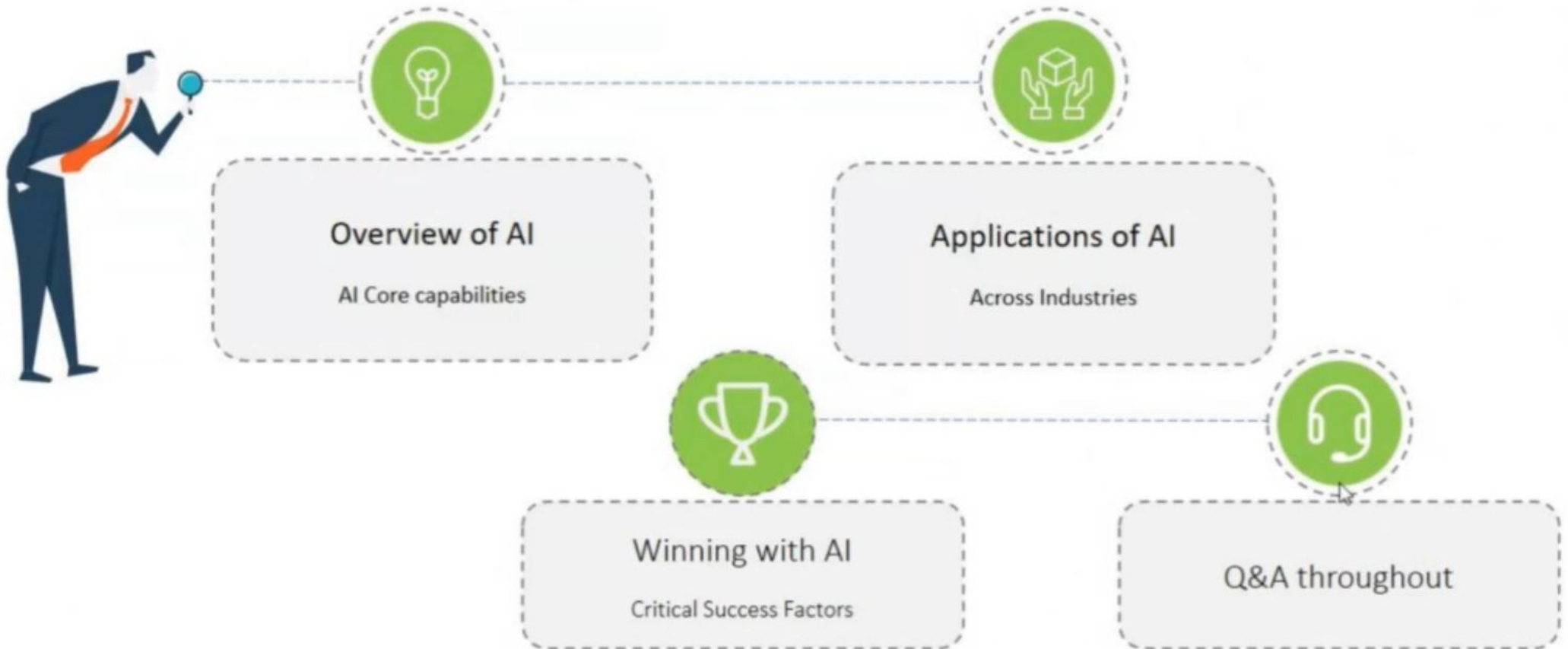


# AI Tools and Technologies



# Today's Agenda



# What comes in mind when we talk about Artificial Intelligence?

## Image Recognition



# AI is in fact much more than just Image and Object Recognition

## Pattern Detection

*Discovery of new trends and anomalies*

## Foresight

*Determine the probability of future events*

## Radical Personalisation

*Product recommendation & tailored offers*

## Predictive Analytics

*Predicting customer lifecycle value or customer attrition likelihood*

## Real-time operations and processes optimisation

## Resource Allocation

*Assets & staff allocation*

AI Problem Classes  
*"Usage"*

## AI is simply data interacting with algorithms and "learning itself"



## MACHINE LEARNING

**"Training"** algorithms with large volumes of data which evolve the algorithm without it needing to be explicitly programmed.

### Examples include:

- Segmentation
- Regression



## DEEP LEARNING

**"Learning"** algorithms using layered neural networks to mimic the brain's ability to respond to varied stimuli

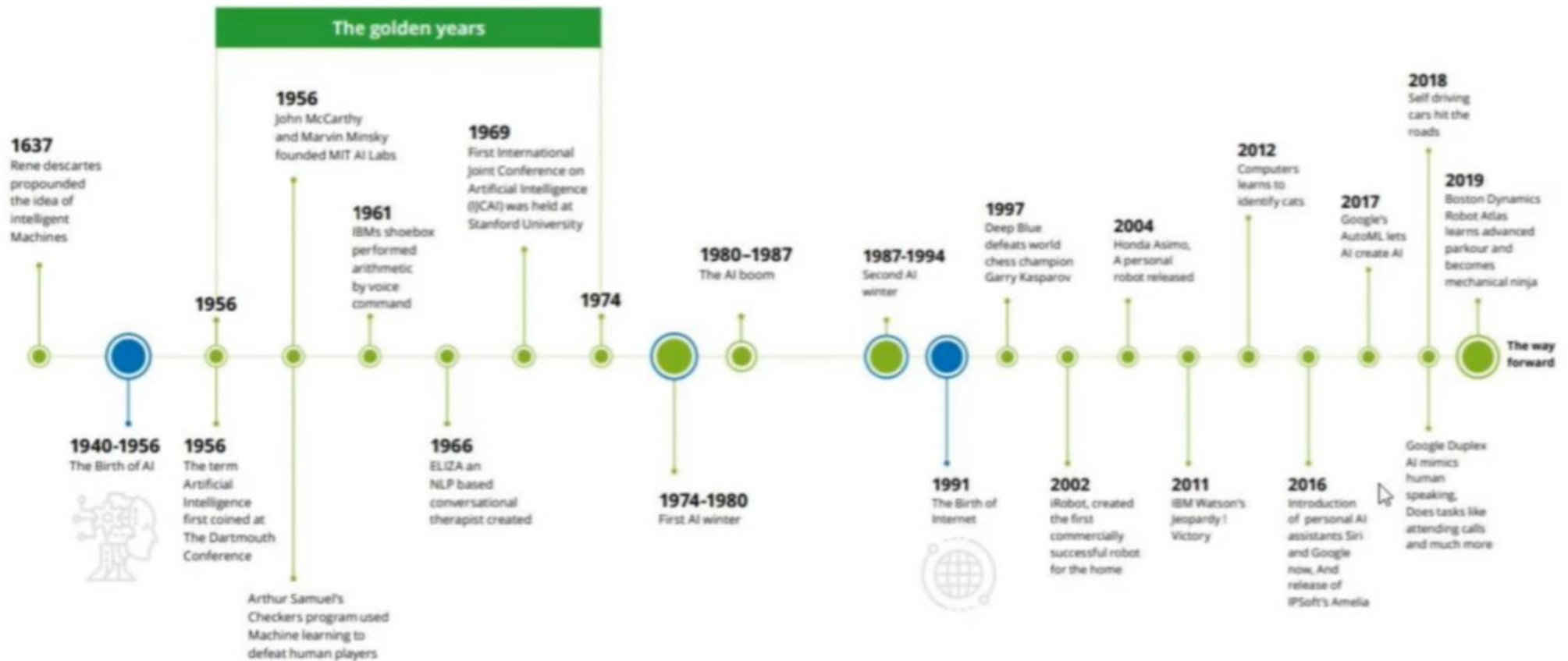
### Examples include:

- Image recognition
- Voice recognition

AI Algorithms  
*"Technical Approach"*

# AI : The story so far

While the future of AI is promising, one must also know how we reached where we are today





# Evolution of data along with the technology disruptors is causing analytics to evolve

Technological changes are enabling us to aggregate, analyze, and act on data in powerful ways



# Significant AI applications disrupting major industries

Rapid advancements in the field of AI has brought revolutionary transformation across industries

## Manufacturing

- Predictive Maintenance
- Workforce Planning
- Product Design
- Demand Forecasting

## Healthcare

- Medical Imaging and Diagnostic
- Drug discovery
- Proactive health management

## Retail

- Inventory Demand forecasting
- Product bundling and pricing strategy
- Product Recommendation



## Financial Services

- Automation
- Risk Management
- Campaign Management
- Fraud detection

## Energy

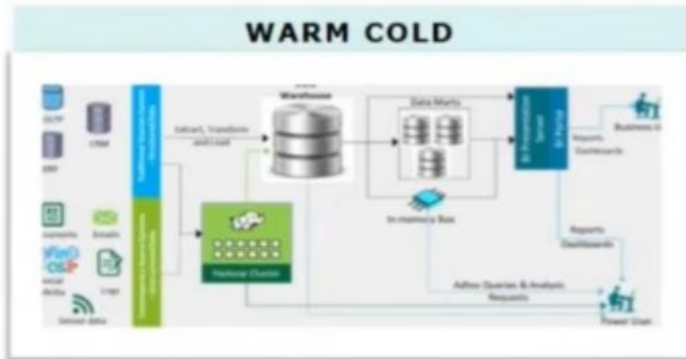
- Failure Management
- Smart Grid Management
- Demand & Supply Optimization

## Travel & Tourism

- Dynamic Pricing
- Traffic pattern and congestion management
- 24\*7 connect to customers via Chatbots

# Typical Maturity of AI/Big Data platform

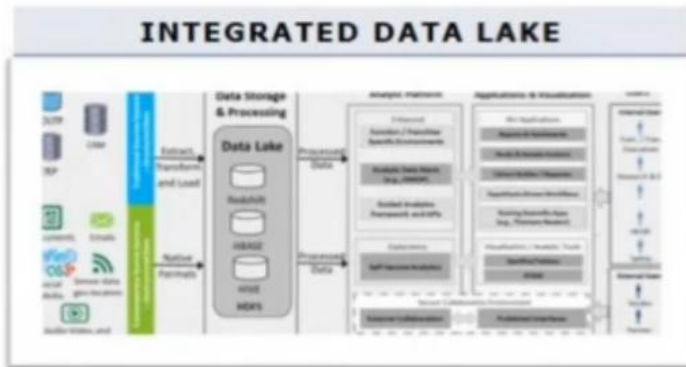
Different Implementation patterns



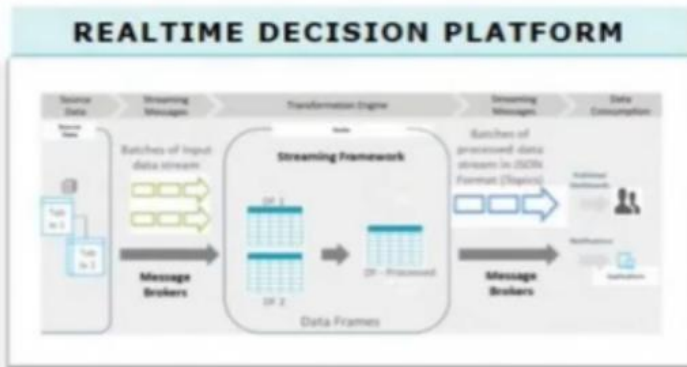
Data Lake for storage & processing; EDW for reporting/ AI-ML



Data Lake for storage & processing; reporting/ AI-ML on both EDW & Data Lake



Everything on Data Lake



AI-ML as an integral part of core business processes

## KEY CONSIDERATIONS

- Architecture will evolve; don't solve everything on day one
- Role of cloud in the architecture – capabilities vs limitations
- Avoid vendor lock-in
- Real-time analytics comes at cost; mature to the stage



# Proactive Sensing Issue Identification Analytics

## The Issue

Increasing pressure to identify quality, warranty, and safety issues quickly and limit the scope of service campaigns and recalls

## Our Solution: Proactive Sensing



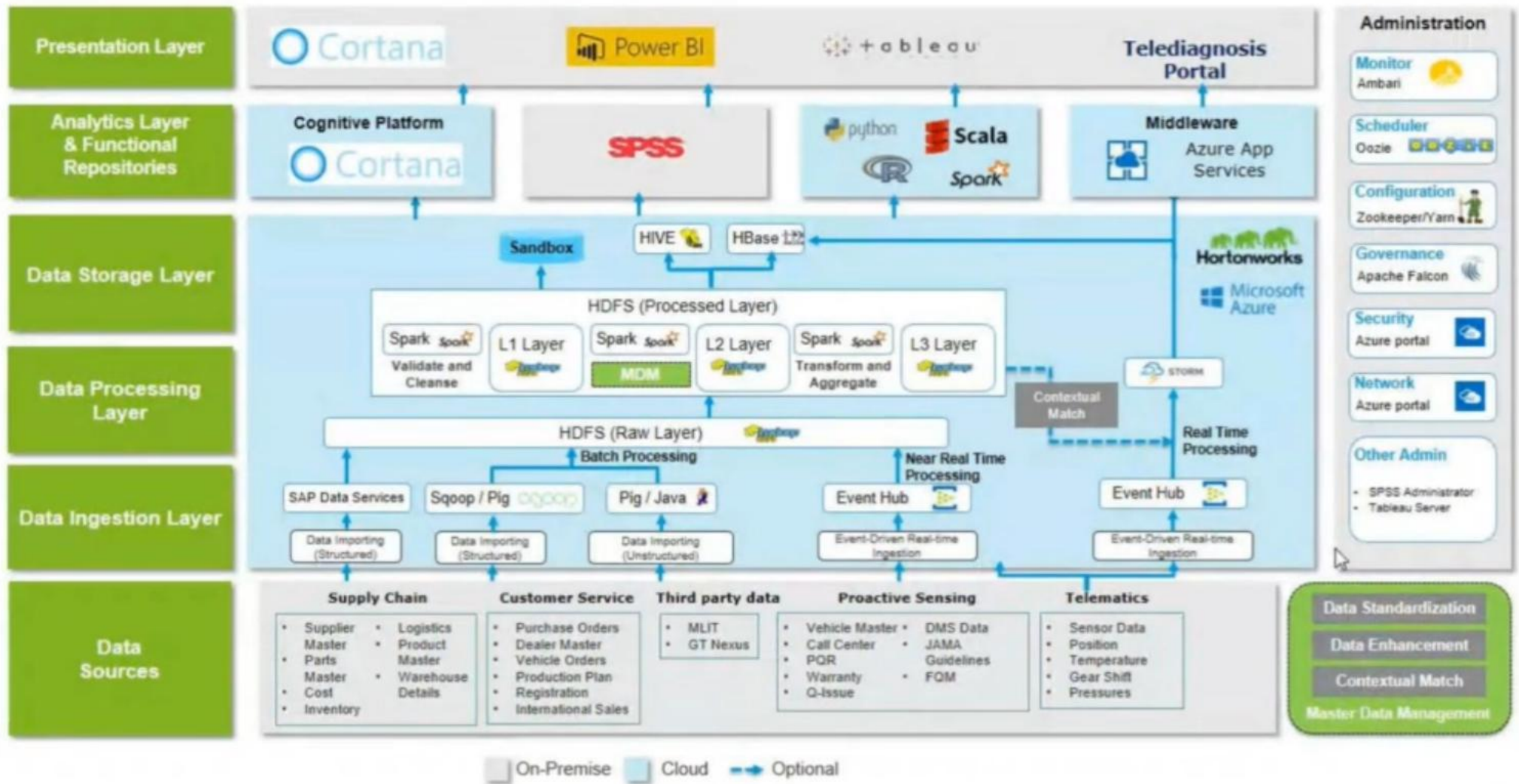
## The Business Value: Proactive Sensing vs. Traditional Issue Detection



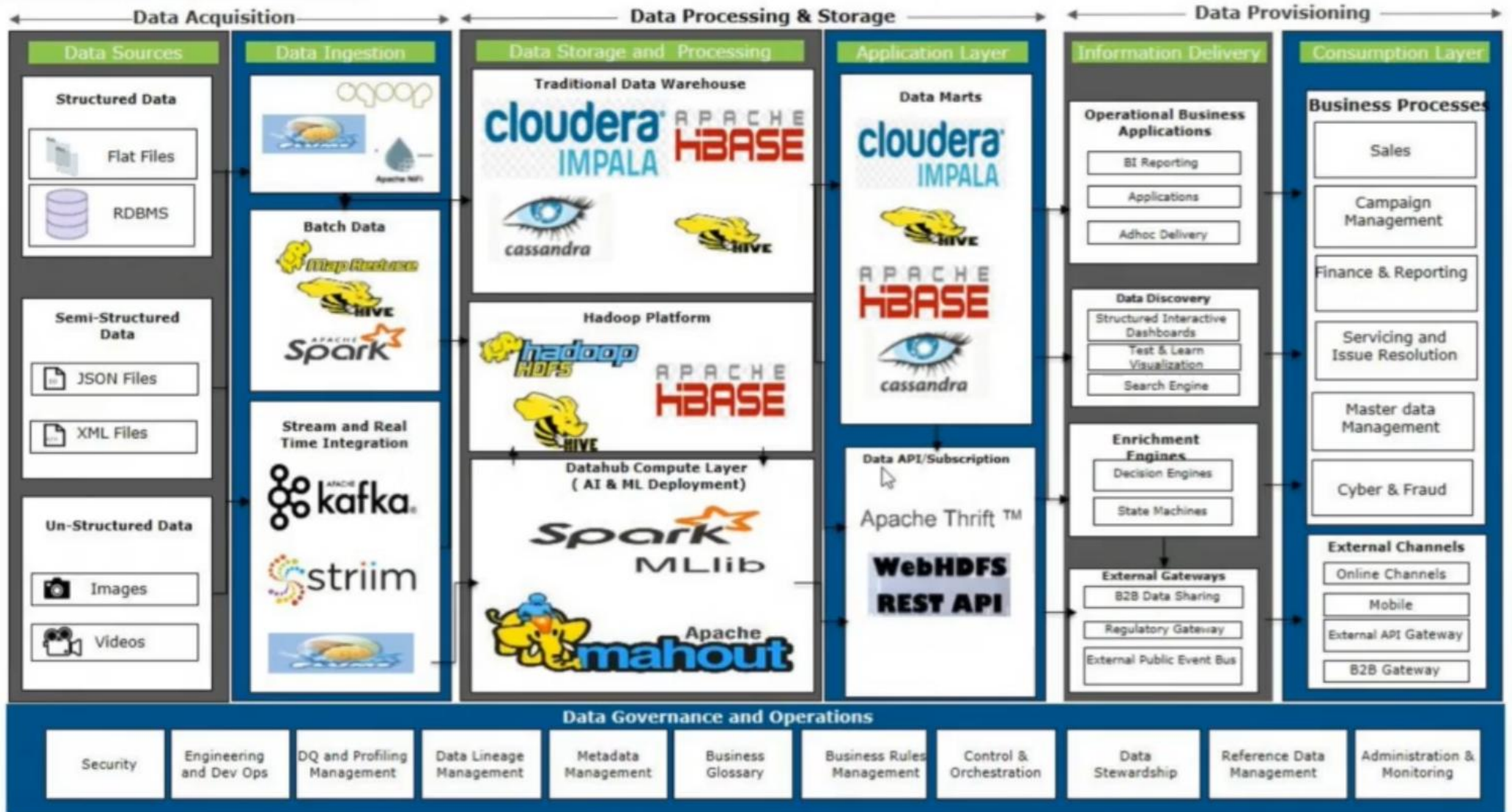
## Impact

- ¥ **Steady State Annualized Benefits \$XXX**
- 1 **17 months in advance**
- 2 **Prioritized 12 month projected cost**
- 3 **Monitors effectiveness of fix upto 1 year**

# Architecture that Enabled the Solution

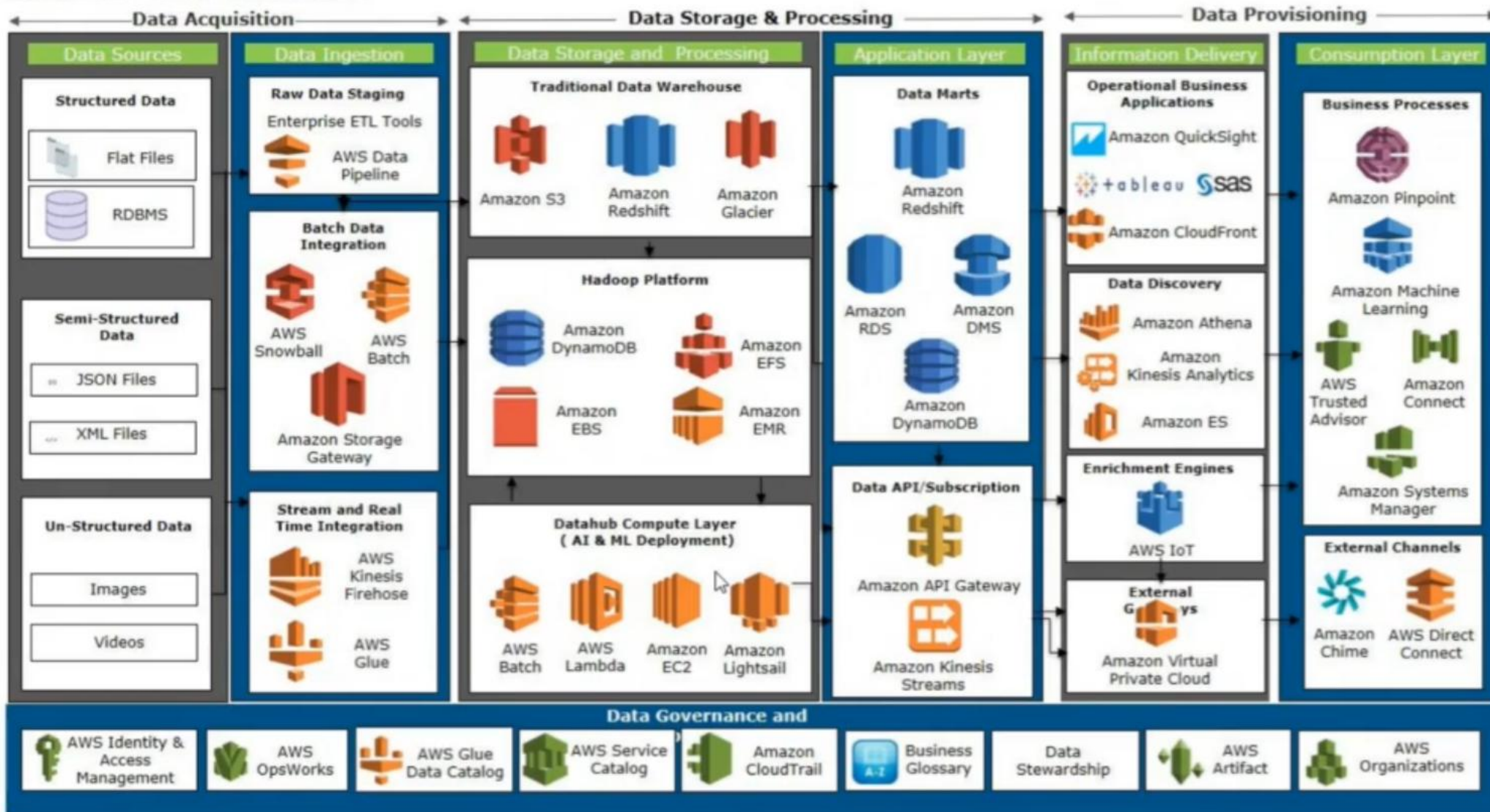


# Cloudera Distribution





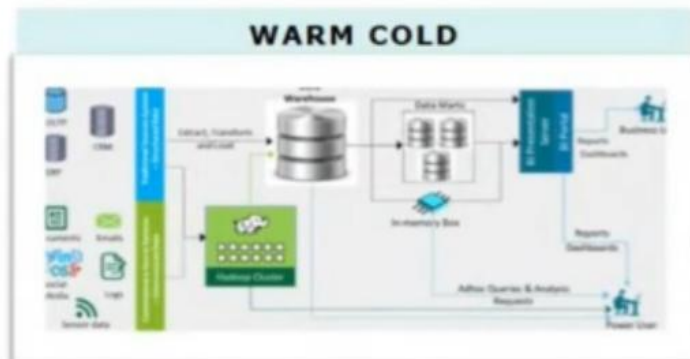
# Amazon Web Services



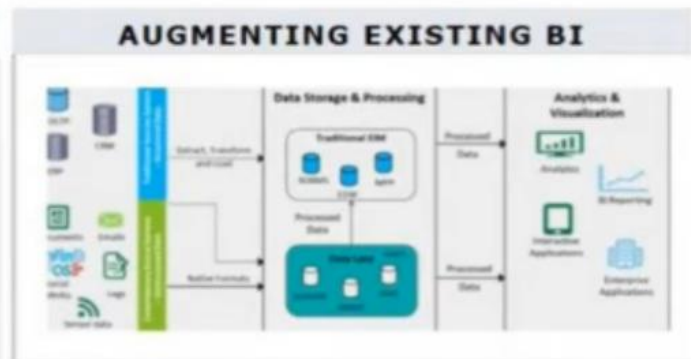


# Typical Maturity of AI/Big Data platform

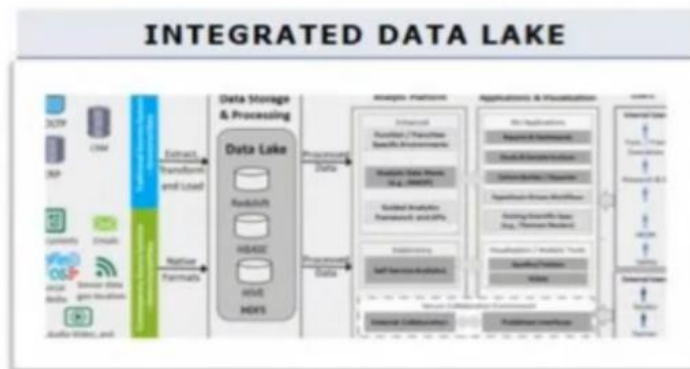
Different Implementation patterns



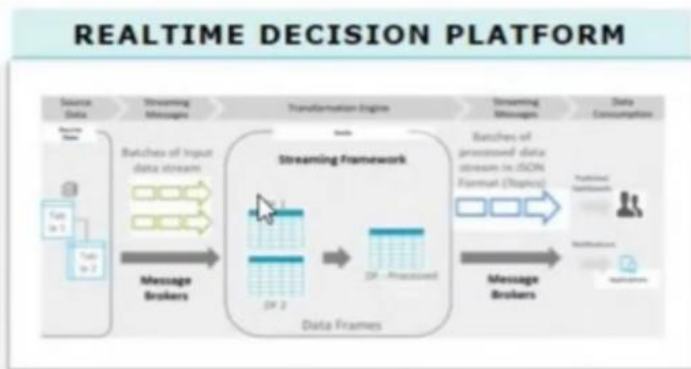
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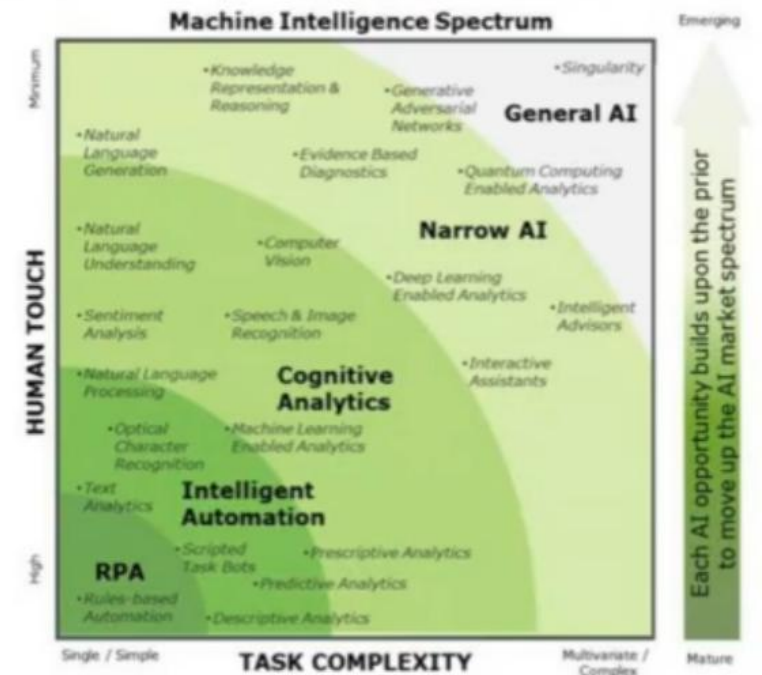
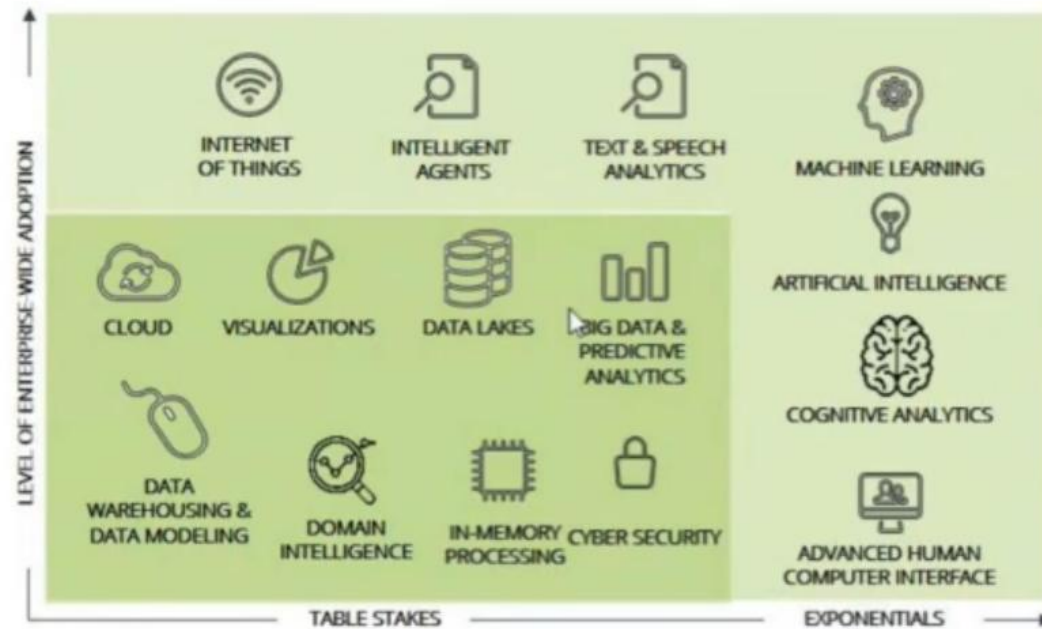
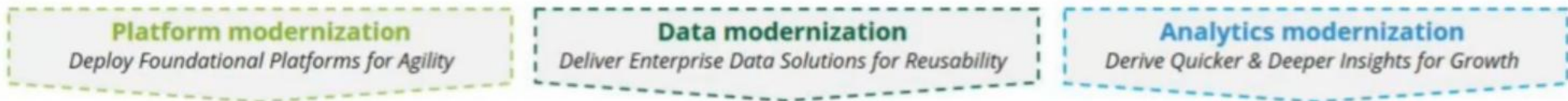
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# Summarizing Journey of AI..

Modernizing platforms, data and analytics systems allows to innovate and explore possibilities



Thank You  
Q&A

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