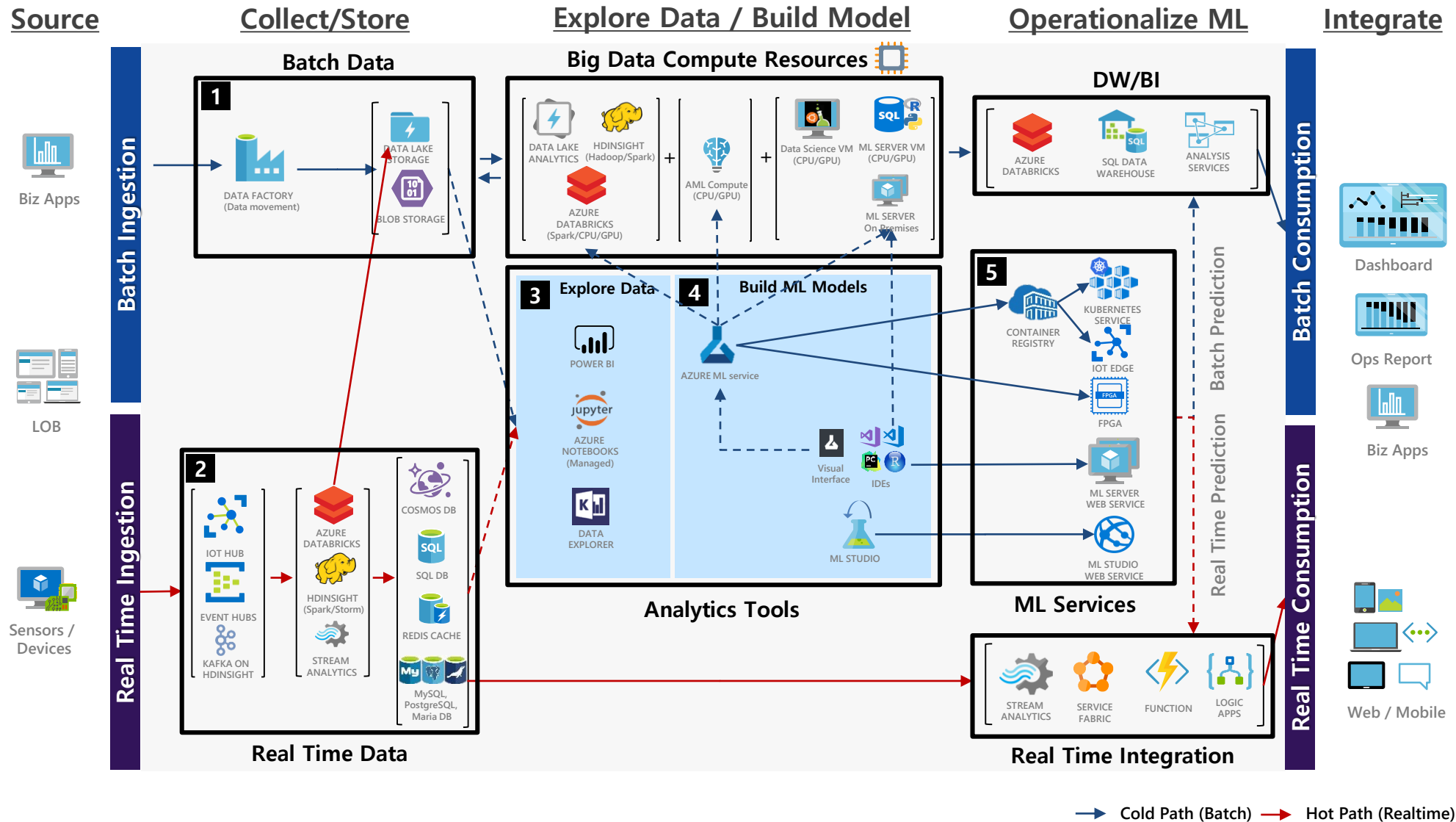# Machine Learning – Reference Architecture

Agile and Flexible Machine Learning Platform and Tools

Machine Learning – Reference Architecture

Agile and Flexible Machine Learning Platform and Tools

Source **Collect/Store** **Explore Data / Build Model** **Operationalize ML** **Integrate**

Batch Data

Big Data Compute Resources

DW/BI

Batch Ingestion

Biz Apps

1 ETL — Cool Path Store

Big Data Cluster + VM Cluster + VM / Server

OLAP / DW

Batch Consumption

Dashboard

Ops Report

Biz Apps

LOB

3 Explore Data — Visualization / Exploratory Data Analysis

4 Build ML Models — AZURE ML service

Visual Interface   IDEs

ML STUDIO

5 CONTAINER REGISTRY

Inference Web Service (Cloud/ Edge)

Batch Prediction

Real Time Prediction

Real Time Ingestion

Sensors / Devices

2 Message Queue → Stream Processing → Hot Path Store

Real Time Data

Analytics Tools

ML Services

Real Time Event Integr- ation

Real Time Integration

Real Time Consumption

Web / Mobile

→ Cold Path (Batch)   → Hot Path (Realtime)