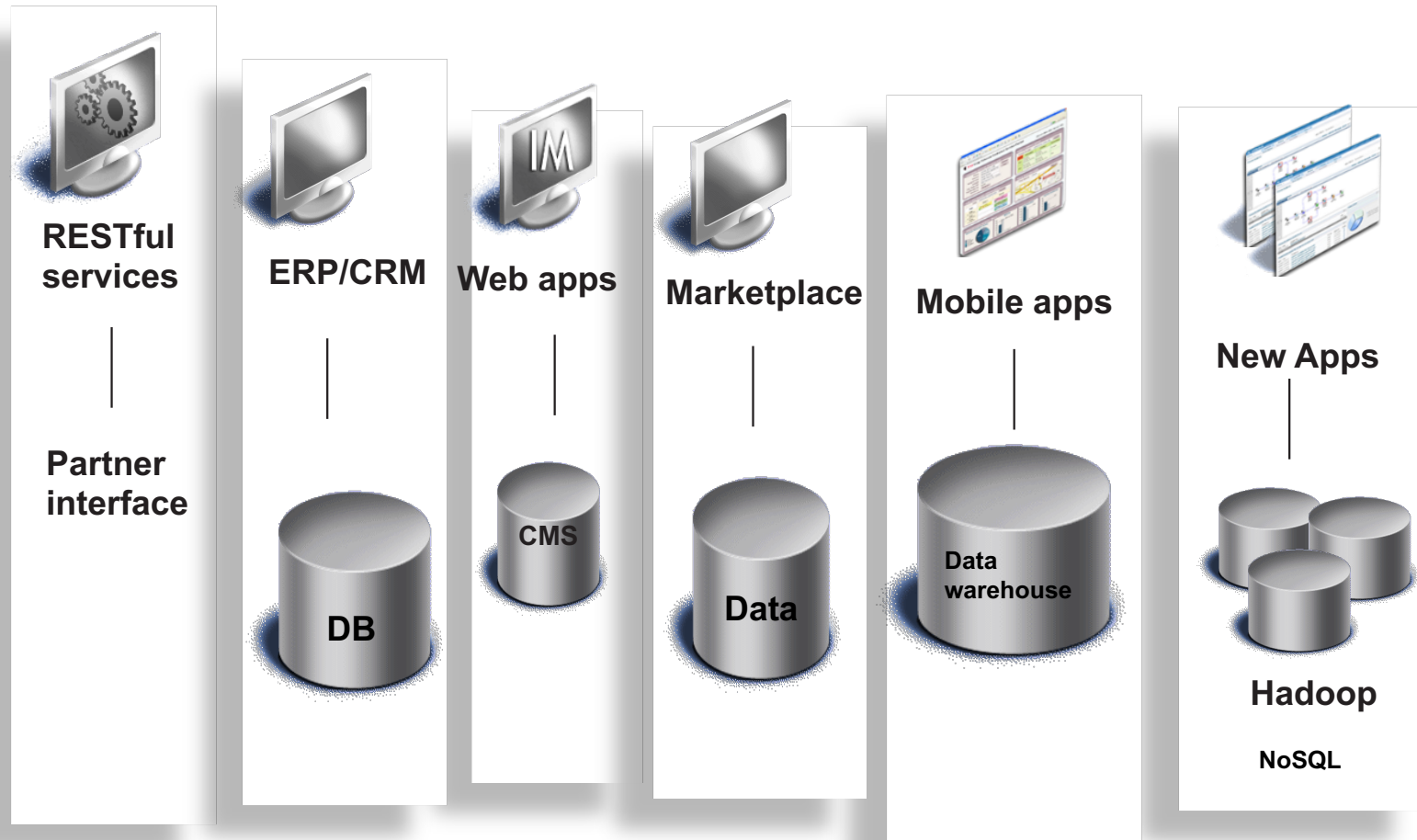Sensor

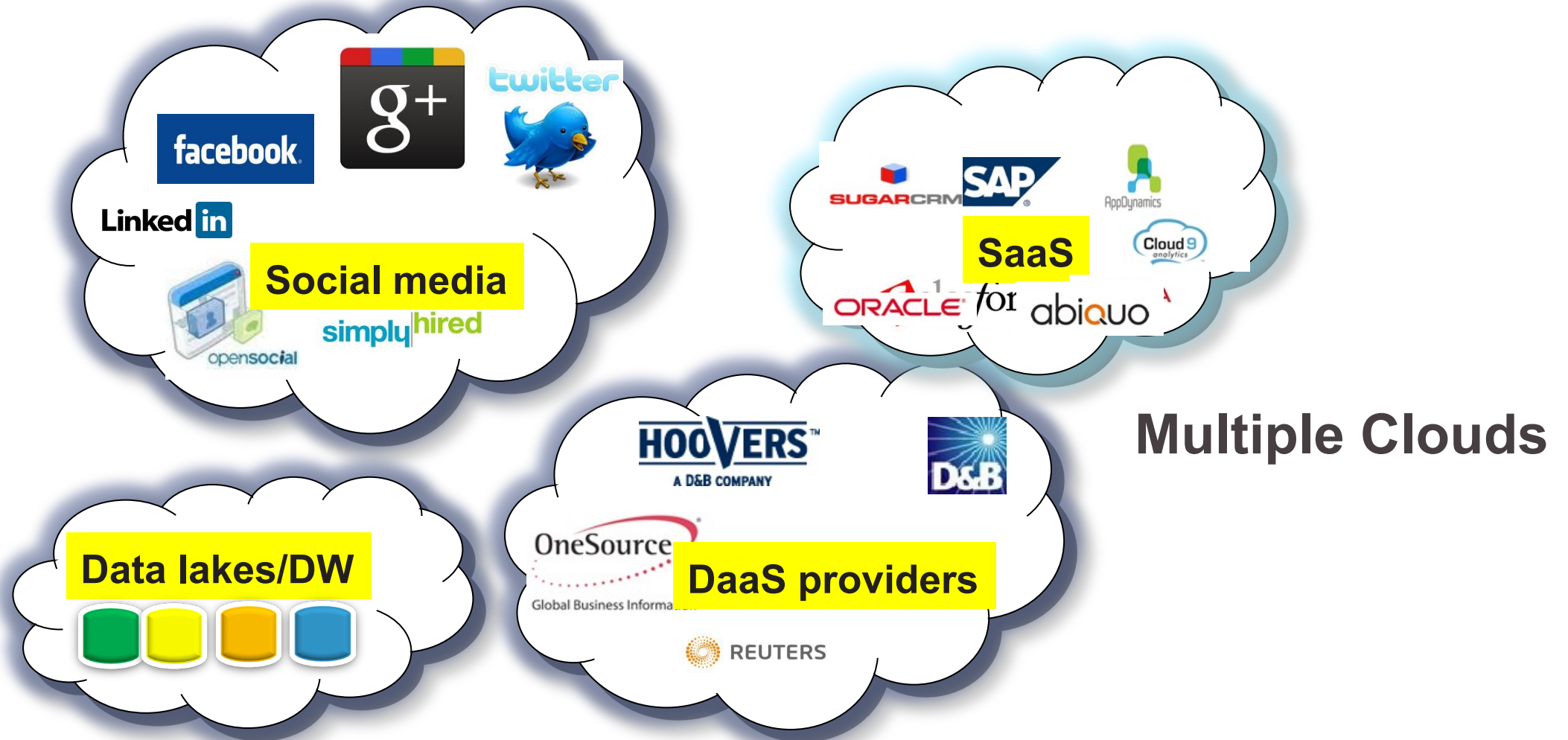# 12ZB

Data is on net!

Video

Web apps

Mobile

. . . It creates new possibilities . . . when leveraged!

However, your data is locked in multiple apps, data repositories on-premises.....

RESTful services

Partner interface

ERP/CRM

Web apps

Marketplace

Mobile apps

New Apps

DB

CMS

Data

Data warehouse

Hadoop

NoSQL

On-premises

And we now have data also stored and processed in the cloud !

Social media

SaaS

Multiple Clouds

Data lakes/DW

DaaS providers

And data extends out to the Edge… that is growing even more rapidly ….

Smart Devices

IoT Sensors

Edge Computing

Robots

Driverless Cars

5G
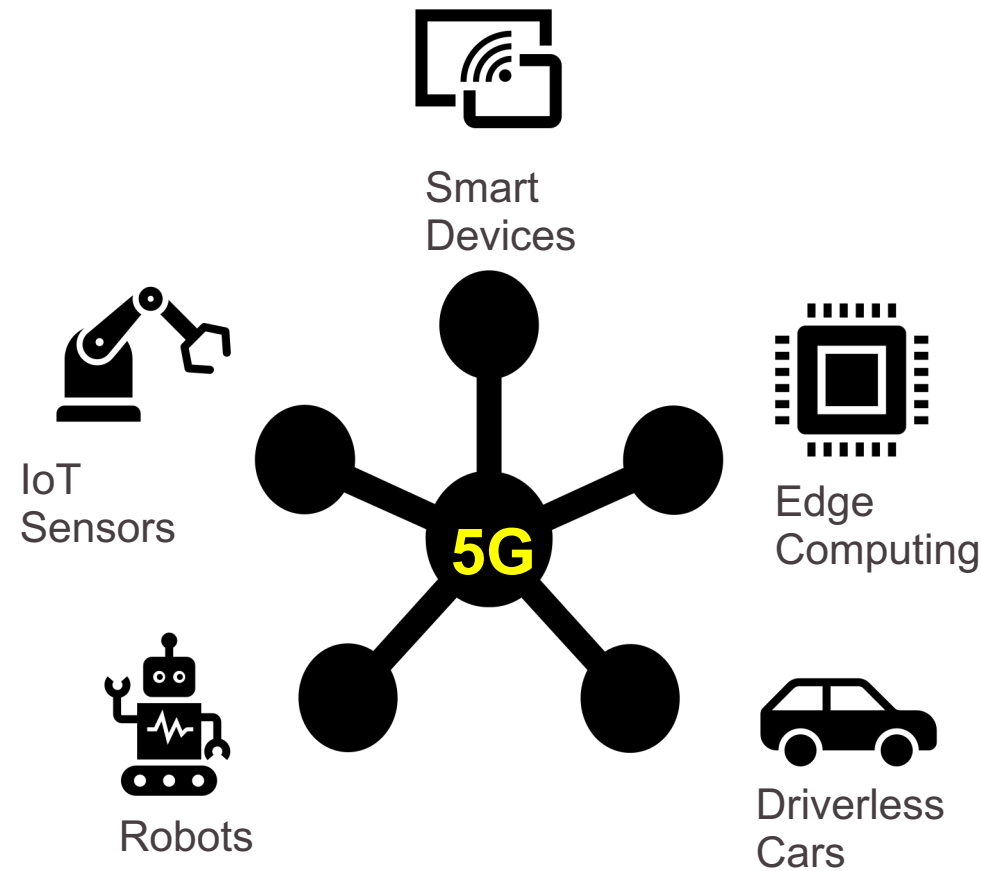
Applications need contextualized data

Insights need contextualized data

Traditional data architectures fail to support new generation requirements…

Lack of real-time data support: Traditional architecture mostly support batch or slow-data processing

Not agile: Unable to quickly respond to new business needs.

Lack of automation: Most traditional systems lack automation to simplify data management function.

Lack of support for non-structured data: Most traditional data systems don't support semi-structured and un-structured data

Lack of collaboration: Most traditional architectures do not have multi-persona support.

Dynamic integration: Brings together diverse sources to support customer scenarios quickly.

FORRESTER

Data fabric

"Dynamically orchestrating disparate data sources intelligently and securely in a self-service manner and leveraging various data platforms to deliver integrated and trusted data to support various applications, analytics, and use cases"
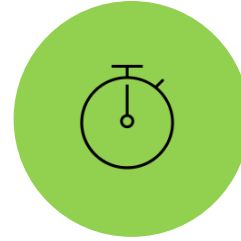
DEFINITION

Data fabric delivers a modern data architecture

Trusted and consistent data: Provides trusted data for all applications and insights.

Agile: Quickly responds to new business needs — across enterprise.

Self-service (Business): End users can leverage data to support various use dashboards, reports.
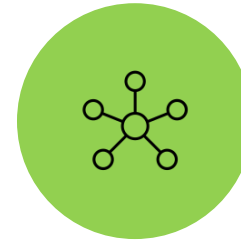
Self-service (IT): High degree of automation for data management functions.
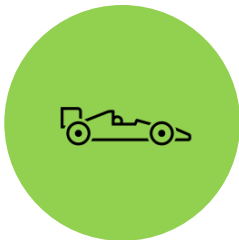
Real-time initiatives: Focuses on real-time and near real-time customer data initiatives.
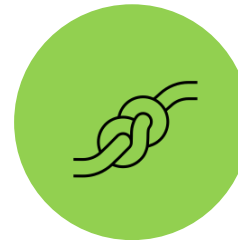
Dynamic integration: Brings together diverse sources to support customer scenarios quickly.

Data Fabric – Delivers integrated, trusted and real-time view of business data ..

Data Sources

Systems of Transactions

Systems of Record

Systems of Engagement

Integration Security

Classification Metadata

Data Lake

Quality Enrichment

Processing Governance

Cloud Data Warehouse

Data Fabric

Sematic Layer

Integration

Transformation

Models

Governance

Security

Quality

Catalog

Metadata

Customer 360

- Sentiment analysis
- Next-best action analysis
- Cross-sell/up-sell analysis
- Social network analysis
- Customer churn analysis
- Customer engagement analysis

Forrester's Data Fabric Reference Architecture

Data management

Metadata/catalog

Data security

Data governance

Data processing

Data quality

Data lineage

Policies

AI/ML

Global distributed platform, in-memory, embedded, self-service, and APIs

AI/ML

Global data access

Data modeling, preparation, curation, and graph engine

AI/ML

Data discovery

Transformation, integration, and cleansing

AI/ML

Data orchestration

Hadoop NoSQL Spark **Data platform — processing** Data lake EDW/BDW

AI/ML

Data processing/ persistence

Ingestion, streaming, and data movement

AI/ML

Data ingestion/streaming

Cloud   **Data sources**   **On-premises**

Systems of Record   **Systems of Engagement**   **Systems of Transactions**

DataOps

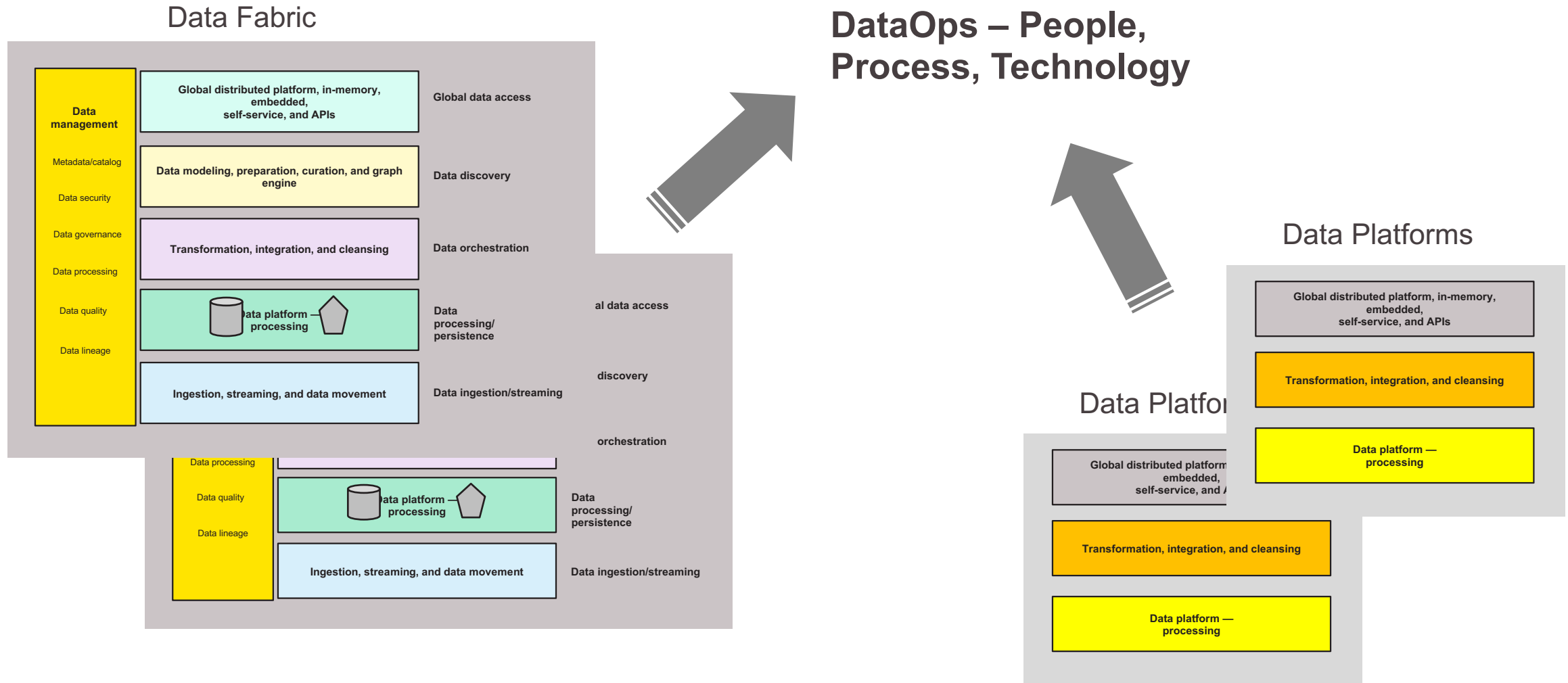*"DataOps is people, process and technology that aims at making data available quickly, securely and in a timely manner to support multiple roles in an organization. DataOps focuses on end-to-end automation, self-service, integration and trusted data in close alignment with business objectives".*

FORRESTER

DEFINITION

DataFabric And Data Platforms Enables DataOps

Data Fabric

Data management	Global distributed platform, in-memory, embedded, self-service, and APIs	Global data access
Metadata/catalog	Data modeling, preparation, curation, and graph engine	Data discovery
Data security		
Data governance	Transformation, integration, and cleansing	Data orchestration
Data processing		
Data quality	Data platform — processing	Data processing/persistence
Data lineage		
	Ingestion, streaming, and data movement	Data ingestion/streaming

DataOps – People, Process, Technology

Data Platforms

Global distributed platform, in-memory, embedded, self-service, and APIs
Transformation, integration, and cleansing
Data platform — processing

Typical use cases for data fabric

- Customer 360 — personalization

- Customer intelligence — for upsell/cross-sell, targeted marketing

- IoT Analytics

- Fraud detection

- Risk assessment analytics

- Healthcare-related analytics and insights

- Financial-services related analytics

- Insurance-related analytics

- Retail-related analytics

Recommendations

- **Accelerate business use cases** with a Data Fabric and DataOpS strategy.

- Focus on new **real-time initiatives** which is the sweet spot for data fabric.

- **Create a data fabric team to succeed** – Enterprise architects, data architects, developers, data engineers, data security, business analysts.

- Keep **security in mind from start** when supporting various data sources especially when dealing with sensitive data.

- **Leverage data fabric** to automate integration, deliver self-service capabilities, support trusted and real-time customer data initiatives.

Thank You.

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