

AI on AWS: Transforming Retail with Intelligence, Agility and Trust

Case in Point: Fraud Detection for a
National CPG/Retail Company

October 23, 2025



datAvail

From Predictive to Agentic: The Next Frontier in Retail AI



GenAI – Personalized Experiences at Scale

- ✓ AI-powered product recommendations and visual search
- ✓ Hyper-personalized marketing and offers using Amazon Bedrock + SageMaker
- ✓ Dynamic pricing and assortment optimization

Outcome:

Higher basket size, loyalty, and conversion rates



Agentic AI – Autonomous Retail Operations

- ✓ Intelligent “digital employees” that act on behalf of humans
- ✓ Automated supplier negotiations, order rebalancing, and inventory control
- ✓ Cross-system orchestration through AWS Lambda & Bedrock Agents

Outcome:

Faster decisions, lower costs, and improved resilience



AI for Fraud Detection and Trust

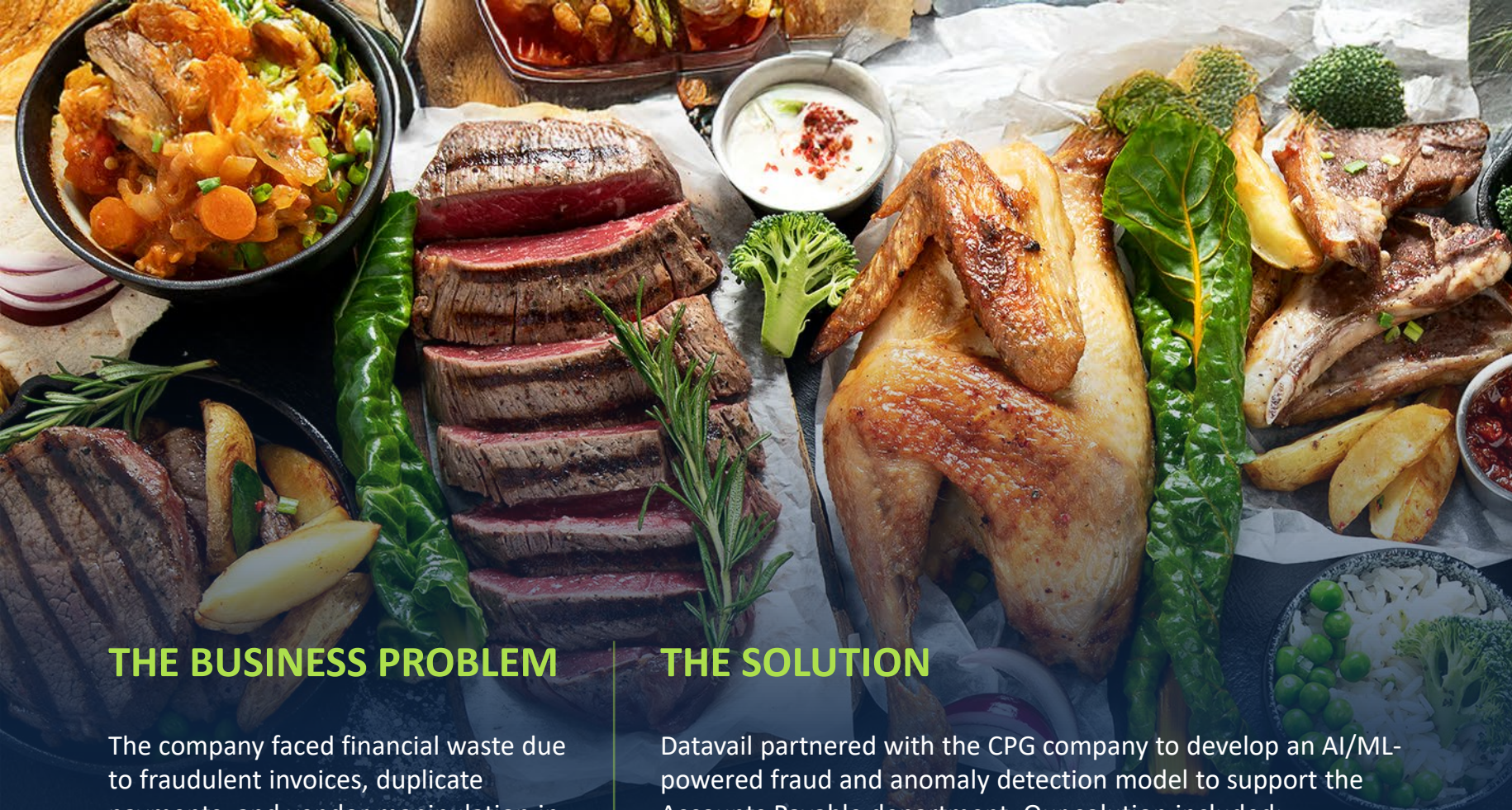
- ✓ Real-time transaction analysis using ML models on AWS
- ✓ Behavioral AI agents identifying synthetic IDs, loyalty fraud, and return abuse
- ✓ Continuous risk scoring integrated with AWS Fraud Detector & Amazon SageMaker

Outcome:

Reduced losses, secure transactions, and trusted customer experiences

Fraud Detection





THE BUSINESS PROBLEM

The company faced financial waste due to fraudulent invoices, duplicate payments, and vendor manipulation in their Accounts Payable systems.

With high transaction volumes, the customer wanted an automated system to detect potentially fraudulent activities, flag high-risk transactions, and trigger appropriate workflow actions such as blocking payment or requesting manual review.

THE SOLUTION

Datavail partnered with the CPG company to develop an AI/ML-powered fraud and anomaly detection model to support the Accounts Payable department. Our solution included:

- Implementing an AI/ML model using Amazon SageMaker and Bedrock FM models
- Integrating data from Accounts Payable systems (Invoices, Purchase Orders, Payment History) for predictive analytics of fraud, vendor-risk, and monitoring
- Applying anomaly detection for unusual payment patterns and matching algorithms for duplicate payments
- Implementing rules-based automation for compliance and policy audits

The client is a CPG company that sells ready-to-cook and fully cooked meat to the foodservice industry.

AI/ML-powered AP Fraud and Anomaly Detection

THE RESULTS

By identifying anomalies in invoicing and identifying potential mistakes or fraud, the CPG company was able to reduce waste and improve financial processes.

Fraud Detection Project

Functional Area

Invoicing



Target Use Case

AI will examine all invoices looking for anomalous patterns. Further training of AI will narrow the breadth and depth of potential issues giving solid outputs for investigation.

Technology

AWS stack, SageMaker automated training and inference pipelines with Bedrock FM models (e.g., Anthropic and Nova).



Value Created

To identify errors in invoicing and identify potential fraud.



Next Steps

Tuning of the ML Model to pinpoint anomalies and extract additional value from initial results

AI in Action

Early Results from Fraud Detection POC



\$2.4 Million Annually Saved Through Fraud Detection

Instead of chasing money after it's gone, the customer now stops suspicious transactions before they happen.



Real-Time Fraud Detection with 94% Accuracy Rate

Out of 12,547 invoices processed, 234 fraud incidents were detected with a 94% accuracy rate. The accounting team received real-time AI detection with instant alerts.



1,500% ROI

For every dollar the CPG company invested in this fraud detection system, they saved \$15 in prevented fraud.

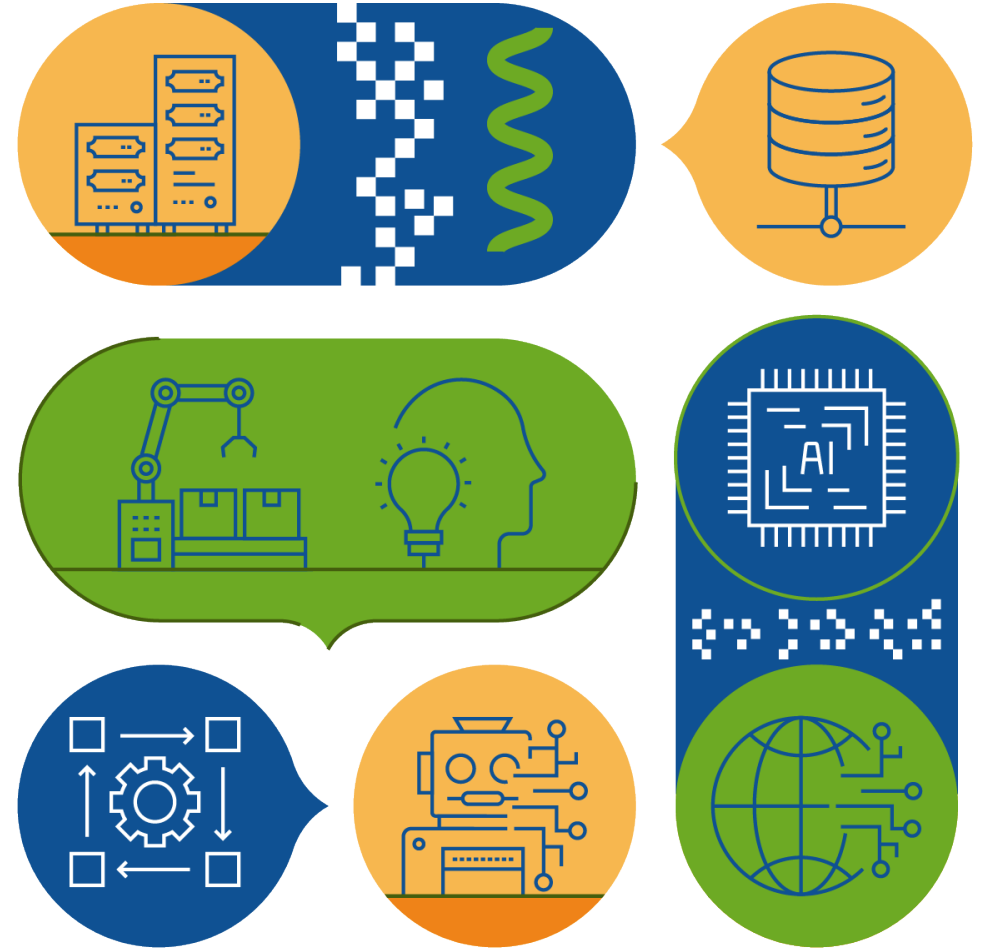


More Time to Investigate and Improve

With automated screening handling routine reviews, AP specialists now focus their expertise where it matters most—investigating complex cases and improving financial processes rather than sifting through transaction data.

Datavail's AI/ML Approach

- ✓ AI/ML is grounded in data – without a good data foundation, you can't set yourself up for an AI transformation
- ✓ Datavail has deep expertise in analytics, data management, and cloud migrations, with flexible engagement models to augment or fully manage your AI/ML journey
- ✓ Our team gets your data ready for AI and guides you along the path with roadmap assessments and Proof of Value solutions



Understanding Your AI/ML Journey

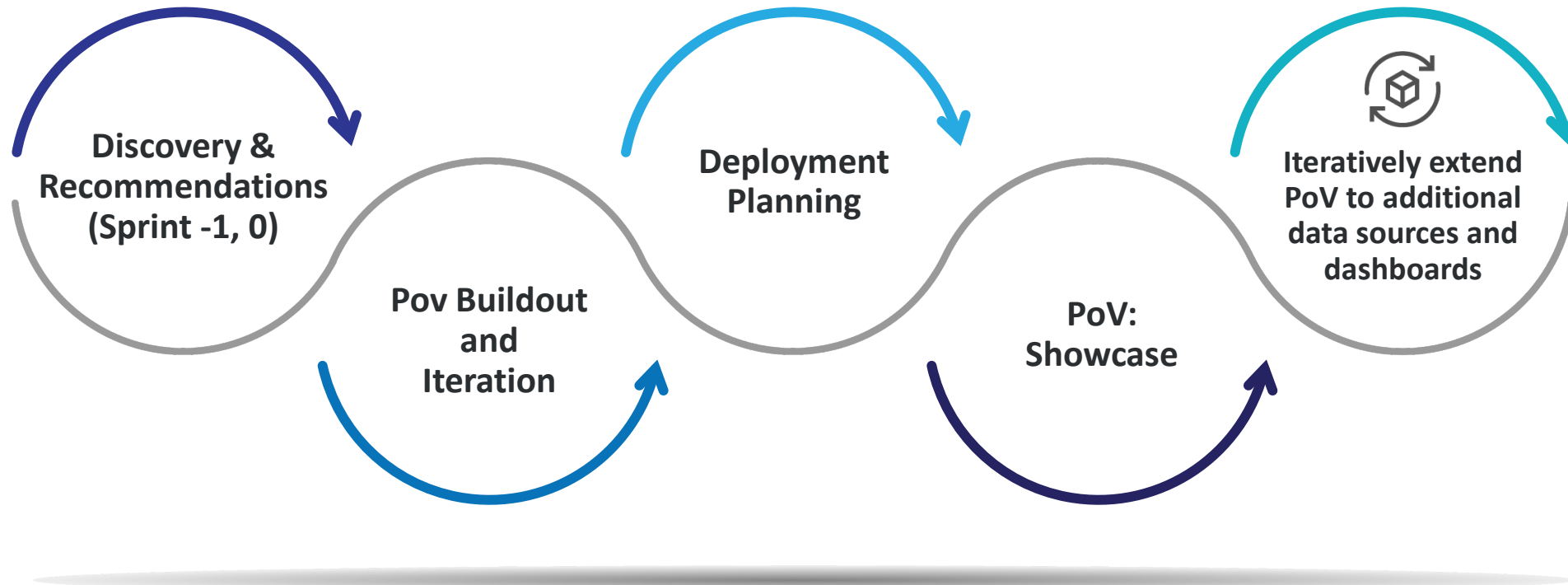
At Datavail, we start by immersing ourselves in your world:



Only by understanding your unique situation can we guide you on the right AI/ML path.

We cover these three items during our Roadmap Engagement.

Datavail's AI PoV Solution Approach



AI Innovation Workshop

1/2 Day Introduction

Accelerating Business Transformation with AI

Through guided ideation and identification of use cases, our approach blends strategic visioning and actionable insights to enable participants to drive AI powered innovation

Workshop Agenda

Step 1: Introduction to AI and Business Innovation

- ✓ Educating the participant as to what is AI (use Demos)
- ✓ Understanding AI trends and industry impact
- ✓ Exploring potential use cases for AI

Step 2: Ideation and Use Case Identification

- ✓ Interactive brainstorming session to identify AI opportunities (uncovering business needs)
- ✓ Prioritization of high-impact AI use cases

Step 3: AI Data Platform Overview

- ✓ Introduction of AI services (based on cloud provider)
- ✓ Exploring data-driven AI solutions

Step 4: Hands-on Exploration and Prototyping

- ✓ Developing proof-of-concept AI solutions

Step 5: AI Roadmap and Next Steps

- ✓ Create actionable implementation strategies
- ✓ Establishing success metrics and governance

Deliverables

- ✓ Documented AI use cases tailored to business needs
- ✓ AI Adoption roadmap with actionable next steps

Modernized Offering Focus: Agile AI & Analytics Enablement

We move beyond traditional assessments by offering a sprint-based, interactive journey to help you unlock the full potential of your data.

Our approach blends strategic visioning with rapid experimentation to deliver measurable outcomes across analytics, cloud, and AI.



Step 1:

Discover & Prioritize (1-2 weeks)

We lead interactive workshops to uncover high-impact data and AI use cases, assess your current environment, and prioritize opportunities based on business value and readiness.



Step 2:

Prototype & Modernize (2-3 weeks)

We execute focused sprints to prototype analytics dashboards, migrate workloads to modern cloud platforms like Redshift and Snowflake, and pilot generative AI use cases using AWS Bedrock and AgentCore.



Step 3:

Scale & Support (6-8 weeks)

We provide managed services to scale successful pilots into enterprise solutions, continuously enhance your data platform, and sustain long-term business impact.

Datavail AI/ML Services

Data Management – AI/ML, Predictive, Generative and Agentic



- Assessments
- Roadmap
- Proof of Concept/Proof of Value
- Consulting – Architecture, Design, and Deployment to Implement and Integrate
- Development
- Managed Service post implementation (Monitoring and Tuning of the Model)



Database

- Database development and management – structured and unstructured
- Vector Databases



Enterprise Apps

- Selection, Design, Implementation of ERP and EPM, inclusive of newly embedded AI capabilities in Finance, HR, Supply Chain modules

Datavail AWS Expertise

AWS Competencies

- ✓ Windows Workload Competency
- ✓ Oracle Competency
- ✓ Data & Analytics Competency
- ✓ Migration Competency

AWS Programs

- ✓ Data Program
 - Database, Analytics, AI
- ✓ Migration and Modernization Program
- ✓ OLA Program
- ✓ Well Architected Program
- ✓ Immersion Day Program

AWS Competency Roadmap

- ✓ Premier Tier FY'26
- ✓ MSP Competency FY'26
- ✓ Gen AI Competency
- ✓ Industry Focused Competencies

AWS Service Delivery Partner

- ✓ Amazon RDS, Aurora
- ✓ Amazon EC2
- ✓ AWS WAF
- ✓ Amazon Redshift
- ✓ Amazon QuickSight
- ✓ Amazon Glue

We've done this before...

1000+

Consultants focused on Cloud deployments and managed services

300+

Successful Migrations and Modernizations

10+

Years AWS Cloud Experience

500+

Customers with average lifespan of 7+ years

200+

AWS consultant certifications



- AWS Glue Delivery
- Amazon RDS Delivery
- Amazon Redshift Delivery
- Amazon QuickSight Delivery
- Oracle Services Competency

- Data & Analytics Services Competency
- Amazon EC2 for Windows Server Delivery

- AWS Microsoft Workloads Services Competency
- Migration and Modernization Services Competency





Thank You



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