



## Predictions – The Future of HCM Analytics

By Brian Gaspar, Oracle Corporation

**T**he world of analytics has shifted emphasis over the past two decades – from looking at the past to looking at the future. Organizations that made this shift realized the basic fact that the billions and billions of pieces of information being produced every single day can be used to answer, fairly accurately, what will probably occur at some given point in the future.

Although predicting the future sounds mystical and straight out of science fiction (like in movies such as *The Minority Report* and *Paycheck*, where predicting the future for all facets of life is the norm), the reality is that we're already doing this today and you are being impacted by these predictions in almost every aspect of your day-to-day life – it's called *predictive analytics*.

### Examples of Predictive Analytics from Everyday Life:

- Supermarkets know more about the people who use their frequent shopper cards than the cardholders' friends on Facebook.<sup>1</sup>
- Credit rating companies such as FICO or Experian gather every person's financial history in order to predict how credit worthy that person is – every single day. This single predicted score (800 = very low risk or 600 = very high risk) is provided to lenders in order to determine how much money to lend, to employers to determine how responsible a person is, or to the owner of the credit score who will be provided with recommendations on how to improve their score.<sup>2</sup>
- Major League Baseball captures every move made by every player during every game. It then crunches this information to determine a player's and team's weaknesses, strengths, and performance in given play situations and based on this "predicted performance," coaches determine who their starters should be against a particular team and even how much players should be paid.<sup>3</sup>
- In six hours, the U.S. National Security Agency collects enough digital information on people, which if printed, can fill the Library of Congress, and these data mining and predictive capabilities were instrumental in finding and tracking Osama Bin Laden.<sup>4</sup>
- Companies are starting to mine millions of tweets and

stock transactions per day in order to predict if their stocks will perform better or worse depending upon the general public mood.<sup>5</sup>

There are a few common threads across these examples. First, all of them are using historical information (one second past current date/time is historical) to make predictions. Second, the predictions being made are about people's behaviors, such as, predictions on how they will perform, what they will buy, how they could be improved, who they are connected to and what their mood is. Third, they are looking at information that comes from a few to several thousands of sources. Fourth, decision-makers can determine the best course of action to minimize challenges or exploit opportunities. And fifth, organizations are spending billions of dollars annually on making predictions about people – and it has proven effective. With HR being all about...well, people...this would seem to be a natural fit.

Human Resources is currently delivering information to managers and executives on items that they already know about, such as their current head count, what it is forecasted to be by quarter-end or year-end, what a worker's past performance rating was, when they will be going on vacation, and even if they are taking too much vacation. While these items are important to document, they do not tell the business anything new and they are primarily geared toward delivering on the next phase of human resource (back-office) automation.

In order for HR to truly deliver on the promise of being "business partners," it needs to tell the story of business scenarios that are predicted to happen in the future, across all levels of the organization, which they do not already know about, and then provide recommendations on how to fix or exploit those scenarios. Analytics, like head count reports, need to shift from mere "what they already know" measures, to ones which will not only, (a) tell an organization that five additional people need to be hired because

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five specific individuals are expected to join the competition but also, (b) the reasons they will leave. For example, your competitors have several positions that match your workers' skills, they are paying more since inflation is on the rise, they have given a pay increase within the last 24 months, or your competitors are beginning to out-innovate your organization.

With Human Resource organizations having difficulty delivering fully robust and accurate head-count reports, predictive scenarios may seem like something that should be explored at some point in the distant future, but this would be the wrong approach. Human Resources typically struggles to get basic funding for important analytics initiatives, demonstrated by the 2009 Forrester Report showing that companies spend less than one percent of their business intelligence budget on HR. With HR (organization's workforce labor expense) making up, on average, 31 percent of a company's total operating costs, the assumption is that this should be one of the top three funding areas. The reality, though, is that all other functional areas have been able to quantify a business case by showing that their analytics initiatives lead to actions that the business must take and/or didn't know about before, such as increasing sales, competitors stealing customers, reducing spending, improving productivity, or even meeting federal laws. The current model for today's human capital management (HCM) analytics just does not provide that strong, credible "business driver" for investment. As discovered by other functional areas, the business driver for HR comes from an ability to tell the organization what it does not already know, why it is happening, and how to fix or exploit it. All of this is predictive analytics and without it, HR will continue to struggle to obtain the funding and support for their "must have" analytics initiatives.

Human Resources can deliver predictive analytics today by partnering with organizations (e.g., Sales, Marketing and Engineering) that have predictive analytics already in place to make quantifiable and actionable predictions about the workforce in previously unknown areas of risk. Several companies have done this already. Oracle, for example, was able to build a business case using this

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approach. In three weeks, Oracle was able to predict which top performers were expected to leave the organization and why; this information is now driving global policy changes in ways to retain key performers and has provided the approved business case to expand the scope for predicting worker performance.

Human Resources is at a crossroads where analytics is concerned. The current approach simply does not work, which is proven by the fact that companies spend less than one percent on an area that costs them 31 percent. In order for HR to be successful in analytics, it must embrace the shift towards predictive analytics. Without making the shift, HR will not be able to deliver on the promise of being a true *business partner*.

## Endnotes

1 Steve Worthington and John Fear, *The Hidden Side of Loyalty Card Programs*, <http://www.buseco.monash.edu.au/centres/acrs/research/whitepapers/hidden-side-of-loyalty.pdf>, December 2009.

2 Credit Score, *Wikipedia*, [http://en.wikipedia.org/wiki/Credit\\_score](http://en.wikipedia.org/wiki/Credit_score).

3 Ira Boudway, "Baseball Set for Data Deluge as Player Monitoring Goes Hi-Tech," *bloomberg.com*, <http://www.bloomberg.com/news/2011-03-31/baseball-is-set-for-deluge-in-data-as-monitoring-of-players-goes-hi-tech.html>, March 31, 2011.

4 Dan Nosowitz, "Every Six Hours, the NSA Gathers as Much Data as is Stored in the Entire Library of Congress," *popsci.com*, <http://www.popsci.com/technology/article/2011-05/every-six-hours-nsa-gathers-much-data-stored-entire-library-congress>, May 10, 2011.

5 Nicole Hemsoth, "A Global Mood Ring for Financial Markets," *hpcwire.com*, [http://www.hpcwire.com/hpcwire/2011-05-11/a\\_global\\_mood\\_ring\\_for\\_financial\\_markets.html](http://www.hpcwire.com/hpcwire/2011-05-11/a_global_mood_ring_for_financial_markets.html), May 11, 2011.

## About the Author



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