# Measuring & improving your business with distribution data

## Overview

This job aid provides an overview of the business questions, metrics or facts, and calculations that can be used to drive business performance with distribution data.

The term "distribution" refers to a variety of concepts all centered around measuring a product's movement and presence on the shelf. Distribution is the percent of stores selling a product. Distribution is an important fact to consider when analyzing sales results, as it helps determine sales potential, based on product availability

## Business questions

When considering the business questions, you should evaluate your business against your own business, your competitors' businesses and the overall category or market. The questions in the chart below offer some insight into the types of business questions that RMS distribution data can help you resolve.

### Distribution

- How do my sales perform where I have distribution versus sales of competitors where they have distribution?  What are the trends in those areas?

- Does my item have its fair share of distribution?

- Did new items/line extensions add to a brand? Are they being swapped out?

- Why is my volume down when my weighted distribution is unchanged?

- How does my Out of Stock (OOS) situation compare to other brands and competitors?

## Distribution types

Review these terms and definitions as a foundation:

- When dealing with NIQ Retail Measurement Services Data, the general term, **Distribution**, refers to the percentage of stores selling an item, irrespective of the number of shelf-facings. Distribution may be used to understand how widely available a product is.

- In reality, both large and small stores exist  in any market. The larger stores have more customers per day. If your item is available in a large store, your business has more potential customers than a small store. To give a better indication of that in the distribution metric, we weight the stores. This is referred to as **Weighted Distribution**, the preferred metric for most analysis.

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## Distribution terms and definitions

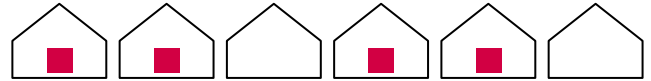### Numeric Distribution (Physical Distribution)

The percent of stores in the universe that sell the item.

Calculation: (Number of stores selling item/Number of stores in universe) $\times$ 100

**Example:**

- Product: Red Square 500ml bottle
- 4 of 6 stores carry Red Square 500 ml bottle.
- Numeric Distribution: 67%
  (4/6) $\times$ 100 = 67%



*Note: Distribution is not always available at all levels of every hierarchy. When unavailable, your solution will display null values or "N/A" (not applicable).*

### Range

When additional products are layered into the store, that store has a wider range of products. Distribution can also be calculated for a range of items, such as one particular brand. When used in this way, distribution tells us the percentage of stores that sell any item from the range.

Calculation: (Number of stores selling any item included in Range /Number of stores in universe) $\times$ 100

To derive distribution at the Range level, you must know the mix of items in each store, which means it has to be calculated in the database.

**Example:**

- Products: Blue Square 500ml bottle, Red Square 500ml bottle and Green Square 500ml bottle
- 5 of 6 stores carry Square brand.
- Square brand (Range) distribution: 83%
- (5/6) $\times$ 100 = 83%



| Square brand | 5/6 stores = 83% |
|---|---|
| Item 🟦 | 67% |
| Item 🟥 | 67% |
| Item 🟧 | 50% |

All three items are part of the Square brand. We can see that the Square brand is carried in five out of six stores, although no one item is carried in all five stores. This gives us a total distribution for the Range of 83% at the brand level, when the highest item distribution is only 67%.

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## Reach distribution facts

When a custom period is created there are two different approaches to calculating distribution facts: average and reach approach.

### Average approach calculation

In general, when periods are aggregated, Discover follows the weighted average aggregation approach for Weighted Distribution, ACV and TDP. This means that while calculating distribution the category sales will be aggregated for each period before a division takes place.

Weighted distribution average approach for a particular Item on MAT (sum of 52 weeks):

$$\text{Weighted distribution (avg) of the Item} = \frac{\sum_{w52}^{w1} \text{Category sales in stores selling Item during the week}}{\sum_{w52}^{w1} \text{Category sales in stores selling category during the week}}$$

$\sum_{w52}^{w1}$ Means that sales of the category will be accumulated for each week starting with week 1 through to week 52.

Distribution facts calculated using average approach are ideal for products with a high rotation and when investigating stores with high category sales.

### Reach distribution calculation

Weighted distribution, ACV and TDP are also available in a Reach version. In this approach, Discover treats the period aggregate as one single time period, rather than a sum of singular time periods (i.e. weeks).

Weighted distribution reach approach for a particular Item on MAT(sum of 52 weeks) :

$$\text{Weighted distribution Reach of the Item} = \frac{\text{Category sales in stores selling Item during MAT}}{\text{Category sales in stores selling category for the MAT}}$$

Distribution facts calculated using average approach are ideal for products with a high rotation and when investigating stores with high category sales.

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## Weighted distribution

### %ACV Weighted Distribution (All Commodity Volume, ACV)

ACV is the total sales volume of all items sold in one store, a banner, or an entire market. %ACV Distribution weights the stores selling a product by their total sales, highlighting the relative importance of the stores selling a product.

For example, a product with 75% ACV Weighted Distribution means that item is sold in stores which account for 75% of total sales.

Calculation: (Sales value of all categories in all stores selling product/Sales value of all categories in all stores in universe) $\times$ 100

**Example:**

- 4 of 6 stores carry Red Square 500 ml bottle, but the weighted value for stores that carry the item is 725 out of 850 total available.

- ACV Weighted Distribution: 85%

- (725/850) $\times$ 100 = 85%



**Weight:** 500    100    100    100    25    25
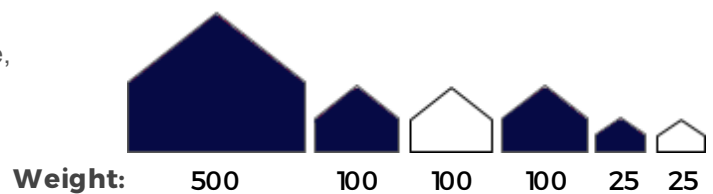
### PCV Weighted Distribution (Product Class Value, PCV, Percent Category Turnover)

%PCV Distribution follows the same principle as ACV Weighted Distribution, but weights according to sales of the Category, or Product Class.

Calculation: (Sum of total categories value sales in stores selling product/Sum of total category value sales in all stores selling the category) $\times$ 100

### Total Distribution Points [TDPs or SUM (Cumulative) Distribution]

Total Distribution Points begin with weighted distribution, and then factor in the number of items each store sells. This provides both the breadth and depth of distribution in one metric.

TDP's may explain volume changes that might not be seen when looking at Weighted Distribution (% ACV).
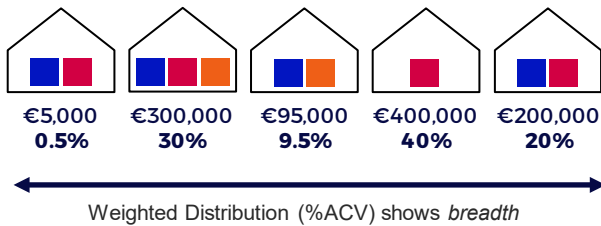
Use the lowest period granularity available (weekly or monthly, depending on the database), and then add the Weighted Distribution (%ACV) for all items.

*For an individual item, TDPs are the same as True Distribution in a single period.*

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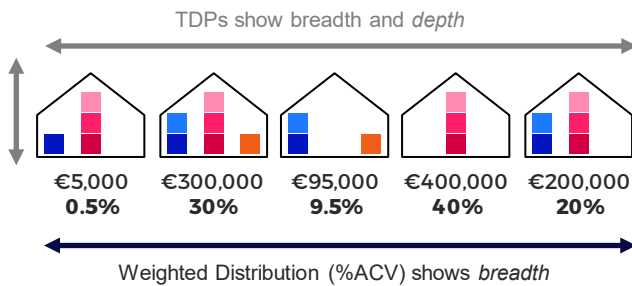# Measuring & improving your business with distribution data

## Weighted distribution (continued)

### Total Distribution Points (continued)

**Example 1: Single item per brand per store**



€5,000 **0.5%**    €300,000 **30%**    €95,000 **9.5%**    €400,000 **40%**    €200,000 **20%**

Weighted Distribution (%ACV) shows *breadth*

| | Total |
|---|---|

| Brand Level | % ACV 100% | # of Items 3 | TDP 190 |
|---|---|---|---|
| Blue Flavor | 60% | 1 | |
| Red Flavor | 90.5% | 1 | **190** |
| Green Flavor | 39.5% | 1 | |

**Example 2: Multiple items per store (Each flavor has multiple pack sizes, rrepresented by shades.)**

TDPs show breadth and *depth*



€5,000 **0.5%**    €300,000 **30%**    €95,000 **9.5%**    €400,000 **40%**    €200,000 **20%**

Weighted Distribution (%ACV) shows *breadth*

| | Total |
|---|---|

| Brand Level | % ACV 100% | # of Items 6 | TDP 430.5 |
|---|---|---|---|
| Blue Flavor | 60% | 2 | 119.5 |
| TDPs=[(0.5 × 1)+(30 × 2)+(9.5 × 2)+(20 × 2)] | | | |
| Red Flavor | 90.5% | 3 | 271.5 |
| TDPs=[(0.5 × 3)+(30 × 3)+(40 × 3)+(20 × 3)] | | | |
| Green Flavor | 39.5% | 1 | 39.5 |
| TDPs=[(30 × 1)+(9.5 × 1)] | | | |

*Dividing Total Distribution Points by Weighted Distribution (%ACV) gives the Average Number of Items Carried within those stores selling the brand.*