

Building Toward Predictive Analytics

Harnessing Big Data Insight for Strategic Action

June 2015

Smart. Focused. Done Right.®



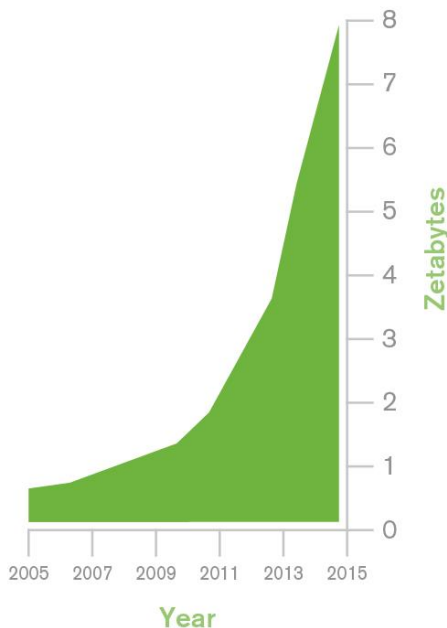


The emergence of Big Data and advanced analytics offers lessons and creates opportunity for HR. As an HR leader, you can take advantage of this opportunity by identifying the key needs of your stakeholders, hiring the right resources, establishing system infrastructure, and gaining credibility early.

The Opportunity

Big Data—everyone is talking about it. With the ubiquity of smartphone devices and proliferation of cloud computing and social media, the world generates a lot of data. Gartner has projected that digital data will explode to eight zettabytes within the next two years. Moreover, IDC’s Digital Universe study¹ projects that data creation will continue to more than double in size every two years. By 2020, it

Figure 1: Digital Data Influx in 2015 (Gartner, 2012)



estimates that the amount of digital data produced will exceed 44 zettabytes. What’s a zettabyte? It’s the equivalent data storage capacity of 250 billion DVDs. Need a visual? If 44 zettabytes were represented by the memory contained in a stack of tablets, that stack would stretch from the Earth to the moon more than six and a half times.

The numbers are certainly astronomical, but what exactly are you supposed to do with this asset? How do you translate big numbers into meaningful results? Big Data represent critical inputs into increasingly sophisticated data analytics. Analytics transforms seemingly disparate kernels of information into comprehensive business insight which, once achieved, can guide strategic action.

Such strategic action is well underway. Companies, especially those in retail, have been mining this mountain of internet-based Big Data for years to hedge competitive threats by creating advanced algorithms to sort shopping data and tailor products to meet consumers’ needs. Just consider Amazon’s success in customizing views based on shopping history and site clicks—it seems to know more about our consumer behaviors than even we know ourselves. Amazon has harnessed the power of predictive analytics to the extent that it is now patenting “anticipatory”

shipping²—a method to start the delivery of packages even before customers click “buy.” Amazon is moving beyond just predicting what we want; soon, that special product will be in route to our homes and businesses *before* we even know we want it. That’s analytical power.

But what if you were to turn that power inward to explore the composition of your company? What might Big Data tell you about your own processes and operations? Increasingly, companies have been collecting and organizing mass quantities of internal data to create digital warehouses of structured and unstructured enterprise information. The primary goal of these warehouses is to glean important insight into the challenges facing various departments like finance and accounting, supply chain, sales, and especially in more recent years, HR.

¹ <http://www.emc.com/leadership/digital-universe/2014iview/executive-summary.htm>

² <http://blogs.wsj.com/digits/2014/01/17/amazon-wants-to-ship-your-package-before-you-buy-it/>

People are your company's greatest asset, as well as your greatest expense. Thus, exploring workforce productivity, performance, and retention is an important frontier in predictive analytics. By moving up the maturity curve from monitoring historical trends and patterns to predicting effectiveness of strategic programs, you can realize the same success and competitive advantage that Amazon enjoys, but with your internal customer—your people. Consider what it might look like to transform anticipatory shipping into anticipatory training or retention programs. What would it be worth to your company to be able to predict when high performers are at risk of leaving and engaging the high performer before their two weeks' notice? Though the absolute costs of turnover vary among companies, turnover is always both an intrinsic and extrinsic loss in productivity, knowledge, and money.

You would think that the high costs of turnover would make predictive analytics a mainstay of hiring and retention, yet several recent studies indicate a considerable gap between a company's need for analytics and its ability to perform the function. In a Cornell University study³, 73% of companies surveyed reported they have the techniques to analyze data, but only 27% believe they have the capability and talent to execute. Similarly, in Ventana Research's⁴ recent benchmark research, nearly three in four (71%) senior decision makers find human capital analytics helps improve efficiency and productivity; however, their analysis shows that more than half of the organizations are dissatisfied with their analytics process, with not readily available information being the leading reason (63%) followed by a lack of skilled analytics talent (45%). ScottMadden's own research on analytics shows that nearly half the organizations pursuing analytics cite lack of technology integration as a key challenge impacting effectiveness. Consistent findings have been shared in various Bersin Studies.

So, how do you ensure that your analytics function can perform?

Identifying the Need

In order to provide significant value to the company, the HR analytics function has to understand human capital issues the business is facing and be able to translate these issues into analyses that will result in business improvements. All too often HR wants to evaluate and look at what is important to HR, but this may not align with what business leaders need. This is why it is critical to meet with and interview business leaders annually to uncover their critical business challenges. These business challenges become the framework for the analytics group's annual strategic goals, guide the group when prioritizing requested analyses, and provide insight into the required talent pool for the group's success.

Hiring the Right Resources

A strong HR analytics resource can be difficult to find because the competencies and skillsets required are not commonplace at this time. The ideal candidate has a mix of skills seen in data scientists, software engineers, subject matter experts related to the business question or hypothesis, and strategists who build the story to engage stakeholders, drive buy-in, and transform results into meaningful and impactful initiatives. Therefore, companies have to define their approach at the outset to determine whether they want to hire the mathematical expertise and develop the higher level presentation and communications skillsets on the job or hire a mix of resources. The second option would require some resources with more polished project management and communications skills and other resources with deep mathematical skills to understand the detail and run the analyses. Whatever

³ <https://est05.esalestrack.com/eSalesTrack/Content/Content.ashx?file=23217acb-5e27-4c3f-b413-798ef6f8e57d.pdf>

⁴ <http://public.dhe.ibm.com/common/ssi/ecm/yt/en/ytl03306usen/YTL03306USEN.PDF>

the organizational approach, defining the competencies and skills in advance and hiring to those required competencies will yield the most successful HR analytics team. For more information, please download the report, "[Predictive Analytics: Building the Infrastructure.](#)"

Establishing Essential Systems Infrastructure

The best-fit technology solution for your analytics group will be one that helps harmonize and synchronize data across platforms for a full, consistent view into your organization. Based on the analytic priorities and the maturity of the analytic infrastructure, your organization may need to bolster proficiency in different areas. If, for example, your analytics group is in its infancy, and a critical issue is that managers do not have visibility into basic information, such as turnover within a certain employee's demographic, then the focus should be data warehousing and dashboard creation. Fortunately for companies that are just getting started, there are a multitude of services and products on the market to clean, store, and display data ranging in capabilities and price tag. However, to ensure the right kind of solution is chosen, the group's objective for the tools (both short and long term) should be determined prior to investing time and capital into large-scale data analytic software. In addition, it is important to audit and understand existing systems and integration points across the enterprise, as these systems may become data feeds in future analyses.

For other companies, the infrastructure is already in place, and the analytics group can [advance beyond reporting and historical views](#) to more creative and predictive analytics. ScottMadden looks at what it takes to put predictive analytics in practice in, "[An Iterative Approach – Predictive Analytics in HR.](#)"

Gaining Credibility

Once the foundation of the organization is in place (i.e., the annual strategy and governance of the organization, the right-skilled resources, and the appropriate technology), it becomes important to establish early wins. If the organization never produces insights that are actionable, then true value creation from the group remains unattainable. We recommend to our clients that their first analyses be one that is easily definable and able to provide results within the first four to six months. This proves to HR leadership and the business that the HR analytics organization has legs to stand on, which will lead to requests for additional analyses.

At ScottMadden, we work with many companies to set up or improve their analytics functions and close the gap between aspiration and ability. For most organizations just getting started, setting clear goals; having competent, appropriately skilled resources; building a strong technical infrastructure; and establishing quick wins, together with a strong organizational infrastructure, are critical in ensuring the organization can succeed long term. For more information, please download the report, "[Predictive Analytics: Building the Infrastructure.](#)"

ABOUT SCOTTMADDEN'S CORPORATE & SHARED SERVICES PRACTICE

ScottMadden has been a pioneer in corporate and shared services since the practice began decades ago. Our corporate & shared services practice has completed more than 1,100 projects since the early 90s, including hundreds of large, multi-year implementations. Our clients span a variety of industries from entertainment to energy to high tech. Examples of our projects include business case development, shared services design, and shared services build support and implementation.

ABOUT THE AUTHORS

Courtney Jackson (courtneyjackson@scottmadden.com) is a partner with ScottMadden and leads the firm's human resources practice. Grey Martin (greymartin@scottmadden.com) is a senior associate.