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[HUMAN RESOURCES]

# Is Your Company Ready for HR Analytics?

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BY BART BAESENS, SOPHIE DE WINNE, AND LUC SELS

**B**ig data and analytics are omnipresent in today's business environment. What's more, new technologies such as the internet of things, the ever-expanding online social graph, and the emergence of open, public data only increase the need for deep analytical knowledge and skills. Many companies have already invested in big data and analytics to gain a better understanding of customer behavior. In fact, due to the introduction of various regulatory guidelines, some of the most mature analytical applications can be found in customer-focused areas in insurance, risk management, and financial fraud detection.

But what about leveraging big data and analytics to gain insights into another group of your company's key stakeholders: your employees? Although we see many companies ramping up investments in HR analytics, we haven't seen many success stories in that area yet. Because HR analytics is "the new kid on the block" in business analytics applications, we believe its practitioners can substantially benefit from

lessons learned in applying analytics to customer-focused areas — and thus avoid many rookie mistakes and expensive beginner traps.

Based upon our research and our consulting experience with customer-focused analytics, we offer four lessons about how to successfully leverage HR analytics to support your strategic workforce decisions. More specifically,

we will juxtapose some of our recent research and industry insights from customer analytics against HR analytics and highlight four important spillovers.

## **LESSON 1: Model, measure, and manage your employee network dynamics.**

In our own research, we have found that ties between customers (such as social ties, credit card transactions made

with the same merchants, or board membership ties between companies) are very meaningful in explaining and predicting collective behavior such as customer churn, customer response to marketing outreach, or fraud. It is our belief that these principles can be easily used to harvest some low-hanging fruit in HR analytics. In particular, a network can be constructed — with employees as the nodes and with the links between them based upon factors such as (anonymized) email exchanges, joint projects, colocation, and talent similarity, and possibly weighted for how recent such connections were. This network can then be leveraged to understand how smoothly new hires will blend into your workforce network; it also can be used to quantify the optimal mix, from a performance perspective, between behaviors that bring cohesiveness to the employee network and those that bring diversity.

By the same token, when laying off or firing employees, it is important to understand the social influence and impact of an employee in order

to prevent viral effects or talent drain from happening to your network or company. Employees who serve as social influencers or community connectors within your organization's network should be carefully approached when making firing decisions to avoid functionally disconnecting essential parts of your network.

**LESSON 2: Big data and analytics are not magic.** As with any new technology, it is important to set appropriate expectations from the outset. While they can be valuable

For example, what if your analytical model tells you that your hiring and firing policy is not at all sound — or is even discriminatory? That you are using the wrong selection criteria or are searching for the impossible? That the recent loss of customers can be traced back to the departure of a specific employee? Any unexpected yet valid analytical findings should be approached in a careful and thoughtful way. Obviously, this requires HR managers with a mindset that is both informed and open.

analytics should be properly motivated and can be simply explained to all stakeholders involved. This quest for simplicity discourages the use of overly complex analytical models that focus more on statistical performance than on proper business insight.

Another key performance criterion concerns model compliance. Safeguarding regulations, privacy, and ethical responsibilities is crucial to successfully deploying HR analytics. This is especially important in HR applications. Analytical models should

that any degradation in performance can be immediately noticed and acted upon. For example, from a hiring perspective, both the pre-hire effectiveness (which recruitment channels give us the candidates with the right profile?) and post-hire effectiveness (which recruitment channels gave us the best candidates?) should be constantly evaluated.

We believe the time is right to boost your investments in HR analytics. And once your HR analytics efforts have matured, we look forward to the next transformative step for organizations. That, we think, will take place when organizations can bring together findings from HR analytics with those from customer analytics. Then companies can more fully understand the relationships between their two key sets of human assets: employees and customers.

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## What if your analytical model tells you that your hiring and firing policy is not at all sound — or is even discriminatory? That you are using the wrong selection criteria or are searching for the impossible?

tools, analytics techniques are not a panacea for all of your company's mission-critical and difficult HR decisions. After all, almost as soon as an analytical HR model is put into production, it becomes outdated, since its ecosystem (including but not limited to company strategy, the employee portfolio, and the macroeconomic environment) is constantly subject to change. Hence it is of key importance that the HR end user critically interprets, reflects, adjusts, and steers the outcomes of the analytical models using his or her business acumen, experience, and knowledge of the problem and organization.

**LESSON 3: Analytical HR models should do more than provide statistical performance — they should provide business insights.**

A typical rookie mistake when deploying analytical models in any business context is a blind obsession with statistical performance (such as fit, correlation, R-squared, etc.) and overly complex analytical models. Statistical performance is important, but analytical HR models should do more. Two other important performance criteria are model interpretability and compliance.

Interpretability means that any HR decision based upon

always be interpreted with caution, and gender equality and diversity should be respected when selecting the data to build your analytical HR models.

**LESSON 4: Backtest the impact of your analytical workforce models.** In customer analytics, the average lifespan of a model is two to three years, and we have no reason to believe that this will be different in HR analytics. However, given the impact of HR decisions on the organization and on individuals, it is important that analytical models in HR are constantly backtested by contrasting the predictions against reality, so



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