



AI Trend Scout:

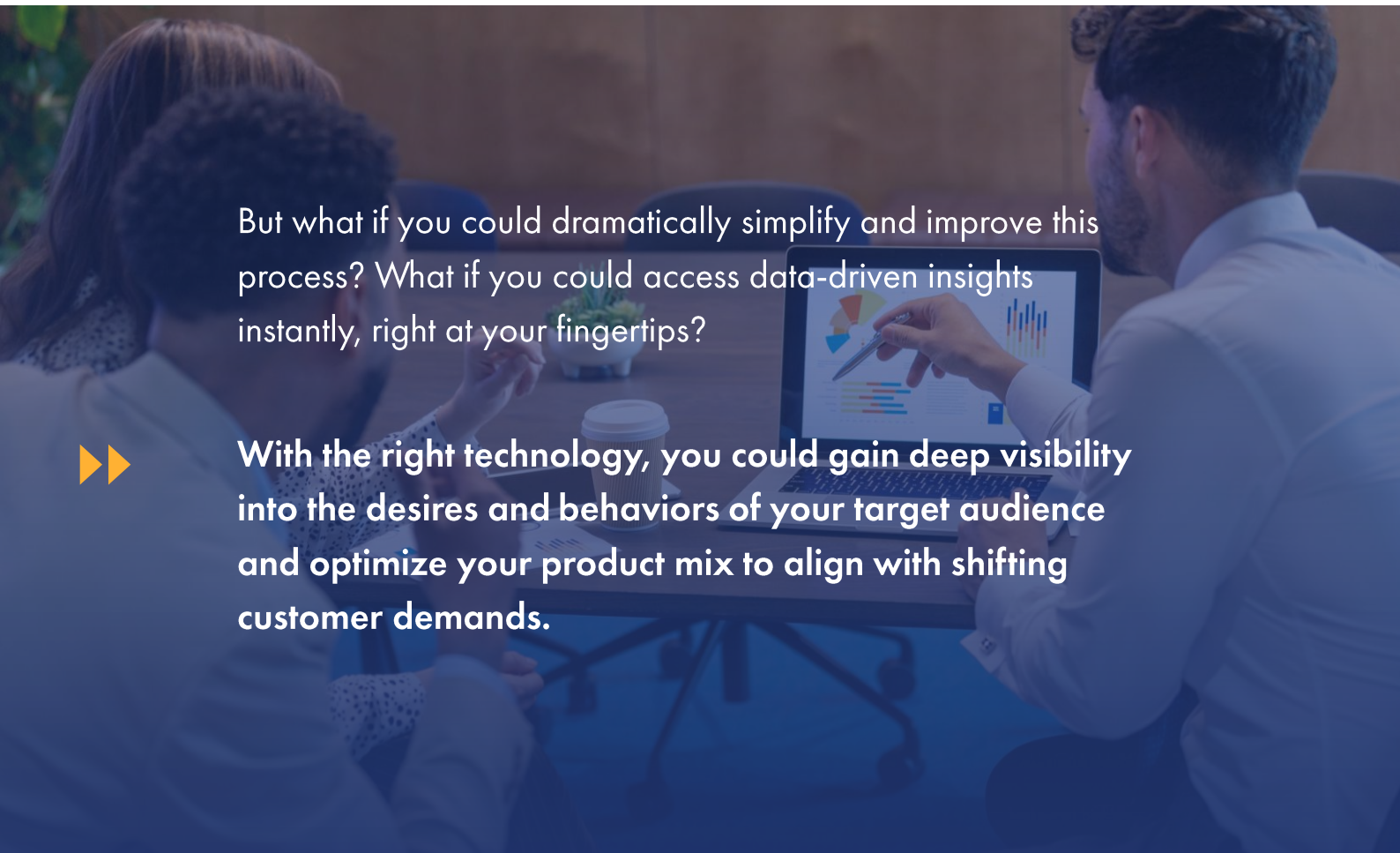
Market Analysis, Procurement
Decisions & Demand Forecasting
for CPG, Retail and eCommerce

Content

01. [Challenge](#)
02. [Solution](#)
03. [Features and Highlights](#)
04. [Target Personas and Gains](#)
05. [Architecture](#)
06. [Approach](#)
07. [Selected Case Studies](#)
08. [Why DataArt](#)

Understanding your customers — what they want, what drives them, and their evolving needs — has always been a challenge. Retailers invest significant time and resources to gain these insights.

- What are the latest consumer preferences?
- What should we stock to maximize revenue?
- Which products should be prioritized for listing based on emerging trends?
- Are there items that should be delisted due to declining consumer interest?
- How should we align our marketing strategy with current market realities?



But what if you could dramatically simplify and improve this process? What if you could access data-driven insights instantly, right at your fingertips?



With the right technology, you could gain deep visibility into the desires and behaviors of your target audience and optimize your product mix to align with shifting customer demands.

DataArt developed a trend scouting accelerator that gathers data from various sources (sales data, weather forecasts, search engines, news, social networks etc.) and, utilizing uniquely developed techniques and modern technologies, extracts valuable insights to provide transparent visibility into market trends and customer demands.

The Solution Helps to



Understand upcoming market trends



Align product strategy with market needs



Ensure stock availability



Forecast sales and economic effects



Analyze competitors' offerings



Analyze public opinion about your company



Catch signals for marketing campaigns

- ✓ AI interpretation of the results based on big data
- ✓ Integration with multiple data sources



- ✓ Industry agnostic
- ✓ High Scalability
- ✓ Cost efficient

Trend Detection & Analysis

- **Identify and Analyze Data Sources**
Select and evaluate relevant data sources to meet business objectives.
- **Transform Signals into Insights**
Leverage AI to convert raw data into categorized, actionable insights for smarter decision-making
- **Visualize Trends**
Present insights with AI-driven tools like graphs, heat maps, and infographics to highlight emerging patterns
- **Prioritize Trends**
Rank trends based on relevance, market impact, and consumer interest to focus on high-potential growth areas.

Trend Radar Dashboard

A visual display of emerging trends, showing movement (e.g., growing, peaking, or declining) in popularity over time

Sentiment Analysis

Insights into how users feel about trending items (positive, neutral, or negative sentiment) to understand which trends have long-term potential.

Trend Momentum Scoring

Rank trends based on velocity and volume, indicating if a trend is likely to be fleeting or has sustainable growth.

Trend Categorization

Break down trends by categories like flavor, product, and influencers driving the trend etc.

Advanced Features

Seasonal Forecasting

- **Seasonal Heatmap**
Visualize when specific trends are predicted to peak over the next few seasons (e.g., Q1, Q2) or how the demand is changing based on the weather
- **Historical Trend Data**
Show how similar trends performed in previous years to validate predictions.

Recommendation Engine

- **Assortment Recommendations (Listing/ De-listing)**
Suggest which trend-related items to prioritize, expand, or phase out.
- **New subcategories recommendations**
Discovering new product subcategories to add to the assortment
- **Product Matching**
Use AI to find product matches in your inventory that align with detected trends, aiding quick decision-making for buys.

Competitor & Market Insights

- **Competitor Trend Analysis**
Display which trends competitors are adopting and how quickly they're reacting.
- **Geographical & Demographic Segmentation**
Break down trends by geography and demographics (e.g., which trends are popular in Germany vs. North America).



Supported Data Sources

- Instagram API
- X API
- Google ADs API
- TikTok

The list of APIs provided here is fully covered as built-in features of the accelerator and can easily be expanded with other data sources if needed



AI Models

- Anthropic
- OpenAI
- Gemini
- Stable diffusion

AI helps identify and create custom AI-generated trend buckets for any business based on signals found in the provided data sources



Infrastructure

- Cloud-native
- In-region redundancy & scalability
- Inter-region DR

Target Personas and Gains

Buyers

Access to real-time insights allows buyers to curate collections that resonate with consumers, enhancing product selection and sales potential.

Procurement Managers

Gain a clear understanding of market demand and trending items, enabling more strategic purchasing decisions and cost savings.

General Managers

Stay informed about industry trends to make data-driven decisions that align with overall business strategy and ensure competitive advantage.

Trends Analysts

Utilize advanced analytics to identify emerging trends early, enhancing their ability to provide actionable insights for the organization.

Data Analysts

Leverage data visualization tools and analytics to interpret vast datasets, transforming complex information into clear, strategic recommendations.

Brand/Product Managers

Align brand strategy with consumer preferences and trends, understand what people are saying about your brand, company, and products, foster brand loyalty, and ensure that marketing efforts resonate effectively

Marketing Strategists

Craft targeted campaigns based on deep insights into consumer behavior and market trends, leading to improved engagement and conversion rates.

The following key factors are taken into consideration for the proposed solution:



Reliability and Resilience

The architecture is designed for scalability, handling increased workloads, data processing, and users. Serverless compute services manage ETL processes with built-in scalability and resilience. A scalable data warehouse accommodates large volumes of data, while container orchestration ensures resilience and automatic scaling.



Security

Applications are hosted within private networks and are only accessible by authorized users. Data, both at rest and in transit, is encrypted using built-in security features of the platform. The principle of least privilege is applied to ensure that users are granted the minimum required permissions.



Optimal Performance

The solution employs a high-performance analytical storage system suitable for complex data processing tasks. Containerized services are designed to scale resources as needed and automatically downscale when those resources are no longer required, improving efficiency and minimizing resource waste.



Operational Excellence

The infrastructure is fully managed through code, utilizing an IaC approach. All application changes are automated through code, allowing for seamless deployment and rollback on demand. CI/CD pipelines are in place to automate build and deployment processes.



Optimal Costs

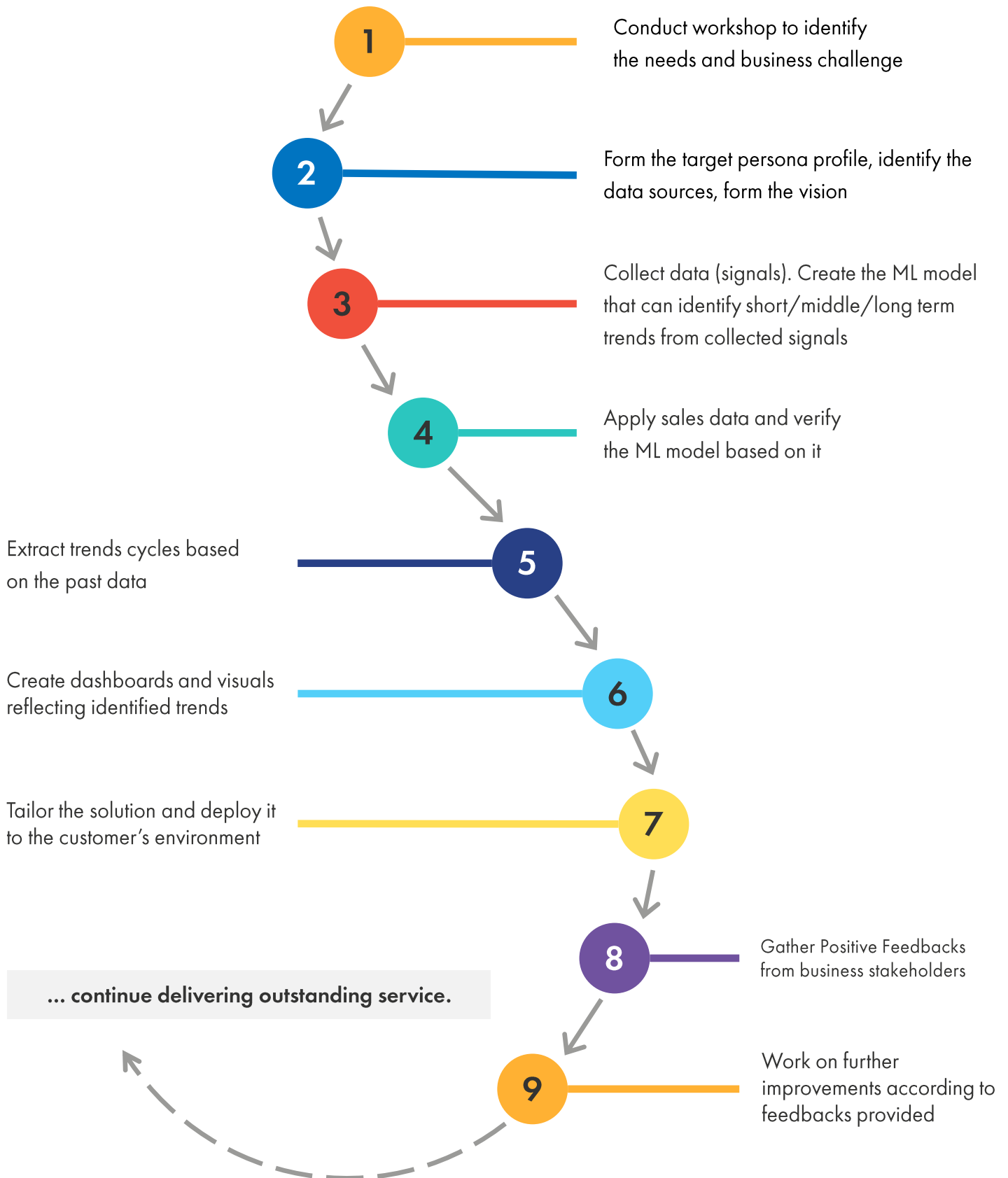
The solution uses a pay-as-you-go model, ensuring that resources are only used and billed when needed. This approach avoids unnecessary costs associated with idle resources and helps optimize overall cloud expenditure.



Observability & Audit

The solution ensures full observability, with logging for infrastructure, application logic, and data management. Logs are stored in long-term storage for easy access and auditing over time.

How We Approach



Our accelerator significantly reduces the development and deployment time. It provides a foundation for custom solution, tailored to the business needs. It allows to create a unique software for the particular business in a record time.



Conceptualization

- Facilitate stakeholder sessions to define goals, gather insights, and align on success metrics and data sources.
- Identify and analyze valuable, accessible data sources for project relevance and accuracy.
- Prioritize business objectives to align with organizational goals.
- Develop a strategic roadmap with milestones, deliverables, and actionable strategies for effective execution.



Validation

- Leverage insights from the accelerator to design a tailored trend scouting solution.
- Streamline setup with pre-built templates, data connectors, and visualization tools.
- Enable stakeholders to explore and refine trends interactively in real time.
- Ensure real-world relevance through practical solution testing



Implementation

- Deploy the solution smoothly, ensuring readiness for user adoption.
- Implement core functionalities to cover critical features.
- Refine the solution based on user feedback, enabling continuous updates
- Deliver a robust MVP that meets user needs and aligns with business goals.

sodales. Nunc tempor ut mauris ac sodales. Sed nec eros lacus. Curabitur non consequat dui, id aliquam nulla. Nulla feugiat consectetur porttitor. Aliquam non ex tempor, faucibus erat sed, venenatis dolor.

Nam ut diam eget risus interdum condimentum eget vitae ligula. Duis tempus id elit eget vehicula. Morbi id justo vehicula, consequat magna placerat, laoreet massa. Maecenas sit amet nunc a mi tempor porttitor vel vitae nisi. Etiam auctor leo sit amet lectus luctus, sed sagittis mi fermentum. Curabitur at vehicula arcu. Sed sed tortor mi. Maecenas nec rhoncus ante. Duis a vestibulum nisl. Suspendisse porttitor nulla et egestas facilisis. Maecenas id lacinia ex, id porttitor est.

Cras a odio sed mauris egestas ornare at a est. Sed pharetra, nisi a ultricies eleifend, quam enim eleifend nulla, nec condimentum



Selected Case Studies



Stay on Trend

Fashion Trends Scouting

DataArt developed a fashion trend scouting engine that gathers data from various sources and, utilizing uniquely developed techniques and modern technologies, extracts valuable information to provide transparent visibility into market trends and customer demands

[Learn more](#)

The solution uses AI to convert raw data into actionable insights for the fashion industry. By selecting relevant data from various sources, it identifies emerging trends and consumer preferences. These insights are visualized through tools like line graphs, heat maps, and infographics. Trends are then prioritized based on signal strength, market impact, and consumer interest, focusing on opportunities with the highest potential for growth and innovation.

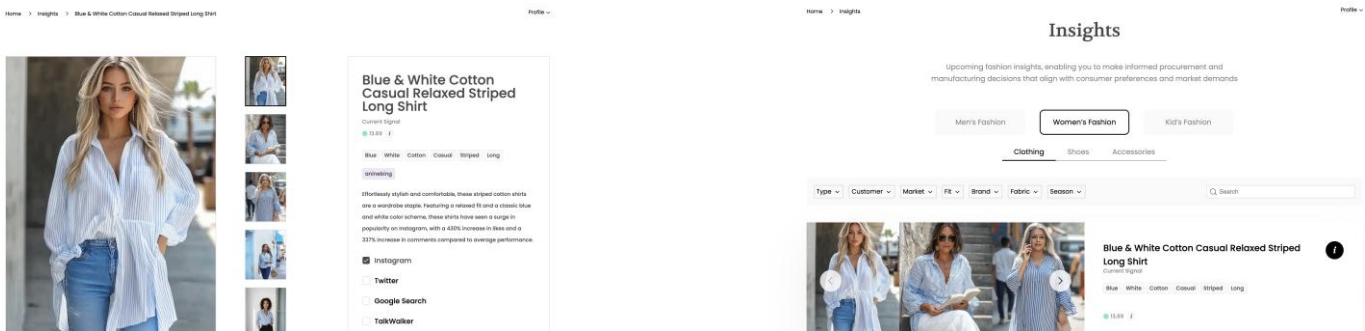
Features and Highlights

- Trend Radar Dashboard: A visual display of emerging trends, showing movement (e.g., growing, peaking, or declining) in popularity over time
- Sentiment Analysis: Insights into how users feel about trending items (positive, neutral, or negative sentiment) to understand which trends have long-term potential
- Trend Momentum Scoring: Rank trends based on velocity and volume, indicating if a trend is likely to be fleeting or has sustainable growth
- Trend Categorization: Break down trends by categories like colors, materials, type of product, patterns, and influencers driving the trend.
- The solution is fully customizable—starting with basic functionality and a limited number of data sources and features, it can easily evolve into a valuable tool for any type and size of retail business.

The Solution Helps to

- Understand upcoming market trends
- Monitor Trends Changes in Time
- Ensure stock availability
- Forecast sales and economic effects
- Analyze public opinion about your company/product
- Analyze competitors' offerings,
- Catch signals for marketing campaigns

Built-in Data Sources (can be easily expanded)



Choose The Right Path

Social Media Analytical Tool for a Leading Future Food Market Player

Challenge

The client was looking for a solution to identify emerging shopping/lifestyle trends in a highly competitive environment.

Solution

A ML model analysing Big Data from various public sources, including social media and news.



Strong

Decision-Making Tool



Highly Targeted

Marketing Campaigns



New Strategy

& Product Launch Vision

Key Advantages

- Enables early recognition of emerging trends
- Discovers opinion leaders and their target audiences
- Executes sentiment analysis of auditory
- Performs analytics on major social media trends and IDs the main influencing factors
- Analysis of dynamics of mentions and reactions to a search query on social media

Guess the Taste

Demand Prediction

for the Multinational CPG Company

Challenge

The client faced the challenge of accurately predicting and meeting consumer demands for potato chips amidst a rapidly evolving market landscape.

Solution

ML predictive analytics system which use diverse data sources (marketing reports, sales history, competitors' analysis, news) to predict future trends on the food market and forecast sales.



Improved

Assortment Planning



Strengthen

Brand Loyalty



Optimized

& Market Responsiveness

Key Advantages

- The solution uncover insights into emerging flavor trends and consumer preferences, empowering to develop innovative and on-trend products that resonate with consumers
- The ML system provides accurate and reliable demand forecasts, enabling the client to optimize inventory levels, reduce stockouts, and improve supply chain efficiency.
- Optimized inventory management and reduced the risk of overstocking or understocking

Personalize Your Offers

Demand Prediction

for the Multinational CPG Company

Challenge

The client had an idea that showing different products and offers for different customer segment, distributed depending on website activities can lead to increase customer satisfaction, increase loyalty and avoid big numbers of items returns.

Solution

The AI System which tracks customer online activities and based on that data customize the future shopping experience, offering personalized content and offers.



Increase
in Sales



Increased
Customer Loyalty



Decreased
The Number of Returns

Key Advantages

- The System tracks various amount of user online activities and using ML Algorithms and AI identifies offers and content which are best to show to the client. For example, if the customer chooses one type of the clothes, the system automatically collects a "Total Look" - including footwear and accessories. The system displays goods in one colour scheme, price and size
- Based on historical data (time of reading product information, added to the bucket but not purchased items, purchased only when the discount appeared etc.) the system identifies what kind of offers better fits the customer and change the site content according to this data
- Personalized offers and content lets the customer purchase items which are less likely to be returned

Secure Your Tomorrow

Demand Forecasting

for the Leading Sporting Goods Retailer

Challenge

The client specialized in sales of sports goods (1500+ stores in nearly 50+ countries) needed to improve forecasting and demand prediction system.

Solution

DataArt developed an ML-based Sales Forecasting system



85% to 93%

Forecast Accuracy Increase



Optimized

Logistics Costs



Clear

Marketing Planning

Key Advantages

- Implemented 6 different Time-Series Models
- DataArt won the competition with the client's own development team
- Better visibility of the future demand.
- Fast hypothesis testing and Implementation of best approaches
- Reduced stock size per store

Improve Customer Experience

GenAI-Powered Customizable Insights Generation for a SaaS Company

The Client

A cloud-based company that offers survey management and a comprehensive statistics platform that provides insight into customer or employee satisfaction.

Overview

The client needed a solution to automate the extraction of insights from customer feedback to make the process faster and more efficient. The primary challenges included handling large data tables with varied attributes and ensuring the quality and accuracy of summarized feedback. To address this challenge, DataArt AI Lab used AWS Bedrock models' capabilities to generate accurate responses based on summaries of positive and negative feedback or custom queries.



Automated Insights Extraction

from customer
feedback



Scalable AI Platform

adjustable to any
Bedrock model



RAG Chatbot Integration

created using internal
company data



Handling Large Data Tables +

intelligent filter
customizable by the user

Key Advantages

- The automated solution significantly reduced the time required to analyze customer feedback.
- The ability to quickly generate summaries and insights helped the client's customers make informed decisions.
- The scalable AI platform could be tailored to different Bedrock models and provided cost insights for business planning.
- The RAG chatbot and GenAI platform set the groundwork for future AI applications within the company.

sodales. Nunc tempor ut mauris ac sodales. Sed nec eros lacus. Curabitur non consequat dui, id aliquam nulla. Nulla feugiat consectetur porttitor. Aliquam non ex tempor, faucibus erat sed, venenatis dolor.

Nam ut diam eget risus interdum condimentum eget vitae ligula. Duis tempus id elit eget vehicula. Morbi id justo vehicula, consequat magna placerat, laoreet massa. Maecenas sit amet nunc a mi tempor porttitor vel vitae nisi. Etiam auctor leo sit amet lectus luctus, sed sagittis mi fermentum. Curabitur at vehicula arcu. Sed sed tortor mi. Maecenas nec rhoncus ante. Duis a vestibulum nisl. Suspendisse porttitor nulla et egestas facilisis. Maecenas id lacinia ex, id porttitor est.

Cras a odio sed mauris egestas ornare at a est. Sed pharetra, nisi a ultricies eleifend, quam enim eleifend nulla, nec condimentum



Why DataArt?

54	120.12
32.73	685.39
38.50	807.96
13.86	910.26
	863.36
36.29	717.60
38.73	619.50
	863.47
86.83	873.63
	536.94
37.99	857.53
37.55	456.43
36.66	
	248.05
	454.88
	224.98
	278.38

White, except of greater exposed, former vel eros. Morbi quis
et eros nulla, etiam eros. Aliquam at interdum lacus. Cras vel
at tellus. Cras non erat at tellus, porta at quis tellus. Pellentesque
in ut egestas sed interdum. Nunc vehicula interdum tellus, id



30+

Global Locations

95%

Return Client

5700+

Consultants and engineers

4500+

Successfully completed projects

87%

Staff Retention

26

Years in Operation

Key Industries

- Retail & Distribution
- Healthcare & Life Sciences
- Travel, Transportation & Hospitality
- Finance
- Media & Entertainment



This document is proprietary and confidential. No part of this document may be disclosed in any manner to a third party without the prior written consent of DataArt.

14+

Years in Retail

30+

Alliances

95%

Recurring Clients

50+

Active Clients Globally

700+

Successful Projects

1000+

Retail Consultants & Engineers

Comprehensive Experience

- End-to-End Ecommerce
- Omni-channel Experience
- Customer Engagement
- Personalization / Recommendation
- Supply Chain Visibility
- Logistics / Delivery
- Inventory Management
- Warehouse Management

Engineering Services

- Custom Development
- Integrations
- Modernization
- Data and Analytics
- AI/ML
- Cybersecurity
- UI / UX
- Blockchain
- Mobile Development

Selected Clients



Cloud Partnerships



Selected Technical Partners



Our Offerings for Retail & Distribution



Strategy

Technology Strategy

AI Strategy

Operational Model

Data Democratization

Organizational Strategy

Business Use Case Offering

Plan

- Product Lifecycle
- Demand Prediction
- Trends Scouting
- Market Research
- Sentimental analysis
- Data Visualization

Supply

- Inventory Optimization
- Route Optimization
- Logistics Optimization
- Transport Management
- Last mile Delivery
- Supply Chain Optimization & Transparency

Produce

- Predictive Maintenance
- Energy Consumption
- Prediction
- Raw Materials Quality
- Analysis
- Security Control
- Production Quality Control

Operate

- Warehouse Management
- Shelf Space / Assortment
- ESG Compliance
- Supplier Collaboration

Market

- Hyper Personalization
- Consumer Insights
- Customer Journey
- Loyalty Solutions
- Customer 360
- Recommendation Systems
- UI/UX

Sell

- E-Commerce
- Omnichannel Integration
- CRM
- Trade Promotion
- Virtual Try-On
- Sales Forecasting
- Return Management

Foundation Offerings

Data

- Cloud Platform
- Data Strategy
- Data Quality
- Analytics
- Ingestion
- Data Platform

AI/ML — Data Science

- Generative AI
- Computer Vision
- NLP
- Recommendation
- Optimization

Migration

- Cloud migration
- Re-platforming
- Rationalization
- UI/UX
- E-commerce

Digital

- UI/UX
- E-commerce Platform
- AR/VR
- Smart Devices

Our Success Stories Across Value Chain



Gift cards retailer

E-commerce platform migration

- Platform responsiveness increased by 30%
- Improved scalability and flexibility after re-hosting in the cloud
- The number of orders processed increased by 100%

DECATHLON

Demand forecasting

- 93% forecast accuracy
- Optimized logistics costs
- Fast hypothesis testing



App Modernization

- Significant Improve in Website and Mobile App performance
- 130% Increase in website and mobile app Engagement
- 80% Decrease in Call Centre Tickets

CPG Company

ML invoice classification

- Analyzes and exploits the information contained in electronic invoices
- Intelligent classifying system
- Self-learning system based on manual adjustments



Product returns platform

- Boosted brand awareness
- Paperless returns in seconds
- Fully customizable solution

JAMES AND JAMES
eCOMMERCE FULFILMENT

Order fulfilment platform

- Significant increase in sales
- Increased customer loyalty
- Boosted brand awareness

Online Grocery

Transport management system

- Home delivery or pick-up services software for last-mile operations
- AI order calculation
- Route optimization (Historical Data, Wheather Conditions, Traffic Situation, Events etc.)
- Delivery Personnel Tracking System



Loyalty Application

- +\$1.8M Redeemed GMV within 12 months
- 70000+ Successful Transactions
- Consolidation of 6 loyalty Programs in one Application

Manufacturing

Predictive maintenance for Heading System Manufacturer

- 15% increase in machine life
- 20% reduction in spare parts inventory
- Minimized revenue losses

Value Chain:

Plan

Supply

Produce

Operate

Market

Sell

Find out more

dataart.com

retail.team@dataart.com

/20

Why Choose DataArt as Your Partner for Progress?



Cutting-Edge Industry Expertise and R&D

- Dedicated industry practices and domain-focused Labs accelerate innovation and delivery at a global scale
- Platform partnerships, reusable frameworks, and tried-and-true best practices drive more future-proof technology solutions

World-Class Experts, Extraordinary Results

- Strengthen your team and get results faster with top technologists from 30+ global locations
- 130,000+ CVs monitored
- 4.6 Glassdoor rating; 96% recommend DataArt to a friend

Unique Culture of Customer Service

- We know how to implement and develop
- Flexible engagement models and custom-tailored project teams
- People-first culture with deeply held human values of curiosity, empathy, trust, honesty, and intuition

Focus on Business Outcomes

- We measure our success by your success, going the extra mile to produce lasting business value in every engagement
- Minimize risk of project failure with our Connect Framework and build the right solution to conquer your business goals



From a vendor placing an order to the package being delivered to the customer, the new end to end sales process solution is agile and easily accessible to all our customers. Within the tight deadline of less than a year, integration of the Marketplace with all of the backend systems was successfully developed. Together with DataArt we have built a platform which ensures the flexibility and scalability needed to support our growth plans throughout Europe. [Watch video](#)

Philipp Blome
CEO

METRO
MARKETS



We have found the technical competence, quality and commitment of DataArt's developers to be very high and DataArt's account management has been extremely professional and responsive.

Paul Clarke
CTO

ocado
TECHNOLOGY



We have thoroughly enjoyed collaborating with Dataart on our e-commerce transformation journey. Their management team showed great commitment to understanding our needs and delivering a product that aligns with our vision. The close collaboration with their architect and developers fostered engaging discussions, resulting in innovative solutions tailored to our requirements. Their expertise in modern technology and structured content approaches has significantly enhanced our website's flexibility.

Patrik Wilhelmsson
Chief Technology
Officer

INTERSPORT



Denis Baranov

Head of Retail & CPG Practice

55 King William St 3d floor, London,
United Kingdom

+44 (207) 0999464, 2167/office/

Denis.baranov@dataart.com

[Linkedin.com](#)



Oleg Royz

VP of Retail & CPG

475 Park Ave S #15, New York,

United States

++ 1 847 922 3710

Oleg.royz@dataart.com

[Linkedin.com](#)

Thank you!



retail.team@dataart.com