WHITE PAPER

Challenges & Benefits of Retailer POS Data Use

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INTELLIGENCE FOR IMAGINATION

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Overview

Understanding Brand Value & Trends

Retailers know the value of their data and are attempting to monetize with Brands.

Merging Monetization & Data

Commercial structures for POS data are not tightly coupled with the data value brands can leverage

Brands are creating their own competitive advantage

Trends toward second party data, and first are bringing unique opportunities. These could bring unique data sets on a brand's platform and unique calculations, integrations, and models, built from the data. This includes separate licensing tiers for a brand's own products and competitor products as part of being a Category Advisor.

Visuals and media in presentations are key. Though video and audio aren't mandatory, you should create engaging campaign mockups. Seek out vector illustrations to highlight important points. Lastly, keep your presentation easy-to-read. Don't make the page too wordy, and choose a color palette that won't distract the audience.

Benefits of acquiring more direct Point of Sale (POS) data

- Licensing cost of third-party data
- Cohesion & unity between Brands & retailers
- Cloud platform availability, capability & cost
- Ease & interest in integrating data with other data sources

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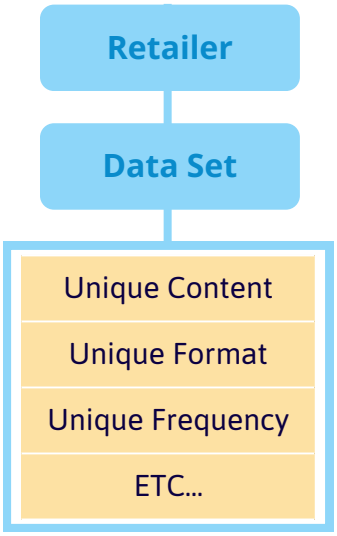
Challenges

of POS Data

Maximize the potential of POS data by solving the problems that dilute the data's benefit

POS data is generated by the retailers' systems, often customized to their specific environment.



Each Data Set is Typically Unique

Those receiving the files (including third party providers) could ask them to change the files and the data in it. However, the probability of that is low, so brands must work with what they have.

Make Data Useful to Brands on POS in...

1

Data Ingestion:

Significant sizes of data can be repeatedly refreshed throughout the day, and historical period data could be restated; requiring stored data updates. If a brand's platform has adequate ownership and support, data may not get the custody required, which can lead to erosion of trust by the end user.

2

Data Validation:

POS data doesn't have to be hard to validate.

This can be accomplished via two primary mechanisms:

Validating against a known independent source

- In this case, retailer POS can be compared to a known third party source
- This type of validation is most useful in the initial stages of POS usage

Validating against itself

- In this case, data in POS files is evaluated for anomalies
- This type of validation is most useful once sufficient POS history for a retailer has been accumulated

3

Data Harmonization:

Product

Items must continuously be harmonized to generate accurate insights at the UPC, Brand, or Category level.

The same item in two retailers may be coded differently due to use of Shelf Keeping Units (SKUs) vs. Unique Product Codes (UPCs) / European Article Numbers (EANs), over-stickering, errors at checkout, etc.

Market

Market dimensions are constantly changing. Store-level info provided by a retailer must be aggregated for analyses.

This could be done by:

- Creating store clusters around brand definition (e.g. consumer segmentation)
- Aligning it with definitions (e.g. zip code for Designated Market Area)

Period

Cutoffs for data processing vary. Differences must be defined to ensure correct interpretations of data.

Retailers' Promo Weeks may vary. The period dimension doesn't change frequently, and can be aligned upon initial ingestion. Even if retailers provide information about dayparts, sufficient granularity usually exists for foundational alignments.

Fact

Filed retailer POS facts can differ across retailers. Beyond transaction data, some may include:

- Data about the consumer
- Data about media publishing
- Data relating to the supply chain

Defined assessment across retailers is needed.

4

Data Transformation:

Unusable retailer source data needs to be transformed.

- **Aggregations**
- **Deriving calculated facts**
- **Mapping of data to other sources**

For example, sales across retailers' banners might need to be aggregated, inventory might need to be calculated across all retailer nodes, or a retailer's stores might need to be mapped to a brand's support territory.

5

Data Modeling:

Keep data relevant and open to applications and users by using a single data model.

The primary use cases from the brand must dictate the data model employed. The data model should be revisited periodically to ensure relevancy to the brand and incorporate changes.

6 Data Permissioning

Occasionally, brands might need to set user access permissions across data to filter which teams (Account, Executive, etc) get certain access to retailer data.

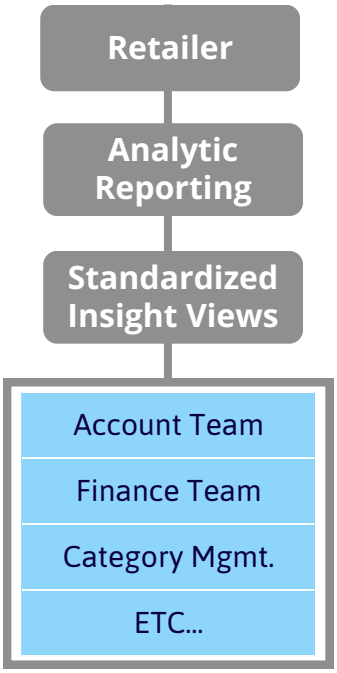
7 Data Integration

Raw POS data lets brands integrate this data with other data sets to derive unique insights. If a brand sponsors a sporting event, the event's data can be combined with retailer POS to better characterize purchase timing and location. Data Science teams tend to make joins across raw data sources to determine unique insights, oftentimes automated.

8 Data Analytics:

Each Data Set is Typically Unique

Analytic reporting may need to be created for users to get standardized views of insights. Though retailers may want the brand to present specific reports to manage the business, the brand should always consider additional reporting to derive competitive advantage.



Benefits

of POS Data

Despite inherent challenges, brands can gain these benefits using retailer POS data:

Refining Analytic Use Cases

The increased granularity in retailer POS data could be used to supplement data from a third party or the Brand's own data.

Example:
UPC listing/delisting decisions could be recommended by stores that index on a specific consumer segment defined by the brand.

Causal Factor Improvements

Even where third party data is still used, POS data could be used to improve the modeling of certain situations.

Example:
More granular time periods or media data in a POS file could be used to achieve higher model fidelity of cause/effect.

Precision Marketing

The shopper information a retailer provides in their POS feed could be used alongside a brand's consumer segmentation profiles or Customer Data Platform (CDP).

Example:
A digital marketing campaign could target shopper demographics, and locations with the highest repeat purchase rate, or promotion spend could be better aligned with execution.

Alignment of Ad Budgets

Ad spend must be applied most effectively. Retailer POS data can help direct ad spend to its greatest sellout potential.

Example:
Out-of-stock products in a retailer location shouldn't be advertised to that location's users. Ad spend should shift to locations with large inventories or at risk of perishability.

Operations Improvement

If the retailer provides supply chain information in the POS feed, that data can improve production/shipment decisions, timing an speed.

Example:
Production and logistics decisions could be informed by the rate of sell out at a retailer's distribution center vs. just the brand's orders, inventory, and shipments.

Additional Use Cases

The facts available through retailer POS data may include facts that have not been available before to the brand.

Example:
Shopper-behavior data results from a digital campaign with the retailer by the brand, and payment information can help determine co-branding opportunities with the brand.

The value of a retailers POS data will be determined in part by the commercial value proposition for the data.

If the retailer directly, or indirectly charges for the data, that cost must be made up by the benefit from using that data. Ideally, the benefit would significantly outweigh the costs. Though the opportunity cost of NOT having the data needs to be considered as well; including the potential for competitors to achieve some advantage from using the data.

Next Steps

How to leverage POS Data

To determine how best a brand could leverage POS information, an empirical assessment of retailer POS data available to a brand should be performed.

A series of research spikes should be performed using an agile methodology whereby:

- **The potential for common use cases would be evaluated (e.g. store clustering)**
- **An estimate of market coverage would be performed**
- **Use of POS data as causal factors would be explored**
- **Greater time fidelity lets brands make more timely, relevant decisions**
- **Operational improvements could be feasible**
- **Client-specific use cases for POS data could be outlined**

To perform these activities, slices of retailer POS data need to be made available for evaluation.

POS Data Assessment:

- Should take a small team a couple months of time, on average
- Make employed analytics use cases available for context
- Stakeholders and Subject Matter Experts (SMEs) must collaborate on the evaluation
- Output must indicate the possibilities, challenges, and considerations associated with the use of that data

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Who is Fractal?

Fractal is one of the most prominent players in the Artificial Intelligence space.

Mission:

Fractal's mission is to power every human decision in the enterprise and bring AI, engineering, and design to help the world's most admired Fortune 500® companies.

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