DATA SATURDAY #23 - OSLO

Enterprise guide to analytics capabilities

A journey for data-driven insights and innovation

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John Mousa

Engineer at heart, enabling enterprise customers in DACH and world wide bridge the worlds of microservices and analytics as a Sr. Solutions Architect at Amazon Web Services.

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Architcture is about the long-term

Maximizing the ***Buseinss Value*** taking into account the

Long-Term consequences of technical decsions

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Long Term Decsion and Commitments

"One of an architect's major objectives is to Create Options."

Gregor Hohpe

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Let’s start then

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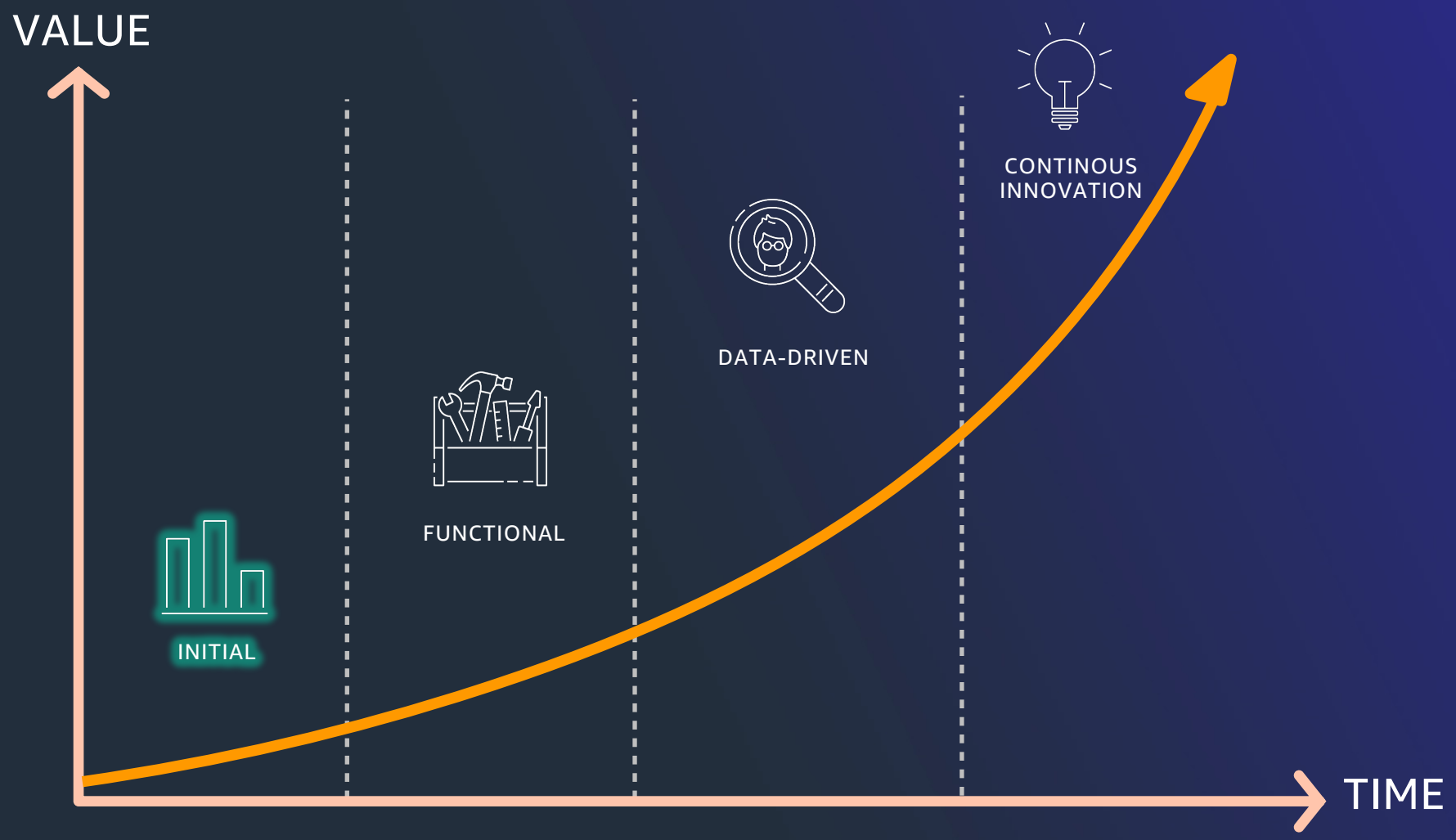
Advancing Analytical Capabilities Model – Initial



Platform

Security and Compliance

People

Analytics

Operations

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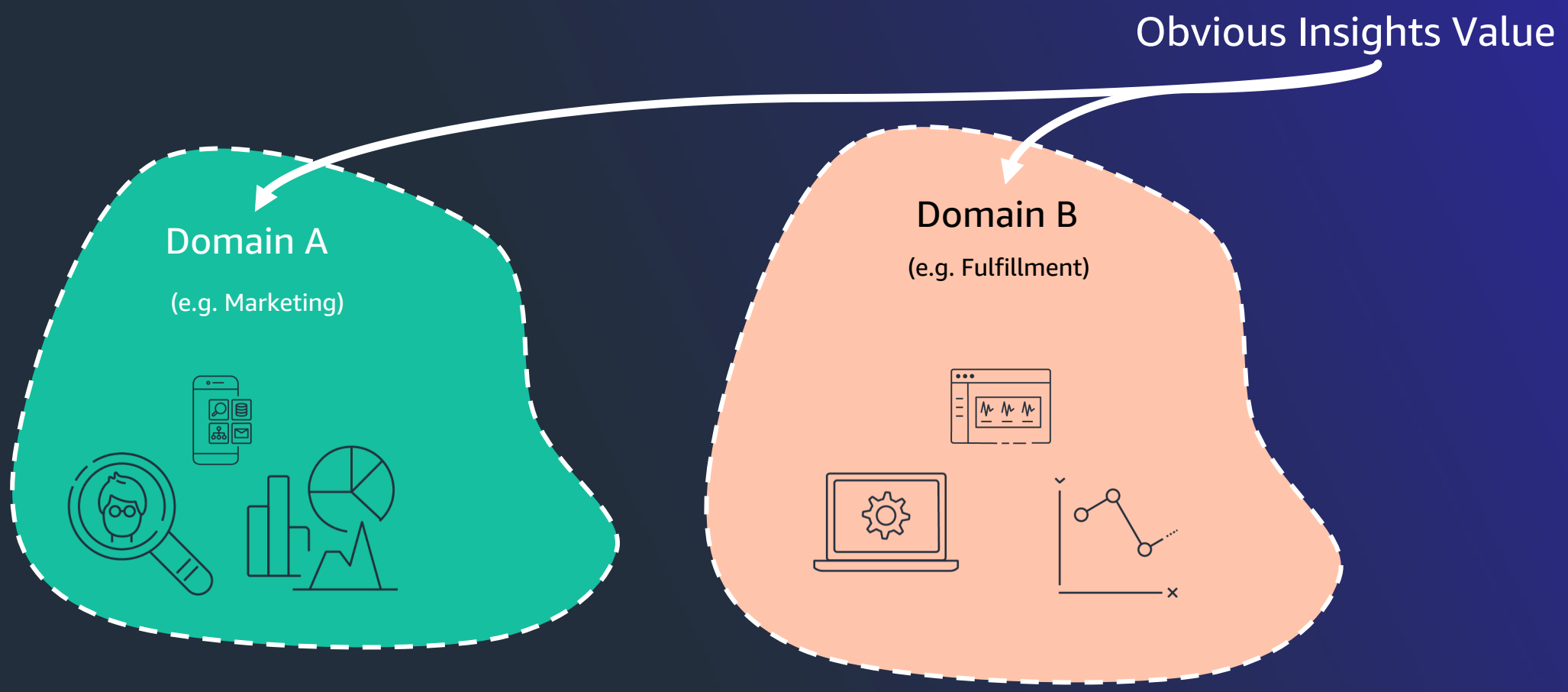
Organizational Landescape



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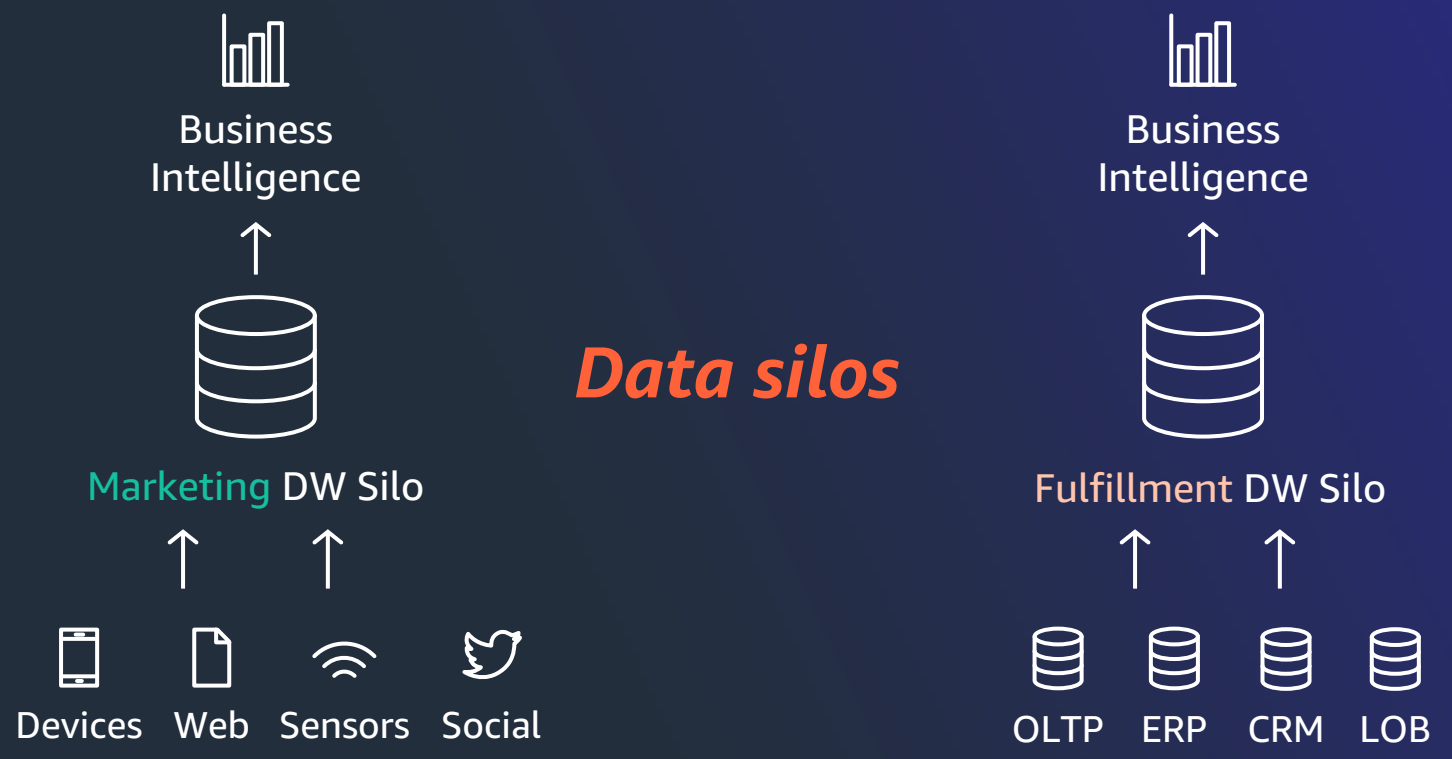
Traditional Analytics Landescape



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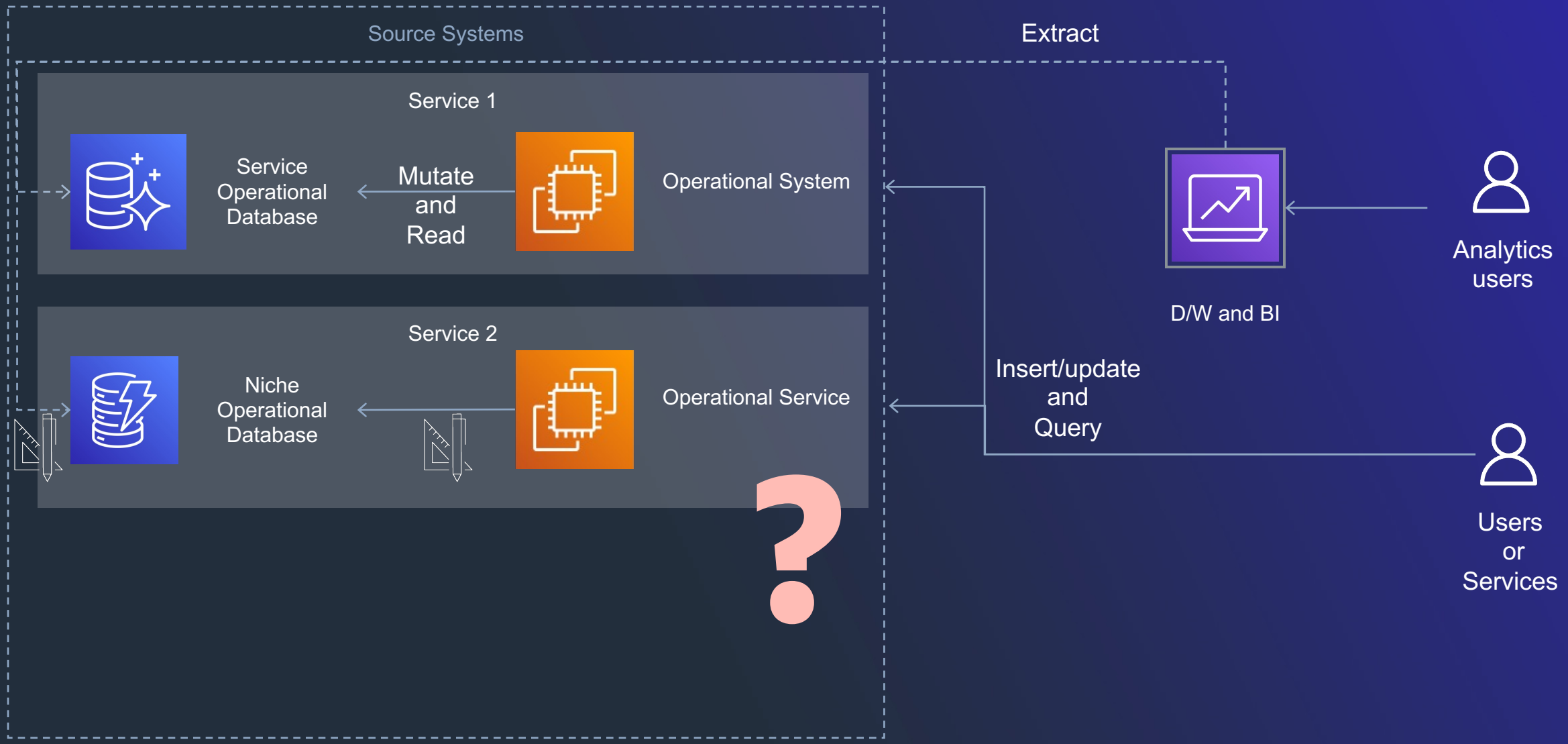
Extracting Data From Source Systems



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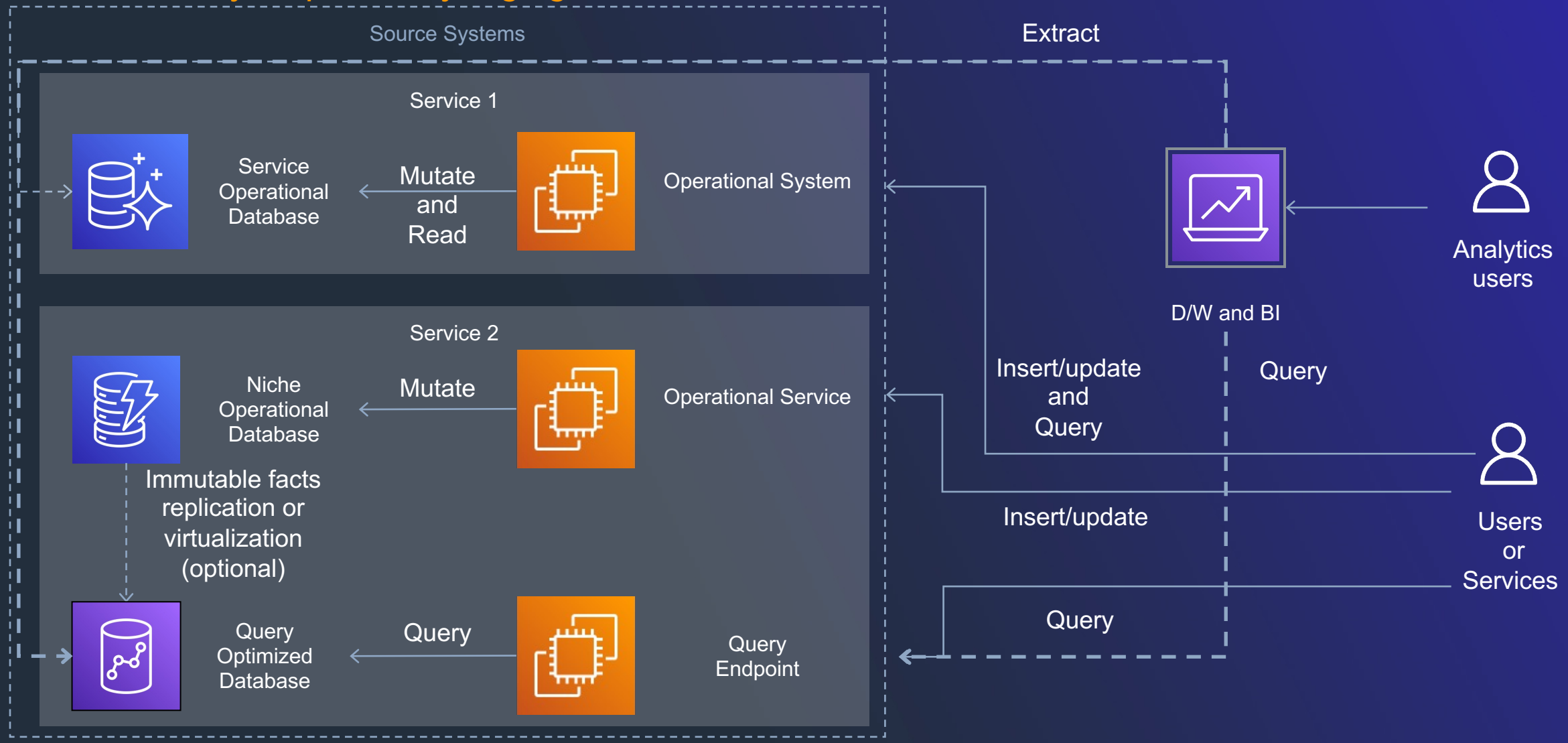
Extracting Data From Source Systems

Command Query Responsibility Segregation - CQRS



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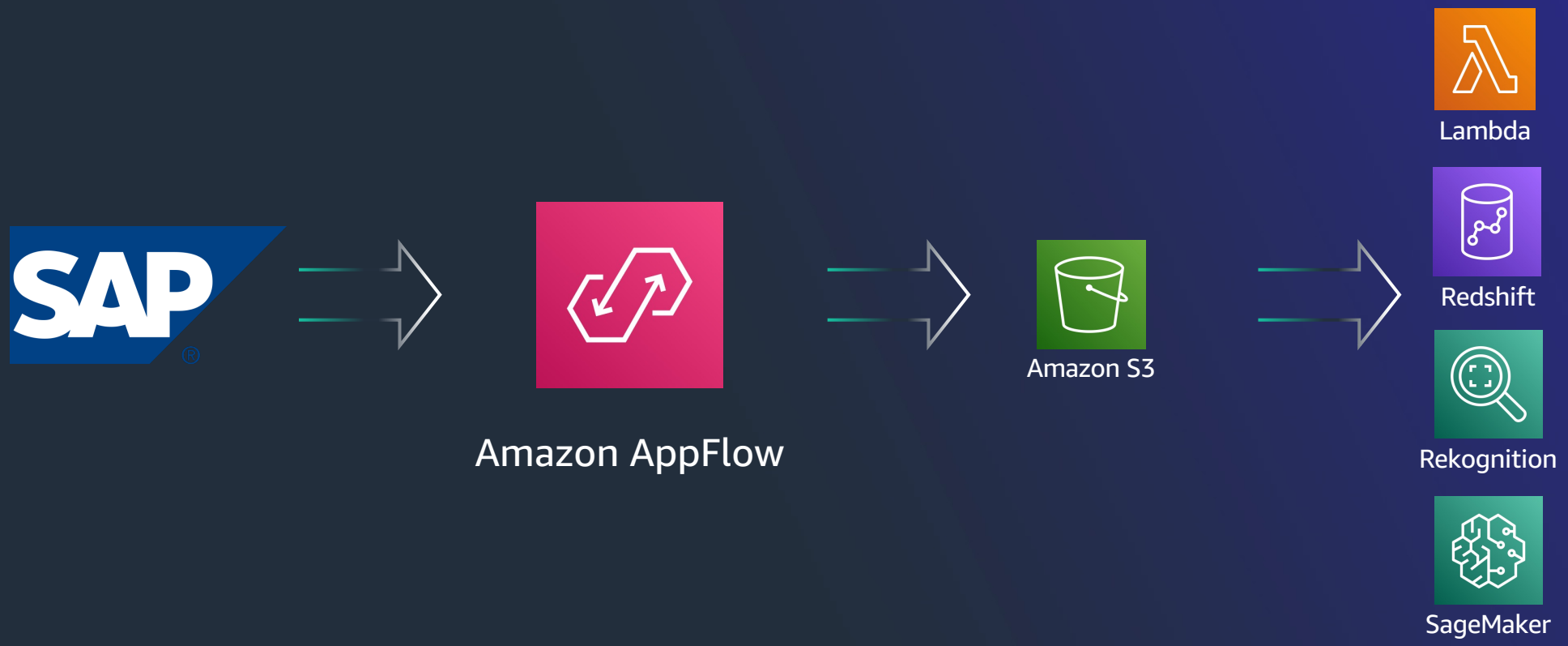
Bring Data from SAP into AWS

Use Amazon AppFlow to connect and run data flows from SAP using OData Services.



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Challenges to Watch Out For

- Oops, I'm using my BI tools for data processing
  - Push back immutability and basic cleaning logic to source
  - Support skills and knowledge gaps
  - Simplify data pipelines
- Vendor choice for BI and Data Warehouse
  - Support of object storage
  - Separation of Storage and Compute

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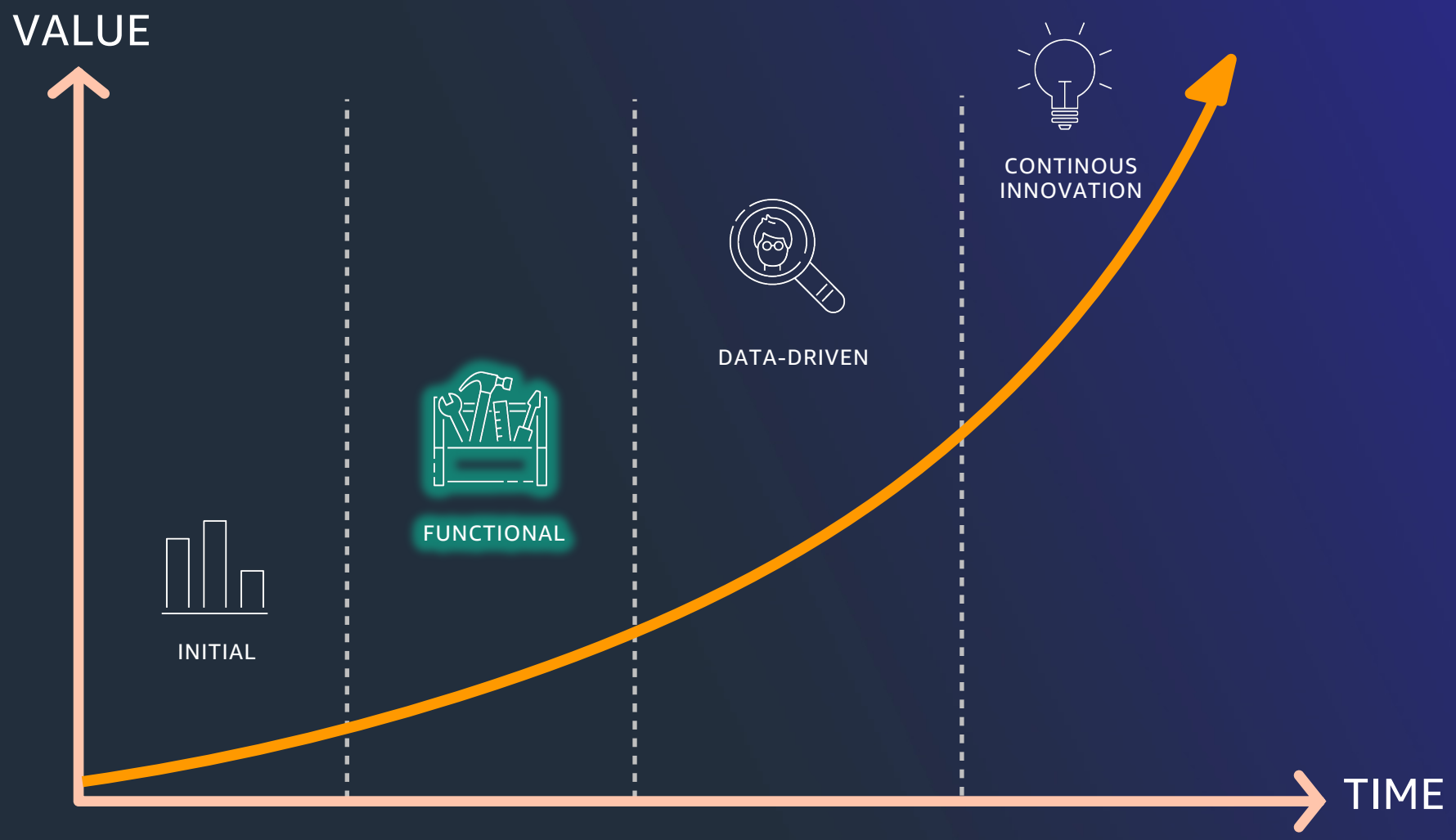
Advancing Analytical Capabilities Model – Functional



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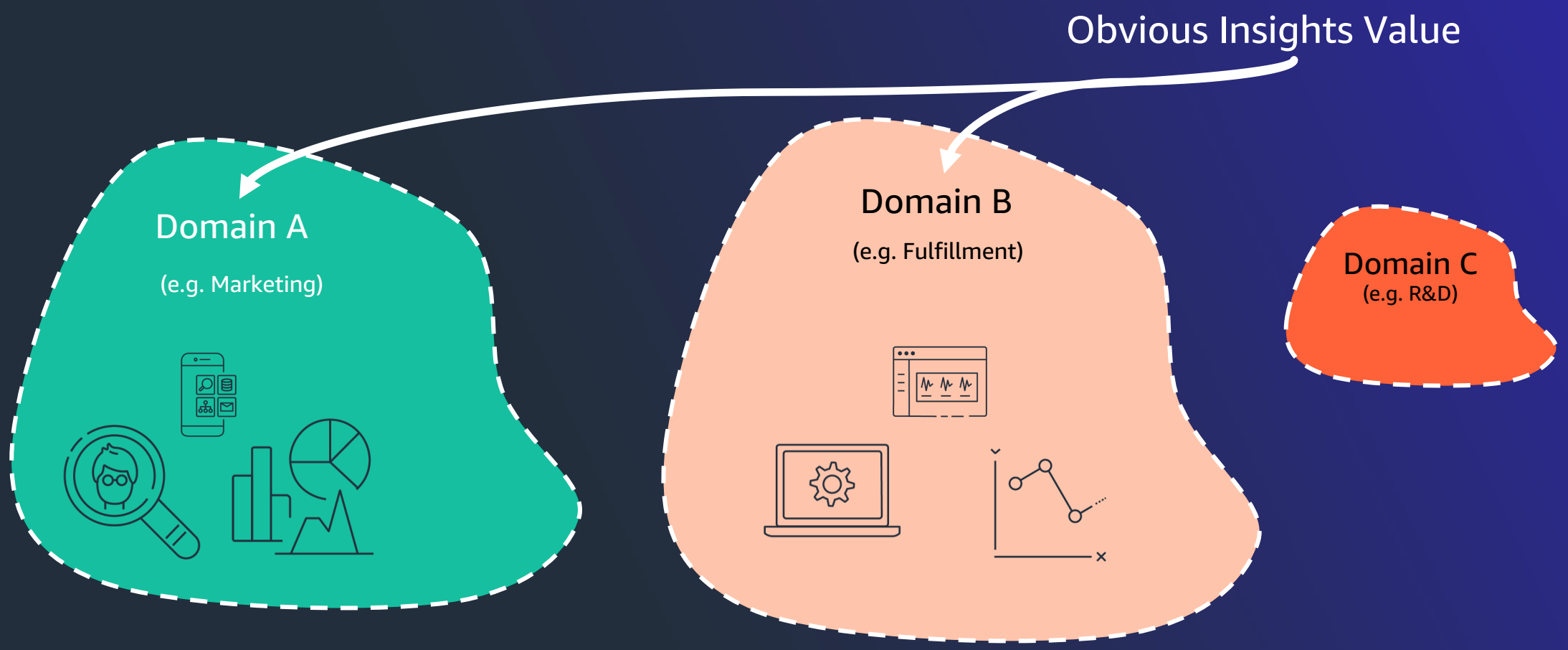
Finding Opportunities



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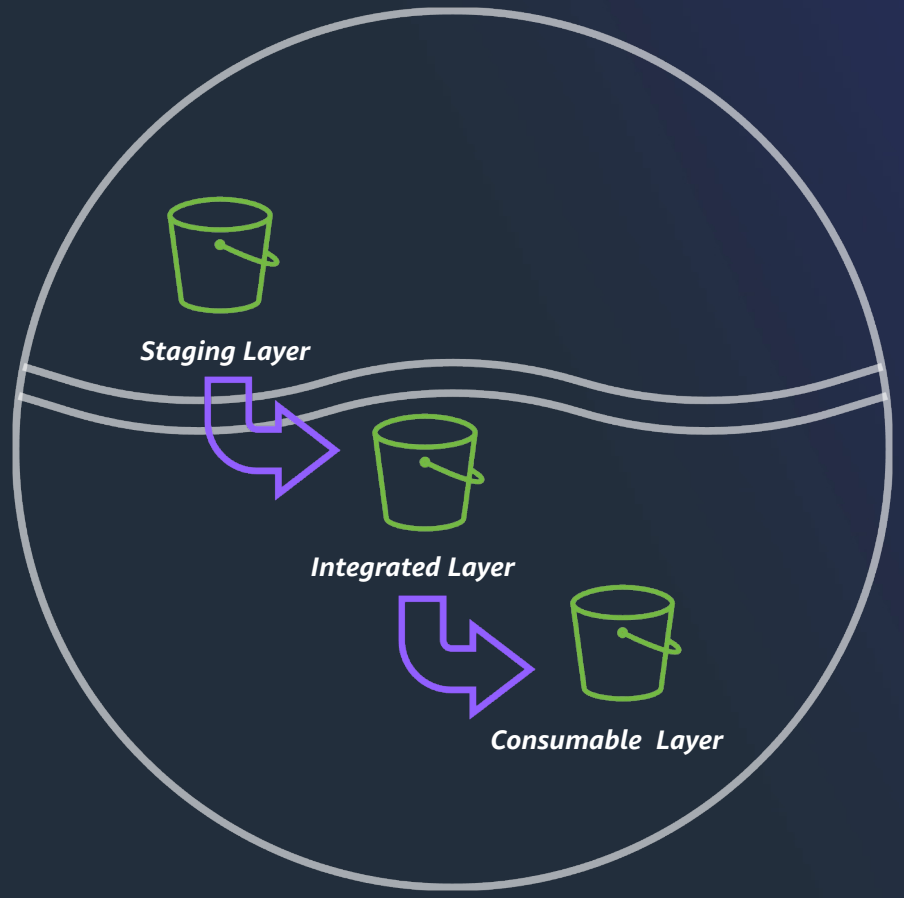
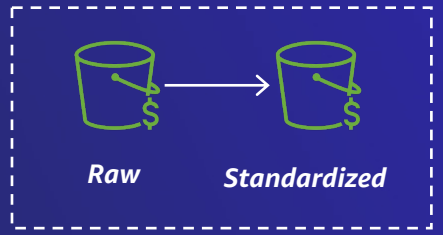
Solutions to Consider

Modern Data Strategy



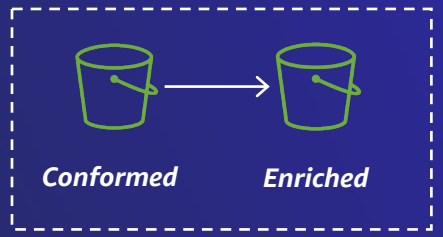
Staging Layer

- Factual source data for all time
- Data treated as immutable
- ***Cost effective***



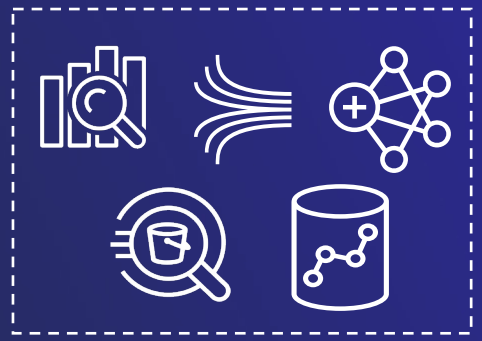
Integrated Layer

- Trustworthy
- Accessible, ***Interoperable*** and ***Open***
- Valuable



Consumable Layer

- Application-Specific format and granularity
- Fits consumer's technology
- Adds ***Flexibility*** to integrated layer



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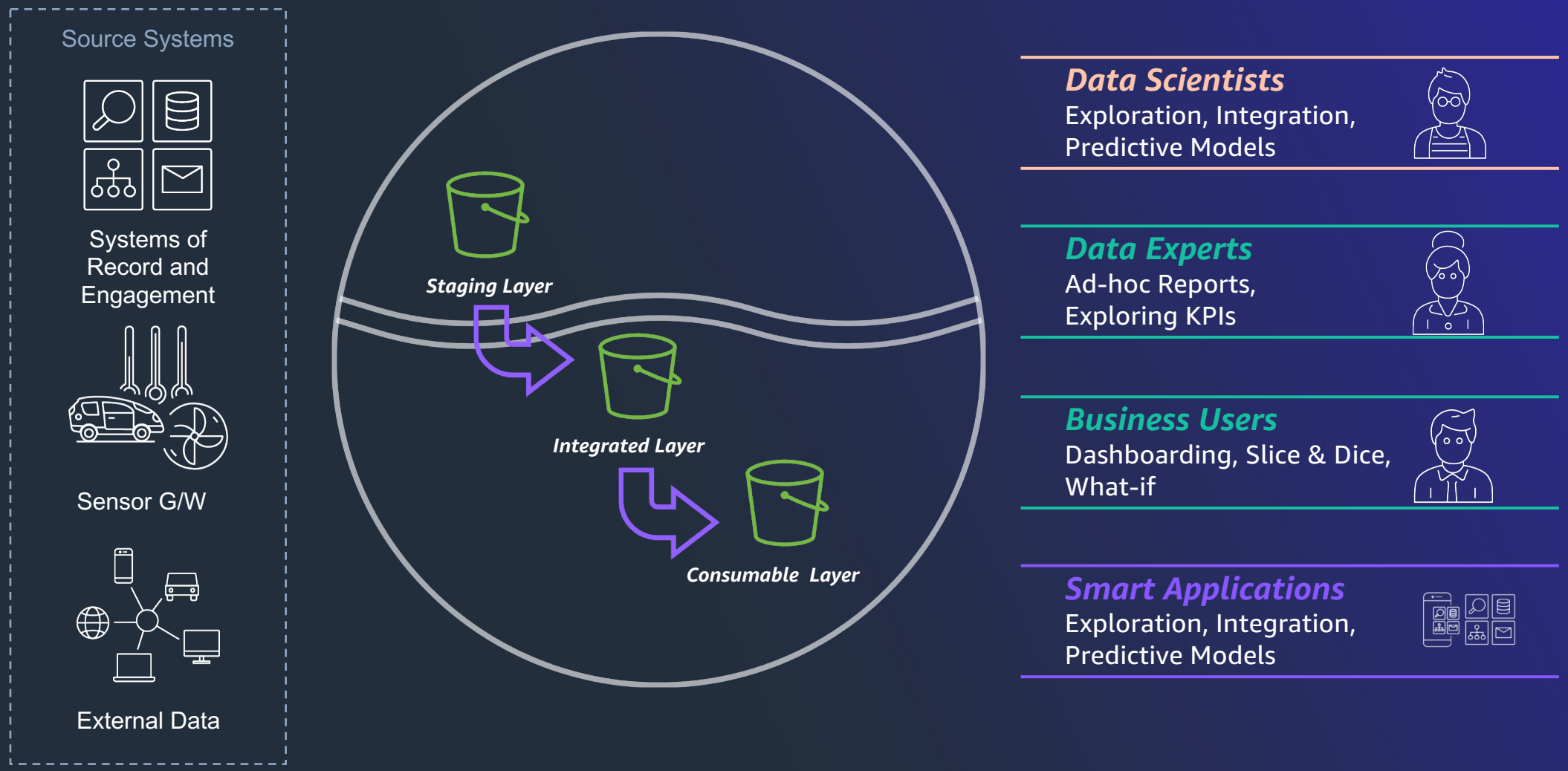
Modern Data Strategy in Action

Modern Data Strategy



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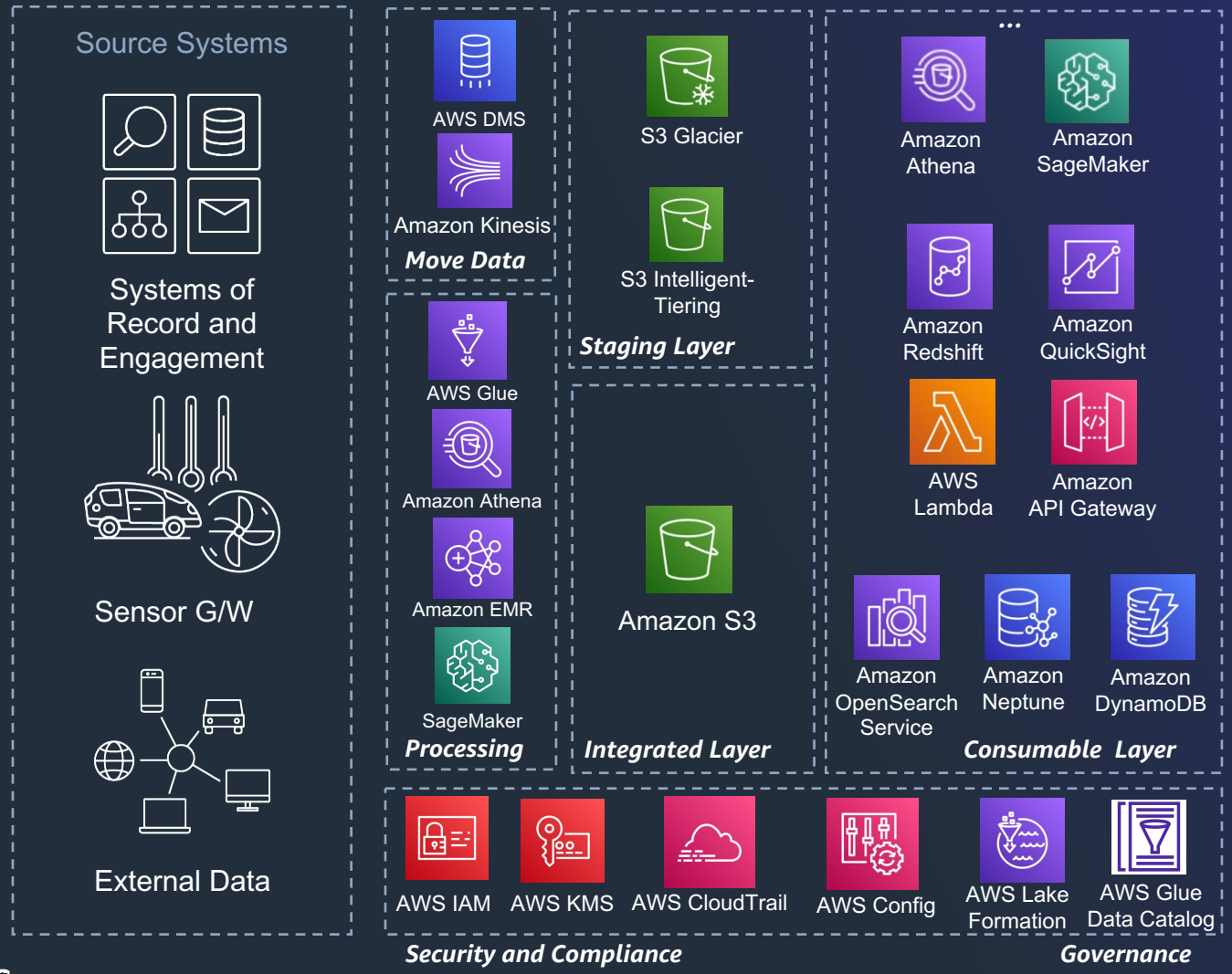

Data Scientists
Exploration, Integration, Predictive Models

Data Experts
Ad-hoc Reports, Exploring KPIs

Business Users
Dashboarding, Slice & Dice, What-if

Smart Applications
Exploration, Integration, Predictive Models

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Modern Data Strategy in Action

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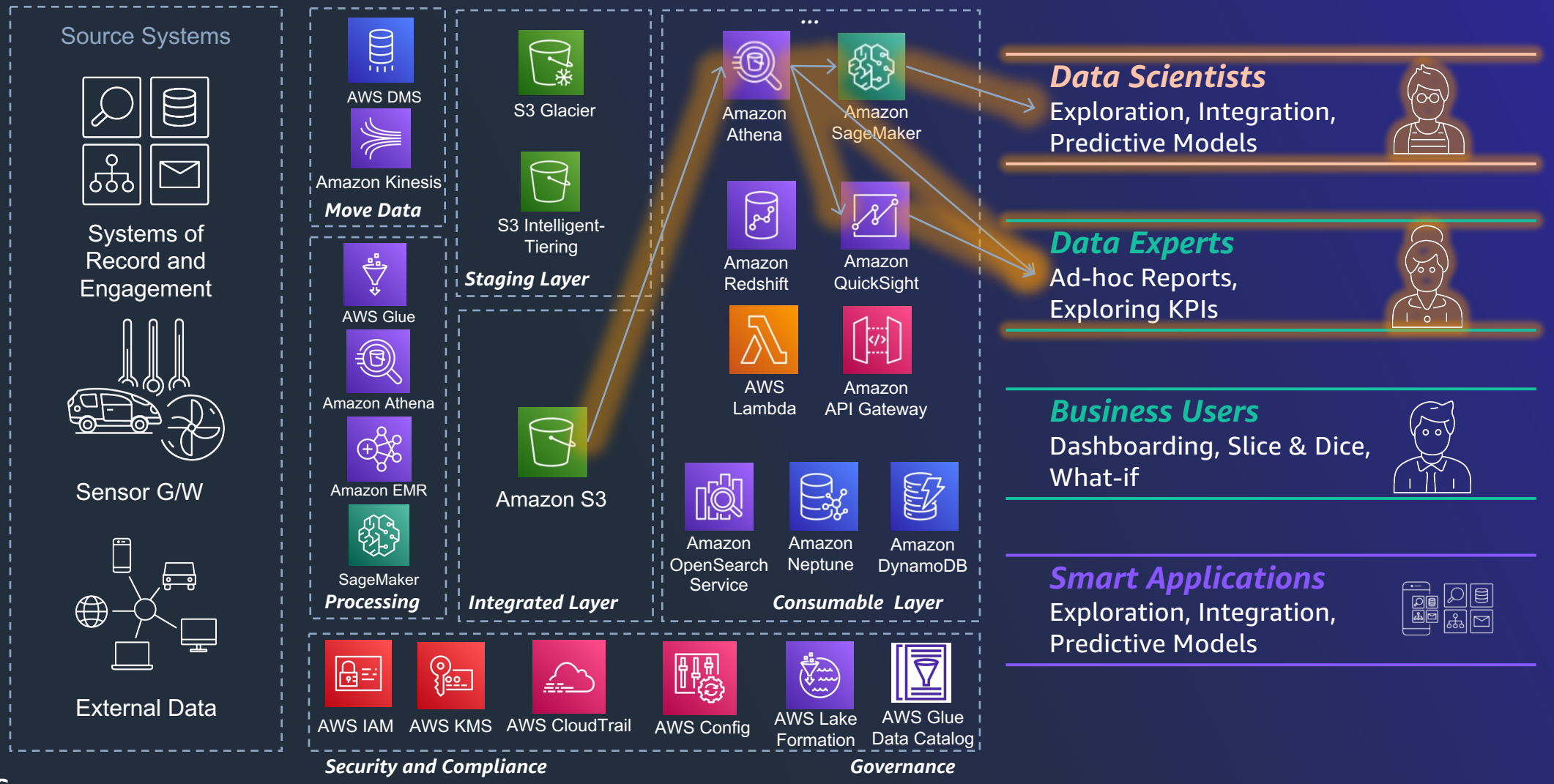

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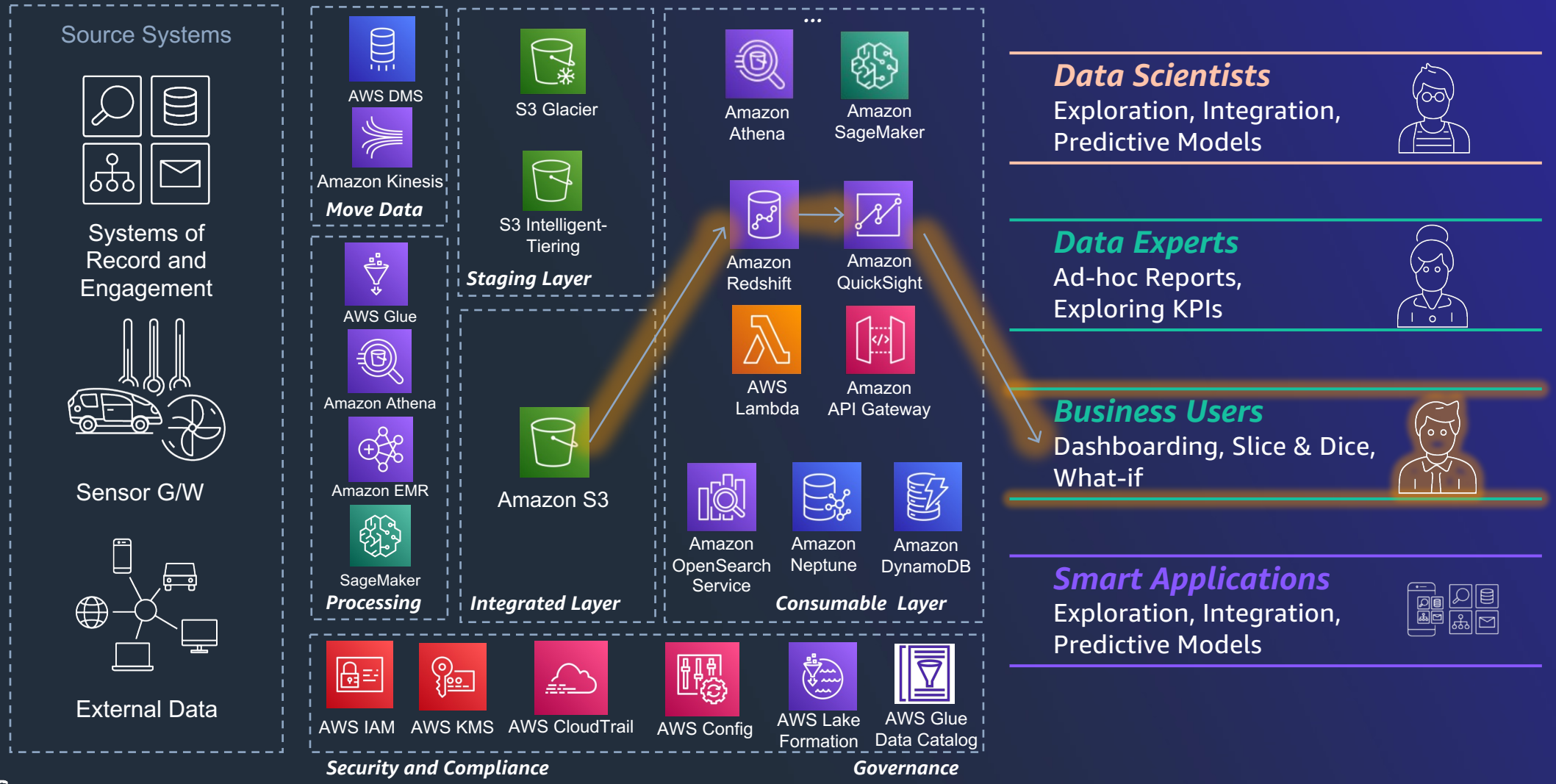

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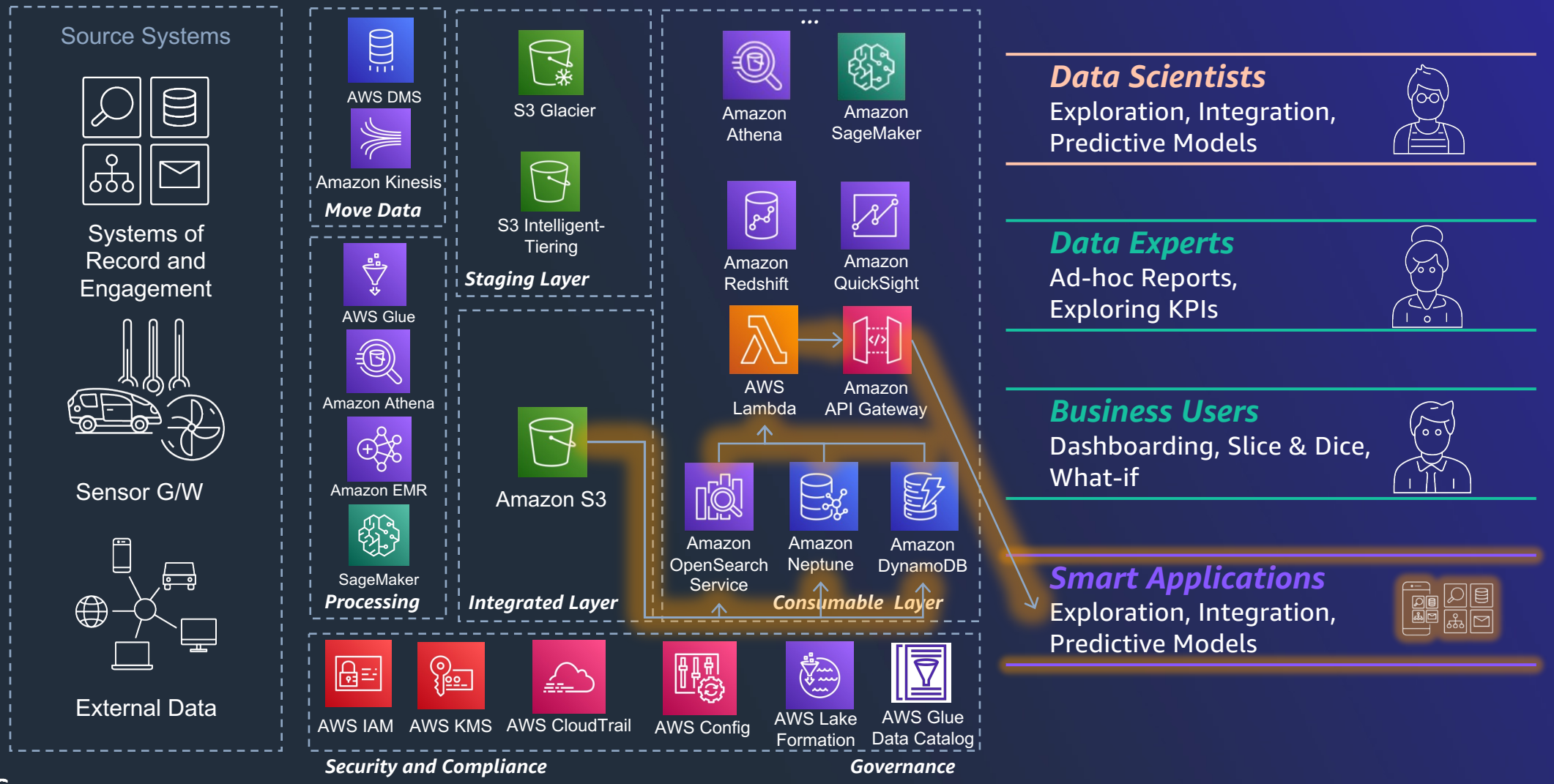

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AWS Expansive Serverless Data Analytics in the Cloud

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Challenges to Watch Out For

- Right personas are not involved
  - You have no product owner
- IT or Infra team over indexing on owning and executing
  - Domain team know best about their use case and consumption patterns
- You get caught up in the “Platform” discussion
  - Enterprise wide RfP for one solution to cover all consumption use cases

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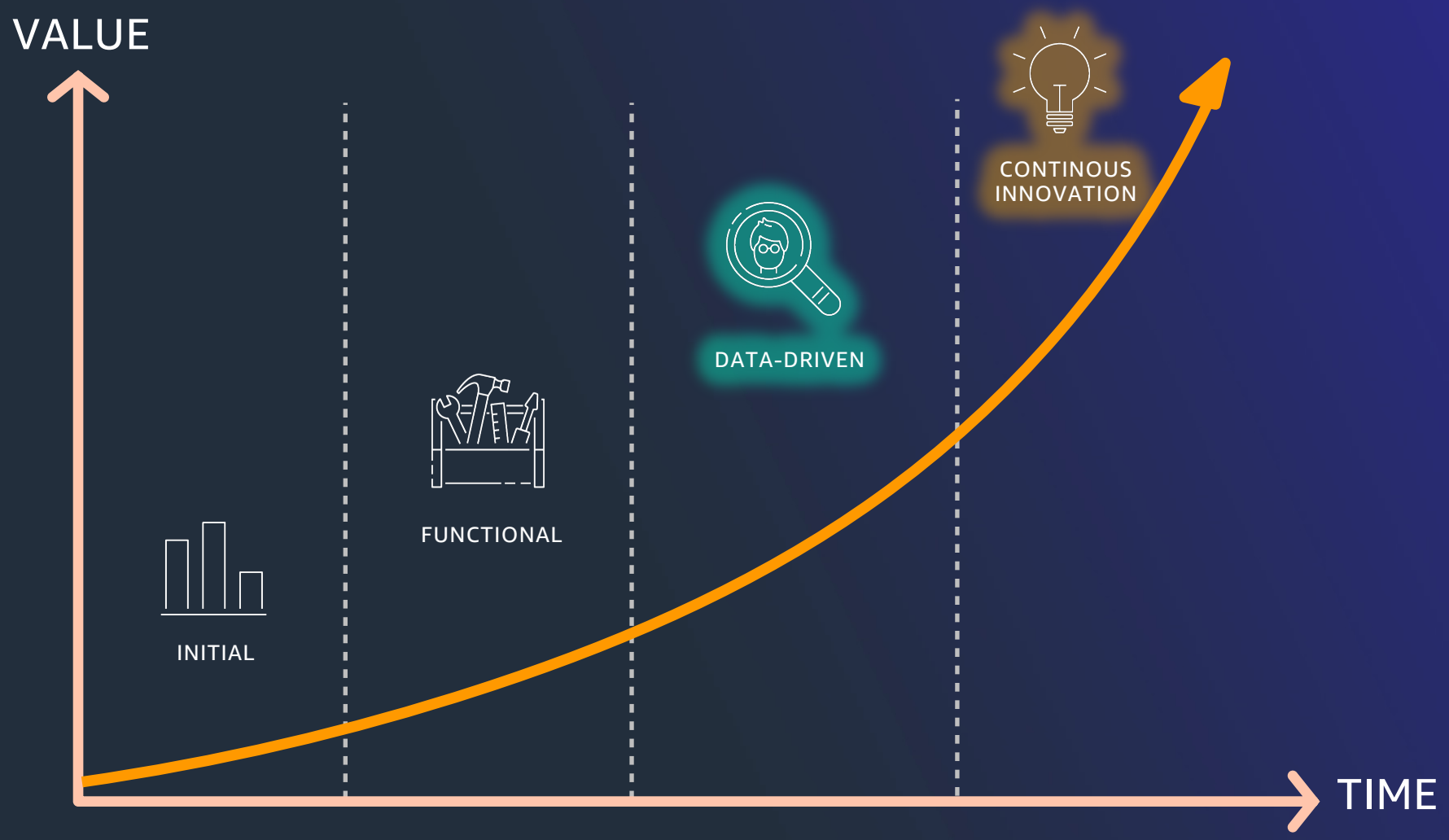
Advancing Analytical Capabilities Model – Innovation



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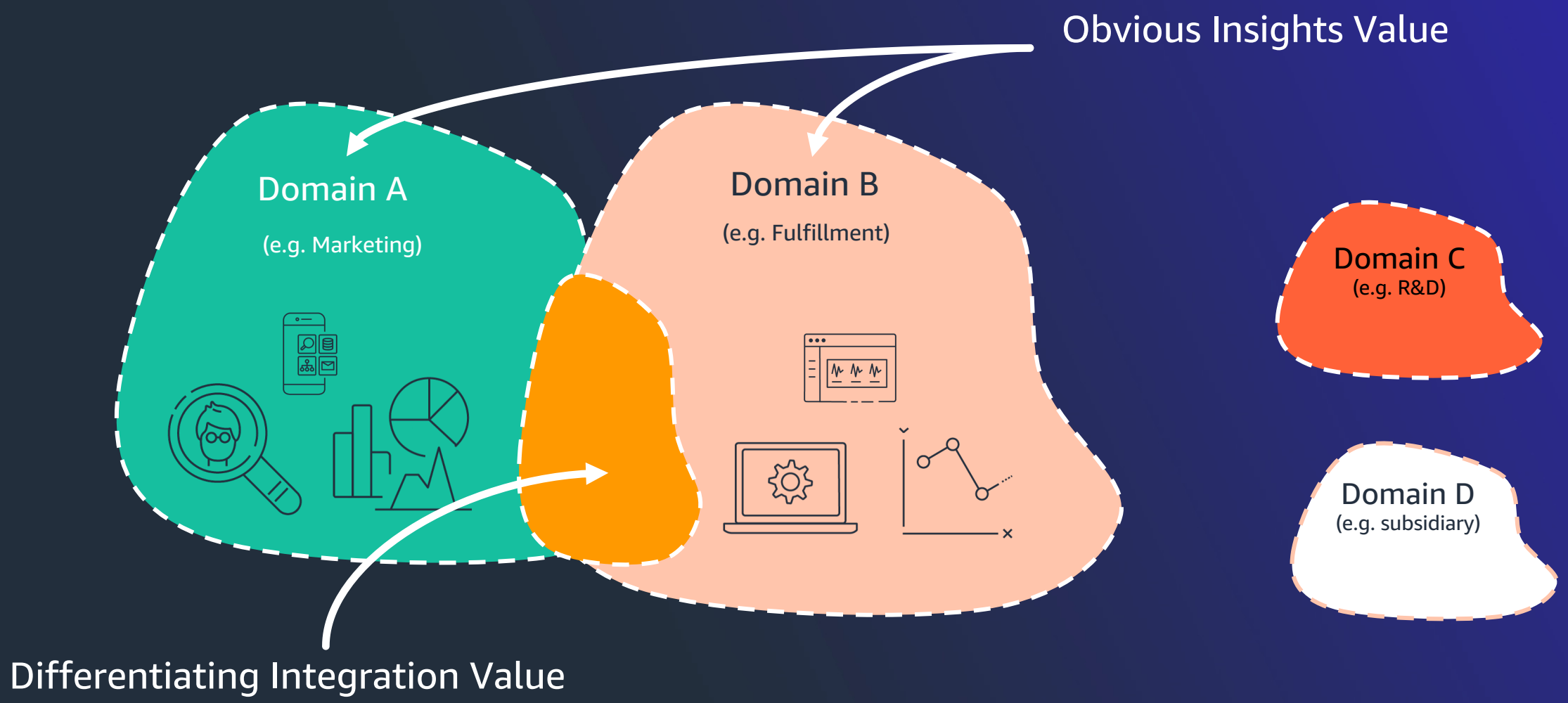
Data Integration Value for Business Scalability



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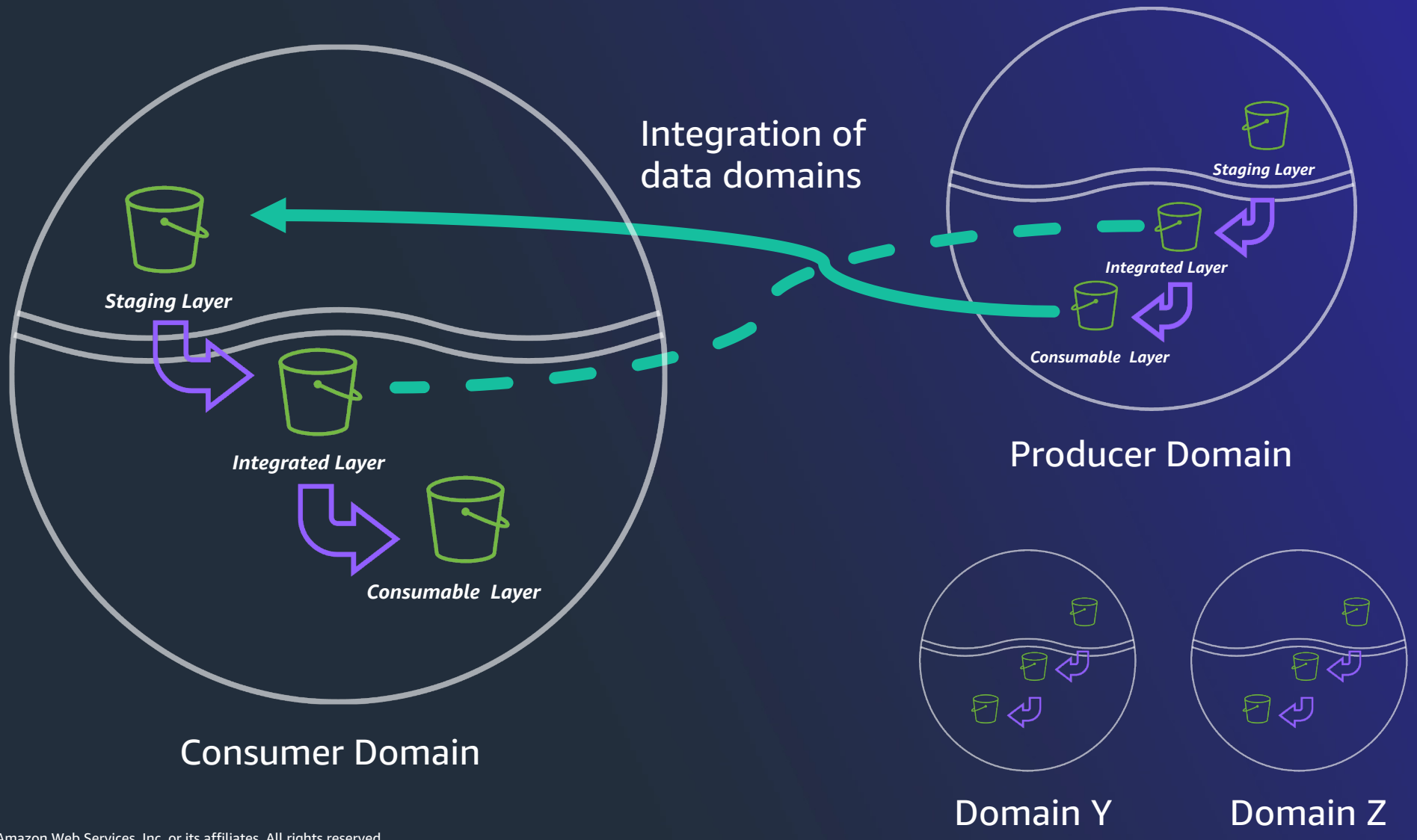
Integrate Enterprise Domains



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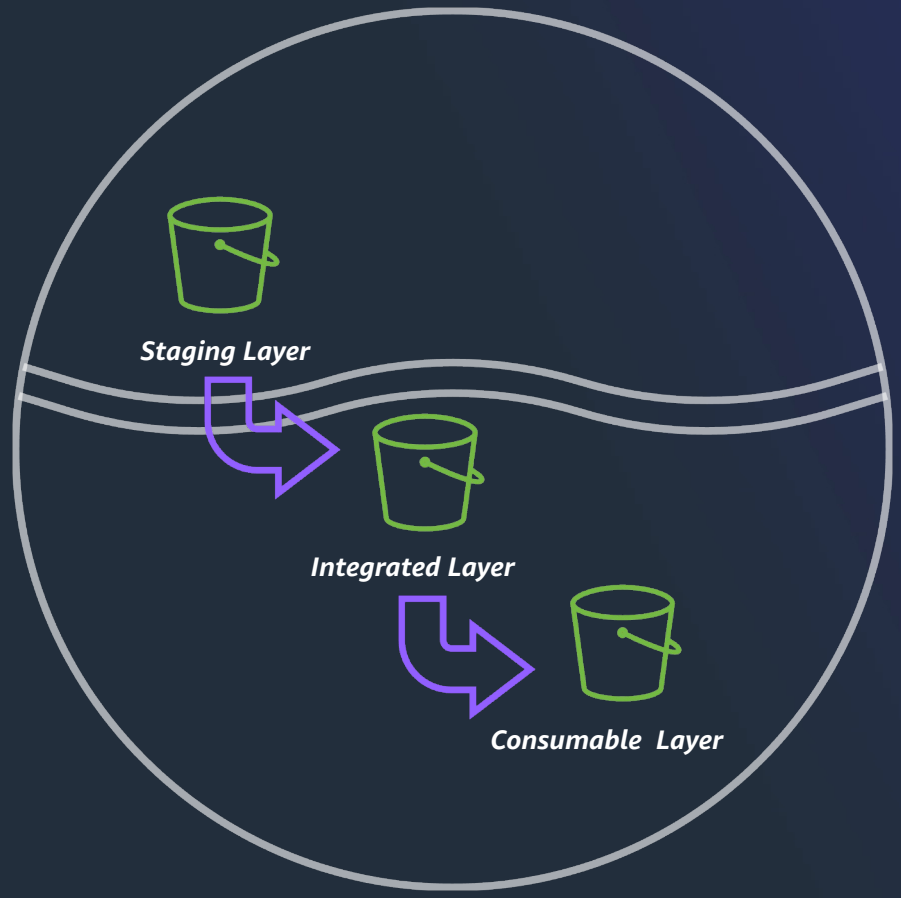
Hub and Spoke approach for Integration

Data Marketplace



Marketplace

- Frictionless
- Discoverability
- Producer incentives
- Consumer incentives
- Operator incentives

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AWS Lake Formation

BUILD A SECURE
DATA LAKE IN DAYS

Build data lakes quickly

Simplify security management

Provide self-service access to data

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Challenges to Watch Out For

- Silos are forming up
  - Your not building modern data silos
  - Govern consumable solutions vs your interoperable integration layer
  - Discoverability
- Building Entity360 views by integrating the whole world
  - Work backwards from specific use cases
  - Aggregate cohesive entities
- Aggregates that are owned by IT

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It’s Definitely a Journey

- Work backwards from context and use-cases, don’t build technical platforms
- Architect for flexibility
- Modern Data Strategy is an analytical pattern for reversible decisions
- You’re one Experiment away

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More Resources

- Modern Data Architecture Whitepaper
- Derive Insights from AWS Modern Data Whitepaper
- Well Architected Framework – Analytics Lens

- AWS serverless data analytics pipeline reference architecture blog post
- AWS Prescripive Guidance – Enabeling data presistance in microservices
- Data Lake Foundation on AWS – Quick Start

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Thank you!

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Sr. Solutions Architect | AWS DACH Enterprise

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