

Salesforce Effectiveness at Sears: An Analytic Approach to Goal Setting and Tracking

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Abstract

Following an organizational restructuring, Sears Holdings Corporation moved to design metric-based performance management systems affecting its consultative sales force. This paper details an overview of a dedicated HR Analytics team's process for organizing the project into three targeted questions and using JMP® to answer and visualize these questions. The current status of the project as whole is discussed.

Note that this paper is not intended to detail the business decisions and specific metrics used by Sears Holdings to create these systems. In the visualization examples provided, dummy datasets were used to showcase a sample of the actual output. This is intentionally done for business competitive reasons.

Introduction

Sears Holdings Corporation underwent a significant reorganization at the start of 2008. To drive profit accountability, the structure was changed to a Business Unit model whereby departments were considered independent businesses with their own P&L. A reorganization of this size and scope was already a challenge, but this was also occurring in one of the worst retail environments in the past 50 years.

After the Business Unit (BU) reorganization, Sears Holdings was comprised of 33 separate BUs, each accountable to a BU specific Board of Directors and BU President. Each of the BUs now hold responsibility for associates inside Sears stores.

The Project

An HR Analytics team, Analytics Center of Excellence (HR ACE) was created and tasked with driving business value from the more than 40,000 consultative sales associates inside Sears Holdings Stores. This would be accomplished by creating a metric-based performance management system touching the following Business Units:

- Home Appliances
- Home Electronics
- Home Improvement
- Fine Jewelry

The goal was to utilize available metrics to determine performance standards that would indicate associates had surpassed expectations, met expectations, or fell below expectations. There were a few considerations to ensure valid measurement. First, the available metrics should be significantly correlated with business performance. Additionally, thresholds and goals should be established to produce achievable targets. Finally, thresholds and goals should be flexible to allow for seasonality, as retail is strongly affected by the time of the year. Producing a sales target for March in Appleton, WI is a different proposition than producing a sales target for December in Atlanta, GA.

The Team

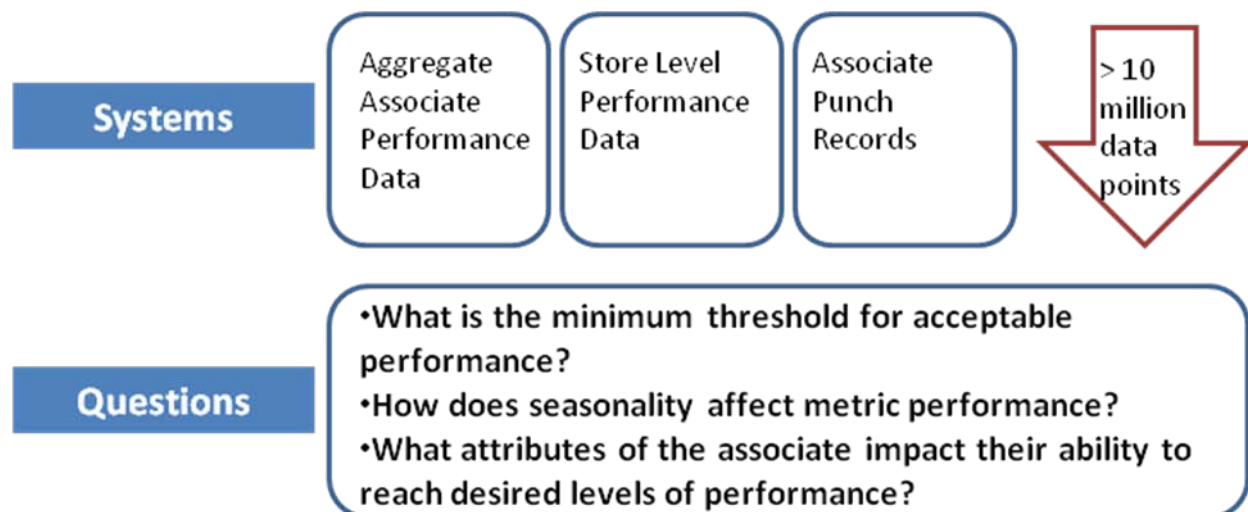
At the start of the project, RH ACE was a two person team comprised of curious HR professionals with a love of data analysis, but no deep technical ability outside of the use of Microsoft Office. Performing the analyses required for this project was beyond the scope of Excel/Access as the data sets were consistently larger than 1 million rows. In addition, presenting the outcome successfully to our retail clients meant that the analyses had to be visualized. SAS®, while a powerful data analysis tool, was not well suited for HR ACE due to the intensive training time needed to become proficient. As such, HR ACE was in the market for a statistical analysis software package that was more powerful than Excel, yet more user friendly than SAS®.

The Data

Every day, Sears associates generate over 3 million data points of summary information pertaining to questions such as *how many sales dollars did you earn per hour* and *how did the customer rate your service*. Many of the systems that handle these data are maintained by external vendors.

These data points could be reconciled with associate time keeping data, associate-level information, and store-level sales data, resulting in over 10 million individual data points. Therefore, HR ACE needed a statistical software package capable of handling large data sets extracted from differing data warehouses.

JMP® was a useful option as it supports all text based formats, Excel, and MS Access files. Since these were the three main data input options, data were consistently joined through the use of the TABLE JOIN function similar to an Excel VLOOKUP action. Additionally, the ability of JMP® to incorporate JSL SCRIPTS meant that recreating the analysis and updating it with additional data could be heavily automated.



The Analysis

To answer the above questions, we first created our master data file. We used the following structure to organize our data:



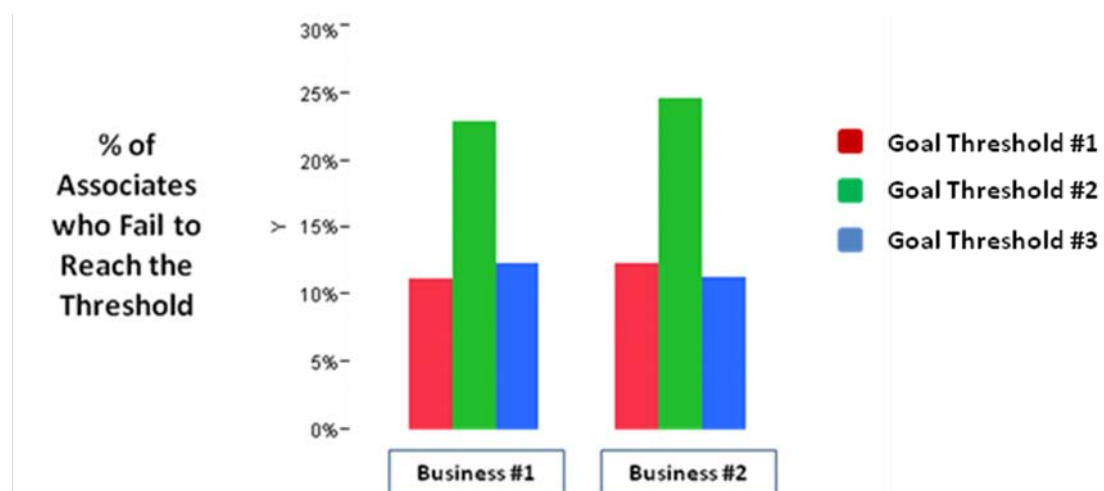
The period field represented the month and year associated with the record. An associate who worked all of 2009 would have 12 records, each charting his/her associate metrics (Full-Time or Part-Time, job title) and performance metrics (sales, customer satisfaction, etc). Using this structure, we were enabled to use JMP’s GROUP BY ability to sort out monthly performance when conducting regressions and distributions.

Question 1: What is the minimum threshold for acceptable performance?

To answer this question, we worked with the BUs to determine the percentage of their workforce to be impacted. We were then able to work backwards and determine the appropriate performance target. For example, if a business stated, “we would like 5% of our associates to fail each month on our sales target,” then we would determine the level of sales that would result in 5% of the workforce below that level.

This approach was helpful because it was common for a BU to suggest, “I want all associates to earn \$1500 in sales per hour,” without realizing only 18% of associates would comply with that target. By fundamentally working backward, we were able to bring realistic goals into the conversation.

To perform this component of the overall analysis, we used binary variables to determine if an associate met the target at many different thresholds (1 = fail, 0 = pass). As such, when we used JMP® functions to provide an average, it produced the proportion that failed to meet their target. The JMP® output was:

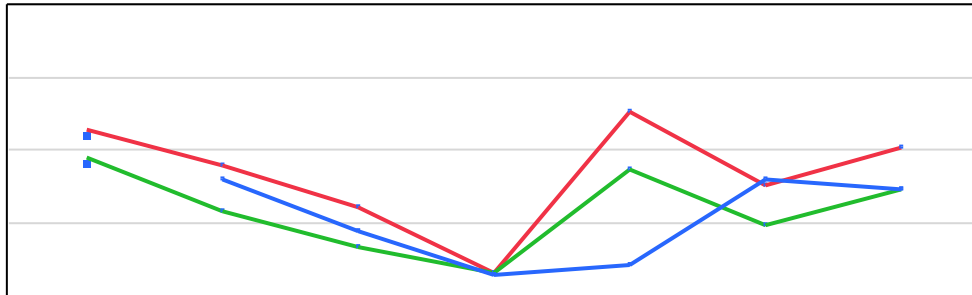


Question 2: How does seasonality affect metric performance?

Knowing an appropriate performance threshold, we next needed to determine the impact of seasonality on an associate’s ability to comply. We used JMP’s FIT Y BY X function where the Y variable was the metric (e.g., Sales) and the X variable was the month (taken from the

PERIOD field). We then used the TEST MEANS function to assess statistical significance across different months.

Knowing that seasonality produced a significant sales impact, we had to visualize the data so the BUs could truly assess the impact it had on their associate base. The GRAPH ability produced the following output in a much easier fashion than Excel 2007 would have produced.



Question 3: What attributes of the associate impact their ability to reach desired levels of performance?

Knowing that associate performance fluctuates by time of year, we assessed additional factors with potential to affect associate performance. The central consideration was the volume of variables under examination, including store size, work shift, associate experience, and more than 30 other variables. Manually creating regressions in Excel was deemed time prohibitive and thus we utilized STEPWISE REGRESSION in JMP®. This enabled us to obtain a snapshot of significant variables prior to using data treatment options to clarify the impact.

In addition to using REGRESSIONS, we bucketed associates by common variables and then compared performance across the bucketed variable. As a follow-up, we used FIT Y BY X and TEST MEANS to determine if associates with different characteristics had significantly different performance. We accomplished this by using the bucket as the X variable and using the performance metric as the Y variable.

Conclusion

We were able to present to each BU an accurate picture of the current performance levels of their associates. In addition, we were able to highlight the impact of seasonality on associates' ability to reach their performance potential. Finally, additional determinants of performance were identified through regressions and bucketing.

Currently, two BUs have approved the launch of their performance management systems on account of the analysis generated through the use of JMP®. It is a credit to the software package that all the analyses were accompanied by clear visualizations of data. A pivotal moment occurred when HR ACE was able to remodel data while in a client meeting based on questions provided by the business.

In addition to the technical analysis, the small learning curve associated with JMP® enabled HR ACE to perform the analysis while on-boarding two new members to its team. While the

training provided by JMP's account managers was both timely and effective, a majority of the learning came through the team's own initiatives.

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