

How to Unlock the Potential of Your SAP Data

April 6, 2022



Introductions

Data Lakes, Warehouses, Analytics and More on AWS



SYNTAX



Syntax Overview



45+

Years in Technology

35

Years Supporting
Non-SAP Apps

40

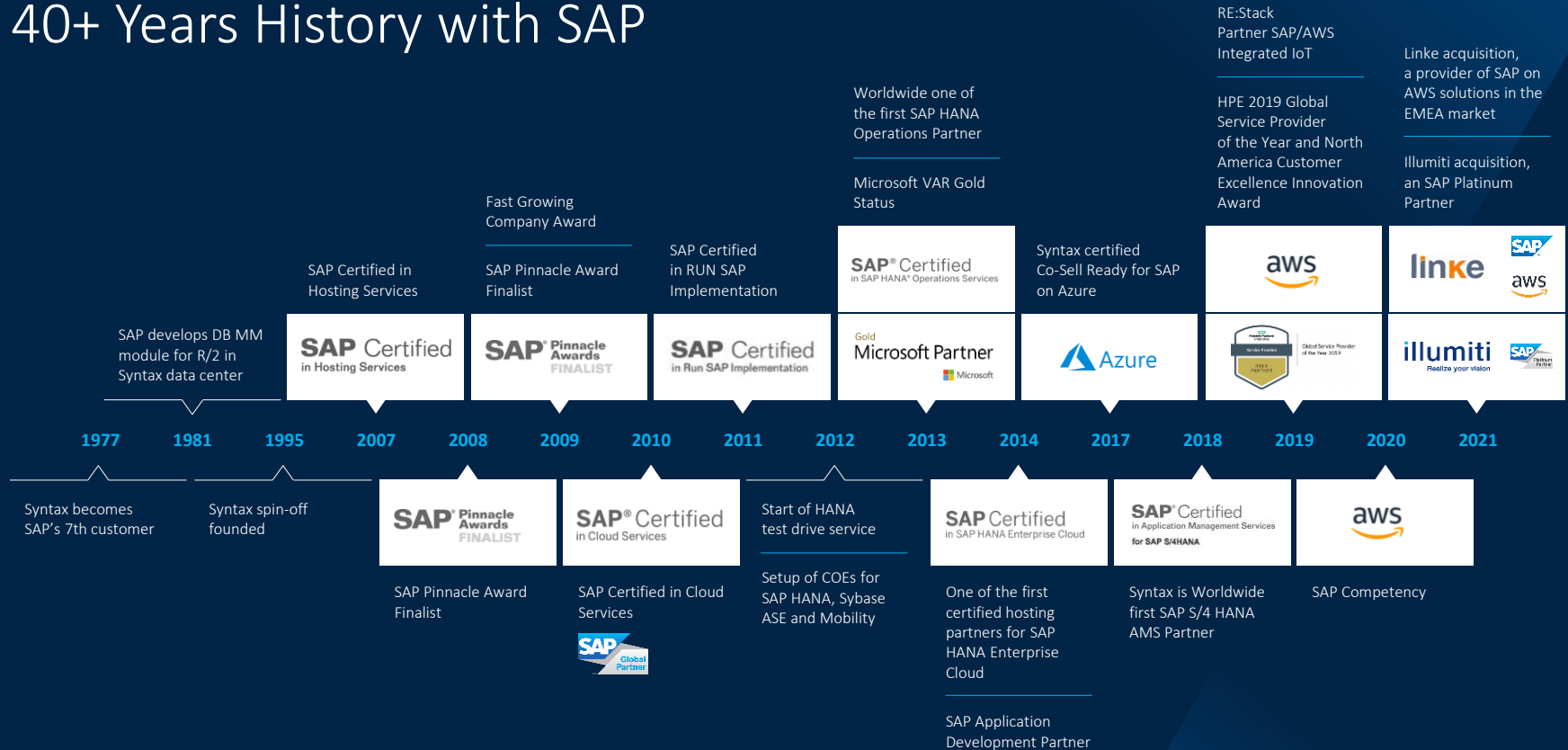
Years Supporting SAP

25

Years of Cloud
Managed Services



40+ Years History with SAP



Syntax Global Capabilities



Meet the Presenters

Craig Kelly

Vice President of Business Analytics
Syntax

- Analytics solutions for ERP for 21 years
- Co-Founder & Partner at EmeraldCube Solutions
- Industrial Engineer from Georgia Tech



AWS Data Lake Solution Overview

Data Lakes, Warehouses, Analytics and More on AWS

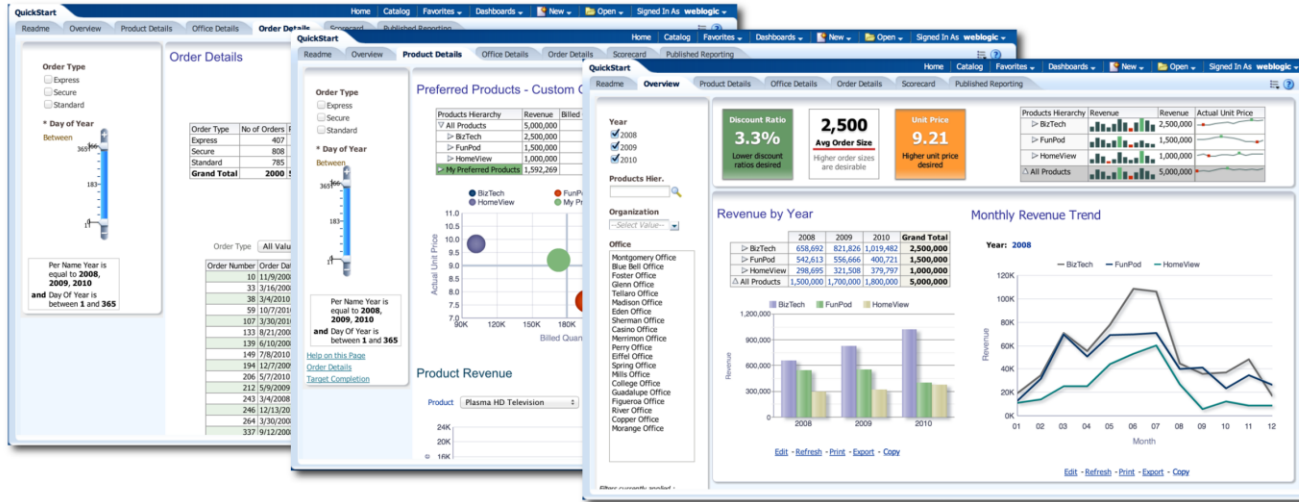


SYNTAX

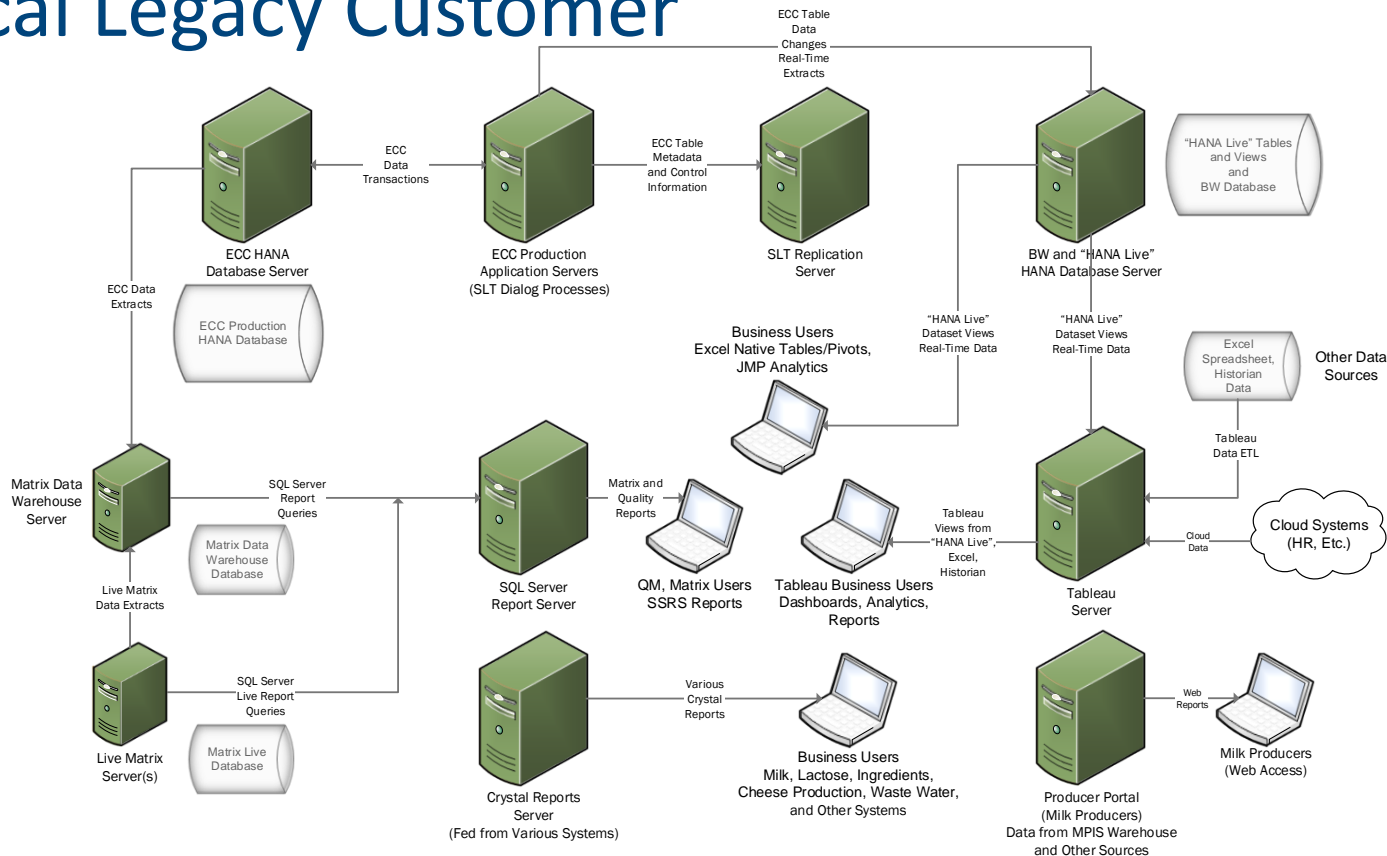


Legacy Business Intelligence

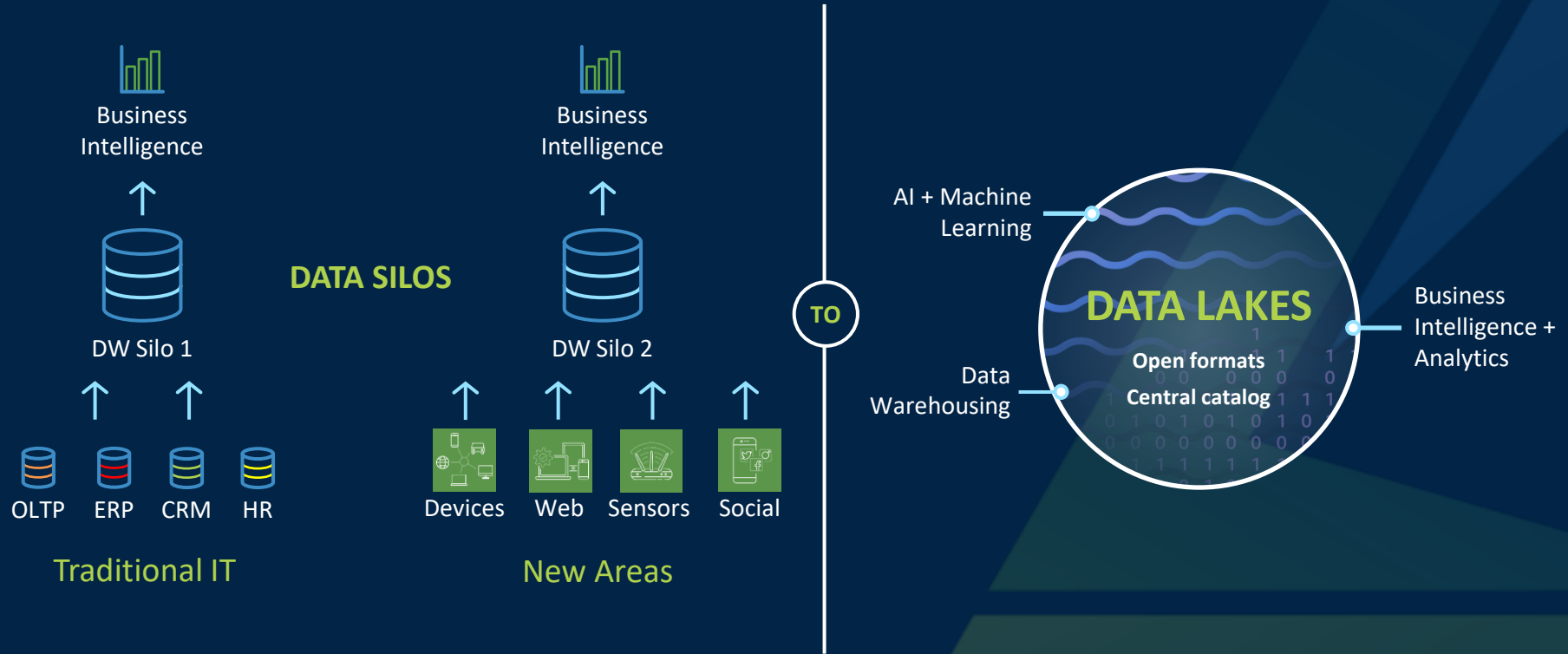
- Data Warehouse
- Deliverables were limited to reports & dashboards



Typical Legacy Customer



Data Silo Dilemma



How it Works

Build Data Lakes quickly

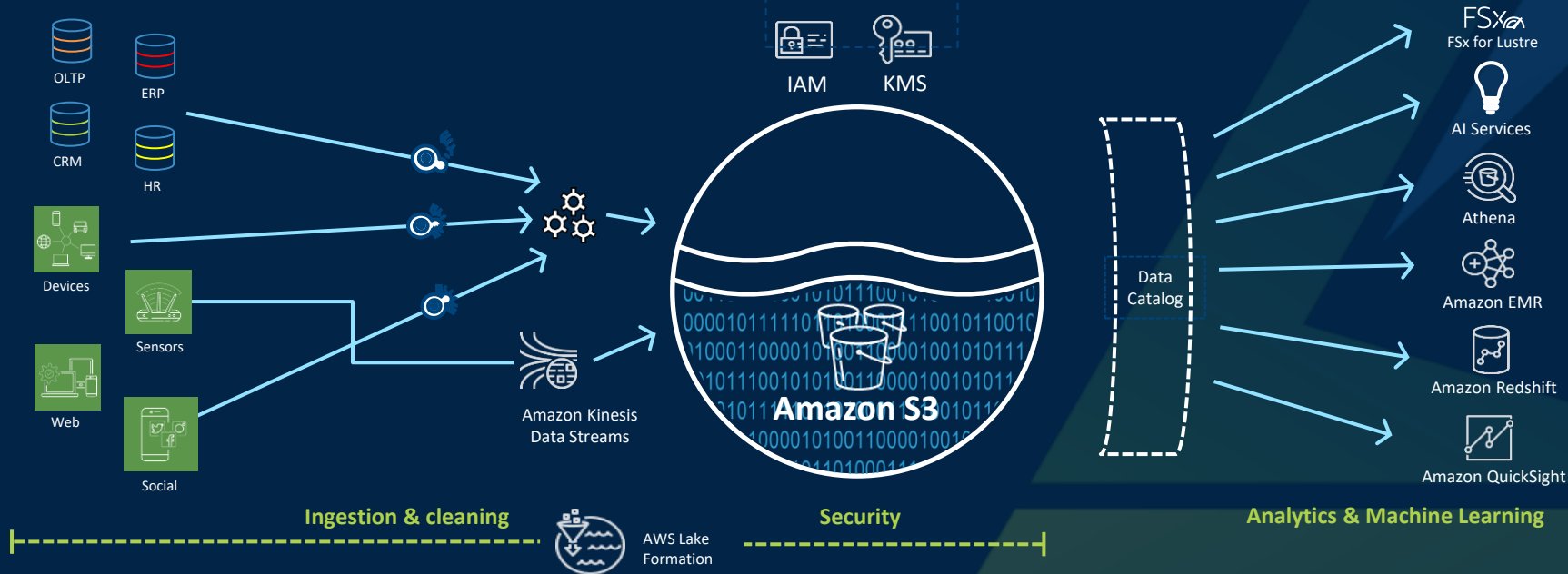
- Identify, crawl, and catalog sources
- Ingest and clean data
- Transform into optimal formats

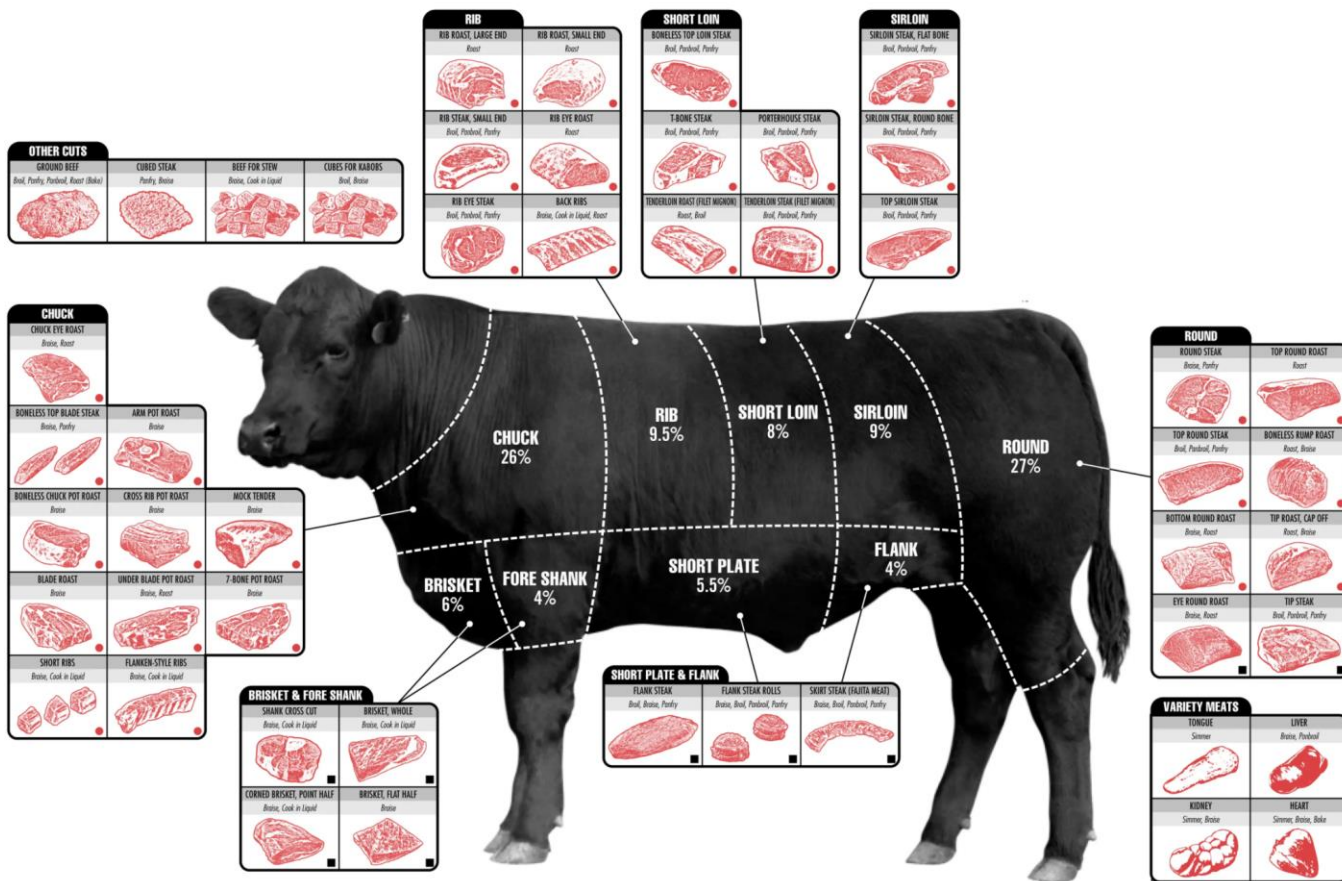
Simplify security management

- Enforce encryption
- Define access policies
- Implement audit login

Enable self-service and combined analytics

- Analysts discover all data available for analysis from a single data catalog
- Use multiple analytics tools over the same data





Analytics Use Cases



Legacy

Innovation



Global Analytics Example



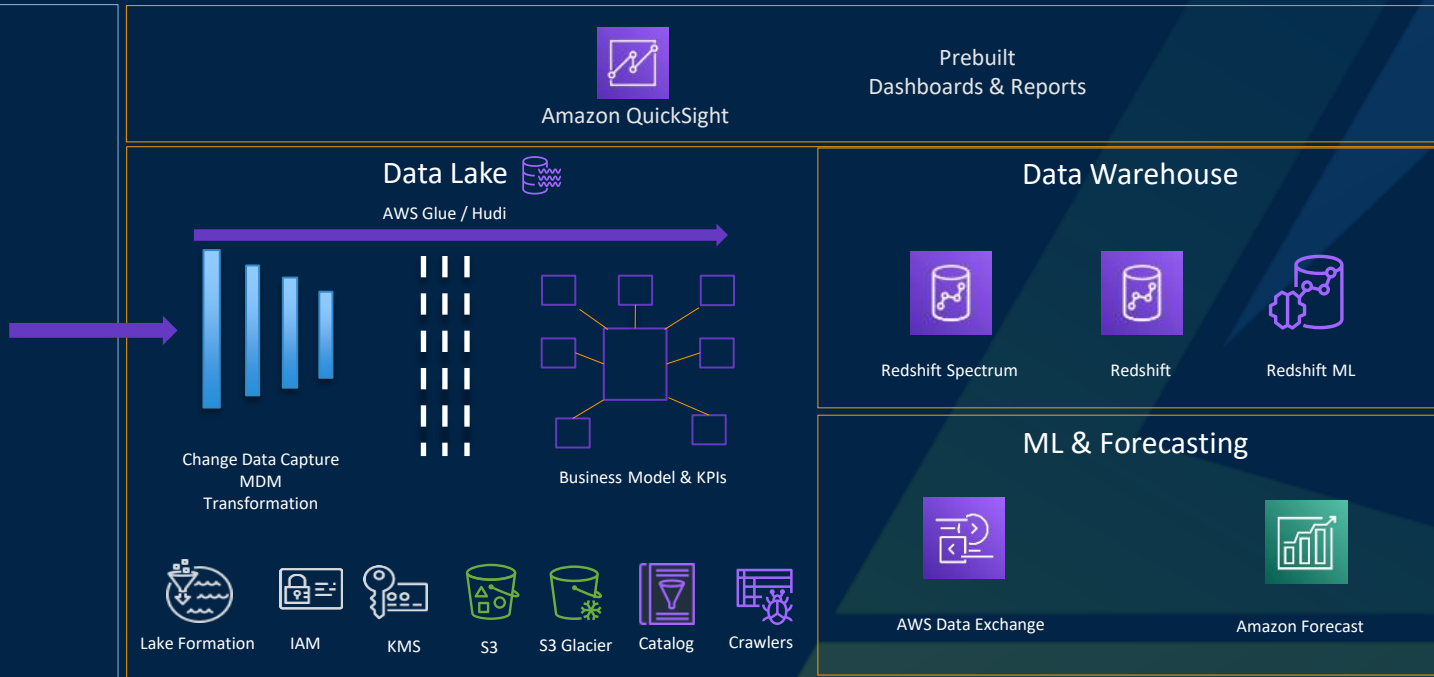
Global Manufacturing Use Case

- Global Company
- Mature Business, Growth Strategy via M&A
- > 10 ERPs Globally, not cost effective to consolidate
 - Includes SAP, EBS, JD Edwards
- Budget Prohibits IT Growth
- Need Global Views of Sales, Purchasing, AP
- Global Forecasting
- Global Data Management

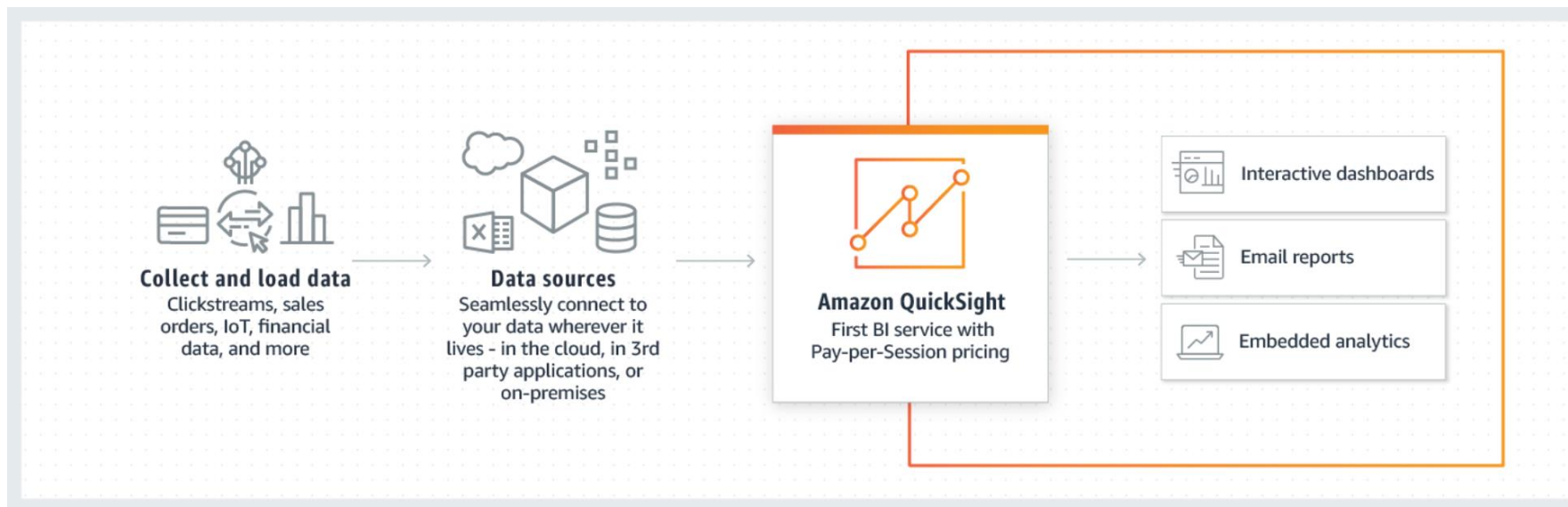
Global Analytic Architecture

ERP –Extractors

- SAP (Oracle DB)
 - ODP / Glue
- JD Edwards (iSeriesDB)
 - Glue
- Oracle EBS (Oracle DB)
 - Glue / DMS
- Exact Globe (SQL Server)
 - Glue / DMS
- Movex (iSeriesDB)
 - Glue
- IQMS (??)
 - Glue / DMS
- TOTVS Protheus (SQL Server)
 - Glue / DMS
- Syspro (SQL Server)
 - Glue / DMS
- AS400/TMM (iSeriesDB)
 - Glue
- API (iSeriesDB)
 - Glue



QuickSight





Retail Analytics Powered by Ironside

Question

How are the sales of 266 unique items sold in North America split between each location?

ML - Forecast

Total sale is forecasted to be \$552942 for Feb 2020 based on historical trends.

ML - Anomaly detection

LAST UPDATED 19 HOURS AGO

The top 1 anomaly for total sale on Dec 17, 2018 is:

- **Boston** was \$9,107, **higher** than the expected \$4,169

Growth rate

4-month compounded growth rate for total sale is **-7.86%**

Top ranked

Top 3 product for total sale are:

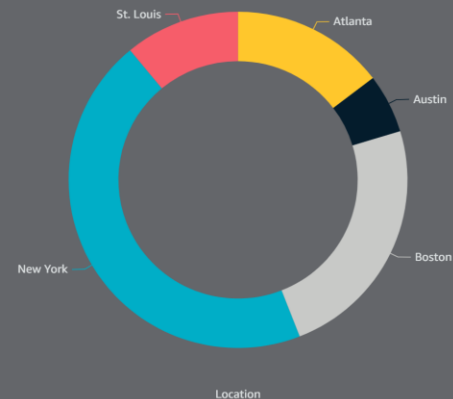
- **Gold Signet ring** \$234,664
- **Gold Choker** \$212,663
- **Gold Class ring** \$212,277

Top movers

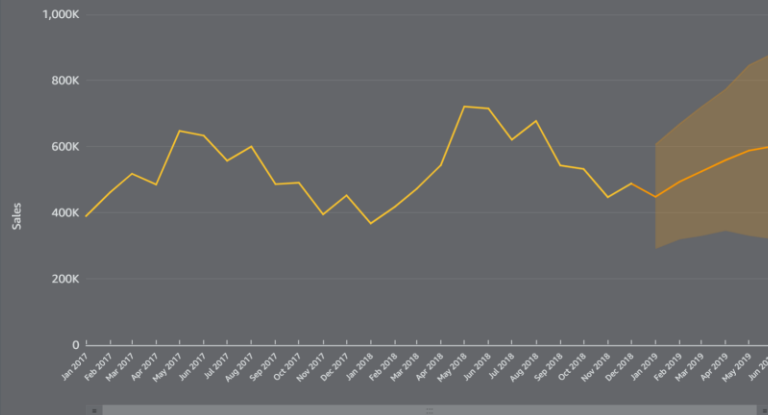
Top total sale movers for Dec 2018 are:

- **Boston increased by 30.75% (31,779)** from \$103,336 to \$135,114.
- **St. Louis increased by 18.17% (8,239)** from \$45,336 to \$53,575.
- **Atlanta increased by 9.61% (6,714)** from \$69,861 to \$76,575.

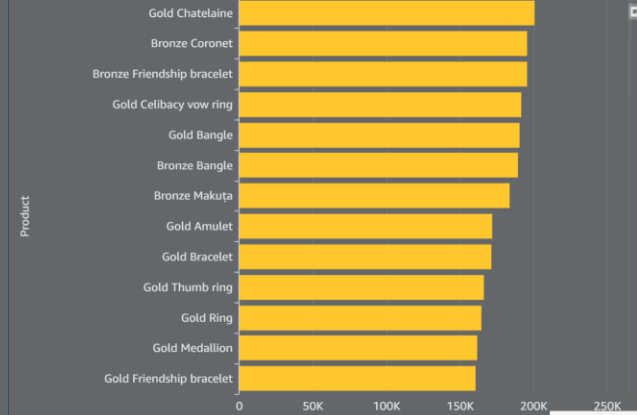
Which locations are driving my sales?



What can I expect my sales to be through the end of 2019?



Which products are most popular by sales?





Rethink Analytics



Forecasting



THE CURRENT LANDSCAPE

Customers increasingly want more variety, they want it immediately, and they want it cheaply

Accurate and flexible forecasts are key; however, traditional methods cannot capture the increasing number of demand signals and complexity

Market leaders are investing in ML-driven forecasting to more effectively meet demand

20% accuracy improvements

5% inventory reduction

3% increase in revenue

Harvard Business Review, McKinsey Global Institute
<https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/most-of-ais-business-uses-will-be-in-two-areas>



Leveraging ML to improve business metrics

The benefits of Amazon Forecast



Highly accurate Train and deploy ML models which can be up to 50% more accurate than traditional methods. No deep learning experience required



Fully managed service Easily implement an ML solution at scale by letting Amazon Forecast do all of the heavy lifting of building, training, and deploying a custom ML model in just a few clicks.

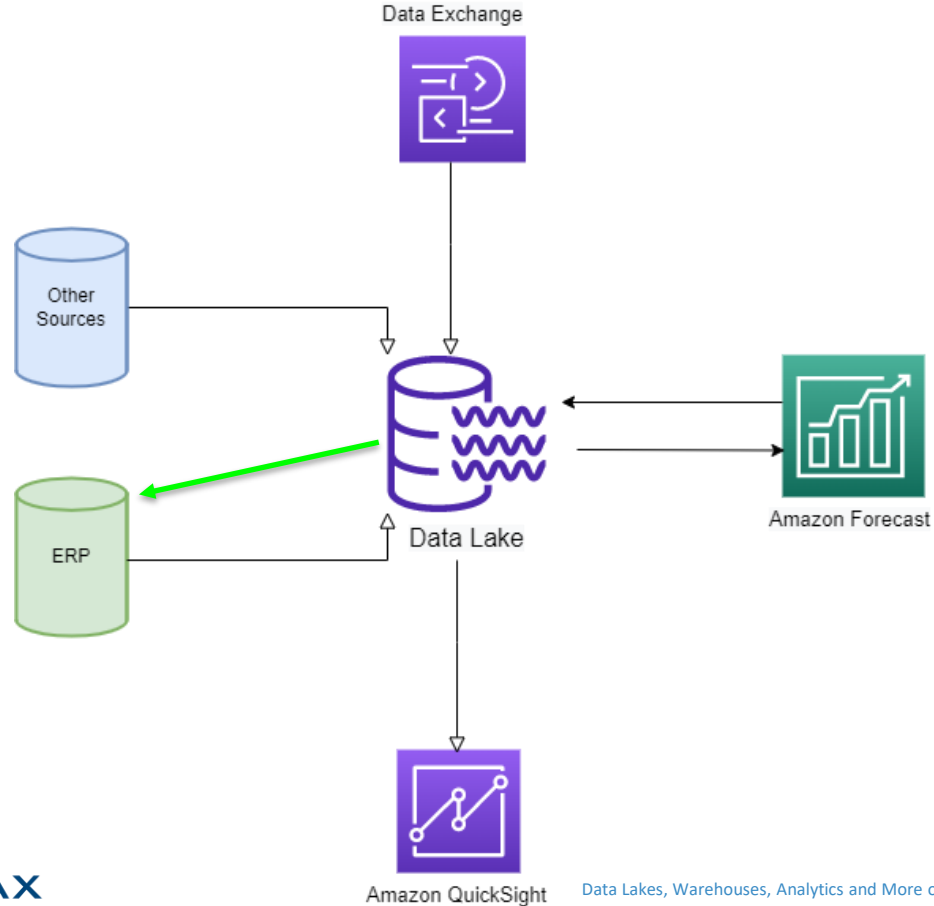


Easy to use and integrate Add ML forecasting to all your processes by integrating Amazon Forecast into your existing supply chain management systems



Secure: Your data, your models All data is encrypted to be private and secure, and is only used to create recommendations for your customers. Data is not shared between customers or with Amazon.com.

Forecast Data Flow



Why not just forecast in the ERP?



ORACLE®
JD EDWARDS

ORACLE®

E-BUSINESS SUITE

- Data inputs limited to the ERP
- Dated forecasting algorithms

IMPROVING BUSINESS OUTCOMES

The power of forecasting

INVENTORY PLANNING



Improve demand planning at granular levels

Reduce waste, increase inventory turns,
and improve in-stock availability

WORKFORCE PLANNING



More effectively staff to meet
varying demand levels

Improve utilization, time to serve,
and customer satisfaction

CAPACITY PLANNING



Make longer term decisions with more confidence

Improve capital utilization

FINANCIAL PLANNING



Plan for sales and top-line revenue

Effectively manage cash flows

Amazon Forecast Pricing Example

Pricing example 1 - Product Demand Forecasting

Let's say you own a clothing company and have 2,000 items selling in 50 stores around the world. Each combination of an item and store location equates to one time series, so you'll have 100,000 (2,000 items x 50 stores) time series to forecast. Assume you need to upload 5 GB of data for this task, a model with this dataset will take about 20 hours to train, and you are using the default number of quantiles.

Cost Type	Pricing	Usage Cost
100,000 time series forecasts	\$0.60 per 1,000 forecasts	\$180 (100 forecast units x 3 quantiles x \$0.60 per forecast unit)
5 GB of data stored	\$0.088 per GB	\$0.44 (5 GB x \$0.088 per GB)
20 training hours	\$0.24 per hour	\$4.80 (20 hours x \$0.24 per hour)
		Total Cost = \$185.24



Retail – More Retail

- Food & Grocery Retail in India
- 22 hyper markets, 624 supermarkets
- 13 distribution centers
- Using Amazon Forecast, increased forecast accuracy from 27% to 76%
- Reduced waste by 20% for fresh produce
- Reduced stock-outs to 3%
- Improved Gross Margin
- Improved accuracy of purchase orders for managers
- Continuing to expand into other datasets and categories

Manufacturing - Foxconn



- World's largest manufacturer and technology solutions provider
- Unprecedented volatility in demand, supplies and capacity due to Covid-19
- Build demand forecasting model for its Mexican factory to generate accurate net order forecasts
- Forecast accuracy was improved by 8%
- Minimized wasted labor cost and maximized customer satisfaction
- \$553K annual savings



Distribution – Axiom Telecom



- Market Lead in Mobile Handset and Technology distribution in Middle East
- Distributes telecom products to over 10,000 independent retail customers
- 30 Warehouses & more than 300 distribution vehicles
- Removed error prone manual processes which required a significant amount of time & people
- 20% increase in product availability and 15% in stock optimization
- Resources that were doing the forecasts manually now focus on extracting insights from the forecasts to improve business outcomes.

Additional ML Use Cases



Contact Us

Amazon QuickSight & Amazon Forecast Analytics for SAP

Syntax can help lower expenses and improve performance for your mission-critical SAP systems.

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- Installations and Upgrades
- Platform and Database Migrations
- Cloud Migrations (private, public, hybrid)
- Continuous Innovation
- Security Managed Services

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