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# New Trends in People Analytics

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# New Trends in People Analytics

## **Abstract**

[Excerpt] People analytics is use of people-related data to improve and inform all types of management, business, and HR decisions throughout the company. These objectives can be achieved, and is most commonly done in many organizations, with simple spreadsheets, effective questions to answer, and good storytelling and change management. In 2016, 8% of companies believed they were fully capable of developing predictive models and 32% felt ready or somewhat ready for analytics.

## **Keywords**

Human Resources, analytics, trends, people analytics, big data, quantified employee, wearable devices, communication, external data, monitoring, employment brand

## **Comments**

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# New Trends in People Analytics

Peter Baek  
December 2016



# Introduction

## What is people analytics?

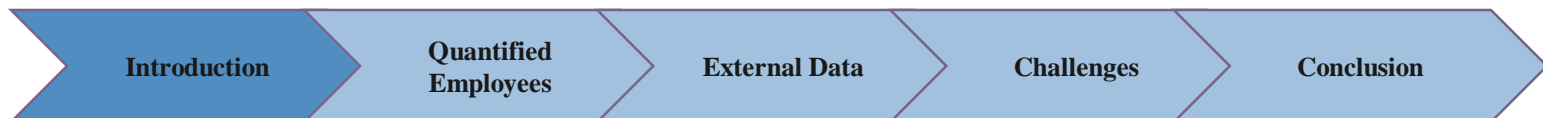
People analytics is use of people-related data to improve and inform all types of management, business, and HR decisions throughout the company. These objectives can be achieved, and is most commonly done in many organizations, with simple spreadsheets, effective questions to answer, and good storytelling and change management. In 2016, 8% of companies believed they were fully capable of developing predictive models and 32% felt ready or somewhat ready for analytics.<sup>1</sup>

“Companies with mature analytics functions in general produce 5-6 percent higher financial returns.”<sup>3</sup>

## Returns from people analytics

For companies proficient in people analytics, the results are clear. A Deloitte study in 2014 found that the 14% of companies with mature predictive and strategic talent analytics capabilities outperformed the S&P 500 by 30% over the last three years.<sup>2</sup> Another study by MIT and University of Pennsylvania researchers found that companies with mature analytics functions in general produce 5-6 percent higher financial returns.<sup>3</sup>

These strong financial results follow from people analytics capabilities that allow organizations to figure out what makes people join, perform well in, and stay with an organization; who will likely be successful; who will make the best leaders; and what is required to deliver the highest-quality customer service and innovation.<sup>1</sup>



## Evidence-based decision making

People analytics provides HR with the opportunity to shift from intuition and “gut feel” towards a scientific and evidence-based decision making approach.<sup>2, 4</sup> In other words, as Jim Barksdale, former Netscape CEO, said, “If we have data, let’s look at data. If all we have are opinions, let’s go with mine”.<sup>5</sup> In this spirit, as the foundation of people analytics is data, this report will explore two significant trends that provide an opportunity for organizations to gather more data to gain superior workforce insights.

## Trends

The first trend is the quantified employee with data coming in on physical characteristics of the world, from the employees themselves and the workplace, in real-time.

The second trend is utilizing a recent but rapidly growing source of data of the employee and of the organization from external sources.

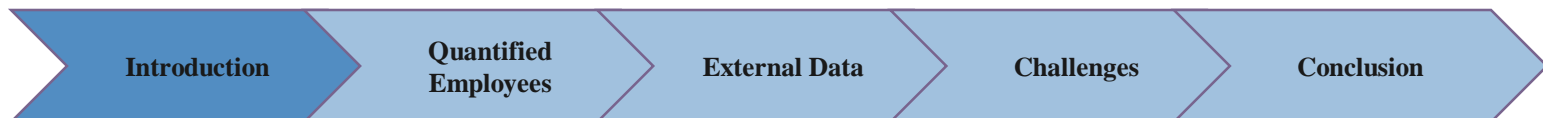
“All people decisions should be informed by data and analytics.”

- Google People Analytics Motto.<sup>6</sup>



Source: [https://www.gstatic.com/images/branding/googlelogo/2x/googlelogo\\_color\\_284x96dp.png](https://www.gstatic.com/images/branding/googlelogo/2x/googlelogo_color_284x96dp.png)

For years, Google used data to systematically improve performance and leadership within the company.<sup>23</sup> Many company executives are now following suit and are pressuring HR to produce evidence-based insight to better drive the return on their investments in people.<sup>9</sup>





# Quantified Employees

Consumers bought more than 45 million wearable devices and fitness trackers in 2015, providing information on their exercise, sleep, movements, diet, and pulse. This creates the “quantified self”, to track and analyze our body to continue to improve ourselves.<sup>7</sup> The “*quantified employee*” then is the quantified self in the office. Rapid development of wearable sensing technology offers organizations the opportunity to gather substantial data on the physical world.

## Sensors leading the way for the quantified employee

These sensors, from company ID badges to cell phones to environmental sensors, provide fine-grained data on interaction patterns, speaking patterns, motion, and location, among other things.<sup>8</sup> PwC’s 6th Annual Digital IQ Survey found that 54% of top performing companies will be investing more in sensors in the coming year to take advantage of opportunities in the workplace ranging from productivity data to tracking employee wellness metrics.<sup>9</sup>

## Quantified employee provide insights to maximize productivity

Ben Waber and his colleagues at MIT Media Lab’s Human Dynamics group found how slight changes in behavior, from changing when you take breaks to what lunch tables you sit at, can make you happier, healthier, and more productive.<sup>10</sup> Opportunities for the quantified employee include using people analytics to transform socialization in the workplace and changing office layout to maximize productivity.

## Fitness trackers

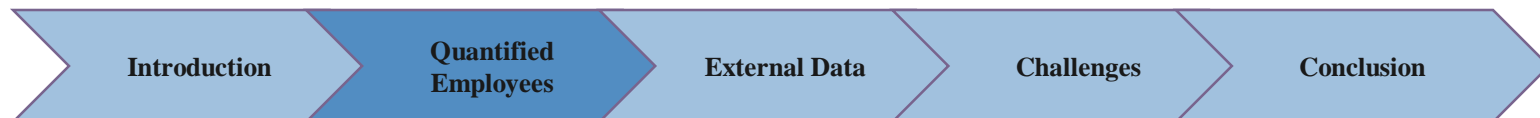


Source: <http://blogs-images.forbes.com/joshbersin/files/2014/08/fitbit.jpg?width=960>

## Sociometric badges



Source: <http://www.cbc.ca/gfx/topvideo/2015/biz-id-badge-office-lee-091415.jpg>



# Socialization in the workplace

When learning how to design teams for success, call centers are a good place to start because of easy to identify skillsets needed for the job as well as easy to monitor tasks. However, managers at a bank struggled with figuring out why some teams got excellent results while others, seemingly identical, did not. Myriad of measured metrics failed to identify the reason for the performance gap. This led to an assumption that team building was an art, not a science.

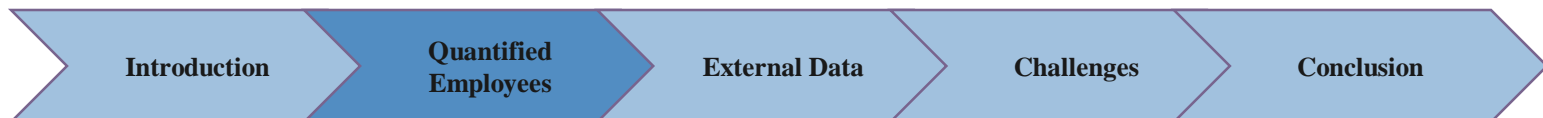
## Application of sensors in the workplace

MIT Professor Alex 'Sandy' Pentland and colleagues from Sociometric Solutions (now Humanyze), using sensors, identified observable, quantifiable, and measurable characteristics of high-performing teams.<sup>11</sup> The sensors were electronic badges that collected data on individual communication behavior such as tone of voice, body language, whom they talked to and how much, and more.

## Sociometric Badges



Source: Bosanac, A. (n.d.). How "people analytics" is transforming human resources. Retrieved December 12, 2016, from <http://www.canadianbusiness.com/innovation/how-people-analytics-is-transforming-human-resources/>



# Socialization in the workplace

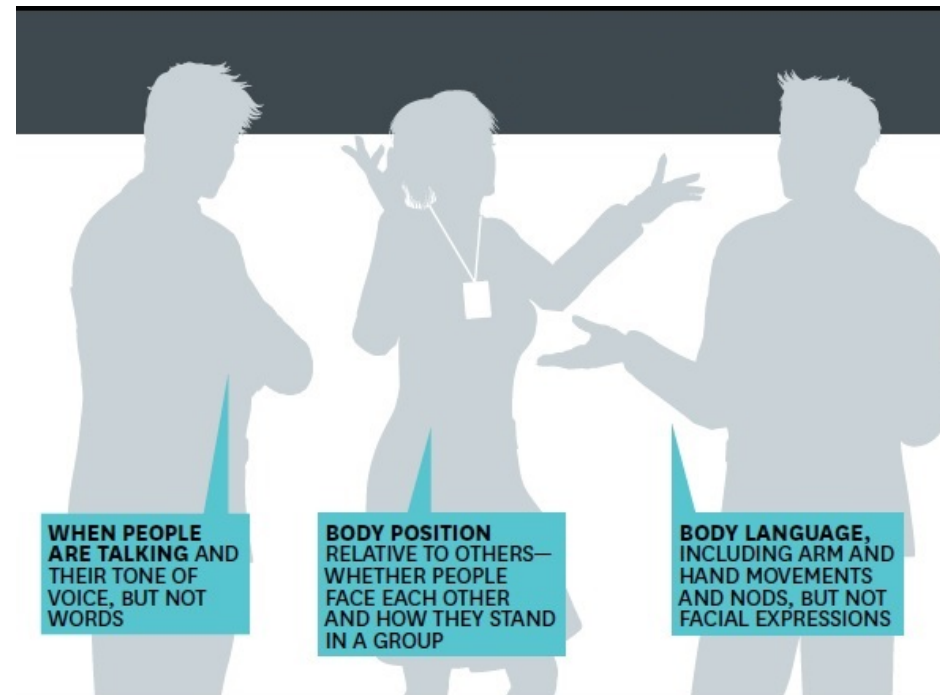
## Sensor findings

What they found, with consistency in multiple industries and various job roles ranging from call center teams to innovation teams, was communication as the most important predictor of a team's success. Pentland identified three key elements of successful communication: exploration (interacting with people in other social groups), engagement (interacting with people within your social group), and energy (interacting with more people overall).

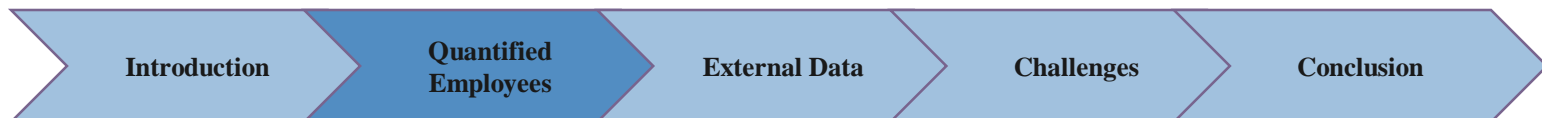
## Quantified employee driven insights

Using this insight, the team recommended the call-center manager to revise employees' coffee break schedule so that all members of a team took a break at the same time. This would allow people more time to socialize with their teammates, away from their workstations. Afterwards, average handling time fell by more than 20% among lower-performing teams and decreased by 8% overall at the call center. This change in break schedule is now implemented in all of the bank's call centers, representing 25,000 employees. The manager is also forecasting \$15 million a year in productivity increases, due to insights driven by analytics and sensors. Building great teams has become a science.

## Data Collected by Sociometric Badges



Source: Pentland, A. (n.d.). New Science of Building Great Teams. Retrieved December 12, 2016, from <http://connection.mit.edu/wp-content/uploads/sites/29/2014/12/hbr-new-science-teams-2012.pdf>





# Workplace Redesign

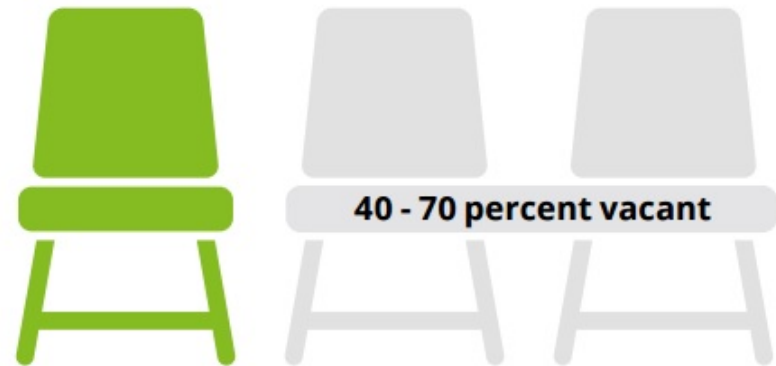
## Using sensors to better understand workplace

Deloitte Canada went further to exploit opportunities using sociometric badges by redesigning its work environment. Workspace and workplace redesign is now gaining traction due to research showing its efficacy to **improve communication**, leading to increases in sales, productivity, or creativity.<sup>12</sup> The badges correlated factors such as “who is in the meeting,” “how much time are we spending together,” and “who is pushing back in his chair,” among others, with employee stress levels and other measures of productivity. The device also gave a heat map of office activity, allowing the company to understand what common areas were popular and which were hardly seeing any action.<sup>13</sup>

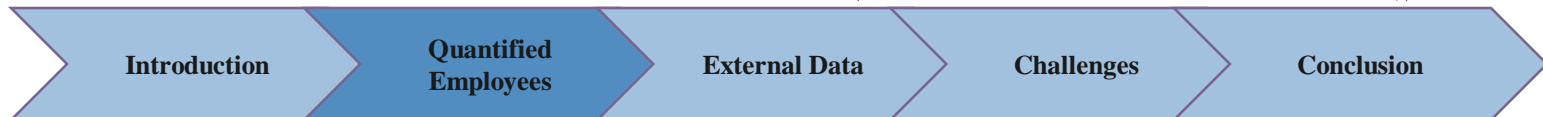
## Workplace Insights

Deloitte Canada found that people tend to prefer to work in smaller groups and that working physically closer to others increases enjoyment and productivity, cross disciplinary teams are higher-performing and more engaging than when service lines work alone, and that offices with more windows and more light promote more “happy people” than spaces that are more closed-in and private, among other insights.<sup>14</sup> Deloitte Canada used these findings to redesign all of its major offices and teams to **satisfy real preferences** and use the work environment to **drive greater performance**.

**Recent studies show workplaces are 40-70 percent vacant**



Source: Botting, S., & Pastakia, K. (n.d.). It's time for a workplace intervention. Retrieved December 14, 2016, from <https://www2.deloitte.com/content/dam/Deloitte/ca/Documents/real-estate/ca-en-real-estate-wotf-v7.pdf>



The figure below demonstrates the opportunities of IoT applications Deloitte has experimented with. This is only the beginning as sensor technology and data mining techniques improve.

### Possible IoT applications in the workplace



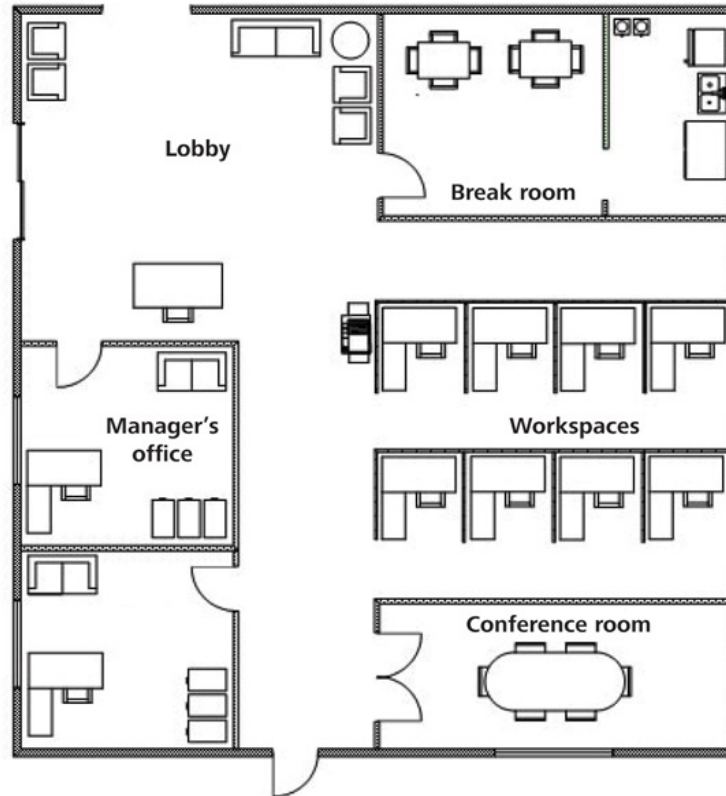
By mapping sociometric data such as tone of voice and rate of gesture, managers can begin to see when they are helping to promote employee engagement and when they may be hurting team cohesion.



Automated adjustments to heating and cooling based on presence can not only help workers feel more comfortable, but also save energy and decrease a facility's carbon footprint.



Managers can see aggregated performance data for a team, to get a real sense of how the team is doing without the risk of identifying any individual.



Experiments from Deloitte Consulting LLP have used wireless access points and team codes to help workers find empty desks near their colleagues. This makes it easier for employees in open plan offices to find a seat, and companies to have more efficient seating arrangements.



Data broken down by task type can help individuals understand when they perform certain tasks best, and schedule meetings when the group is most likely to be engaged.



Kiosks outside of conference rooms let people rate the quality of a meeting on a 1–5 scale, and give planners immediate feedback on what they could do to make future meetings more productive.

Source: Bersin, J. (n.d.). Will IoT technology bring us the quantified employee? Retrieved December 12, 2016, from <https://dupress.deloitte.com/dup-us-en/focus/internet-of-things/people-analytics-iot-human-resources.html>

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# External Data

## HR lacks external data usage

Currently most people analytics teams focus on analyzing internal data. Only 5 percent of companies surveyed by Deloitte believe they have an “excellent” policy for leveraging social media data with 56% rating themselves as “weak” in leveraging social media data. In addition, 81% report that they are “not ready” or only “somewhat ready” to take advantage of this growing trend.<sup>15</sup>

External data sources provide additional data points that at times are more valuable for predicting purposes than internal HR data. It’s through effectively leveraging external as well as internal data that HR can drive critical people insights.

Opportunities for insight include monitoring and building employment brand, identifying and recruiting talent, better understanding compensation

strategies, recognizing flight risks, and monitoring employee satisfaction and engagement.<sup>16</sup> In other words, talent analytics is further strengthened by access to more diverse and external sources of data.

## Sources of external data

Data volunteered by individuals on social networking sites is often more comprehensive and accurate than the data within corporate HR systems. These sources include social media websites such as Facebook and LinkedIn as well as crowd sourcing websites such as Glassdoor.com, Indeed.com, and Payscale.com, which collectively provide company reviews, salaries, and feedback on organizations. HR leaders report that employee profiles on LinkedIn and other social media outlets are more accurate and complete than their own internal employee records.<sup>15</sup>

“Employee profiles on LinkedIn are more accurate and complete than [internal company] employee records.”



Source: <http://www.smartinsights.com/wp-content/uploads/2013/01/LinkedIn-Logo-2C.png>

Glassdoor is a public source of company information ranging from company reviews, salaries, and feedback



Source: <https://press-content.glassdoor.com/app/uploads/sites/2/2015/04/GD-logo-green-on-white-02.jpg>

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# External Data

## Disruption by start-ups

Many start-ups now monitor social networking data to predict patterns of external job-seeking behavior and retention risk. These companies claim that their data is more predictive of an employee's likelihood of leaving than any internal data available.

## hiQ Labs and AOL

Darren Kaplan, CEO of hiQ Labs, went as far as to say “For applications like predicting flight risk or understanding the drivers of retention, our experience shows that public data can be significantly more predictive than internal HR data about people.” AOL worked with hiQ Labs to better leverage external data to predict and understand retention and to find ways to further engage the workforce.

John Callery, former head of people analytics at AOL, says that external data is giving the company a whole new perspective on ways to make better people decisions.

## Where to start

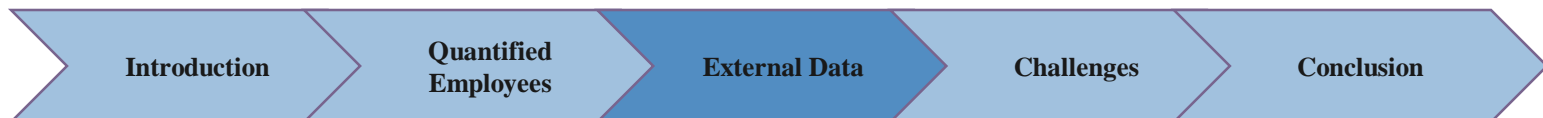
Tools that explore LinkedIn and Glassdoor, among others, are available and companies should become comfortable utilizing external data for sourcing, recruiting, and monitoring their employment brand.

Many marketing teams are already utilizing external data and are comfortable solving the problem of monitoring, leveraging, and managing these data. Marketing teams should be leveraged for tools and processes on how to best find and monitor data about employees.

hiQ Labs solutions include predictive attrition insights about an organization's employees using purely external data.<sup>21</sup>



Source: [https://pbs.twimg.com/profile\\_images/48772291443138560/8KsAwXW3.png](https://pbs.twimg.com/profile_images/48772291443138560/8KsAwXW3.png)



# Challenges

## Capability Gaps<sup>18</sup>

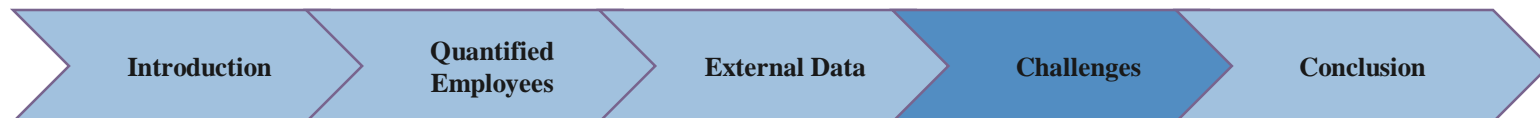
People analytics is a broad space and there are opportunities even now with the internal HR data stored in many organizations. A good place to start with people analytics is with simple spreadsheets, effective questions to answer, and good storytelling and change management. People analytics capability development does not need to be driven solely by technology.

## Consumer-Driven HR

Target hit headlines when its analytics algorithm was able to recognize pregnancies through data on consumer behavior.<sup>17</sup> Using a consumer-driven approach, HR can utilize the data available to identify key employee behaviors and provide insights to improve employee performance and engagement.<sup>8,19</sup> HR should also build teams with employees from other functions to gain this broader perspective.

## Employee Buy-In

Employees worry that their employers may use personal monitoring against them. The “Big Brother” aspect may also hurt employee engagement.<sup>22</sup> Therefore, it is critical for organizations to assuage data security concerns, communicate how the data will be used to improve employee engagement or productivity, and align employee motivation with organizational priorities by sharing some of the efficiency savings through either bonus or salary increases.





# Conclusion

HR's shift from art and intuition to scientific and data-driven is a foregone conclusion. It is now up to company leaders to make the investment in people analytics in order to capitalize on the opportunities.

People analytics is rapidly advancing and new opportunities will continue to emerge. HR will be able to provide concrete ROI measures using analytics and more traditional measurement tools such as surveys will fall to the waistline.<sup>20</sup> The quantified employee will redefine how HR and organizations engage employees and measure their productivity. More and more data, including external data, will become accessible over time and HR must be up to the challenge of capitalizing on them.



Source: [http://www.volometrix.com/hs-fs/hub/408880/file-1328068670-jpg/VoloMetrix\\_People\\_Analytics\\_Cropped.jpg?t=1468875688991](http://www.volometrix.com/hs-fs/hub/408880/file-1328068670-jpg/VoloMetrix_People_Analytics_Cropped.jpg?t=1468875688991)

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