

Leveraging Technology for Future Growth



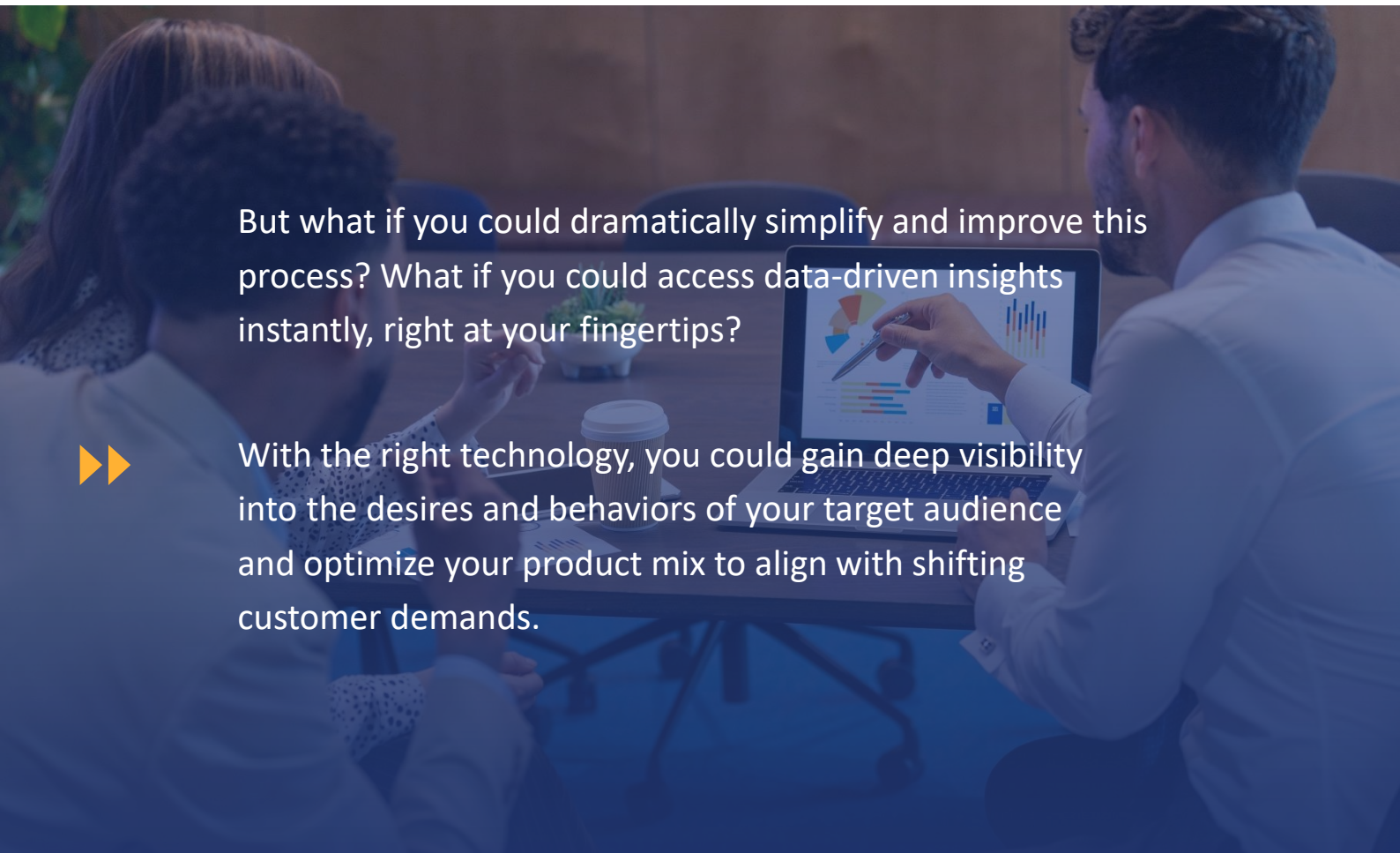
# Digital Trends Scouting for Retail and eCommerce

## Content

01. Challenge
02. Solution
03. Features and Highlights
04. Target Personas and
05. Gains 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
- ✓ Industry agnostic
- ✓ Integration with multiple data sources
- ✓ High Scalability
- ✓ Cost efficient



# Accelerator's Flows and Built-in Features

## 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

## 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

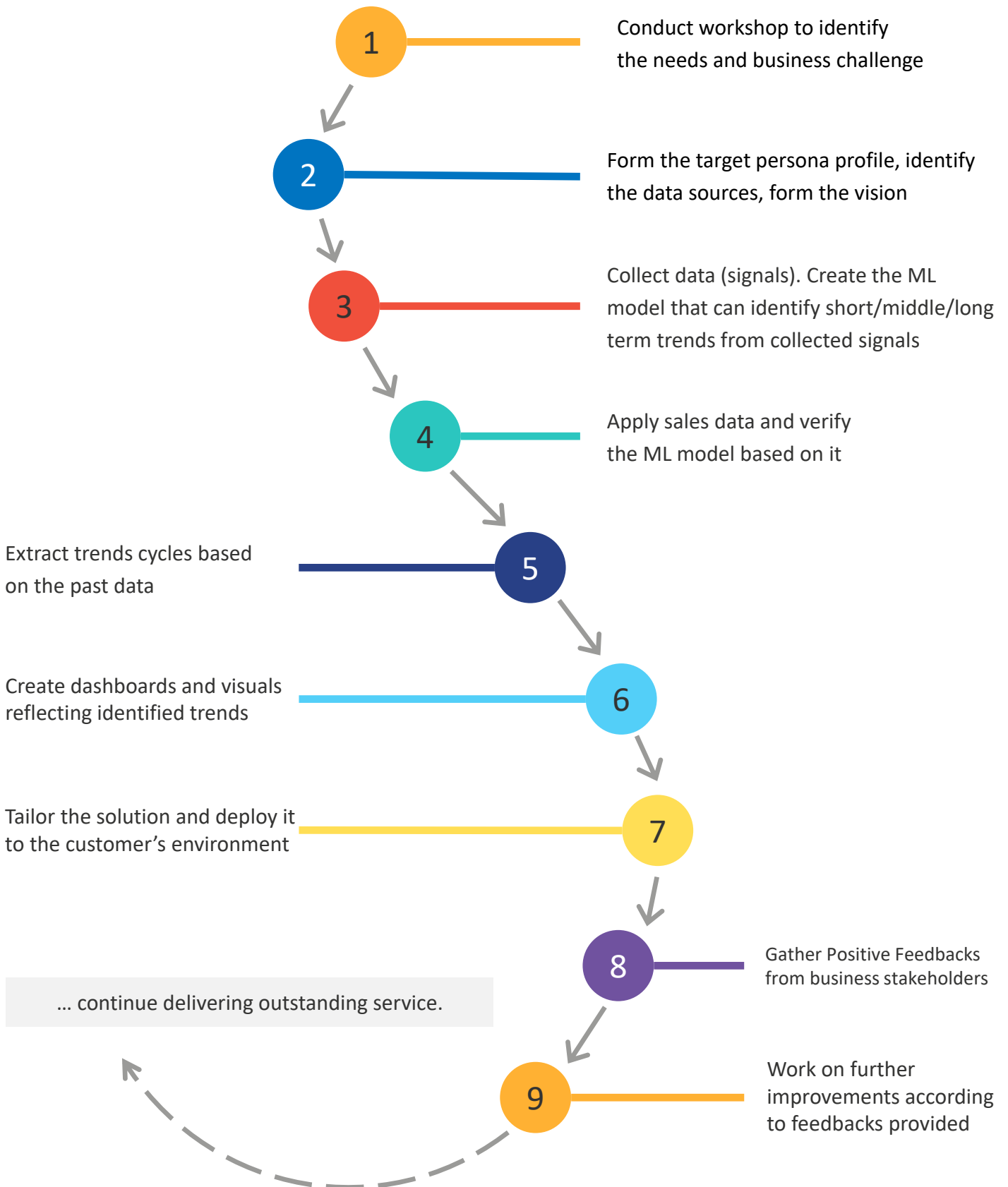
The solution uses a pay-as-you-go model, ensuring that resources are only used and billed when needed. This approach avoids unnecessary costs associated with idle resources and helps optimize overall cloud expenditure.



## 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



54	120.12
32.73	685.39
38.50	807.96
13.86	910.26
	278.38
	863.36
36.29	717.60
	180.19
38.73	619.50
	738.51
	863.47
86.83	873.63
	536.94
37.99	857.53
37.55	456.43
73.66	
	248.05
	454.88
224.98	278.38



# Selected Case Studies

Stock Market Report

Low	Close
\$18,168.27	\$12,525.54
\$19,367.83	\$13,849.99
\$19,078.60	\$14,338.54
\$17,973.70	\$13,481.38
\$16,000.00	\$13,376.81
\$15,727.49	\$13,072.87
\$15,067.36	\$11,259.86
\$15,026.00	\$8,976.92

# 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

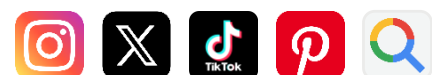
- **Trend Radar Dashboard:** A visual display of emerging trends, showing movement (e.g., growing, peaking, or declining) in popularity over time
- **Sentiment Analysis:** Insights into how users feel about trending items (positive, neutral, or negative sentiment) to understand which trends have long-term 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

## 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)



retail business.

The screenshot displays a detailed trend analysis for a specific fashion item. On the left, there is a large image of a woman wearing the shirt, with smaller thumbnail images below it. The main content area features the product name 'Blue & White Cotton Casual Relaxed Striped Long Shirt' and a 'Current Signal' indicator. Below this, there are filters for 'Style' (white, casual, relaxed, long) and 'Category' (casual). A text block provides insights: 'Blue & white cotton casual, relaxed, striped long shirt is a dominant trend in women's fashion, with a 100% increase in popularity in the last 12 months. It is also a 100% increase in consumer engagement performance.' At the bottom, there are checkboxes for data sources: Instagram (checked), Twitter, Google Search, and TalkWalker.

Insights

Upcoming fashion insights, enabling you to make informed procurement and manufacturing decisions that align with consumer preferences and market demands

Men's Fashion | **Women's Fashion** | Kid's Fashion

Clothing | Shoes | Accessories

type Customer | Market | Fit | Brand | Fabric | Season | Search

Blue & White Cotton Casual Relaxed Striped Long Shirt  
Current Signal  
Blue white casual relaxed long

# 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 a a est. Sed pharetra, nisi a ultricies eleifend, quam enim eleifend nulla, nec condimentum



54	120.12
32.73	685.39
38.50	807.96
13.86	910.26
	278.38
	863.36
36.29	717.60
	180.19
38.73	619.50
	738.51
	863.47
86.83	873.63
	536.94
37.99	857.53
37.55	456.43
73.66	
	248.05
	454.88
224.98	278.38



# Why DataArt?

Stock Market Report

Low	Close
\$18,168.27	\$12,525.54
\$19,367.83	\$13,849.99
\$19,078.60	\$14,338.54
\$17,973.70	\$13,481.38
\$16,000.00	\$13,376.81
\$15,727.49	\$13,072.87
\$15,067.36	\$11,259.86
\$15,026.95	\$8,976.92



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

<h3>Plan</h3> <ul style="list-style-type: none"><li>Product Lifecycle</li><li>Demand Prediction</li><li>Trends Scouting</li><li>Market Research</li><li>Sentimental analysis</li><li>Data Visualization</li></ul>	<h3>Supply</h3> <ul style="list-style-type: none"><li>Inventory Optimization</li><li>Route Optimization</li><li>Logistics Optimization</li><li>Transport Management</li><li>Last mile Delivery</li><li>Supply Chain Optimization &amp; Transparency</li></ul>	<h3>Produce</h3> <ul style="list-style-type: none"><li>Predictive Maintenance</li><li>Energy Consumption</li><li>Prediction</li><li>Raw Materials Quality</li><li>Analysis</li><li>Security Control</li><li>Production Quality Control</li></ul>
<h3>Operate</h3> <ul style="list-style-type: none"><li>Warehouse Management</li><li>Shelf Space / Assortment</li><li>ESG Compliance</li><li>Supplier Collaboration</li></ul>	<h3>Market</h3> <ul style="list-style-type: none"><li>Hyper Personalization</li><li>Consumer Insights</li><li>Customer Journey</li><li>Loyalty Solutions</li><li>Customer 360</li><li>Recommendation Systems</li><li>UI/UX</li></ul>	<h3>Sell</h3> <ul style="list-style-type: none"><li>E-Commerce</li><li>Omnichannel Integration</li><li>CRM</li><li>Trade Promotion</li><li>Virtual Try-On</li><li>Sales Forecasting</li><li>Return Management</li></ul>

## Foundation Offerings

<h3>Data</h3> <ul style="list-style-type: none"><li>Cloud Platform</li><li>Data Strategy</li><li>Data Quality</li><li>Analytics</li><li>Ingestion</li><li>Data Platform</li></ul>	<h3>AI/ML — Data Science</h3> <ul style="list-style-type: none"><li>Generative AI</li><li>Computer Vision</li><li>NLP</li><li>Recommendation</li><li>Optimization</li></ul>	<h3>Migration</h3> <ul style="list-style-type: none"><li>Cloud migration</li><li>Re-platforming</li><li>Rationalization</li><li>UI/UX</li><li>E-commerce</li></ul>	<h3>Digital</h3> <ul style="list-style-type: none"><li>UI/UX</li><li>E-commerce Platform</li><li>AR/VR</li><li>Smart Devices</li></ul>
---	---	--	--

# 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



### 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

# 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](#)

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.

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.

Philipp Blome  
CEO

**METRO**  
MARKETS

Paul Clarke  
CTO

**ocado**  
TECHNOLOGY

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](mailto: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](mailto:Oleg.royz@dataart.com)

[Linkedin.com](#)

Thank you!



[retail.team@dataart.com](mailto:retail.team@dataart.com)