

# Use Case로 알아보는 데이터 분석 솔루션 활용법

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최석재 실장

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Hybrid Data Management Platform

Data & AI

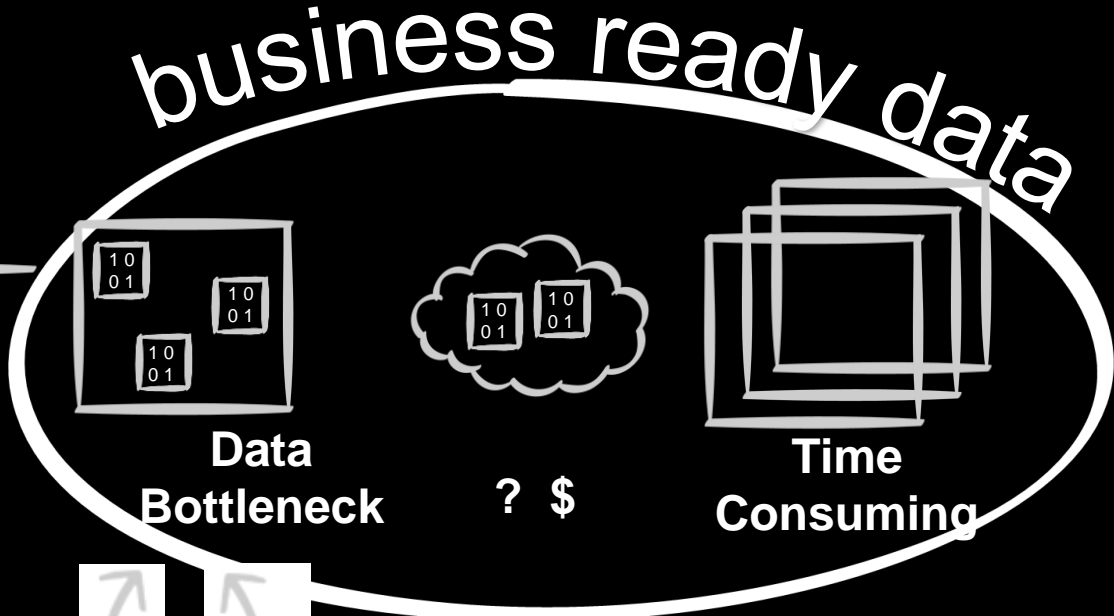
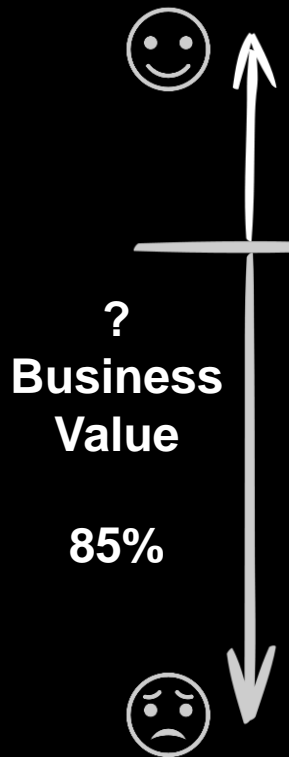
IBM Korea

Data and AI Forum by IBM

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고객 통찰력 향상

셀프 서비스를 활성화하고  
신뢰할 수 있는 통찰력을 제공하기 위해  
분석 기능 강화

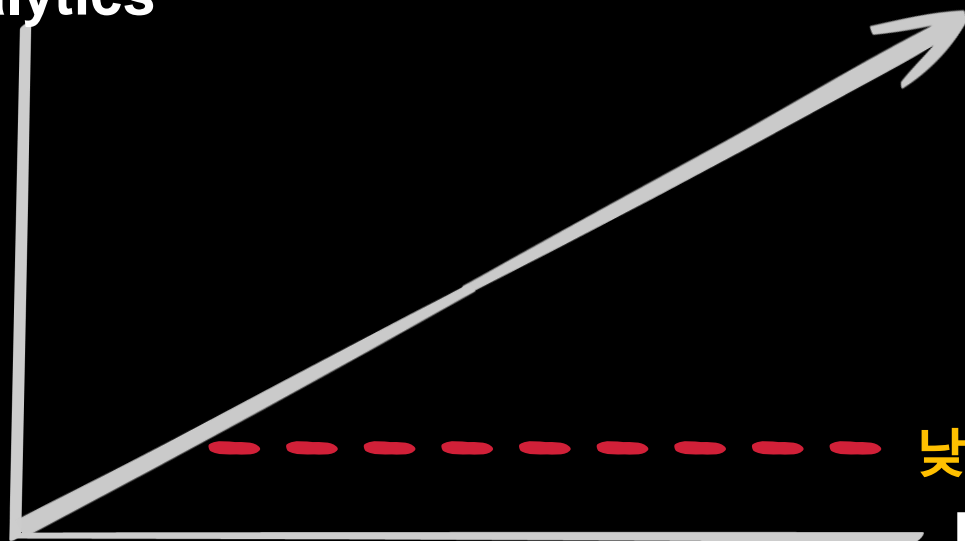


통제 가능한  
셀프 서비스  
조작이 용이한

멀티 클라우드 환경에서 인공  
지능 활용



Analytics



90%  
낮은 성숙도

Data

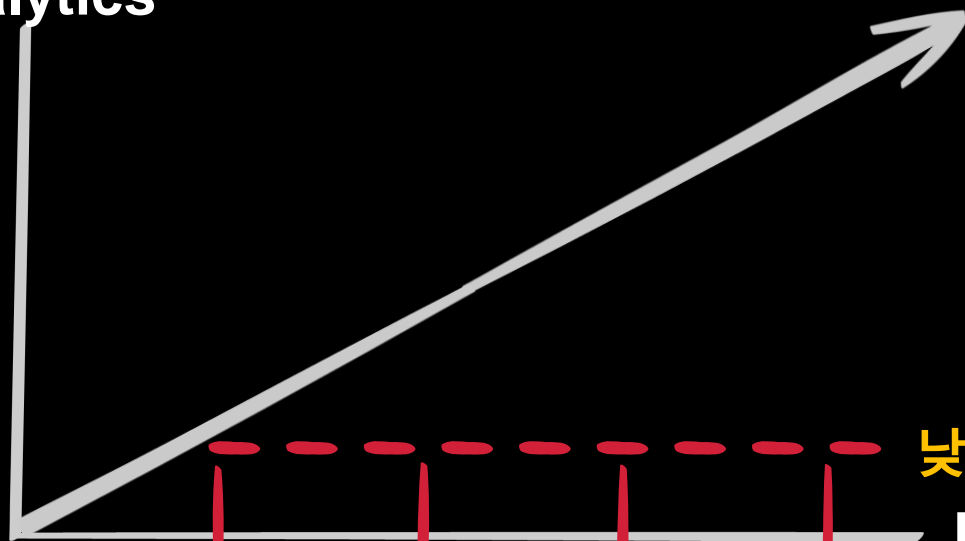
고객 통찰력 향상

신뢰 있는 정보를 제공하여  
셀프 서비스를 가능하게  
하는 분석 기능 강화

멀티 클라우드 환경에서  
머신 러닝 활용



Analytics



90% 낮은 성속도

Data

데이터의  
중앙 집중

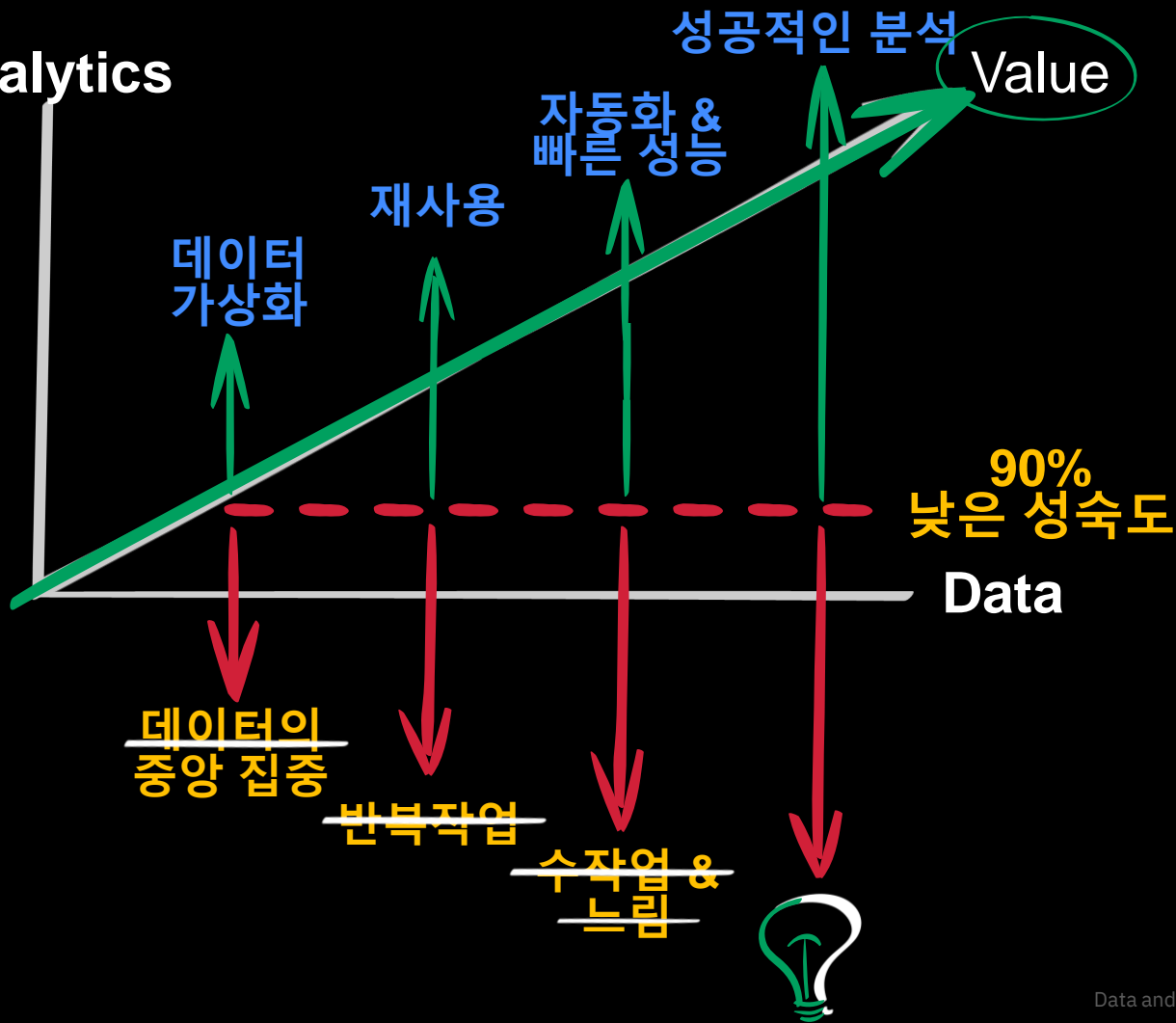
반복작업

수작업 &  
느림

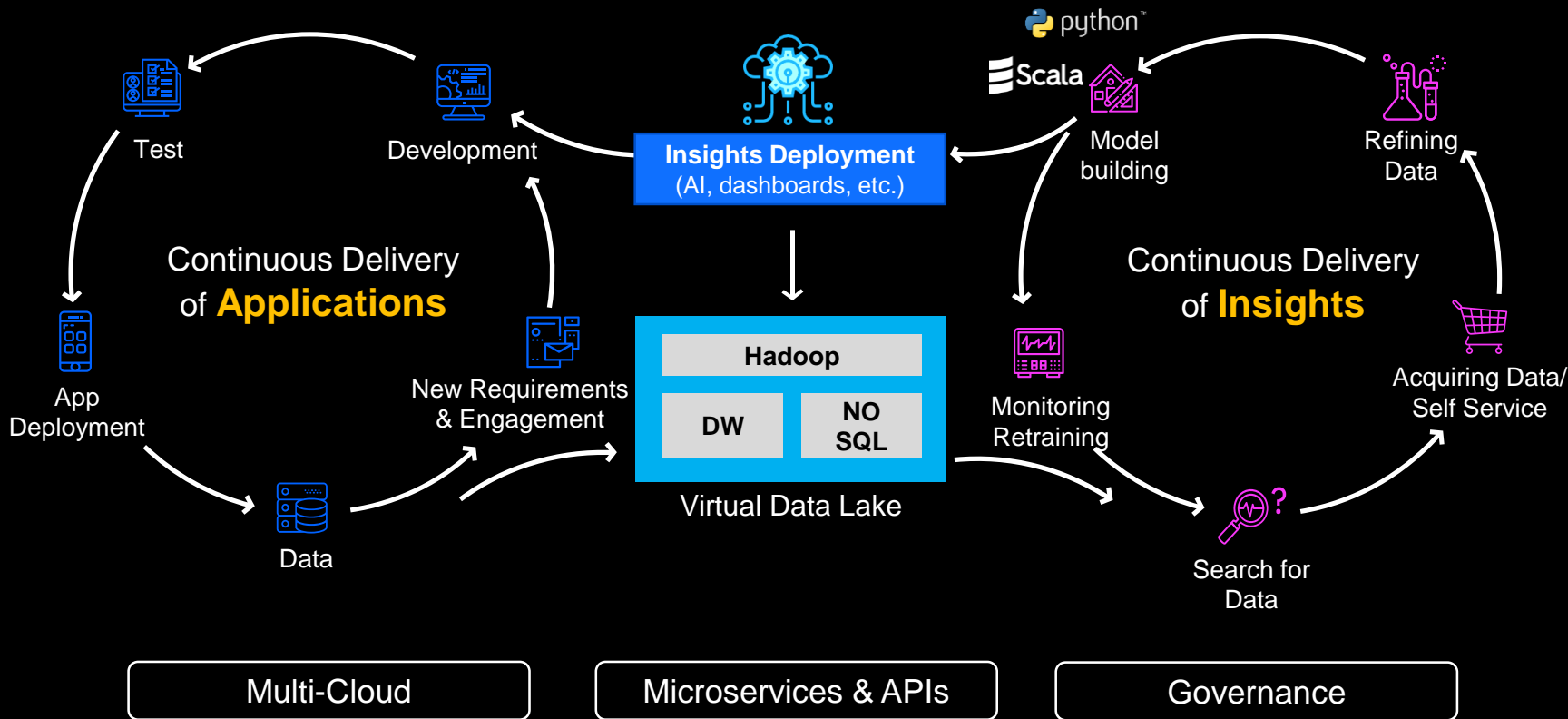




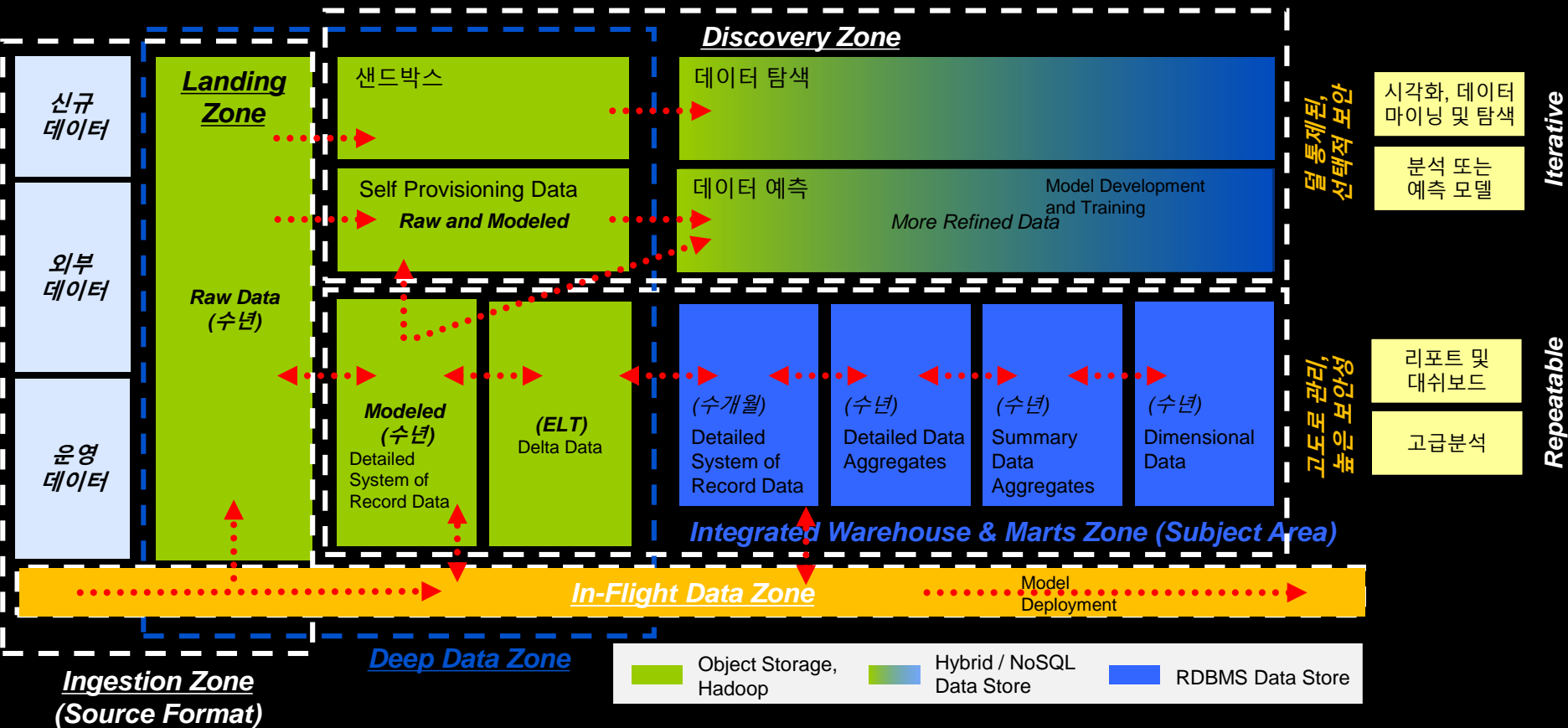
Analytics



# Delivering Insights to the Business



# Hybrid Cloud Data Topology



# 사이버 위협으로부터 국가와 국민의 안전을 지키겠습니다.

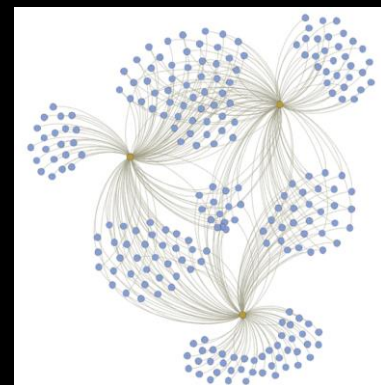
4차 산업혁명에는 정보보호의 안전한 기반 위에서만 계속될 수 있습니다.

복원력이 강한 사이버위협 대응체계를 구축하고 C-TAS 209여개 참여사의  
사이버보안 공유·협력 활동을 통해 안전한 국민생활, 튼튼한 국가안보에 기여하겠습니다.



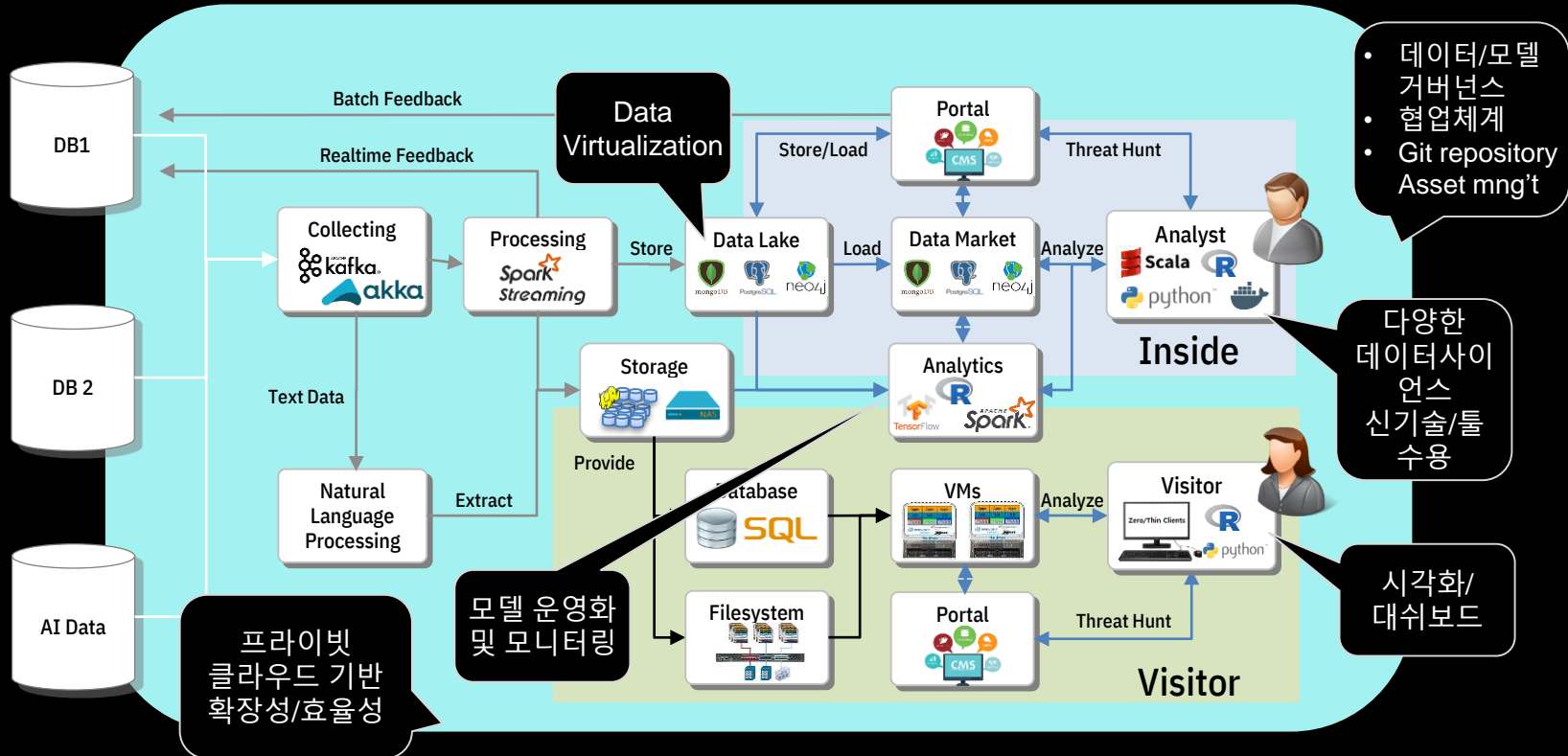
## What is DGA ?

- DGA(Domain Generation Algorithm) - algorithms seen in various families of malware that are used to periodically generate a large number of domain names that can be used as rendezvous points with their command and control servers(from Wikipedia)





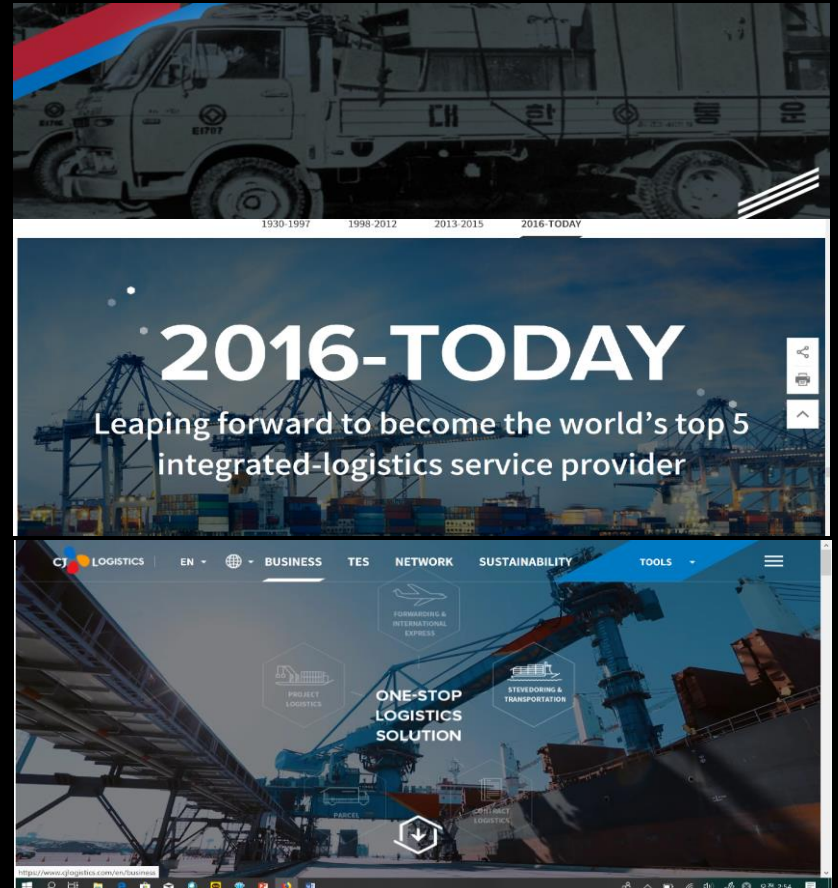
**“ICP for Data는 AI/ML에 필요한 데이터 수집 및 가상화, 거버넌스, 분석에 관련된 다양한 기술과 요구사항들을 하나의 플랫폼에서 구성하고 사용하며 운영화할 수 있습니다.”** - 고객사 솔루션 검토 담당 고객



# Largest logistics company in Korea : CJ Logistics

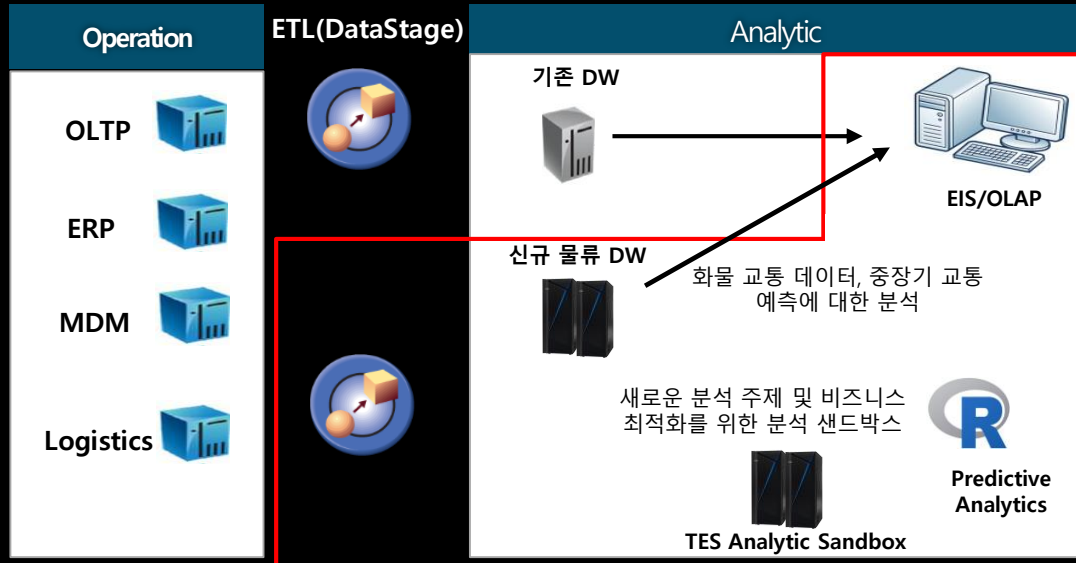
## Business Challenge

- 기존에 CJ대한통운 에서는 물동량 예측 시스템을 타사의 분석 어플라이언스를 이용해 운영하고 있었고, 일부 다른 분석 업무를 위해 Oracle DB를 사용하고 있었음
- 비즈 니스 성장에 따라 용량과 성능의 한계가 임계치에 도달하였다고 판단하여, 더 높은 성능의 신규 빅데이터 플랫폼을 도입하기로 결정



# Largest logistics company in Korea : CJ Logistics

- 물류 DW (2-rack) and TES 분석전용 샌드박스 (1-rack)
  - 더 많은 분석 프로젝트를 지원하기 위해 600TB 이상을 유지하는 더 큰 스토리지 지원



- 물류 DW
  - IIAS 2Rack으로 마이그레이션
  - 2~3배 향상된 성능으로 새로운 분석 워크로드를 위한 배치 작업 여유 공간 확보
- Big data analytics for TES
  - 데이터 분석가를 위한 IIAS 1-rack with tiered storage
  - 새로운 분석 프로젝트 기간 1~2주 단축 (on-time analysis)

# Largest logistics company in Korea : CJ Logistics

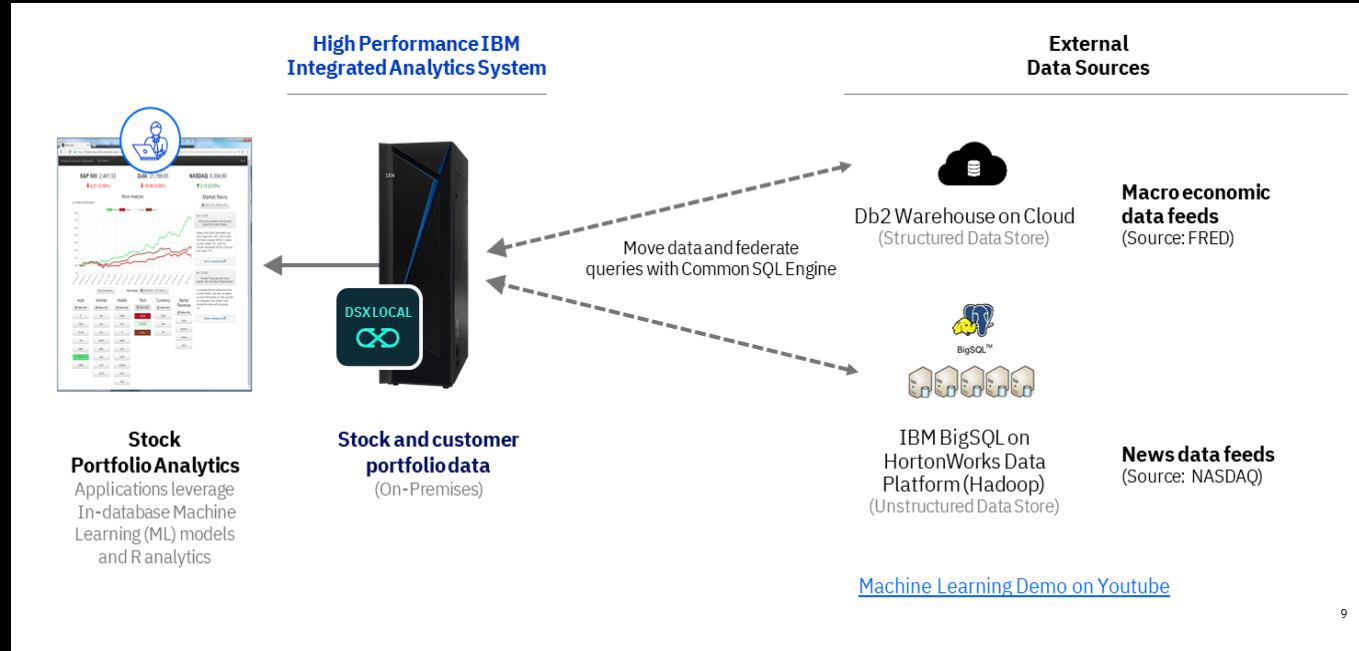
- **신기술 채택(국내 IIAS 최초 도입)**
  - Columnar : 분석 워크로드에 최적화
  - In-memory : Disk I/O를 줄여 조회 성능을 높임
  - Docker-based : 프로그램의 관리 (패치, 이관), 데이터의 이동이 용이
- **Performance**
  - 해외 사례를 참고하여 최적의 성능으로 튜닝
- **ETL**
  - IIAS를 위한 전용 DataStage Loading 기능 제공 (External Table)
  - 20% 더 나은 성능 / 높은 동시성 및 높은 availability
- **Query 호환성**
  - 메모리 내 최적화를 위한 최소 튜닝 노력으로 호환성 문제 없음
  - JDBC 드라이버만 바꾸어 연결 구성을 변경

# Financial service Company in North America

IBM Common SQL Engine을 활용한 Hybrid Cloud 및 Hybrid 아키텍처 사례

Public Cloud상에서 Db2 Warehouse on Cloud와 On-premise Hadoop Solution을 활용한 Public Data 추출 및 연계

On-premise IIAS을 기반으로 Spark ML module 및 R analytics를 사용하여 Public Data와 고객 Data를 활용한 Stock portfolio Analytics



# Telecommunication Company in North America

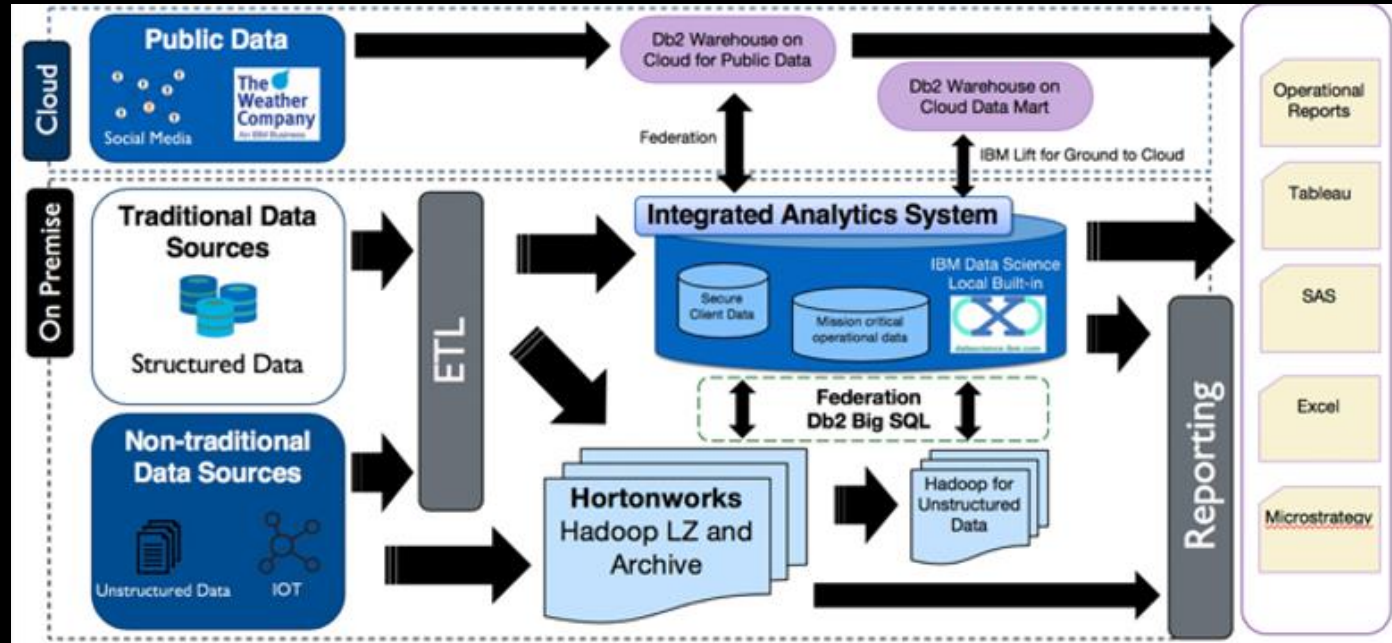
전통적인 DW를 Hybrid Cloud 및 Hybrid 아키텍처로 전환한 사례

데이터와 사용자에게 따라 최적화된 Analytic 아키텍처

Db2 Warehouse on Cloud을 활용한 Public Cloud 환경에서의 Public Data 활용

IBM Lift와 Federation solution을 활용한 On-premise와 Cloud 상의 데이터 연계

On-premise Hadoop을 Landing Zone을 활용과 IAS 연계





“Watson Studio Local에서 개방형 Spark 플랫폼에 이르기까지 고성능 및 고급 분석의 조합을 통해 비즈니스 분석가는 쉽고 빠른 데이터 분석을 수행할 수 있습니다.

**Integrated Analytics System**은 IBM Netezza Data Warehouse와 IBM PureData System for Analytics, 클라우드 기반 Db2 Warehouse on Cloud 클러스터 및 기타 데이터 소스를 연결하는 엔터프라이즈 데이터 아키텍처 솔루션의 필수 구성 요소로 자리 잡고 있습니다.”

— **Vitaly Tsivin**, Executive Vice President, AMC Networks

DO DATA  
SCIENCE FASTER

**IBM Integrated Analytics System**은 인지 기계 학습을 사용하여 데이터 과학자가 하나의 통합된 플랫폼 내에서 협업하도록 지원합니다.

SUPPORT HYBRID  
WORKLOADS

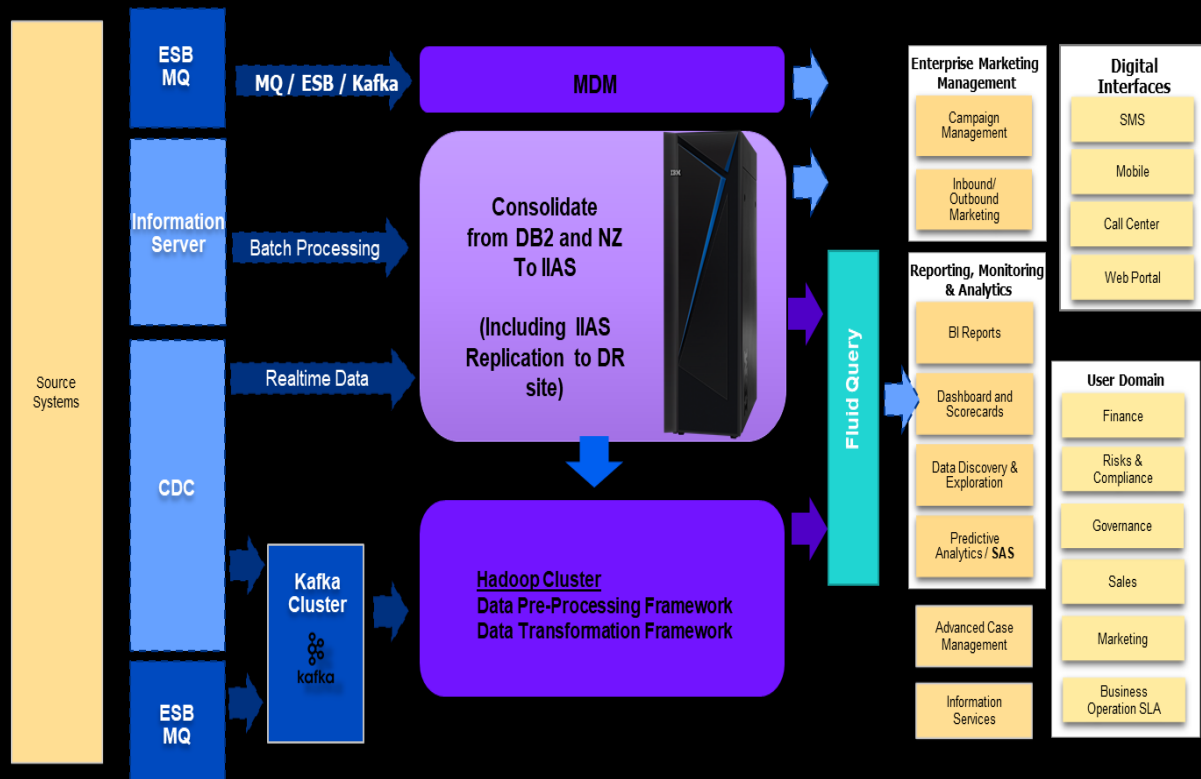
**IBM Fluid Query** 하나의 공유 API를 사용하여 모든 데이터 레파지토리에 쿼리를 통합합니다.

SUPPORT HYBRID DEPLOYMENTS

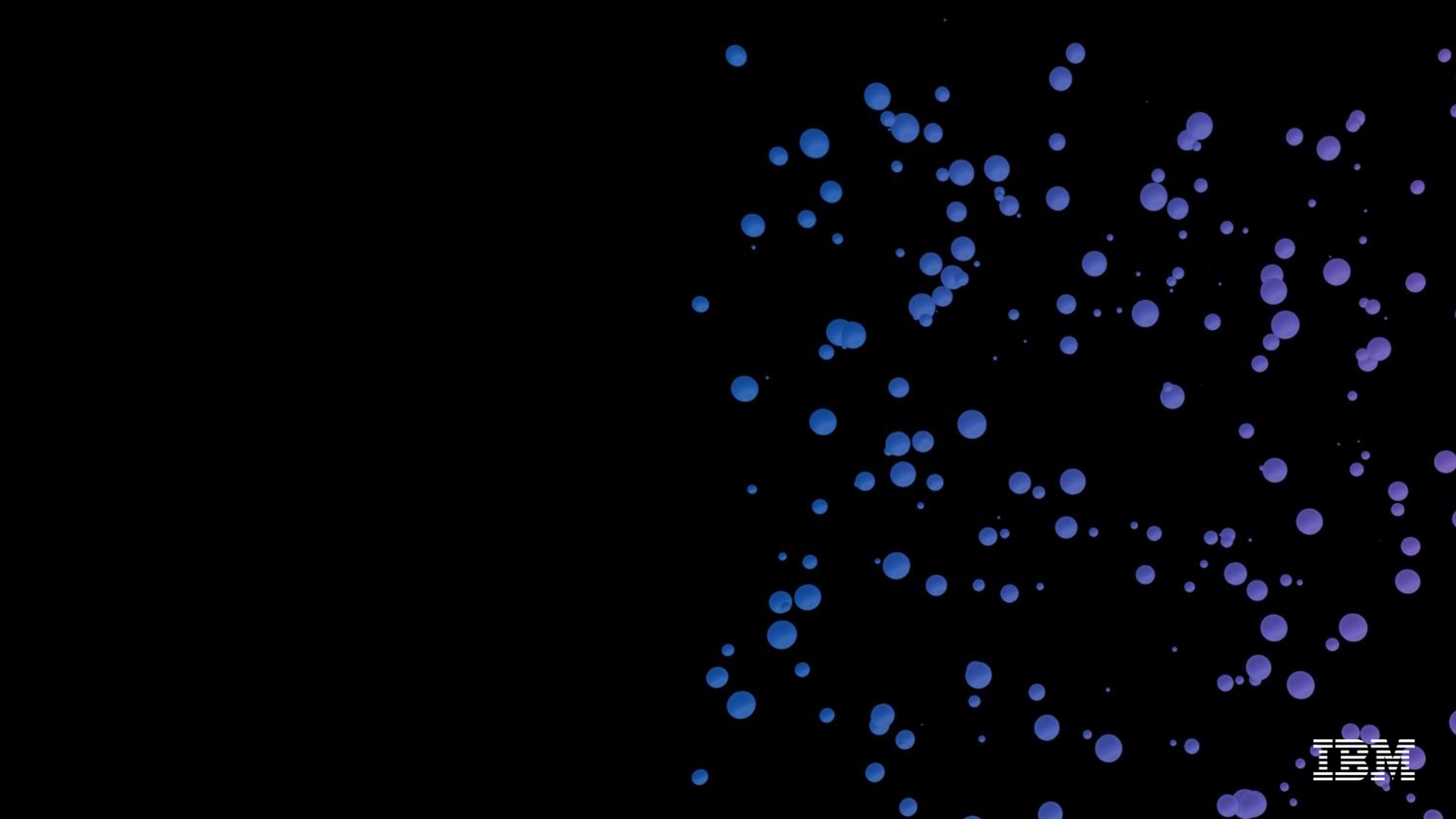
**IBM common SQL engine**은 On-Premise 및 클라우드 배포 환경에서 논리적 데이터웨어하우스 환경을 가능하게 만듭니다.

# Finance Company in Asia Pacific

- EDW와 Data Mart를 하나의 Data Lake Platform으로 통합한 사례
- DB2 및 NZ에 대한 SQL 호환성
- 우수한 SAS 쿼리 성능
- 400 개의 동시 워크로드
- IIAS 감사 기능
- 마이그레이션 작업은 ETL 프로그램 및 스크립트로 수행
- Federation (Fluid Query)
- 작업 부하 공유를 위한 데이터 복제







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