

# **Your Roadmap to Success in People Analytics**

*A <<Company>> Best Practices Guide*

## Introduction

As the 4<sup>th</sup> industrial revolution unfolds, everything is becoming digital. Almost 90% of businesses expect digital disruption in their sectors. Most view it as an opportunity, but there is a cloud on the horizon. Just 44% believe they are ready for a digital transformation.<sup>1</sup>

The new competitive landscape requires new ways of thinking about organizational design, culture, and investment in talent. Companies are redesigning themselves and pressuring every HR function to reinvent itself to support organizational transformation.

## Embrace the Digital Future

Best practices, experience, and good instincts were once enough to support an enterprise, but HR now must step up and embrace the digital culture. Companies need to develop and retain the leadership and skills to manage the transformation while dealing with the threat of a more mobile and demanding workforce.

Employees have become less loyal and harder to engage; their commitment is to their development, not an organization. Talented people will flee when they don't feel they can develop themselves and apply new skills where they are.

As CEOs realize people are their only sustainable competitive advantage, people analytics as a business practice is gaining momentum. It won't be long before human capital analytics becomes a required fundamental competency for HR professionals. HR leaders have a new mission: use data about people to create a sustainable business.

If you are just now getting started in people analytics or are still sitting on the sidelines, this e-book is for you. We will give you an overview of the current state and a self-assessment tool. Then we will show how to build your analytics team and get started.

---

<sup>1</sup> Kane, Gerald C., Doug Palmer, Anh Nguyen Phillips, David Kiron, and Natasha Buckley. Research Report: "Aligning the Organization for Its Digital Future." MIT Sloan Management Review. July 26, 2016. <http://sloanreview.mit.edu/projects/aligning-for-digital-future/>.

## The State of People Analytics

People analytics has emerged as a business discipline. In a 2016 report, Bersin by Deloitte research showed a rapid increase in capability, with organizations making strides in understanding the relationship between people and performance. While the percentage of companies who regard themselves as “excellent” in analytics still seems small, competence is increasing at a rapid rate.<sup>2</sup>

### People Analytics Maturity Grows

|   | 2015 | 2016 | Percent Change |
|---|------|------|----------------|
| Correlating people data to business performance                       | 24%  | 39%  | +63%           |
| Correlating people data to business performance (percent excellent)   | 8%   | 11%  | +120%          |
| Using people data to predict business performance                     | 28%  | 6%   | +29            |
| Using people data to predict business performance (percent excellent) | 4%   | 9%   | +125%          |
| Performing multi-year workforce planning                              | 38%  | 48%  | +26%           |

Source: Bersin by Deloitte, 2016.

Analytics delivery is moving away from the old IT-centric model, where reports are a product, to a user-centered service model. The balance of power has shifted from IT to business users.<sup>3</sup> Companies have embedded reporting and analytical tools into the applications where people work.

### Embedded Analytics

Agile niche companies like Birst, TIBCO, and Domo have joined established vendors Tableau, SAS, and Microsoft to provide user-friendly embedded reporting and analytics functions in the business applications people use in their everyday work.

A variety of integration models drive the change. Workday partnered with Hadoop-based Platfora on several major projects and is now acquiring that company to build out its analytics capability.

SumTotal partners with TIBCO’s Jaspersoft to provide its branded SumTotal Advanced Reporting and offers Jaspersoft Studio for customers who want to create more robust integrated solutions.

SuccessFactors uses open-source BIRT to develop its reporting platform.

Instead of HR moving into analytics, analytics has moved into HR. Vendors are in a heated competition to deliver tools that include graphical interfaces and natural language data search.

Instead of hiring developers to create complicated SQL queries, users can select their data sources, set up their models, and prepare their data to create visualizations in minutes or hours instead of weeks or months.

<sup>2</sup> Bersin, Josh. "People Analytics Market Growth: Ten Things You Need to Know." Joshbersin.com. July 01, 2016. <http://joshbersin.com/2016/07/people-analytics-market-growth-ten-things-you-need-to-know/>.

<sup>3</sup> "Magic Quadrant for Business Intelligence and Analytics Platforms." Gartner. February 4, 2016, revised February 8, 2016. <https://www.gartner.com/doc/reprints?id=1-2XXET8P&ct=160204>

## The Risks of Embedded Analytics

Embedded analytics have democratized business intelligence but can create multiple versions of the truth. Data managers must balance the need to deliver fast analysis at the point of need with the requirement for organization-wide data governance.

Much of the information HR needs to show the value of people to the organization exists outside of HR. Embedded analytics will not survive in isolation from other data sources. Disconnected analytical tools will have limited value.

## People Analytics Maturity

You might well ask what value a maturity model brings to a discussion about analytics. It is much more than fodder for academicians and buzzwords for consultants. Models are useful assessment tools for organizations to assess where they now, what they need to improve, and what their next steps should be.

In *Predictive Analytics for Human Resources*, Jac Fitz-Enz and John Mattox describe three levels of human capital analytics beyond simple reporting: descriptive, predictive, and prescriptive.<sup>4</sup> We use an expanded model that shows the value of simple operational reporting as the foundation for business intelligence.

Most data work is in routine management reporting for operations. Experts spend little time on “full-blown” analytical tasks,<sup>5</sup> but that work has the most impact on the business. Few things matter enough to spend resources on predictive analytics for decision modeling, but those that do matter a lot.

All four levels of reporting and analytics are necessary for a 21<sup>st</sup>-century enterprise. Each has its role in supporting sustainable operations.

**Operational Reporting.** We have used this in our business applications for decades. It includes snapshots of the current state, current activity, and history. We show the user what happened and leave it to them to make inferences and draw conclusions.

Being able to deliver this information is at the foundation of daily business operations and is often the data source for more advanced analysis. We advise clients to resolve issues in reporting before attempting to launch into analytics.

**Descriptive Analytics.** Comparing data, observing trends, and establishing relationships enable us to make inferences about the *why* of information. Charts and visualizations take us beyond knowing what happened to why it happened. Scatter diagrams and simple correlation charts help us understand relationships. We can then use them to assess the impact of people programs on the organization. For example, we can show the effect of wellness programs on attendance, retention, productivity, and revenue.

**Predictive Analytics** uses historical patterns to predict future patterns. Statistical models calculate the probability of a future trend and the confidence level of the prediction. Many organizations can already predict which candidates for hire or promotion will succeed and who might be a flight risk.

**Prescriptive Analytics** quantifies the projected impact of decisions. We can estimate the probability and impact of market forces, competitive pressures, business decisions, and other factors to inform us of the costs, risks, and benefits of decisions far into the future. Predictive analytics can inform decisions at any



<sup>4</sup> Fitz-Enz, Jac, and John R. Mattox, II. *Predictive Analytics for Human Resources*. New Jersey: Wiley Publishing, 2014.

<sup>5</sup> Reilly, Peter. "What do we mean by 'HR analytics'?" *HR Magazine UK*. November 28, 2016. <http://www.hrmagazine.co.uk/article-details/what-do-we-mean-by-hr-analytics>.

level of the business, from an individual employee development plan to a decision to expand to a new continent.

## The People Analytics Team

If you are just getting started in people analytics or restarting your efforts, you are not alone. Most HR reporting and analytics is still at the operational reporting and descriptive analytics levels. But if you are ready to use your data to make better business decisions, we recommend you start by forming partnerships with people who can both enjoy and support your efforts.

### Form Alliances

The people who will make people analytics successful in your organization are already in your corner. They have a keen interest in successful talent management and have the expertise and resources to make the right things happen. If you have not already formed alliances with the CFO, CMO, and line of business leaders, now is the time to start.

**Finance** is no longer the Department of No. The role of the CFO has changed from risk manager, cost controller, and cash flow manager to performance accelerator. After the Great Recession, CFOs understand that talented people drive business results.<sup>6</sup> They know business models, and systems create no value until people make it happen.

Your CFO's people bring analytical skills and expertise in financial modeling to your team. They have been using predictive analytics for decades.

**Marketing** has been doing consumer research and predictive modeling since the 1950s. The profession is adept at measuring human behavior and may have all the analytical expertise you need to get started. An experienced marketing analyst will have already experienced the errors that faulty assumptions and incomplete data models can cause, and can help you stay on the right path.

**Line of business leaders** have performance objectives to meet. Your organization's strategic plan should show you who owns which performance indicators. Get a good handle on what is important to your CEO and the rest of the executive team.

Start conversations with business leaders about performance. Learn about their frustrations and the obstacles they must overcome. Explore with them how knowledge about people and their impact on the organization can help them succeed. Position your proposed analytics team as a tool for them to improve their results.

### Form Your Team

If you are an HR practitioner, you need not become a data scientist to get started. Your analytical skills will grow over time as learn to ask the right questions. But you need a data scientist on your team.

If you can't borrow expertise from Finance or Marketing, a consulting partner can help you control your costs and provide all the help you need. Data scientists and technical skills are expensive. It is often better to contract for only the services you need. Find a partner who understands your needs and respects your budget.

A people analytics team requires expert knowledge in every area of human capital management, but also many other skills necessary that rarely live in HR. These competencies are minimum requirements

---

<sup>6</sup> "From finance to people accelerator: The CFO's evolving role." IDG Connect. January 26, 2017. <http://www.idgconnect.com/blog-abstract/24127/from-finance-people-accelerator-the-cfo-evolving-role>.

for your team.

1. **Visionary Leadership:** the ability to frame and communicate the future state in a way that makes the right people want to help. A visionary leader can create a picture of the future in every team member's mind and motivate them to want to achieve it.  
If that is you, great. If not, you will need a visionary ally and sponsor. Ideally, this will be the executive responsible for the business unit that owns the problem or opportunity you want to address.
2. **Business Acumen.** More than in-depth knowledge of your company, your business model, and your industry, it is how your firm makes money and capitalizes on opportunities. This expertise will be in Finance and the business unit responsible for the KPI.
3. **HR Expertise.** Knowledge and experience in every HR function are necessary, but we also recommend expertise in I/O Psychology. You will explore how human behavior affects the enterprise and how the organization can influence behavior.  
As in data science, a consultant may be the most cost-effective source.
4. **Technology Infrastructure.** You will need access to data wherever it is: in your software, in your company, or outside it. You also need to deliver insights wherever your people or partners need them.
5. **Data Management.** If your organization has a [Chief Data Officer](#), a [Master Data Management](#) program, and a [Data Governance](#) board, you are well on your way. If not, we urge you to get started now. Talk with your CIO about the need for data governance in HR and the entire organization.



6. **Data science, analytics, and visualization.** You may be fortunate enough to have a data scientist or partner who can manage all three roles, but that is a rare combination of skills. Your best plan may be to engage the skills on an ad hoc basis while you grow analytics and visualization capability in your HR group.
7. **Marketing.** How well your business leaders receive your analyses and recommendations will depend on how well you market your efforts. Partner with Marketing to make sure you deliver your findings and recommendations with impact.

## Getting Started in People Analytics: Think Big and Start Small

Information about people analytics abounds, but a step-by-step guide on what to measure, how to measure it, and what to do with the results doesn't exist and would not be useful. Your path of inquiry is unique to your business and the people in it. What we can do is give you some guidelines from our experience.

The strongest recommendation we can make is to keep organizational transformation in mind but make small, measured changes. Choose an area where you can impact the business and add value. Learn from the data you collect and use your knowledge to develop hypotheses, test them, and act on the results.<sup>7</sup> This has been the path to success for our analytics clients and many other organizations.

Don't tie yourself up by thinking you need to gather more data. If you have been using automated systems for two years or more, you have all the data you need.

### Expect Skepticism

If your executive team is not all in for people analytics, don't let their reluctance deter you. Business leaders and managers have been making people decisions based on gut instinct for their entire working lives. When you have built a successful career on your judgment of individuals, it's hard to trust that an algorithm will do a better job of predicting performance than you do—even when the evidence presents itself. A recent Fortune Knowledge Group™ study showed lingering mistrust.

1. "Nearly two-thirds (65%) of executives believe subjective factors that can't be quantified (including company culture and corporate values). Only 16% disagree.
2. A majority (62%) of executives say it is often necessary to rely on gut feelings and soft factors.
3. A majority (61%) of executives agree that when making decisions, human insights must precede hard analytics."<sup>8</sup>

Getting support for a broad initiative may be difficult at first, but incremental success will change minds.

### Ask the Right Questions

Knowing the right questions to ask can be harder than it might seem. If your company has a concern about the quality of the people they hire, focusing your efforts on the people you hired may not be the right place to start. It could be a process that arrives at poor decisions or relationships between recruiters and hiring managers.

Team member insights will shine, and your data scientist will help you form the group's ideas into hypotheses you can test.

### Select and Clean your Data

Once you have narrowed down your inquiry to a business focus, the right questions will be:

- What do we know now?
- Will additional information increase our understanding?

---

<sup>7</sup> Isson, Jean Paul, and Jesse Harriott. *People Analytics in the Era of Big Data: Changing the Way You Attract, Acquire, Develop, and Retain Talent* (Kindle Locations 783-786). Wiley, Kindle Edition. 2016.

<sup>8</sup> "Emotion Trumps Data for Business Decision Makers." 2014. Accessed February 21, 2017. <https://www.gyro.com/onlyhuman/>.

- Do we have the information or can we get it easily?

Prepare the data, but don't waste resources trying to make it perfect. Many hands create people data, and operators make their own judgments about its importance. You only need to make it good enough to make valid predictions.

Several vendors have user-friendly data preparation tools, and the list is growing. We have found the tools in Talend and Pentaho to be cost-effective and useful, suitable for data-savvy business users.

## Challenge Assumptions

A false assumption can render an analytical model invalid, and assumptions that were true last year may not be valid today. Assumptions can also be invalid if we don't include the right variables.

Data analysts know how to test for the validity of your assumptions, and analytical software has tools for testing them. What is important for business leaders to understand is that invalid assumptions will lead you astray.

## Test your Hypotheses

You may be able to test your questions against your existing data, or you may need to run a small test project. Balance the value of additional information against its cost. The variables in most business cases have "information value" near zero, but some are so valuable it is easy to justify measurement.<sup>9</sup>

Analyze your result and quantify them in terms of impact on the business. Take care to include all the factors in your calculation and estimate the intangibles. For example, when you measure turnover cost, replacement is only one aspect. Consider the impact on productivity, morale, reputation, employment branding, and knowledge.

## Tell Your Story

You can have the best data in the world, but if you don't present it in a way that captures your audience, it will be of little use.

Creating data visualization is only the starting point. Without a compelling story to capture attention and motivate action, your efforts will be in vain.

Some data experts will tell you that a well-designed visual presentation doesn't need explanation, but communication elements are missing in data displays only a compelling story can resolve. A well-written story will add these essential elements.

- Context that brings all the elements into a cohesive message.
- Personalization and relevance to the audience. A well-told story places each member of the audience into the story by creating a picture of themselves in the situation.
- An emotional connection. Like it or not, emotions rule decision-making.

## Constructing an Analytics Presentation

Once you have created a story, you can build a presentation.

- Start in the middle of the story. Describe the business need you addressed and the crux of the problem.

---

<sup>9</sup> Hubbard, Douglas W. How to Measure Anything: Finding the Value of "INTANGIBLES" in Business, 3<sup>rd</sup> Ed., p. 49. John Wiley & Sons, Inc. Hoboken, New Jersey. 2014. Print.

- Make it personal to draw people into the story. You could start with something like this: “Fred was standing his office window, gently banging his head against the frame. He thought he didn’t know enough to solve his problem.”
- Remove any unnecessary detail—anything that will distract from the central message.
- Hint at the “big idea” that will come at the end. It can be as simple as stating you discovered new insights. Use the idea to build suspense.
- Keep the momentum going.
- Use details to maintain interest, but don’t let them distract.
- Be specific about what you want to happen next, but let people make their own decisions. You could give them several choices, or open discussion on what the solution should be.
- Provide ongoing communications and a forum for discussing ideas.

## Prepare for the Future

Current HR practices in people analytics are too often developed in isolation. We expect a far different future where people analytics is central to the business.

People are not, as we like to say, a business asset. They are the force that produces value for your customers, your partners, and your organization. The impact people have on your organization should be a part of every business decision.