OVERVIEW

As you are probably well aware, human resources (HR) is in a state of transition – moving from concentrating on meeting internal metrics (such as hiring to meet headcounts, limiting turnover) to connecting the dots between metrics (e.g., identifying and understanding how hiring and turnover are connected).

This new focus on linking people variables together presents an interesting opportunity for HR, in terms of analytics, with a great deal of upside for you as an HR practitioner including:

- A greater understanding of the employee knowledge, skills, and abilities that drive business outcomes specific to your organization
- The ability to make people investments that truly deliver results
- A way to calculate the ROI of investing in your people
- The opportunity to take the lead in making HR process business-focused, making HR a strategic business partner for the core business
This white paper is designed to provide an overview of HR analytics including what it is (and what it is not), introduce you to the four levels of HR Analytics in organizations, and discuss data and data sources. A recent case study example is also presented in which SMD connected two different sources of data together to perform a predictive analysis in order to answer an important HR analytics question for the client. Finally, practical tips for conducting your own HR analytics research in your organization are included.

**HR ANALYTICS – WHAT IT IS AND WHY IT IS DIFFERENT**

Data in and of itself is not all that interesting – it is through the combination of data and analysis that better talent decisions are uncovered. A great example is an organization that is looking to reduce turnover. The leading assumption at the organization is that people are leaving due to treatment by the immediate supervisor. Analytics can be used to test this assumption and determine the true cause of high turnover – whether it be the immediate supervisor or something else entirely.

Ok, so what exactly is HR Analytics? Simply, HR analytics is the analysis of people data. The goal of any people analytics project is to gather and understand the connections between people data in order to inform organizational and HR changes that support leadership’s vision and company initiatives. Many times, the analysis requires multiple data sources, involving the actual collection of data (such as the distribution of a survey) as well as use of previously collected data (e.g., attrition data accumulated over the last year, selection data of all successful job applicants). The implications of HR analytics can be far reaching – across HR as well as the organization, and can include projects like:

- The development of predictive talent profiles to aid in succession planning and inform the selection and development of employees.
- Survey development and the continuous assessment of employee attitudes across the life cycle of employee tenure.
- The utilization of targeted organizational assessments in times of organizational change (e.g., change readiness, climate assessment, wellness assessments).
- The prioritization of survey categories or behavioral competencies based on their impact on business outcomes.

When you start to talk to people about HR analytics, one thing immediately becomes apparent – there are often more questions than answers. When SMD goes into a new organization, it keys in on their analytics questions because this tells much about the organization’s current level of thinking in terms of people analytics as well as their potential readiness for more advanced data analysis projects.

**FOUR LEVELS OF HR ANALYTICS IN ORGANIZATIONS**

SMD believes in the four levels of HR Analytics, all of which stem from the complexity of people analytics questions.
**Level 1.** The first being the lowest level – that of data collection and management. Here, clients are collecting and storing people data but not doing much (if anything with it). Questions in this phase tend to be around what kinds of data should be collected, and how it should best be organized/stored.

**Level 2.** Level two dives into reporting and data visualization. Questions emerging in this stage tend to focus on how to best present data, and what pieces of the data are most meaningful to the data consumers (e.g., data splits – department, team, locations, etc.).

**Level 3.** At stage three, SMD sees clients tracking trends across time. In this level, the organizations are collecting and comparing data, and generally use the results for goal-setting purposes. Questions in this phase are about the best ways to evidence increases (or decreases) on target areas in order to meet goals or see an improvement from last year.

**Level 4.** Level four contains the most advanced companies – those that are using data to make predictions (i.e., predictive analytics). These companies are not only using people data to inform people decisions, but also linking people data sources to other data sources (e.g., business outcomes, financials, customer satisfaction, etc.) to inform organizational decisions.

The method behind predictive analytics, structural equation modeling (SEM), is quite complicated, and unfortunately, many companies that think they are truly harnessing the power of predictive analytics are only scratching the surface – looking at correlations. SEM is the method used by SMD, to not only show prediction (above and beyond correlation), but also show cause and effect. For more information on predictive analytics, including a ‘Predictive or Not Test,’ check out SMD’s white paper – Big Data and Predictive Analytics, HR is Still Getting it Wrong.

In your own organization when you are thinking about crafting a predictive analytics question, the following question can be helpful: How does X impact Y? X and Y are variables such as scores on the employee survey, performance evaluations, turnover, or even hard business outcomes.
Next, you will need to define how X and Y will be assessed in this project. For example, if you are interested in predicting turnover, how will turnover be measured? Will it be actual attrition data, or will it be turnover intent from an opinion survey?

**DATA, DATA, DATA – SOURCES AND INTEGRATION**

A critical component of any analytics project are the data sources available. Access to and quality of data can dictate which HR analytics questions can and cannot be answered as well as how X and Y (the variables of interest) are measured and defined.

SMD organizes data sources into four broad categories: Organizational Data, Employee Survey Data, People Performance Data, and Business Performance Data.

- **Organizational Data.** Organizational Data houses all HRIS data. Variables of interest that fall in here can include: turnover information, compensation, and applicant tracking. But, data from this category is most commonly used to provide organizational hierarchy information. That is to allow for splits based on departments, teams, leaders, etc. This area is also critical in that employee IDs (a valuable linkage key for many types of analyses) originate here.

- **Employee Survey Data.** Many organizations have employee survey data -- whether from an annual employee survey, pulse surveys, or more constant survey initiatives (e.g., continuous listening, employee life cycle surveys). Surveys are a great way to pull data on employee attitudes and perceptions.

- **People Performance Data.** People performance data includes any type of selection, training, or performance assessment/evaluation. This data is at the individual level, which allows for performance comparisons between employees.

- **Business Performance Data.** Last is business performance data. The data in this category can vary greatly by industry and organizational goals, but some common examples include
financial information, customer satisfaction, patient satisfaction, and measures of overall efficiency and effectiveness. The data can be at the individual level (e.g., individual sales, profit), but more commonly is found at higher levels (i.e., department, team, location levels).

Although many HR analytics questions can be answered using one data source, more strategic questions often require data from two or more sources. For example, when asking “how does X impact Y?,” X and Y can fall in two different data sources. In order to perform the analytics, the data sources need to be merged together. To do this, you need to have a unique identifier, which is included in both data sources. Often this can be employee ID number (as long as it is unique). If you do not have a unique identifier, one trick is to create your own. For smaller data sets, using a combination of first name and last name works well.

**CASE STUDY – LINKING PERFORMANCE DATA TO DOLLARS**

To demonstrate some of the principles discussed above, this section introduces a recent case study. The client in this HR analytics project is a large, global professional services firm. The project centered around one job type: Executive Sales Professionals. The question SMD was charged with answering: “What are high performing sales executives doing differently than low performers?"

To answer this question, data was needed from two sources – People Performance Data (360 Feedback scores for the professional sales team) and Business Performance Data (sales outcomes – sales goal attainment, average win size, and average win rate for each executive sales employee). SMD then linked the 360 performance data for each sales executive to their sales outcome data. This was a smaller data set that contained no duplicates in employee full name, so SMD could use the last name and first name as the link variable.

Through this analysis, SMD was able to determine the specific behavioral competencies assessed in the 360 that have the greatest impact on sales. In this case, eight of the 12 behavioral competencies from the 360 were identified as key drivers of sales outcomes.

To calculate the projected ROI of investing in these eight behavioral competencies, SMD looked at high performing sales executives (in terms of scores on these eight critical competencies) and compared them to their peers looking at differences in sales outcomes. SMD found that sales executives who evidenced high levels of all eight of the critical behavioral competencies had an average sales goal attainment of +78% higher than their peers, an average win rate of +10% more often than their peers, and an average win size of $10,000 more than their peers.
This case study has many implications for this client. Through this analysis, SMD was able to set target goals and proficiency levels for the current workforce on the behavioral competencies. Additionally, using the proficiency cuts, it was able to map current workforce proficiency levels across the critical eight behavioral competencies to identify areas where the workforce as a whole could benefit from training. In an effort to align HR process, implications for training also hold implications for selection. In other words, since SMD knows these eight behavioral competencies have the strongest impact on sales, and the current workforce can be trained on these competencies, SMD should also be selecting new employees based on their proficiency level with these same competencies. From this, a reengineering of the selection process is underway where candidates will be selected based on hiring assessments designed to measure a candidate’s ability on each critical competency.

**PRACTICAL TIPS**

People analytics has far reaching implications from uncovering trends, solving current organizational problems, to providing support to HR functions. A few tips are provided below. For more tips, check out the white papers at smdhr.com.

- **Choose Wisely:** When thinking about where to start in your organization, choose to solve a problem that aligns with your organizational strategy.

- **Start Small:** If HR analytics is new to your organization, start small and choose something manageable but applicable. For instance, if one organizational goal is to reduce turnover, instead of choosing to intervene at the organizational level, choose a smaller department or team that is critical to the core business of the company, but also one that has a high attrition rate.

- **Integrate & Share:** When conducting HR analytics projects, work to integrate findings together as well as share resources throughout. For example, the development of a competency model in which the discovered competencies are used in selection and development.

**CONCLUSION**

The HR function is evolving in its understanding and application of analytics; the benefits are numerous. Ultimately, connecting people data to business outcomes through analytics will provide the foundation for not only becoming better business partners and increasing HR’s credibility, but it will also demonstrate the value and ROI that HR provides on a daily basis. To achieve these goals, HR professionals don’t have to be data experts, but they must understand the basics of analytics to effectively harness the power.