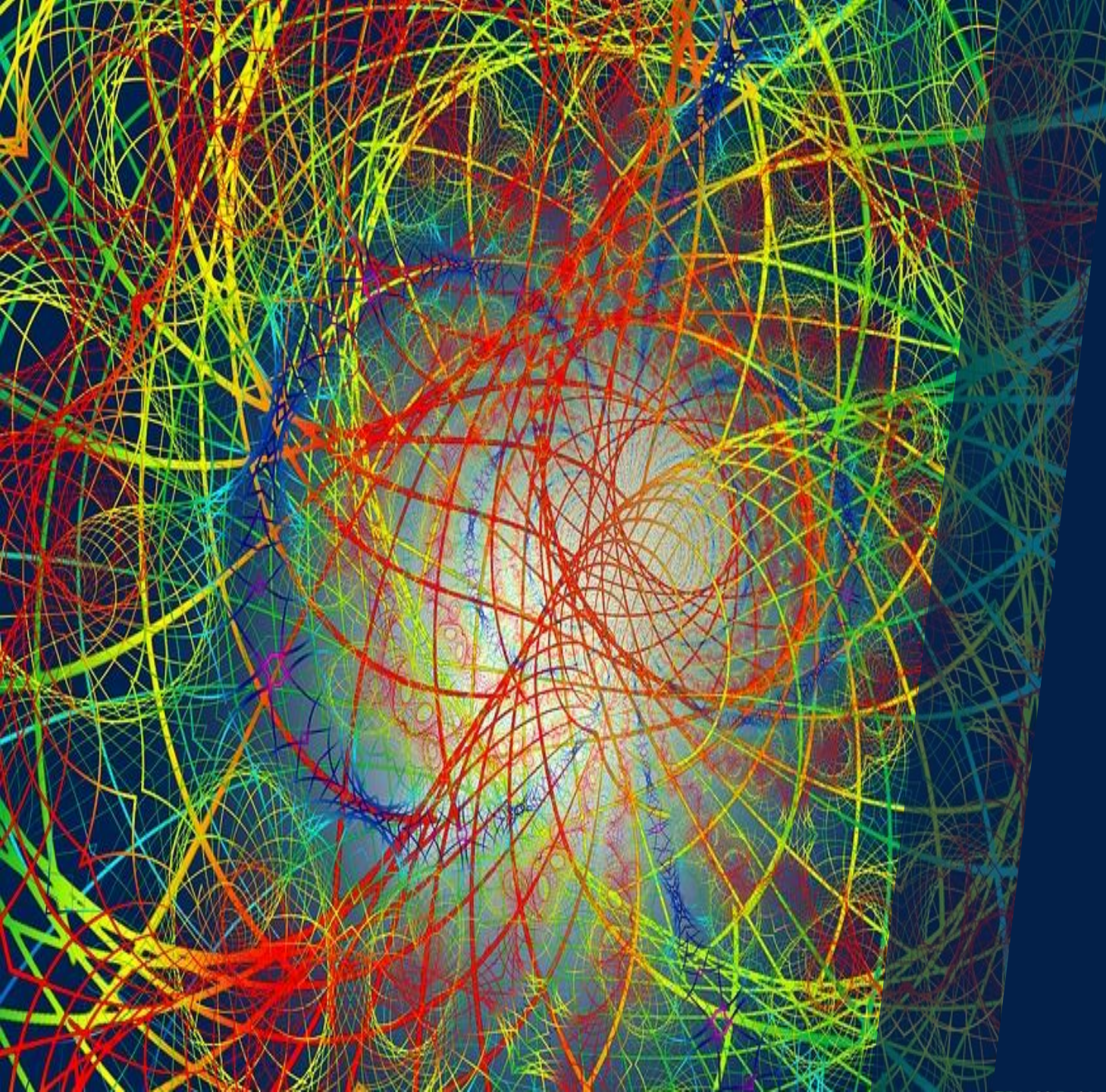


Align Your Operational Cadence with the Natural Rhythm of Business



Cadence Creates Efficiencies and Reduces Risks

Hypercompetitive markets are chaotic and, thus performance fluctuates somewhat unpredictably. An IBM sales study indicated that “chaos can be managed with cadence.” Cadence is the alignment of people and resources for a standardized, consistent and repeatable execution. Thus, cadence requires the creation of execution patterns.

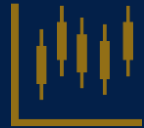


Today we know that this is not enough to reduce chaos. Operational cadence must further align with the natural rhythms in business to fully control market chaos.



Natural Rhythms

Natural rhythms, also known as recurring patterns, sequences and motifs, occur in nature, in machines and in business.



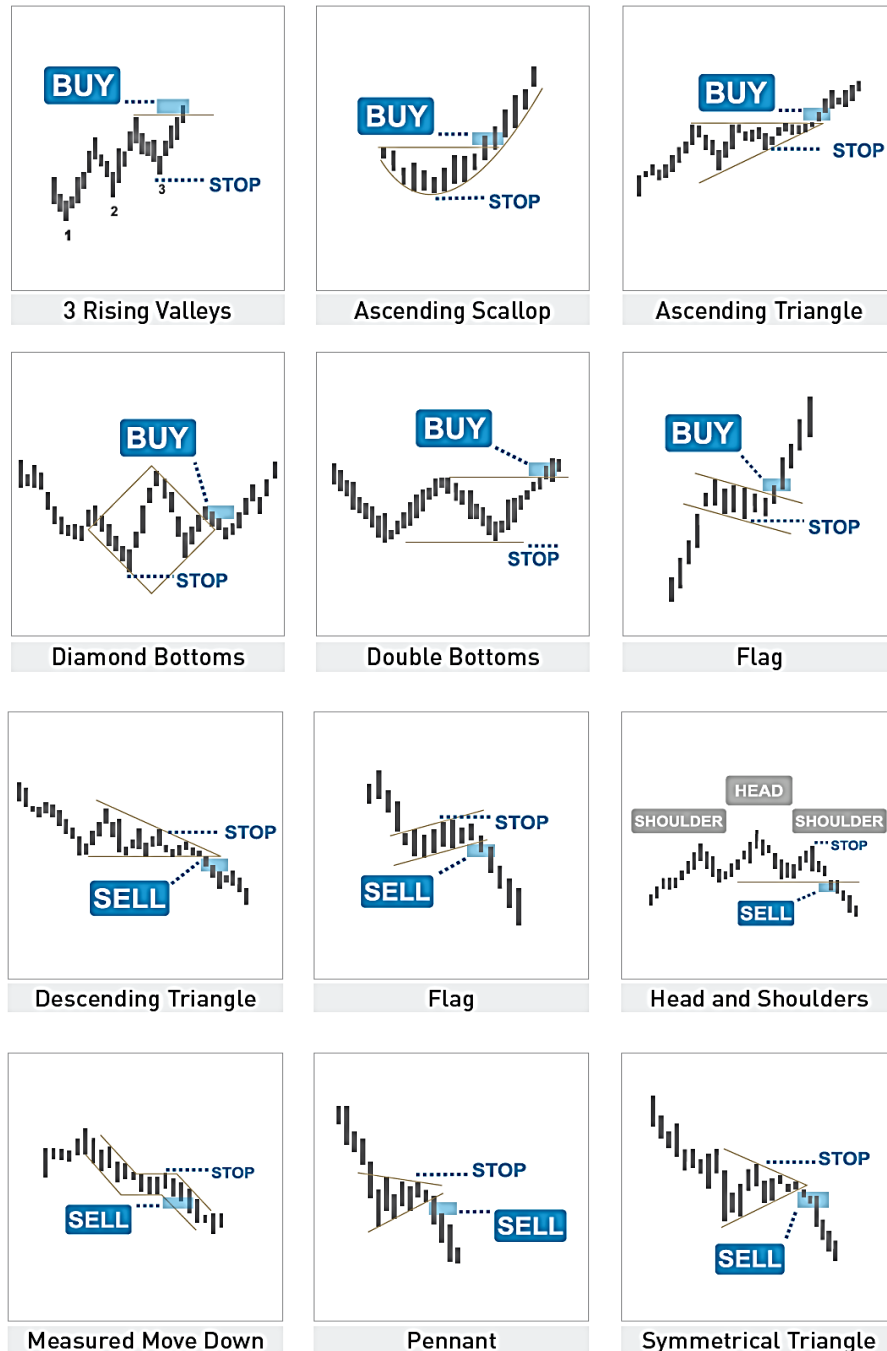
The heart beat has a regular pattern, music has recurring motifs, and stock trading has distinct market driven patterns that trigger buy and sell decisions. Knowing the recurring motifs leads to fast, fact-based decision-making that can save or make money.

Market Rhythms Example

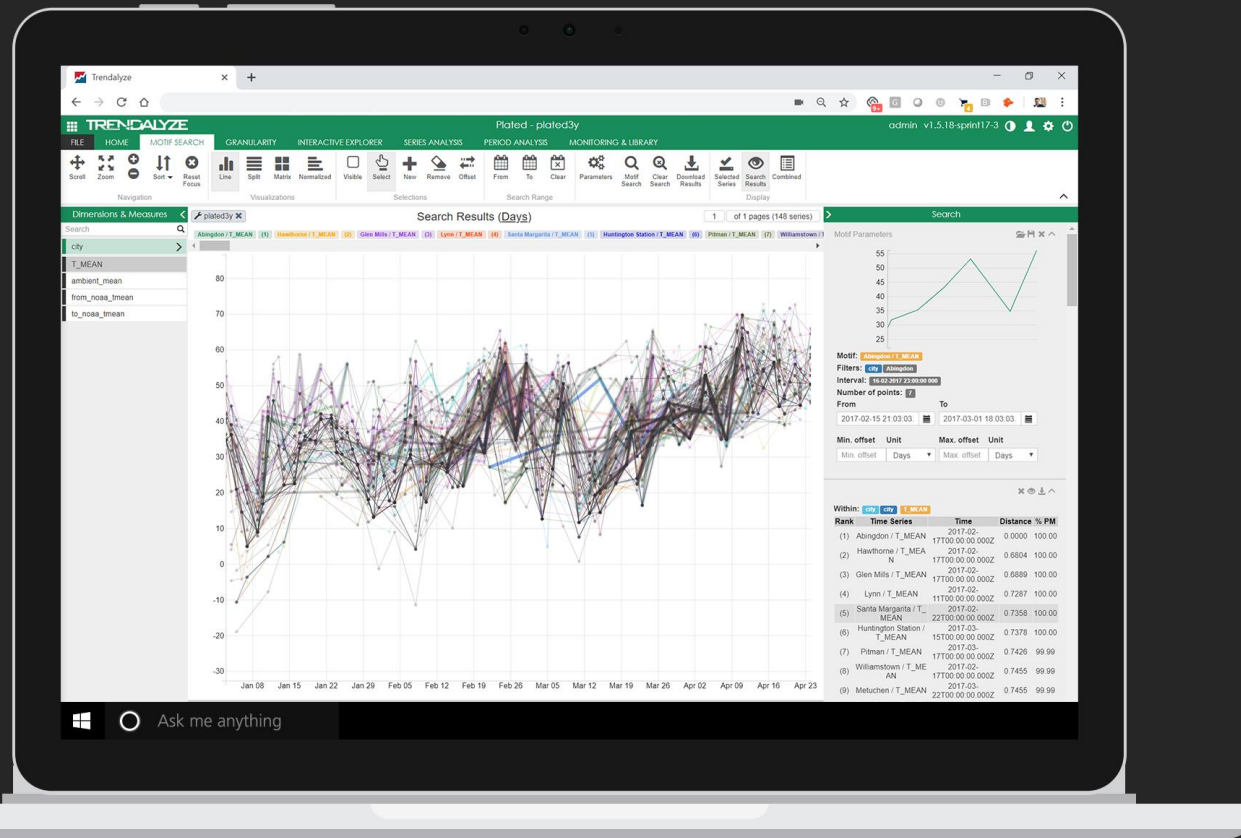
Despite being perceived as chaotic and unpredictable, the stock market and all traded asset show natural rhythms. Traders study the patterns to identify meaningful motifs. If a meaningful motif is spotted again, they know what trade to execute.



All industries have such business rhythms. In retail, every SKU and every store has a rhythm that is captured in its sales history. The granular (hour-by-hour or minute-by-minute) sales history time line is like DNA. It contains repeating motifs that reveal valuable opportunities.



The Challenge of Finding Business Rhythms in Retail

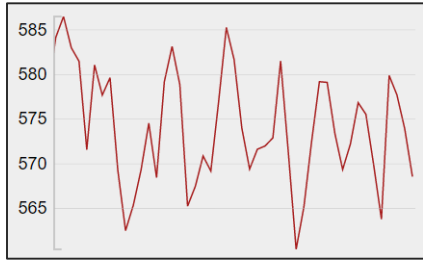


The Haystack Is Too Big

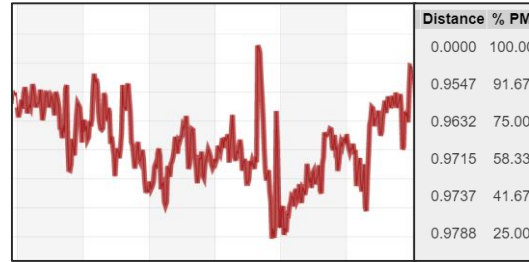
A rhythm-based strategy, requires retailers to identify meaningful motifs at the grain. They must profile the sales DNA of every SKU, store, and every SKU within every store. The combinations produce millions of individual sales time series histories for investigation.



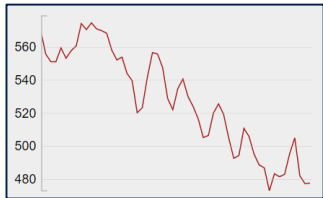
Motif intelligence leverages AI 3.0 to uncover and systematize the recurring business motifs. Retail professionals can leverage the micro-trends insights to organize the haystack into monetizable strategies and actions.



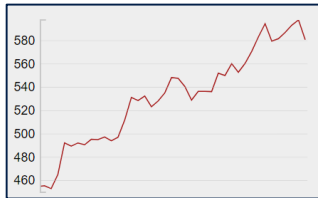
Normal Periodic Pattern



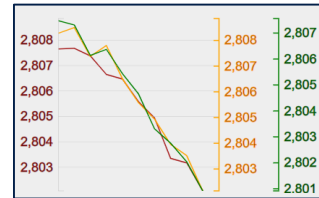
Period-on-Period Trend Changes



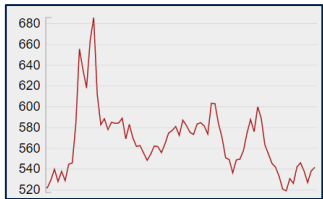
Down Trend



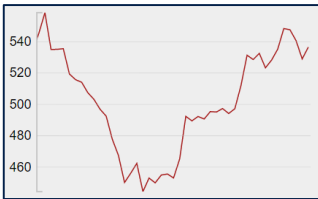
Up Trend



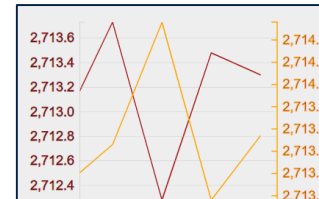
Correlated Trends



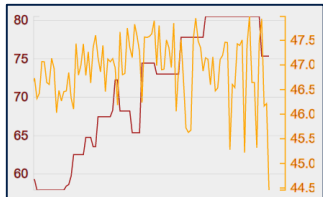
Peak-and-Level Off



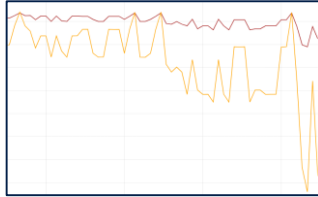
Dip-and-Raise



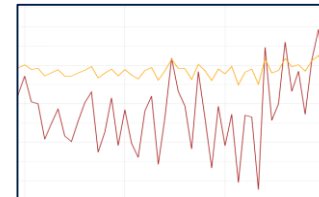
Cannibalization



Tipping-Point



Alarming Trend



No Cannibalization

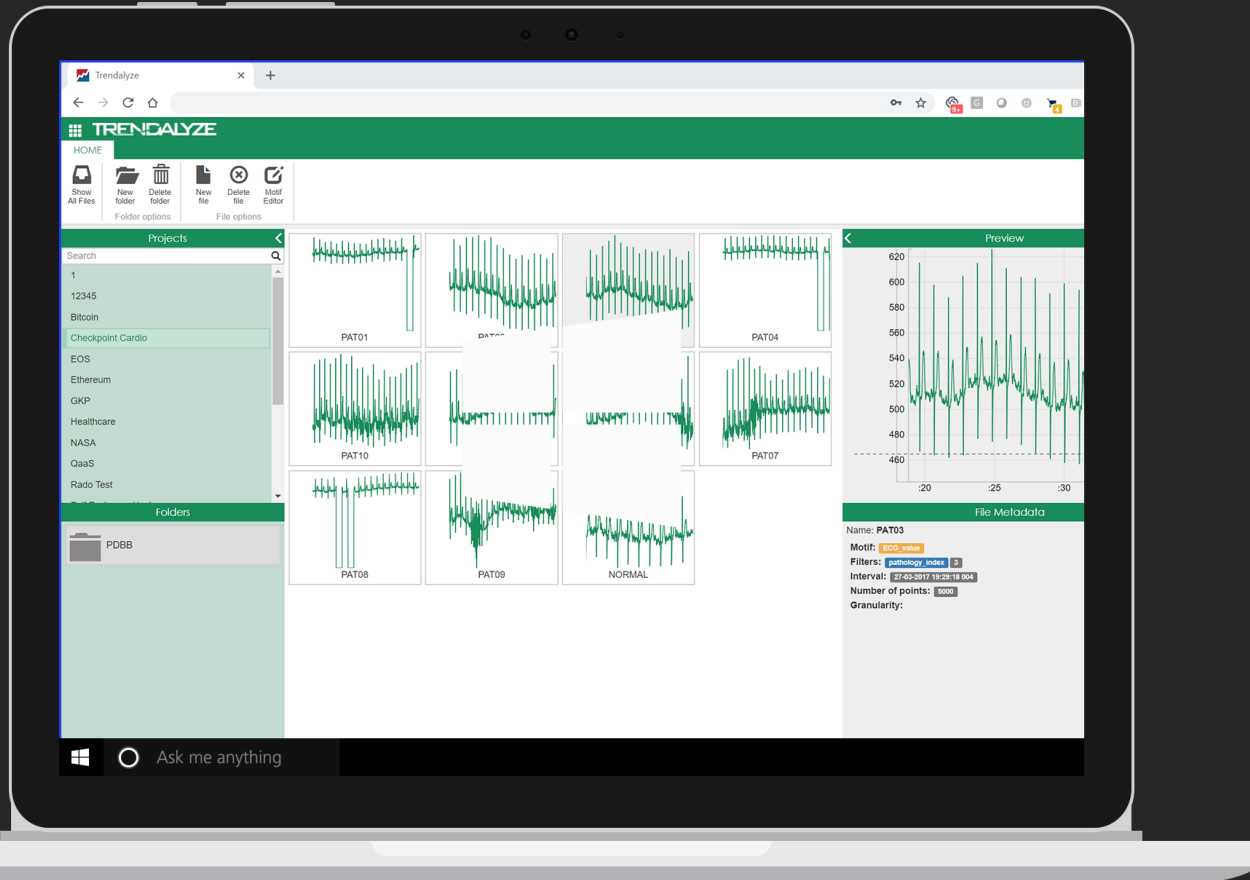
Retail Motifs

Knowing the normal patterns of every SKU and every store establishes a baseline and allows to streamline many decisions. Period-on-period motif monitoring identifies items and stores with pattern deviations that may require action.



Spotting various item-level trends may trigger various actions: supply adjustments, promotional opportunities, precise timing of liquidation discounts, pricing decisions, assortment decisions, shelf layout and many more.

Better to Manage the Trends than their Effects



Phase 1: Research and Learning

- Step 1: Identify granular level transactional data for stores and items
- Step 2: Profile the data using AI 3.0 to identify and annotate meaningful motifs
- Step 3: Create a business library with different categories of monetizable motifs

Phase 2: Operationalization

- Step 4: Identify actions to be take when each meaningful motif occurs
- Step 5: Name the stakeholders who should be alerted when motifs occur
- Step 6: Create monitoring schedules for the motifs in the library
- Step 7: Determine decision/action automation for sets of motifs
- Step 8: Set intelligent motif predictions for high risk or high opportunity trends

Monetizing Meaningful Motifs in Retail



AI 3.0 Motif Intelligence™

Objective / Problem Statement:

With the Trendalyze platform you can address the critical business challenges that most of the online and offline retailers are facing today, such as:

- How to know and monitor for micro trends at SKU, store, channel level
- How to expect and act fast when key strategic micro trends occur, as well as how to instantly recognize new and unexpected micro trends
- How to adjust the prices and discounts to optimize profit/volume/revenue

Expected Outcome of Analysis:

- Identify meaningful business motifs and organize them into a library
- Determine a monetization and action plans for each meaningful pattern
- Perform back testing to determine the overall economic effect
- Define an operationalization strategy and outcomes KPIs
- Define key areas for motif intelligence predictions

Business Benefit

- Understand the natural rhythms of your business at the most granular level to align it with your operational plans and cadence
- Get early warning signs for critical trend changes in the business and shorten the time and need for after the fact root cause analysis
- Improve your profit by identifying optimal motif-based price and promotion strategies

Challenges

- Time to get the appropriate data from operational systems
- Availability of customer business experts to review the AI 3.0 discovered motifs, as meaning can only be attributed by experts

Source Data

- One or more years of historical transactional data time-stamped at the most granular level (minutes or hours)
- The data contains the following dimensions: SKU, category, brand, stores, geographies, promotions and discounts, sales price and quantity
- Scope of analysis can be adjusted: store level only, category level, set of SKUs

Analytic Techniques

- Trendalyze Motif-Mining
- Trendalyze Motif Search
- Trendalyze Motif Intelligence
- LSTM

Success Criteria

- Identify at least five previously unknown systematic trends (surprises) that can improve store/category performance
- Identify at least ten motifs that can be used for systematic monitoring of sales, promotions and operations in general
- Create a strategy for operationalizing motif intelligence with real time monitoring and trend predictions
- Improve analytics productivity by automating micro-trends analysis and period-on-period trend monitoring
- Shorten the cycle from discovery and analysis to action in order to prevent sunk costs and to monetize short-lived opportunities

Benefits

High

Feasibility

High

TRENDALYZE