

# Increase in Revenue by Anticipating Stockouts for Limited-Edition Collectible Toys

## Problem

A collectible toy manufacturer encountered **recurring stockouts for their limited-edition releases**, causing dissatisfaction among customers and impacting brand loyalty.

The company found it challenging to predict sudden demand spikes driven by social media trends and viral posts, which led to **inadequate inventory allocation** and missed sales opportunities.

## Solution

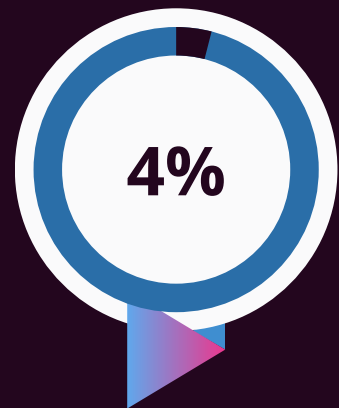
With Granularity's NLP and AI-driven trend analysis, trained on tens of thousands of social media posts and search engine results, the toy manufacturer was able to detect an upcoming trend.

This real-time monitoring revealed a **35% increase in social media mentions** of a similar collectible last month, primarily due to popular unboxing videos and influencer posts.

## Outcomes

Empowered by Granularity's insights, the company refined their inventory allocation and pre-order strategies, resulting in a **14% increase in revenue**.

By monitoring market data, the manufacturer adjusted their pre-order limit, allowing them to effectively distribute their limited-edition toys across various channels and regions. They also implemented a waitlist system, capturing customer interest and ensuring future sales.



# Savings in Inventory from Sustainable Outerwear in Real-Time Market Analysis

## Problem

A mid-sized clothing retailer experienced a **30% drop in sales** for a new line of heavyweight winter coats, leading to increased warehousing costs and surplus inventory.

The unexpected downturn puzzled the company, as their **previous baseline forecast predicted strong** for the season.

## Solution

With Granularity's market trends platform, the retailer discovered that consumer preferences had shifted towards eco-friendly outerwear.

Granularity estimated market demand shifts caused a **50% decline in demand** for their traditional winter coats.

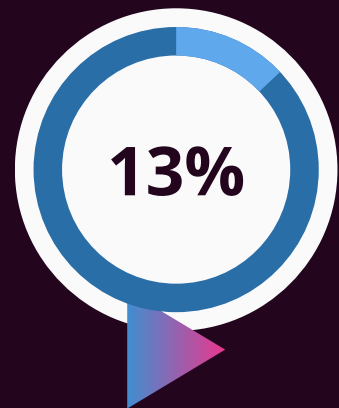
Granularity's analysis revealed that this trend would continue.

## Outcomes

With these insights, the retailer adjusted allocation to heavyweight coat orders, **reducing immediate inventory costs by 4% for the category.**

They then increased allocation to a new line of sustainable outerwear, which strengthened their brand as environmentally conscious.

Granularity's solution allowed the company to make **data-driven decisions**, optimizing inventory management and product strategy.



# Decrease in Shipping Costs by Optimizing Channel Distribution for Gourmet Chocolates

## Problem

A premium chocolate manufacturer faced the **challenge of distributing their gourmet chocolate line** efficiently to brick-and-mortar retail stores in Toronto, Los Angeles, and Seattle.

The company **struggled to allocate their inventory effectively**, resulting in inconsistent stock availability and suboptimal sales performance.

## Solution

The chocolate manufacturer turned to Granularity's geographic demand modelling for a data-driven solution.

Granularity's analysis provided detailed insights into the modelled demand for gourmet chocolates in each market, revealing that **Toronto favoured dark chocolate by 60%**, while Los Angeles and Seattle showed a preference for milk chocolate at 55% and 65%, respectively.

## Outcomes

Equipped with Granularity's geographic insights, the manufacturer optimized their channel distribution strategy.

They increased the allocation of desired products to specific channels, optimizing fulfillment.

As a result, the manufacturer saw a **13% decrease in shipping costs and reduced out-of-stock occurrences by 25%**, enhancing customer satisfaction and brand loyalty.

# OUR OFFERINGS FOR SCALE AI PROGRAMS

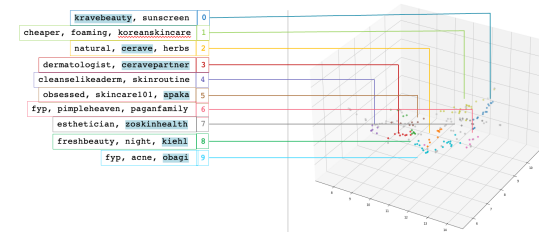
## External Data Pipelines for Raw Data

AI training data streamed from 4+ APIs



## Trend Indicators & Predictions

Market data cleansed and transformed insights on retail products generated from external data sources



## Topic Modeling & Conversational AI Applications

Key conversational topics extracted from social media and search data sources



## Data Engineering & Machine Learning Engineering Capabilities

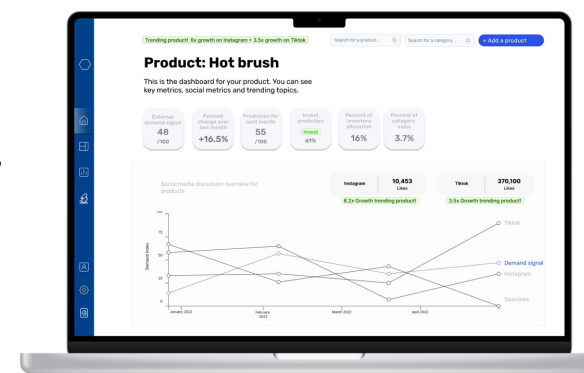
In-house talent with experience in implementations for global enterprises



## End-to-End Platform on Merchandising Analytics

Platform on Merchandising Analytics

- ✓ Market benchmarks on assortment mix
- ✓ Real-time topic modeling
- ✓ Ongoing trend indicators



## SAMPLE SCALE AI PROJECT

### Problem

- Develop an AI solution that optimizes product lines by generating a customized planogram for each location, delivering solutions to effectively merchandise each store through the use of **real-time data optimizing operations and increasing sales** based on customer behaviour patterns
- Apply merchandising principles to **better respond to local demand, seasonal needs** and store space in a much more dynamic manner

### Solution

- An AI-based planogram optimization engine
- Develop a UI in conjunction with the dealer community to understand what the user experience should be

### Results

- AI will help store owners make and product placement **data-informed decisions about inventory**
- Expected to streamline store operations and increase sales based on meeting local customer demand

## WHERE GRANULARITY COULD HELP

External Data Pipelines for Raw Data: **Improve accuracy by extracting location based search data** from pre-built external data pipelines to be used as model features

Trend Indicators: **Improve user experience and accuracy by providing near real-time data on trending products for store managers** have a proactive view of the market across their categories

Data Engineering & Machine Learning Engineering Capabilities: **Accelerate speed to market by contributing best practices and development hours** for structuring data pipelines for this complex use case

## SAMPLE SCALE AI PROJECT

### Problem

- Provide solutions that **extend from product discovery to delivery** for retail partners
- Enable **retailers to use data to better predict** customer demand, optimize inventory, and deliver products faster

### Solution

- An AI-powered retail supply chain platform that will connect people and physical and virtual spaces

### Expected Results

- Insights derived from the digital platform will be used to **propel development of AI-enabled solutions that service Canadian retailers**

## WHERE GRANULARITY COULD HELP

Topic Modeling: Augment product features by **providing analytics on market conversations for product discovery**

External data pipelines for raw data: Augment product features by providing **live-streamed raw data from social media on consumer themes** configured for the use-case

Data Engineering & Machine Learning Engineering Capabilities: **Increase scalability and speed to market by providing best practices for data pipelines** and data engineering

## SAMPLE SCALE AI PROJECT

### Problem

- Develop a solution that **improves demand forecast accuracy** for a grocery retailer

### Solution

- **An AI tool** that improves demand forecast accuracy

### Expected Results

- Improve supply chain aspects that are impacted by forecast accuracy, including: fulfillment, inventory, assortment, and planograms
- Allow for **optimal management of store supply** and ensure the best possible shopping experience for consumers

## WHERE GRANULARITY COULD HELP

Trend Indicators Accelerate speed to market by providing pre-built features extracted from market data APIs to be used in the demand forecasting model

Data Engineering & Machine Learning Engineering Capabilities Increase capacity by adding resources and expertise in data engineering for retail transaction data

External data pipelines for raw data Improve model accuracy by providing raw data for model training

 granularity

Reach out at:  
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# Hi, we're Granularity

trends by  granularity

Granularity empowers retailers to stay ahead of viral trends with an AI-powered platform that predicts social media and search trends.

We drive product-level insights from TikTok, Instagram and Google - bringing them together into one dashboard for planners to action.

We're made of:  
Data Scientists + Engineers  
Certified Forecasters

As featured in:



And backed by:

