ADASTRA

Generative Lakehouse: Unleash AI Potential for Data-Driven Excellence

Data Driven /w OpenAI

Adastra's Azure OpenAI Offers

Intelligent Search Bot

Contextually aware search bot to unleash the value of your any data.

Intelligent Support Bot

Support customer and staff through automation via improved user experience.

Intelligent Content Bot

Generate content aligned to organizational context to accelerate collateral.

Generative Analytics

Leverage Generative Analytics to accelerate value from your data; Code Generation, Copilots, and Generative Lakehouse.

What is Azure OpenAI?

What is Azure OpenAI?

Ensure that artificial general intelligence (AGI) benefits humanity

+

Empower every person and organization on the planet to achieve more

GPT-3
GPT-4 Preview

Generate and Understand Text

Codex

Generate and Understand Code

DALL-E

Generate Images from text prompts

ChatGPT Preview

Azure OpenAI Services

GPT-3

Prompt

Write a tagline for an ice cream shop.

Response

We serve up smiles with every scoop!

Codex

Prompt

Table customers, columns = [CustomerID, FirstName, LastName, Company, Address, City, State, Country, PostalCode]

Create a SQL query for all customers in Texas names Jane query =

Response

```
SELECT *
FROM customers
WHERE State= 'TX' AND
FirstName = 'Jane'
```

DALL-E

Prompt

A ball of fire with vibrant colours to show the speed of innovation at our media and entertainment company

Response

Potential OpenAI Benefits

Customer Experience

Employee Productivity

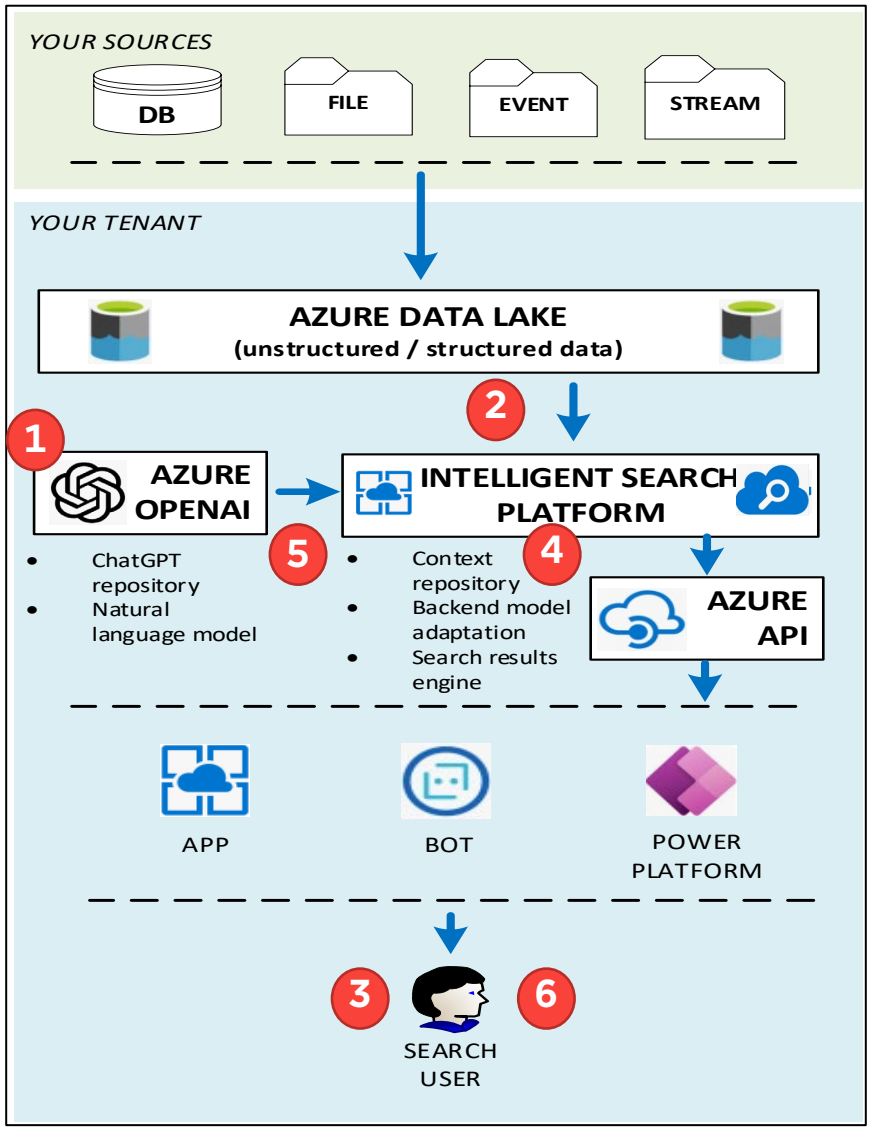
Accelerating Data and Analytics

Business Operations

Creative Content Production

Adastra Intelligent Bot Architecture

1. Deploy private Azure OpenAI
2. Create Index of Corporate Data
3. Submit ChatGPT Query
4. Lookup Relevant Data in Corporate Index
5. Include Corporate Data as Context /w GPT Model Interaction
6. Receive Contextual AI Result



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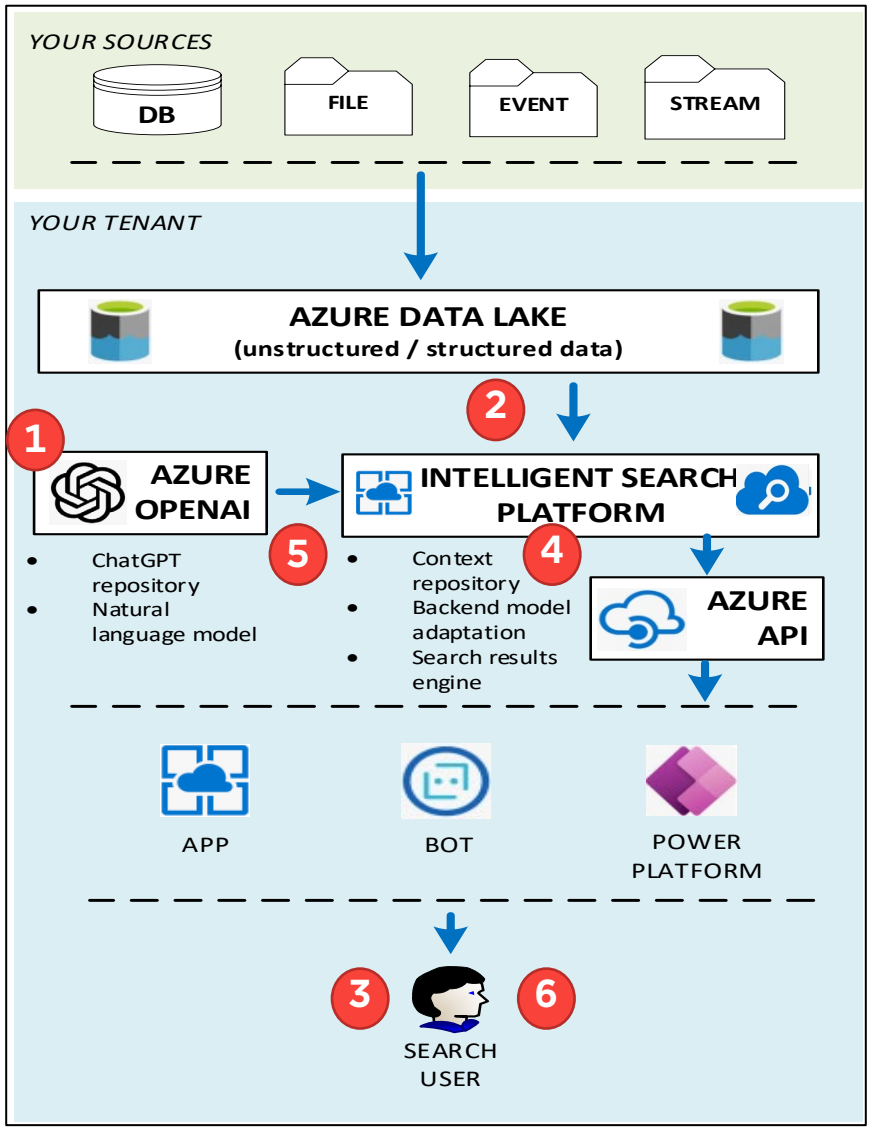


Microsoft / Azure OpenAI Options

	Bing Enterprise	O365 Copilots	Adastra Intelligent Bot
Cost	$5 / user month (or E3 / E5)	$30 / user month (/w E3 / E5)	Azure Costs
Deployment	Public	Private	Private
Type	SaaS	SaaS	PaaS
Access	bing.com	O365 Apps	Teams / App
Authentication	Azure AD	Azure AD	Azure AD
Source Security Integration	No	Yes	Yes
Responsible AI	Yes	Yes	Yes
Chat Privacy	No History	Private History	Private History
GPT LLM Integration	Yes	Yes	Yes
Tuning Control	None	Limited	Full
Scope	Prompt Only	O365 Data	All Corporate Data
Prompts	Manual	Automatic	Automatic
Index	None	Microsoft Graph	Vector Database
Limits	50 responses / day	None	None

Adastra Intelligent Bot Tuning control

Consideration	Adastra Intelligent Bot
GPT Version	Choose which GPT version (3, 3.5, 4, future) to use for specific topics. As each version has different behaviour, some topics may return better LLM results with earlier “less creative” versions.
Conversation History	Control the length of conversation history and related historical search results for current interactions. Impacts cost, performance, and degree of historical conversational relevance.
Temperature	Manage the degree of creativity (temperature) in LLM model responses. Lower temperature (less creative) responses promote consistent and standard answers. Higher temperature (more creative) responses promote more advisory, insightful, and artistic responses.
Behavior	Fully influence LLMs behavior through prompt engineering. Manage which prompts inputs are allowed, and manage prompt outputs allowed. Enables control re: which topics are allows to be discussed via the bot.
Hallucinations	Adastra’s solution enables control over hallucination behaviour. Hallucination issues can be adjusted for and fixed, using available controls (lineage tracing, result ranking, etc).
Logging	Full control over logging behaviour and how log results get incorporated in future contextual conversations.

Adastra ML Solutions

Retail C360 Analytic Solutions

- Customer Segmentation
- Next Best Offer
- Omni Channel Marketing
- AI Powered Product Sales
- Loyalty Customer Cross Selling

Retail ML Analytic Solutions

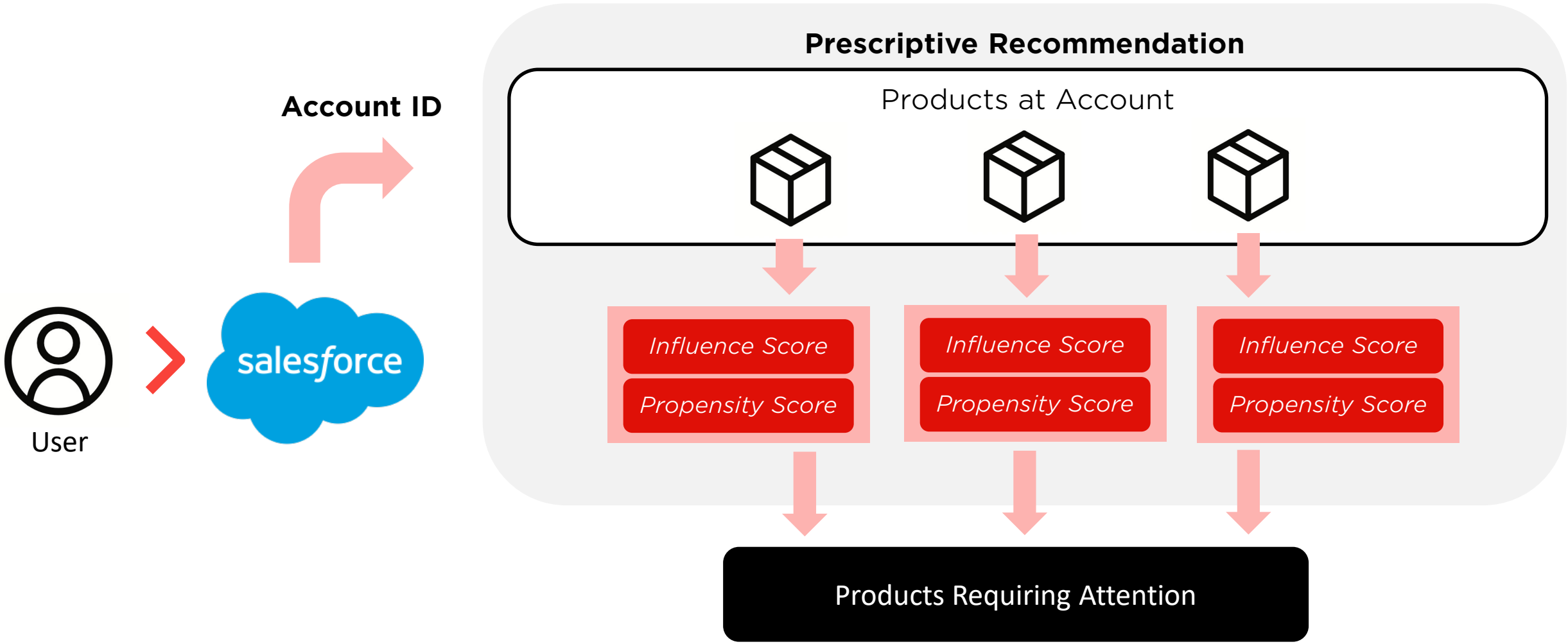
Theft Loss Prevention	Out of Stock Forecast	Scrap Prediction	Just in Time Order Planning	Enterprise Cost Harmonization
Revenue Forecasting	Product Profitability	Sentiment Analysis	Product Propensity Analysis	Store Customer Tracking

Mining ML Analytic Use Cases

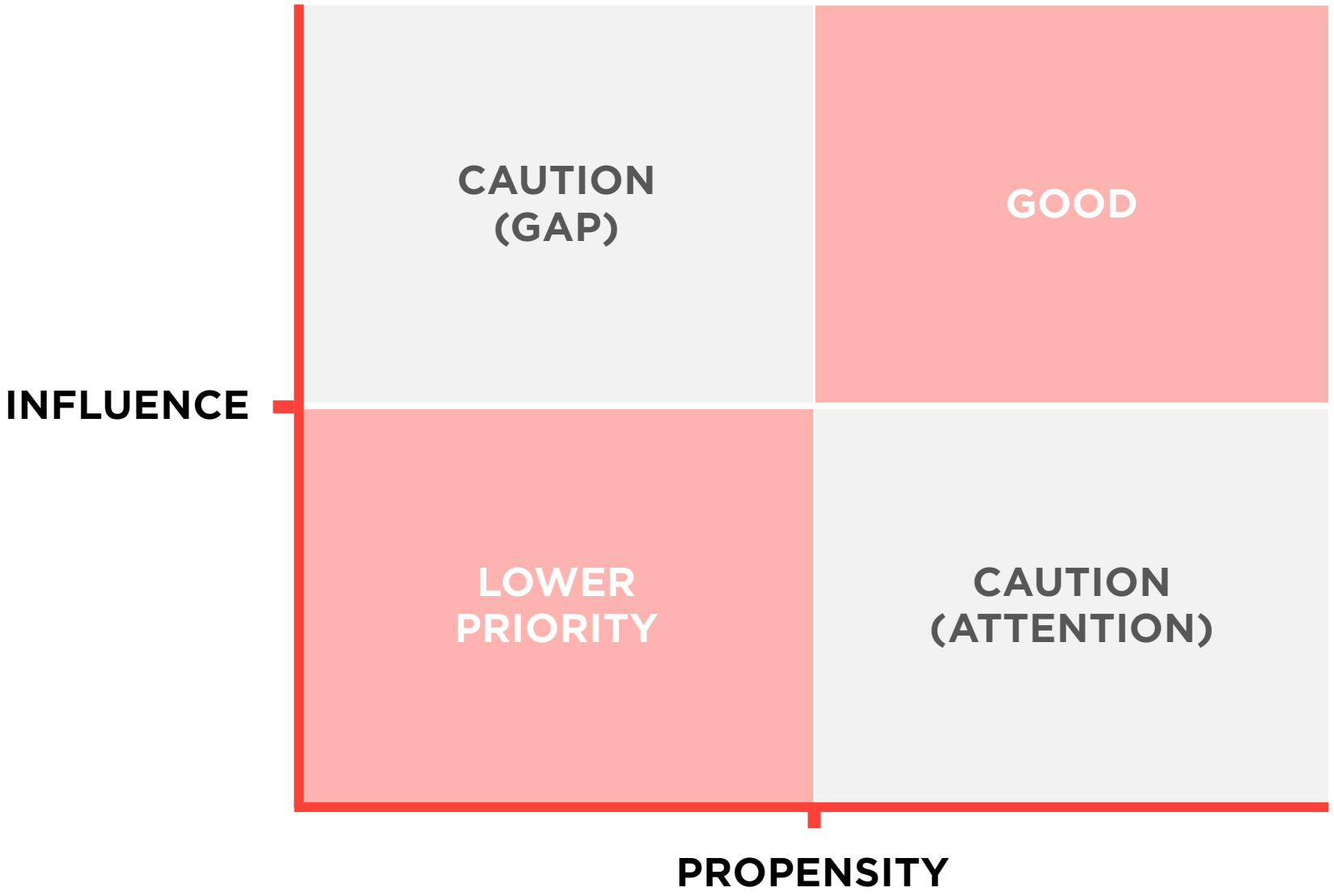
- Price Index Forecasting
- Drill and Blast Optimization
- Mining Asset Monitoring
- Mining Asset Optimization
- Mine Efficiency Analytics
- Predictive Maintenance
- Fulfillment Optimization
- Cognitive Vision Tracking

Accelerating ML Thru OpenAI

Sales Recommender

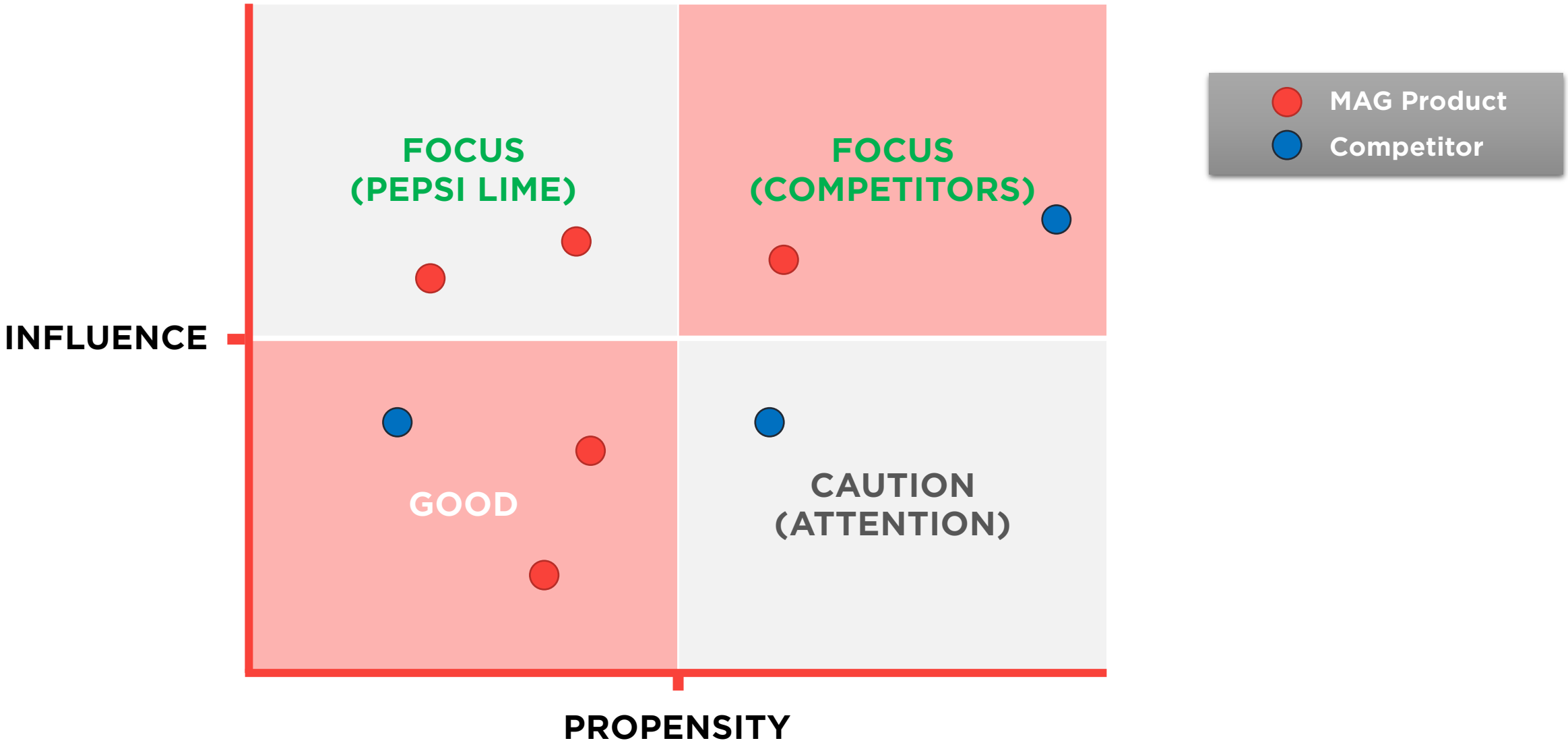


Influence vs. Propensity



Influence = Potential Revenue
Propensity = Current Performance

Influence vs. Propensity



Structuring the Pitch

- The defined pitch structure is **highly variable** given different situations, but always contains **key points**.
- The pitch is produced using three distinct tones: Casual, Formal and Bullet Point. The user can choose which they would like to use from within Salesforce.

EXAMPLE: CASUAL

Hey there! I just wanted to talk to you about one of our popular summer drinks, **Pepsi Real Lime**. I've noticed that **it's not selling as well as it should be in your store compared to other similar products and when comparing to stores in the surrounding regions**. In fact, it's **selling around 60% worse here**, which is quite significant.

Given that **it's summer** and this **ready-to-drink product usually does really well during this time of year**, I think it would be a great opportunity to boost its visibility and promotion in your store. **Your store is known to do well with ready-to-drink products**, especially considering the **nearby parks and beaches** where people are always looking for refreshing drinks on the go.

Pepsi Real Lime is a delicious, sweet, and crisp summer lime flavor that comes in single serve cans - perfect for customers looking for something easy and refreshing. By giving this product some extra attention, I'm sure we can improve its sales performance and contribute to your store's overall revenue.

What do you think about giving it a go and making it more prominent in your store? It's the perfect product for your customers to enjoy during these warm summer months!

OpenAI Accelerates Data and Analytics

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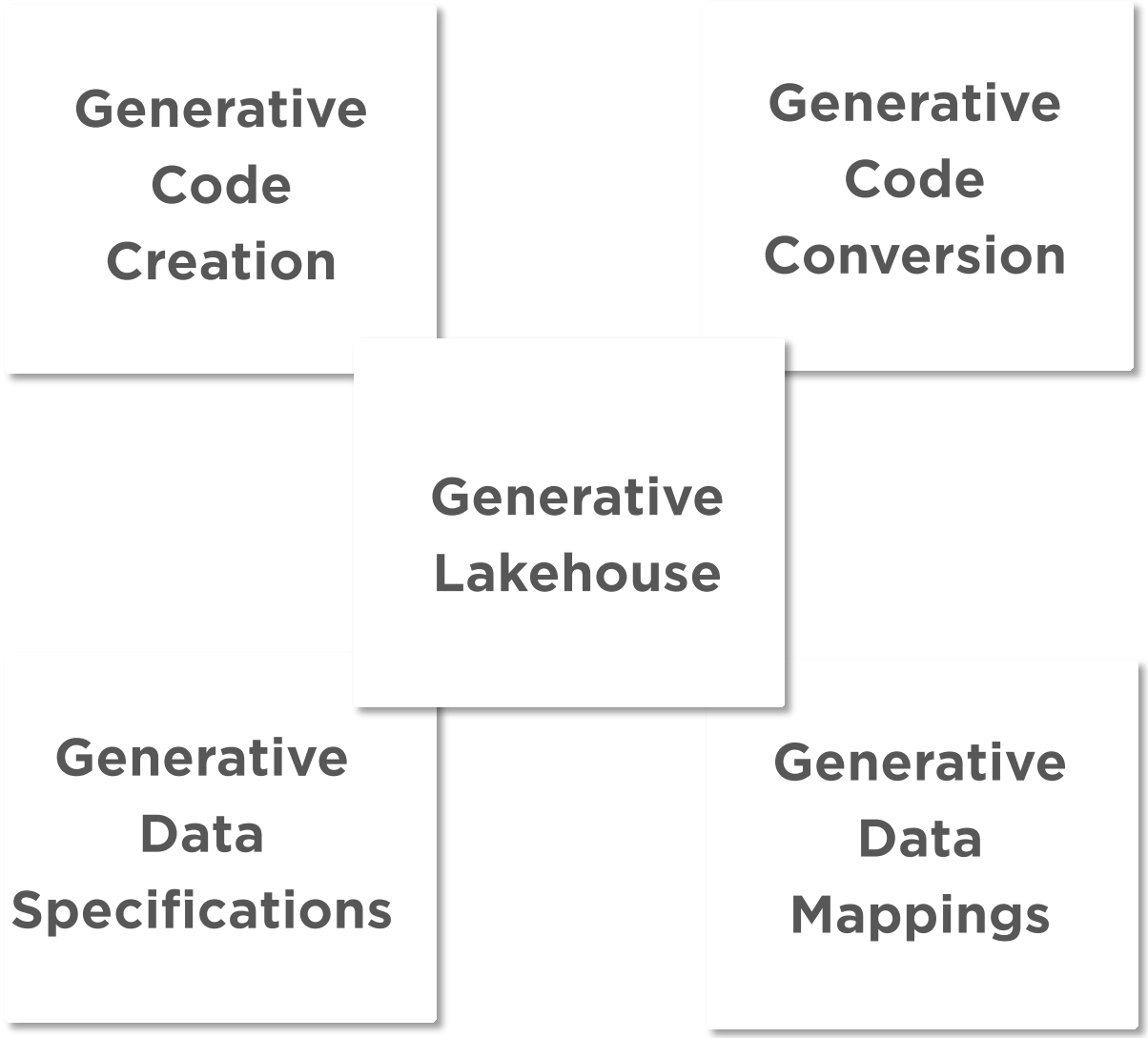
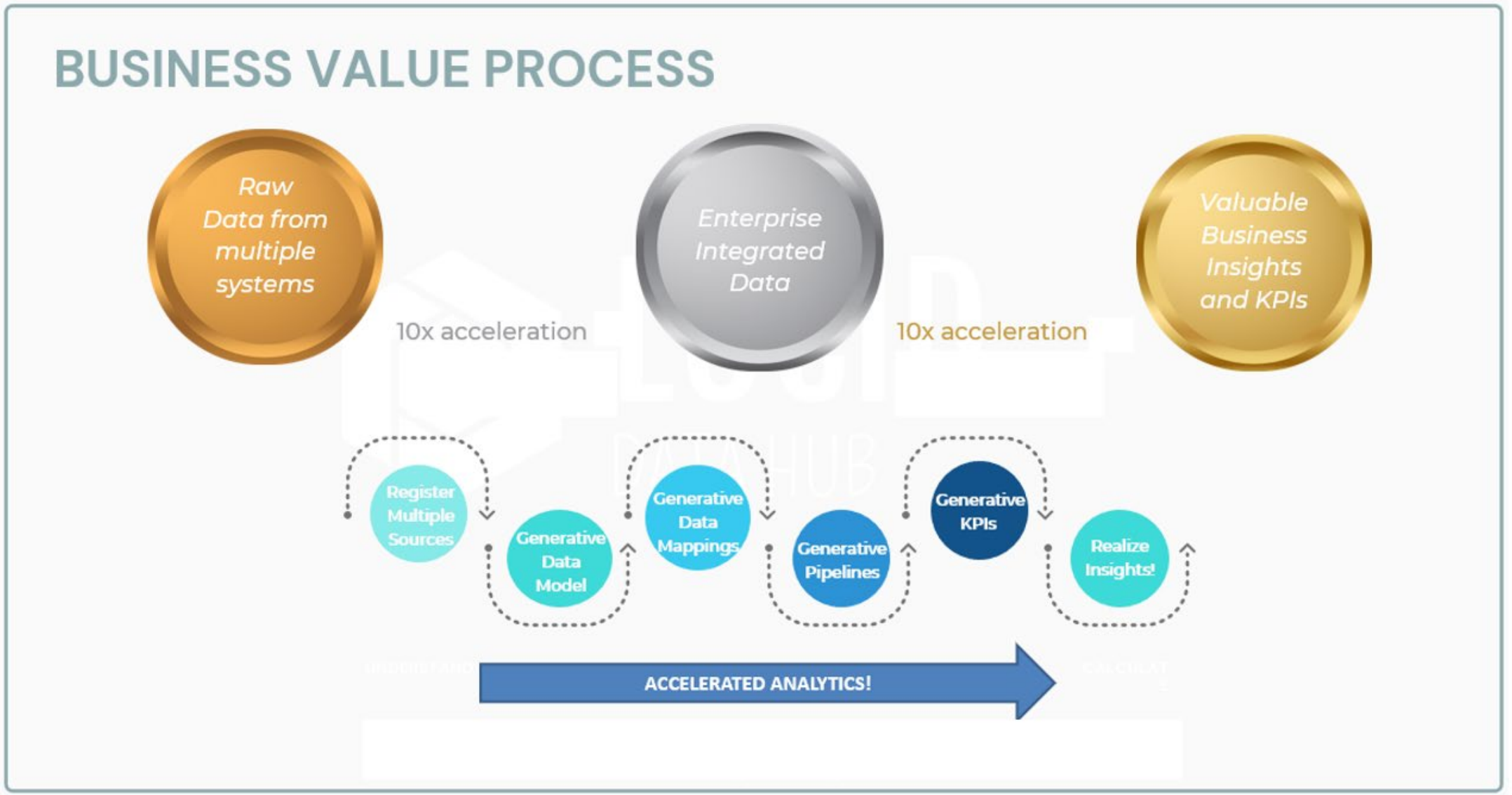


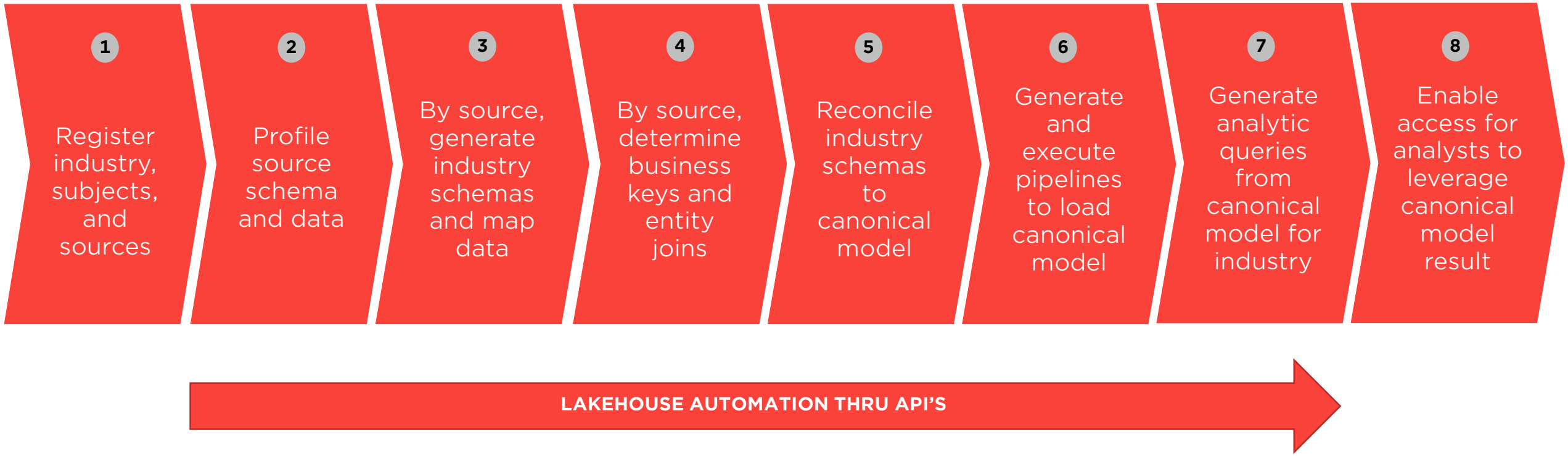
Generative Lakehouse Acceleration



Enables Analytics Effort Reduction

Enterprise Data Tasks	Traditional Method	**Generative Lakehouse**
Source data analysis	Manual	Automated
Source data profiling	Manual	Automated
Data Modelling	Manual	Automated
Data Mapping	Manual	Automated
Data Load	Automated	Automated
Analytics Models	Manual	Automated
Analytics Calculations	Manual	Automated

Generative Lakehouse Journey



Retail Example

Raw Data & Business Context as Input

Source Data

Industry

Define the industry type the data belongs.

Retail Industry

Subject Area

Define the domain / subject area the data belongs to

Supply Chain Management (SCM) System
Point of Sale (POS) System

Subject Area Description

Define the domain / subject area the data belongs to

Supply Chain Management (SCM) System: SCM systems help retailers manage the flow of goods and services from suppliers to customers. They optimize logistics, track shipments, and provide visibility into the supply chain, ensuring timely deliveries and reducing costs.

Point of Sale (POS) System: A fundamental data system in retail, the POS system records sales transactions, manages inventory, and tracks customer data. It helps retailers process payments, generate sales reports, and analyze customer behavior.

Data Systems

Access to raw source data in data landing zoen

2 databases, 26 Tables & 280 columns

Generative Analytics as Output

Enterprise Model

Entities

Industry standard Entities

Sale, Customer, Brand, Store, Inventory, Discount, Supplier, Product, Employee, Price, Category

Attributes

Industry standard attributes

Customer ID, Product ID, Product Name, Address, Category Name, Supplier ID, Location, Inventory…

Valuable Insights

Measures

Industry standard measures / kpis

- Sales by Product
- Inventory Turnover by Product
- Gross Margin by Product
- Supplier Diversity
- Receipt Accuracy
- Receipt C Quantity
- Sales Order Item Revenue
- Sales Order Item Profit
- Sales Order Item by Product
- Product Profitability
- Discount Effectiveness
- Discount by Type
- Category by Product
- Category by Sales
- Category by Customer
- ***…up to 81 measures***

Not just generates models, it also deploys model, generates ETL and data loads into target model

Not just KPIs and Measure are generated, it also deploys KPI model, generates ETL and data loads into target KPI model

Retail Example: Source Data

Point of Sale (POS) System

sales	
sale_id	int

custs	
cust_id	int

brands	
brand_id	int

invtry	
inv_id	int

stores	
store_id	int

discnts	
discnt_id	int

catgrs	
cat_id	int

pay_methods	
pay_method_id	int

sups	
sup_id	int

emps	
emp_id	int

prods	
prod_id	int

Supply Chain Management (SCM) System

Emps	
id	int

Sls_Ordrs	
id	int

Prdcts	
id	int

Invt	
id	int

Splrs	
id	int

Rctpts	
id	int

Brnds	
id	int

Prc_Itms	
id	int

Prcs	
id	int

Trnsprt	
id	int

Wrhses	
id	int

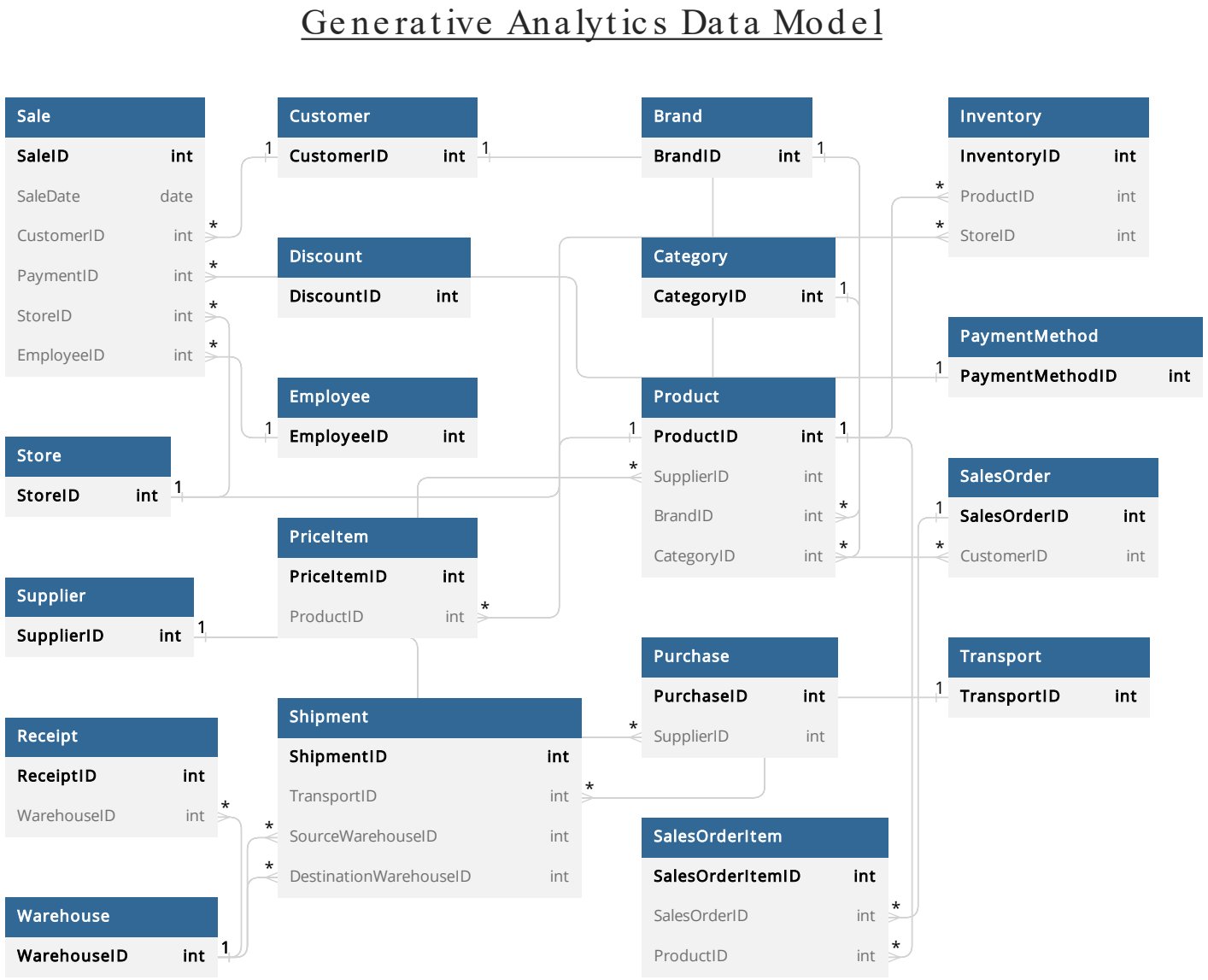
Shpmnts	
id	int

Sls_Ordr_Itms	
id	int

Cstmers	
id	int

Ctgries	
id	int

Retail Example: Generative Model



Retail Example: Generative KPI's

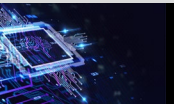
Measures	Description	SQL Queries
Sales by Product	Calculates the total sales revenue generated by each product.	`SELECT prod_name, SUM(unit_price * quantity) FROM sales_transactions INNER JOIN products ON sales_transactions.product_id = products.prod_id GROUP BY`
Inventory Turnover by Product	Calculates how quickly each product is sold and replaced.	`SELECT prod_name, SUM(sales_quantity) / AVG(inventory_quantity) FROM sales_transactions INNER JOIN inventory ON sales_transactions.product_id =`
Gross Margin by Product	Calculates the profit margin for each product.	`SELECT prod_name, (SUM(sell_price * quantity) - SUM(cost_price * quantity)) / SUM(sell_price * quantity) * 100 FROM sales_transactions INNER JOIN products ON`
Product Returns Rate	Calculates the percentage of products that are returned by customers.	`SELECT prod_name, COUNT(DISTINCT return_id) / COUNT(DISTINCT sales_id) * 100 FROM returns INNER JOIN sales_transactions ON returns.sales_id =`
Product Availability	Calculates the percentage of time each product is in stock and available for purchase.	`SELECT prod_name, COUNT(DISTINCT available_date) / COUNT(DISTINCT date) * 100 FROM inventory_availability INNER JOIN products ON inventory_availability.product_id =`
Customer Lifetime Value	Calculates the total value a customer brings to the business over their lifetime.	`SELECT cust_id, SUM(sell_price * quantity) FROM sales_transactions INNER JOIN customers ON sales_transactions.customer_id = customers.cust_id GROUP BY`
Customer Churn Rate	Calculates the percentage of customers who stop doing business with the company.	`SELECT COUNT(DISTINCT churned_cust_id) / COUNT(DISTINCT cust_id) * 100 FROM sales_transactions INNER JOIN customers ON sales_transactions.customer_id = customers.cust_id INNER`
Customer Acquisition Cost	Calculates the cost of acquiring a new customer.	`SELECT SUM(marketing_cost) / COUNT(DISTINCT cust_id) FROM marketing_campaigns`
Customer Satisfaction Score	Calculates the level of satisfaction customers have with the company's products and services.	`SELECT AVG(satisfaction_score) FROM customer_feedback`
Customer Demographics	Provides insights into the demographics of the customer base.	`SELECT gender, COUNT(DISTINCT cust_id) FROM customers GROUP BY gender`
Supplier Performance	Calculates the percentage of orders that are delivered on time and complete by each supplier.	`SELECT sup_name, COUNT(DISTINCT order_id) / COUNT(DISTINCT orders_placed) * 100 FROM orders INNER JOIN order_fulfillment ON orders.order_id =`
Supplier Quality Score	Calculates the quality of products and services provided by each supplier.	`SELECT sup_name, AVG(product_quality_score) FROM supplier_feedback INNER JOIN suppliers ON supplier_feedback.supplier_id = suppliers.sup_id GROUP BY`
Supplier Cost	Calculates the cost of products and services provided by each supplier.	`SELECT sup_name, AVG(product_cost) FROM supplier_costs INNER JOIN suppliers ON supplier_costs.supplier_id = suppliers.sup_id GROUP BY sup_name`
Supplier Lead Time	Calculates the time it takes for a supplier to deliver products or services.	`SELECT sup_name, AVG(lead_time) FROM supplier_lead_time INNER JOIN suppliers ON supplier_lead_time.supplier_id = suppliers.sup_id GROUP BY sup_name`
Supplier Diversity	Provides insights into the diversity of the supplier base.	`SELECT country, COUNT(DISTINCT sup_id) FROM suppliers GROUP BY country`

Retail Example: Accelerated Analytics

simplified process of report development by utilizing pre-generated gold data from Lucid Data Hub

Getting Started Offer

Adastra 2 - 2 – 2 Offer: OpenAI



AN AZURE OPENAI PARTNER YOU CAN TRUST

Eliminate Bias thru Ethical AI

Adastra's ethical AI framework uses Human in the Loop (HIL) to create, validate and update AI models, reducing bias and ethical concerns.

Secured Workloads

Deployment on Azure means that your production needs are met as part of the standard MS cloud infrastructure.

Intelligent Bots

Traditional bot solutions can be complex to implement and lead to a frustrating user experience. Through Adastra's Intelligent Bot Platform, improve user experience and bot success rates by more than 50%.

Unified Experience

Scale and Speed

Advanced Insight

Cost Benefit

To stay competitive in a rapidly changing marketplace, many organizations are eager to accelerate processes and reduce time spent on tedious manual tasks.

While Azure OpenAI can help achieve this, for optimal results, it needs to be combined with quality data, context training, security, and technical expertise.

Leverage Adastra's 20+ years of experience transforming businesses with artificial intelligence and machine learning and the scalability of Azure's infrastructure to unlock the full potential of generative AI.

Step 1

Free Visioning / Discovery Workshop

Mobilize with a complimentary 120-minute Art of the Possible on Azure session followed by a 2-day design workshop.

Step 2a or 2b

a) POC

Length: 2 Weeks
Value: 15K USD

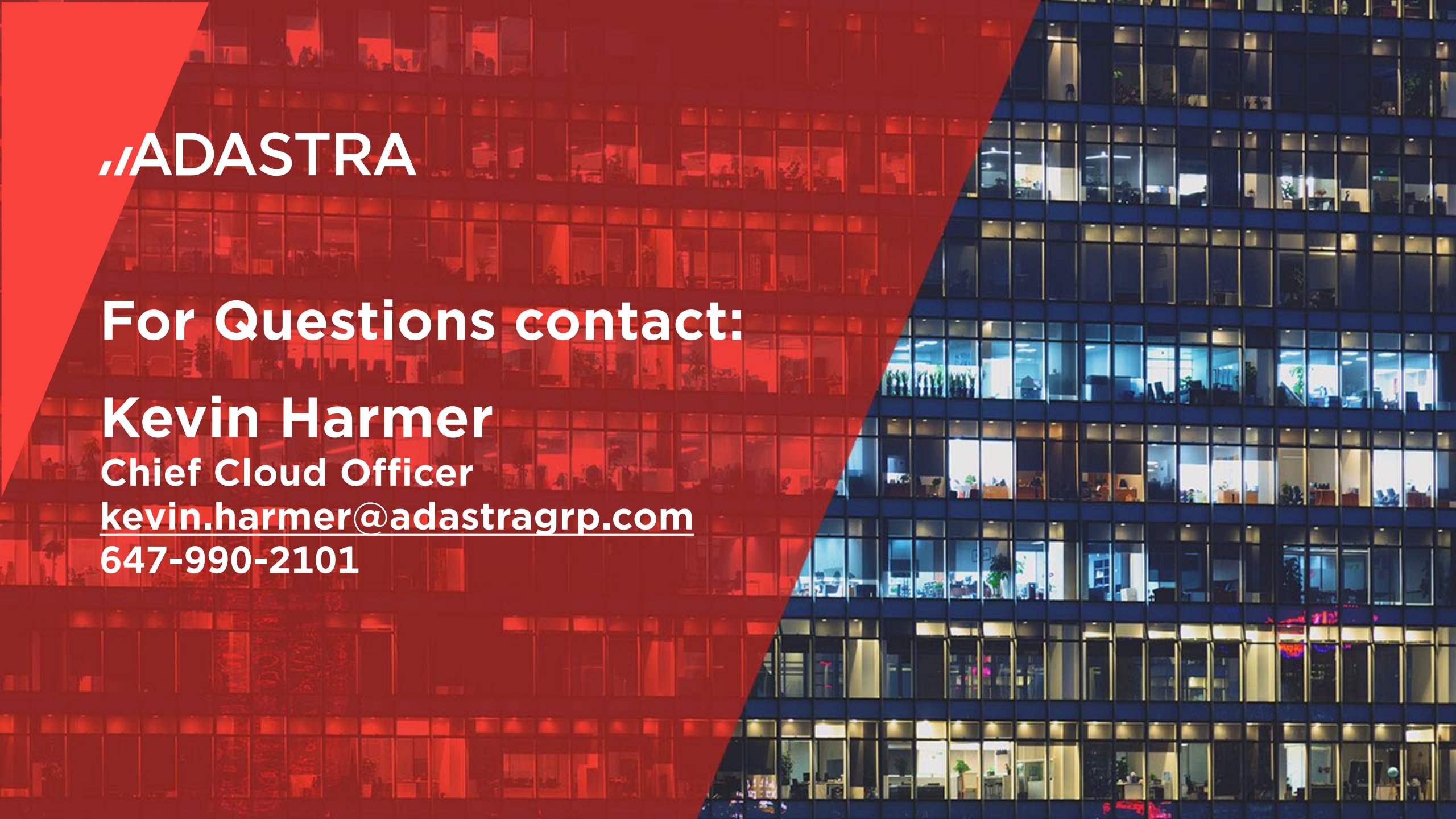
Azure Environment Setup, Discovery and Analysis of Data Sources, Document/Text Indexing, Adastra's Intelligent Search API Integration, Documentation, Executive Presentation

b) MVP

Length: 2 Months
Value: 50K USD

Technology Architecture Decision Workshops, Detailed Implementation Plan, Environment Setup, Data Pipeline Framework, ML Training, ML Ops Framework, Go-Live Readiness, Executive Presentation

* As a leading Microsoft Solutions Partner, Adastra has access to Microsoft ECIF funding to offset POC and MVP costs



ADASTRA

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