

AI PERFORMANCE IN FOCUS

by SYNERGISE

OMNICHANNEL
RETAIL



Smart Offers:

AI-Driven Approach to Personalized Promotions

From Random to Relevant: **Personalized Promotions Boost** **Sales and Frequency by 30%**

This is not just another offer. Nor is it a simple recommendation campaign. This case is a well-balanced combination of both. It delivers personalized promotions as exclusive coupons, tailored to each customer's preferences, helping drive more visits to offline stores. The result? A powerful engagement tool and a consistent revenue driver that contributed to 30% higher average spending and 35% more frequent purchases compared to random offers. This hybrid solution, developed by an omnichannel retailer and powered by the Synerise recommendation engine, leverages a robust mobile application used by millions of customers to deliver real-time, AI-driven offers.

Highlights

Goal

Drive growth in both **purchase frequency** and **average customer spending** by leveraging the recommendation engine, continuously optimizing its logic, and expanding the promotional pool.

Key Test Group Performance

Average Spending (\$)	Purchase Frequency (🛒)
vs. Control Group (2025 evaluation period) +~30%	vs. Control Group (2025 evaluation period) +~35%
2024 vs. 2025 comparison period +~9%	2024 vs. 2025 comparison period +~20%



The Data Behind Personalization

„nearly 83% of all consumers are interested in customized discounts and promotion offers”

Personalized Offers Are Powerful — But Too Often Off-Base, PYMNTS, 2024

„Compared to brands with low personalization maturity, personalization leaders were 48% more likely to have exceeded revenue goals in 2023 [...], 71% more likely to report improved customer loyalty, 67%, more likely to report increased frequency of purchases by customers”.

Personalization: It's a value exchange between brands and customers, Deloitte Digital, 2024

“Relevant discounts (69%), rewards (54%), and personalised coupons (49%) are some of the key factors that shoppers consider when weighing up a retailer's value proposition.”

How to keep hold of your customers, dunnhumby, 2025

“23% of shoppers across Europe said that personalised offers from retailers had prompted them to make a purchase they weren't planning on.”

How to keep hold of your customers, dunnhumby, 2025



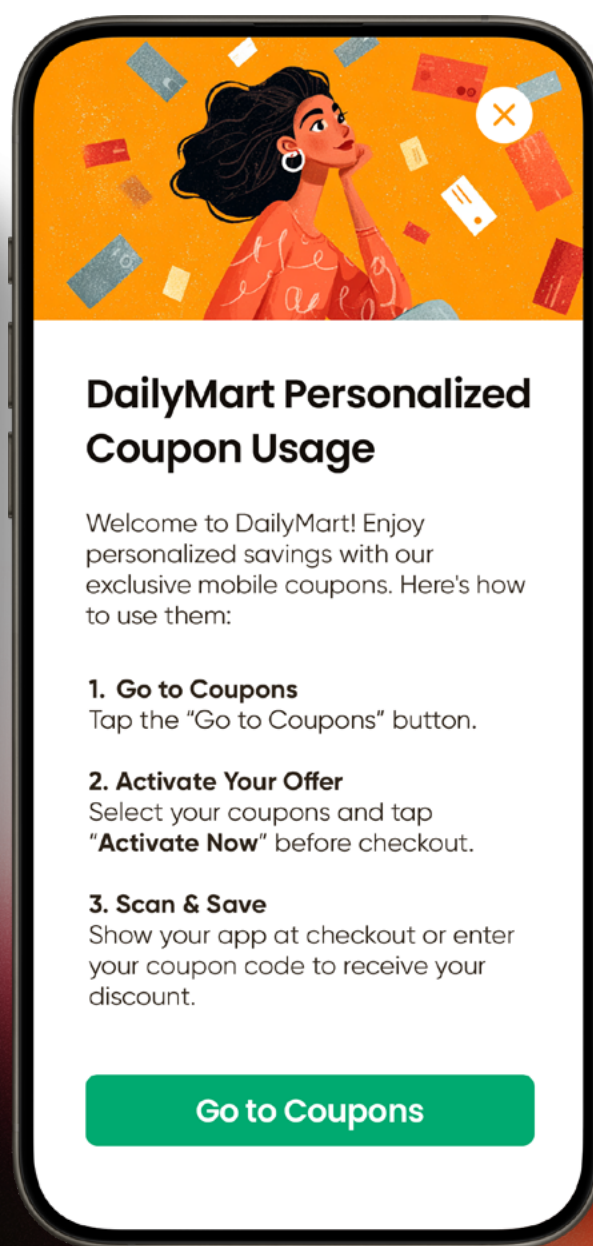
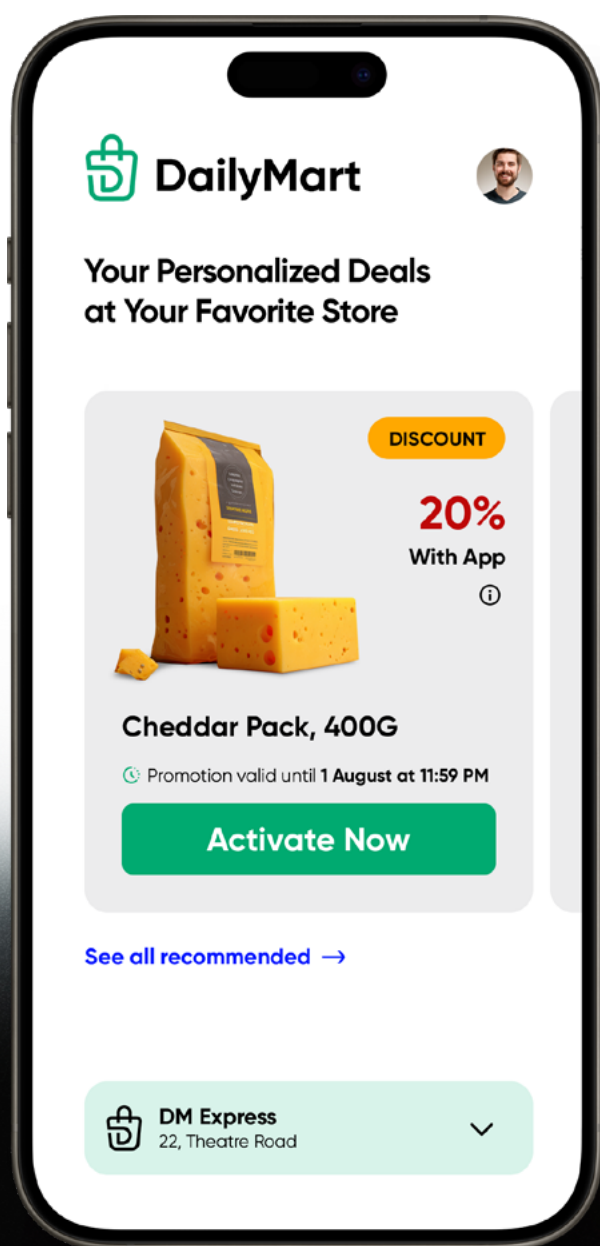
The Story Behind Success

Consumers today are overwhelmed with generic offers and suffer from banner blindness. To break through the noise, our client introduced **exclusive, personalized promotions** available in their mobile app, following an online-to-offline model that drives in-store visits and customer engagement at the point of sale. In addition to standard coupons, each customer receives fixed number of customized offers selected from a pool of hundreds of products. While the value of the incentive remains fixed, the product selection is tailored to each customer's preferences. To redeem a coupon, the user must first activate the promotions within the app. This deliberate action reinforces engagement and intent.

Numerous studies confirm that this type of relevance significantly increases the effectiveness of promotions. When customers are presented with discounted products they regularly buy or prefer, the likelihood of purchase rises, even if the product wasn't originally on their shopping list. This often leads to incremental sales, either through impulse buying or increased basket volume. As highlighted by the studies on the previous page, personalization enhances both engagement and conversion.

To maintain this level of relevance and ensure that offers stay aligned with evolving customer behavior, The Synerise AI engine recalculates and reassigns coupons **in real time** as the customers engage across channels, with varying frequency and at different times. These offers are not only relevant but also timely, dynamic, and deeply personalized, fostering a stronger emotional connection and increasing long-term customer loyalty.

Over time, the campaign has evolved **from a promising pilot into a strategic growth lever**. By expanding the pool of available offers and refining personalization logic, the retailer significantly increased its ability to match the right promotion to the right customer. This use case demonstrates that **personalization strategies can be built gradually and effectively**, without the need for a large-scale launch from day one.

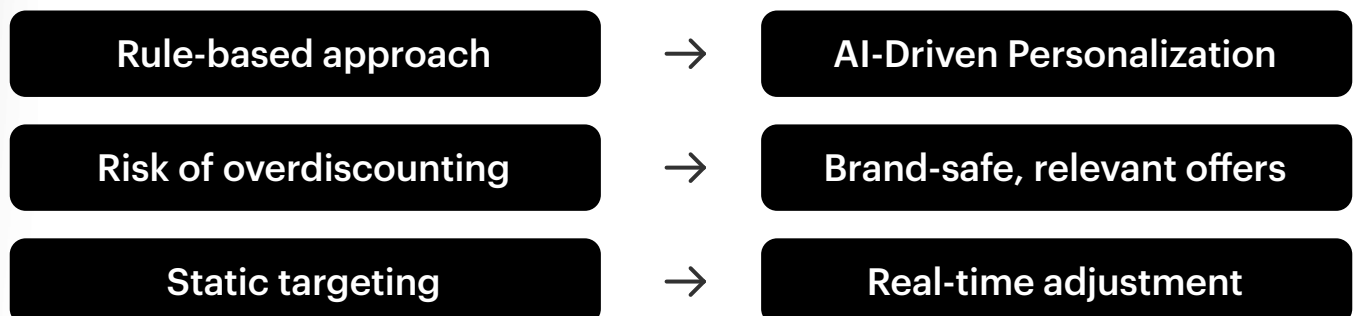


Strategic Insight:

AI-Powered Promotion Management

Managing large-scale promotional operations can be both financially and operationally demanding, especially when promotions represent a significant share of total revenue. Thanks to AI-driven personalization, retailers can automate offer assignment for all levels of promotional complexity, including retailer's media and monetization strategies, without relying on batch data analysis and processing or rule-based segmentation. This not only **reduces operational complexity** but also **protects brand value** by avoiding overexposure to different offers and ensuring that coupons are targeted and relevant. As a result, even with a high promotional share, the campaign costs remain optimal, driving higher purchase frequency and increasing average basket size, while fostering long-term customer loyalty.

AI balances performance and complexity



Personalization in Action: The Data Breakdown

How do we measure the results? Customers are randomly assigned to **4 test groups** (T1-T4), each powered by a unique recommendation logic. Variant T1 functions as a **control group**, where customers receive random offers not based on individual behavior. The remaining variants are driven by **customer shopping preferences**, primarily based on historical transactions, complemented by different factors, such as the variety of offered products, the maximum number of similar products, the frequency of delivering the same items or importance of a product's popularity.

To ensure consistency and eliminate potential bias, no changes were made to the placement of personalized promotions within the mobile application, discount levels, or number of periodic coupons during the test period.

Variant T4 has emerged as the most effective, delivering the highest average spending and purchase frequency vs. control group, demonstrating an optimal balance across all personalization parameters.

Variant T3 also delivered strong results, confirming the potential of fine-tuned AI recommendation strategies. All other test groups, excluding the random group, demonstrated notable improvements in key performance indicators, confirming the effectiveness of the strategy optimization in 2025:

Performance Metrics by Variant – 2025 Evaluation Period

Group	Average spending – Index 100 for control group (T1)	Purchase frequency – Index 100 for control group (T1)
T1	100	100
T2	116	117
T3	126	133
T4	130	137

Average spending – average customer spending for transactions where the personalized promotions were used.

Purchase frequency – average frequency of shopping with personalized promotions.

Key Variants Performance – 2024 vs. 2025 Comparison Period

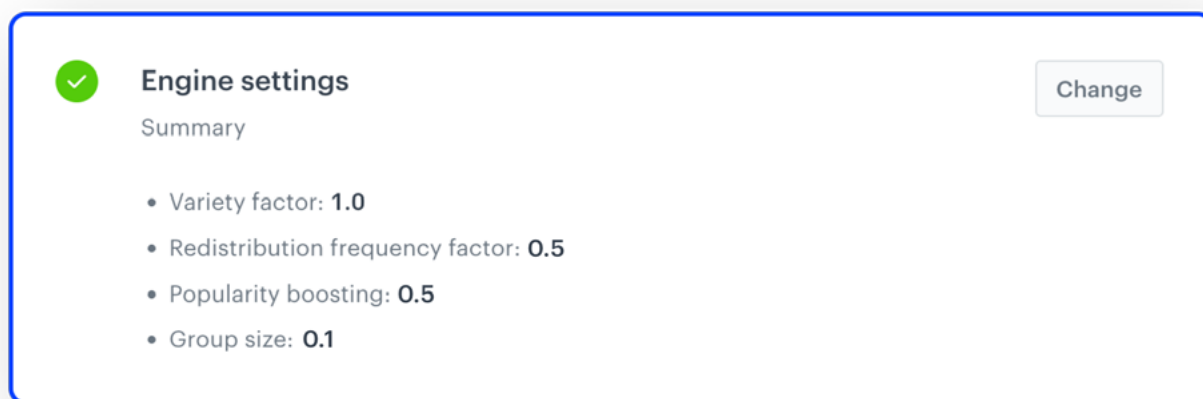
Variant	Average spending	Purchase frequency
T3	+~12%	+~15%
T4	+~9%	+~20%

Key Variants Compared to Control Group T1 – 2025 Evaluation Period

Variant	Average spending	Purchase frequency
T3	+~26%	+~32%
T4	+~30%	+~35%

The data clearly shows that personalized promotions, especially in **variants T3 and T4**, significantly outperform random offers, validating the strategy's effectiveness. Expanding the promotional pool sevenfold enabled more precise targeting, which translated into stronger results for the leading test groups.

However, what drives the success of variant **T4**? Its effectiveness lies in the configuration of the recommendation engine, which ensured maximum diversity, freshness, and relevance of offers, while maintaining a balanced approach to product popularity.



The key parameters were:

- **High product variety (Variety factor = 1.0):**

This parameter, adjustable from 0 to 1, defines how diverse the recommended products should be. A value of 1.0 means the engine selects a highly varied set of items, increasing the likelihood of matching individual preferences.

- **Low repetition of the same items (Redistribution frequency = 0.5):**

With a value of 0.5 (on a scale from 0 to 1.5), promotions were refreshed frequently, minimizing the chance of users seeing the same product repeatedly and keeping the experience dynamic.

- **Balanced popularity influence (Popularity boosting = 0.5):**

With a mid-range value of 0.5 (on a scale from 0 to 1), popular products were considered, but not overly prioritized, allowing for a mix of mainstream and niche items tailored to each user.

- **Minimal similarity in recommendations (Group size = 1):**

This setting defines the maximum number of similar products that can be offered in a single promotional cycle. A value of 1 guarantees that users receive distinct product recommendations, avoiding clusters of nearly identical items.

Synerise's Approach

Synerise personalization engine is powered by a robust and scalable AI architecture that learns continuously from behavioral data, such as transactions, web interactions, and catalog updates. It combines two proprietary key technologies: **EMDE**, which compresses multi-dimensional behavioral sequences into compact representations that preserve context and time; and **Cleora**, a fast, inductive graph embedding algorithm that models relationships between users, products, and categories at scale.

This hybrid architecture allows Synerise to generate rich vector representations for every entity in the ecosystem within minutes. These embeddings are refreshed on a rolling schedule for example, personalized coupon sets can be re-evaluated periodically (depending on configuration) ensuring that recommendations and promotions remain timely and relevant. The AI system routes these embeddings through lightweight prediction models that support real-time ranking, similarity search, and next-best-offer decisions across all customer touchpoints.

Learn more about the technology and architecture behind Synerise on our [AI Research Blog](#)



Performance-Driven Optimization

During the comparison period between 2024 and 2025, the promotional pool was expanded sevenfold. Synerise's AI-powered recommendation engine successfully leveraged this growth by intelligently matching relevant products to individual preferences, having trained on a significantly larger and more diverse catalog. This optimization ensured precise targeting and sustained high performance, even as the complexity of matching offers to individual preferences increased.

To further enhance performance, the distribution of test variants is regularly reviewed and adjusted based on **real-time results**. Variant **T4**, which consistently outperforms others across all key metrics, now serves as a benchmark for refining the recommendation logic in other groups. This data-driven approach ensures that the campaign remains agile, scalable, and aligned with evolving customer behavior.

Opportunities for Expansion

Looking ahead, several enhancements might be implemented to further elevate the impact of personalized promotions:



Increased Offer Visibility and Volume

The visibility and number of active personalized coupons per user can be expanded, allowing for greater variety and relevance in each promotional cycle.



Expanded Product Pool

To significantly broaden the scope of personalization and enable more precise targeting, the promotional catalog should continue to expand.



Third-Party Collaboration

The product pool might be enriched with additional exclusive offers from external vendors, opening new partnership opportunities and increasing the perceived value of the campaign.



Customer Incentive Optimization

By aligning the value of the offer with customer expectations and shopping behavior, retailer can maximize promotional effectiveness while maintaining profitability.

Timeline Overview

2023

(evaluation period)

- Promotional pool = 100
- Average spending = 100
- Purchase frequency = 100
- Customer redemption rate = 100
- Transaction redemption rate = 100

2024

(evaluation period)

- Promotional pool = 88.6
- Average spending = 99.6
- Purchase frequency = 96.8
- Customer redemption rate = 140.4
- Transaction redemption rate = 113.2

2025

(evaluation period)

- Promotional pool = 596.2
- Average spending = 106.5
- Purchase frequency = 107.7
- Customer redemption rate = 194.6
- Transaction redemption rate = 181.6

To illustrate how performance metrics have evolved over time, the timeline is based on test group T4, which was selected as a representative variant due to its consistently strong results across key indicators. Using a 30-day evaluation period in 2023 as the reference point (Index = 100), the data reveals clear correlations between the size of the promotional pool and overall campaign performance.

In an evaluation period in 2024, a temporary reduction in the promotional pool coincided with lower values in average spending and purchase frequency. At the same time, the number of app users engaging with personalized coupons increased significantly, making it harder to match relevant offers to individual preferences. The results support the hypothesis that a larger promotional pool is essential for maintaining high campaign effectiveness, especially as user engagement grows.

Definitions

Promotional pool – the total number of unique promotional offers available to the recommendation engine during a given period.

Average spending – average customer spending for transactions where the personalized promotions were used.

Purchase frequency – average frequency of shopping with personalized promotions.

Customer redemption rate – the share of loyal customers who actively used at least one personalized coupon during the campaign period.

Transaction redemption rate – the share of all transactions that included a redeemed personalized coupon.

Selected Results

Average Spending Growth  ~30% in the key test group vs. control group (2025 evaluation period)	Average Spending Growth  ~9% in the key test group (2024 vs. 2025 comparison period)*
Purchase Frequency Growth  ~35% in the key test group vs. control group (2025 evaluation period)	Purchase Frequency Growth  ~20% in the key test group (2024 vs. 2025 comparison period)
Increase in Customer Redemption Rate  ~5 pp in the key test group (2024 vs. 2025 comparison period)	Increase in Transaction Redemption Rate  ~3 pp in the key test group (2024 vs. 2025 comparison period)

* This value represents a net increase in average spending in the key test group during the comparison period, exceeding inflation trends estimated for the sector in the same timeframe.

Related Use Cases

Personalized promotions in a mobile application

Personalized promotion in the mobile app with display time limitation

Personalized recommendations in a mobile app

Personalized checkout promotions based on category slots in offline stores

Personalized SMS with discount coupon

Personalized in-app promotion triggered by a store visit

Contact

If you are ready to level up, we'd love to help. Contact us to get started, and together we'll begin to reach new heights!

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About Synerise

Synerise is an innovative deep-tech company specializing in advanced artificial intelligence and big data solutions, founded in Kraków, Poland, in 2013. Recognized and awarded by major global organizations such as Google, Microsoft, EY, Deloitte, and Financial Times, Synerise has a global presence, and serves clients across more than 150 markets, empowering industry leaders in Retail, Banking, eCommerce, Automotive, Insurance, and Telecommunications. Annually, Synerise processes transactions exceeding €150 billion, manages trillions of operations, and facilitates over 12 billion automated decisions monthly, including 4 billion driven exclusively by AI.

All data processing is performed instantly, in real-time, without technical compromises. Synerise maximizes the future freedom of its clients by building an API-first intelligence platform with unlimited integration capabilities, a low-code approach, and a unique, open-source proprietary design system, components, libraries, and storybooks. Clients can freely develop their applications and ideas without being limited by the company's roadmap.

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