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A NEW AGE OF TECHNOLOGY IN TALENT MANAGEMENT

USING AI AND BIOMETRIC DATA TO IMPROVE EMPLOYEE WELL-BEING

Thought Leadership

Once seen as futuristic fantasies in sci-fi shows, biometric technologies like voice ID, facial recognition and fingerprint scanning have become normal parts of our daily lives. The recent explosion of artificial intelligence (AI) has led business leaders to focus more on ways to use advanced technology to accelerate their organizations and shape the future of work. This includes creating workplaces where workers feel valued, empowered, and motivated to give their best toward the success of the company. New biometric and AI technologies have emerged as opportunities to boost business growth by using novel data sources to support employee well-being and performance. Through the precise insights of biometric tools and AI, new neuroscience-supported approaches to coaching can be increasingly tailored to each individual's needs. The article summarizes ways businesses can benefit from the rapid progress in wearable technology and AI, as well as provides best practices on how to implement this tech in organizational settings.

The impact of workplace well-being on a healthy bottom line

Around the time of the COVID-19 pandemic, we saw companies paying more attention to employee well-being. The research showed that a happy and healthy work environment offers employees a chance to connect socially, gain a sense of purpose, and focus their efforts on things that support their sense of meaning and fulfillment. What's more, happy workers are more productive at work. Not only does meaningful work bring psychological benefits to an employee, but research shows employee well-being and business success are closely linked. A supportive and challenging environment predicts work engagement, commitment to work, and job satisfaction, which ultimately contribute to impactful financial outcomes.

However, it is not always an easy task to create a happy workplace. Many aspects of work can be emotionally, physically, and socially challenging. When jobs are characterized by stressors like repetitive tasks, excessive or conflicting time demands, a lack of clarity in one's role, interpersonal conflicts, toxic work environments, and untrained management, to name a few, employees are more likely to develop work-related stress and even burnout. As a result, heightened stress contributes to a loss of productive workdays and a loss of key talent, ultimately hurting the profitability of the organization. A 2019 study conducted by the American Institute of Stress found that after including factors such as absenteeism, turnover, diminished productivity, increased medical costs, and increased legal costs, the total economic impact of stress on US employers was estimated at $300 billion.

Therefore, business leaders need to stay vigilant about managing not only their stress but also be aware of and meaningfully address employee stress levels within their organizations. Modern biometric and AI technologies offer a powerful way to not only track but also transform the well-being of their employees, boosting the performance of the organization as a whole.

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What can new technologies offer for employee well-being?

Biometrics refers to the analysis of biological data, such as human characteristics or physiological activity. Biometric research uses sensors to track various bodily signals such as eye movements, facial expressions, or heart rate. These signals provide objective measures of where our attention is focused (e.g., eye gaze) or how excited we are in response to a video (e.g., heart rate). Today, the increasing popularity of consumer wearable technologies (e.g., Fitbit, Apple Watch) makes the real-time tracking of physiological states and feelings possible outside research laboratories. According to one recent study, over 1 in 5 American adults use a wearable fitness tracker, and around 41% utilize this technology to improve their health.

While the adoption of biometrics in businesses is relatively new, biometric measurement has a long history in the psychological study of human behaviors and feelings, particularly those that are hard to measure, implicit and subconscious. As such, these wearable technologies may offer a compelling resource for organizations to support the well-being of their employees. Leading-edge organizations are already leveraging the insight of HRV to help their employees identify and address stressors in their daily lives. For example, empirical publications highlight the applicability of using HRV to address employee stress in industries such as nursing, call centers, construction, and aviation.

One reliable biometric measure that has the potential to transform employee well-being and resilience at work is **heart rate variability** (or HRV), which describes the variability in the amount of time between heartbeats. HRV is an important indicator of overall cardiac health, psychological stress, and emotional regulation. When we are under stress, our heart responds by beating with uniform regularity. The variability in time between heartbeats decreases, translating to a decrease in heart rate variability.

Many commercially available wearable devices today are equipped with sensors that are used to record changes in heart rate variability. Traditionally, elite athletes have used HRV to evaluate how much further they can push themselves and when they need to recover. Recently, however, the widespread availability of wearable technology has opened the door for innovative uses for HRV technologies and the data they provide. Along with advancements in HRV measurement technology, several companies are innovating biometrically supported stress management apps. These apps are often synchronized to wearable devices to keep track of stress, and offer stress management techniques such as breathing exercises, progressive muscle relaxation exercises, and visualization exercises. Some apps take this one step further by also integrating tailored interpersonal communication training designed to help users overcome particularly stressful interactions with peers, superiors, or direct reports.

Armed with this new kind of data, users can respond with more intentionality and precision than ever before. Insights into HRV levels and the patterns we see in that data can allow employees to think about their everyday stress in a new way and can be instrumental in creating those “aha” moments that spark insight into deeper self-awareness. What meetings are draining them? What kinds of conversations are especially difficult? How do they respond to their everyday work life? Is their time away from work *really* restorative?

Users can leverage AI-powered insights to identify which interpersonal interactions are most overwhelming or stressful by comparing their biometric data to their work schedules. Executive coaches can integrate biometric data and AI-powered coaching to add even deeper levels of insight and support to help their clients better identify patterns in stress responses and prioritize action steps. The following case study illustrates how executive coaches can leverage this information to help their clients quickly understand and overcome their stressors.

Using HRV & AI to increase employee well-being: A case study

Recently, Korn Ferry offered this technology to a group of its executive coaches. This study leveraged pre-existing coaching dyads for peer support and development. Each member of the dyad was given access to an app that uses HRV data collected from smartwatches. The app summarized the data, identified key stressors, and suggested ways to proactively address these stressors. For example, after identifying several stressors about time management, deadlines, or feeling spread too thin, the program would prompt the user with questions that helped identify the root causes of these stressors. Depending on the responses, the AI would then offer techniques such as role clarification, task prioritization, and delegating responsibilities. The exact solutions provided by the AI would depend

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on various contextual variables such as the nature of the stressors.

At the outset of the study, participants downloaded an app to their smartphone and synchronized the app to their smartwatch. The initial phase of the study was two weeks of passive baseline measurement where the executive coaches simply wore their smartwatches so that the app could capture heart rate variability data in multiple settings. After this baseline measurement period, one-on-one meetings were carried out where the coaches leveraged biometric information to quickly identify the types of stressors that were most salient. After identifying the most impactful stressors, the coaches supported each other in creating action plans designed to address these stressors. After the biometrically assisted coaching sessions, coaches provided HRV data for at least two more weeks.

Results showed clear reductions in biometrically measured stress with a 3% improvement in heart rate variability following the biometrically enabled coaching session. Results also showed improvements in self-reported measures such as reduced perceived stress (8% decrease), reduced anxiety (16% decrease), increased resilience (5% increase), and increased metacognition (7% increase)[1]. This is one example of how biometric data and AI can be leveraged to help professionals increase awareness of stressors and develop precision interventions to navigate them to maximize well-being[2].

1. Perceived stress was measured with the Perceived Stress Scale-4 (Cohen et al. 1983); Anxiety was measured with the Generalized Anxiety Disorder-2 (Kroenke et al., 2007); Resilience was measured with the Response to Stressful Experiences Scale-4 (De La Rosa et al., 2016); Metacognition was measured with an 8-item measure.

2. While this example is not experimental in nature and no control group was available, these results are in line with what would be expected given use of biometric data to help professionals overcome stressors.

3 ways to leverage wearable tech to transform organizational well-being

Given the well-documented prevalence of stress and the overwhelming costs to both employees and employers, it is no surprise that numerous organizations have attempted to quantify stress and well-being at work. Many companies are looking for ways to provide the support their valued employees need to perform at their best every day. This support often takes the form of executive coaching, mindfulness, and meditation, as well as training in professional and interpersonal communication.

While these techniques have helped people cope with stress they encounter in their professional and personal lives, the most innovative organizations are taking this one step further by leveraging rapid advancements in wearable technology and AI to help their valued employees identify and overcome their toughest challenges.

Here are three steps leaders should take to leverage the power of wearable technology.

1. **Choose the right device that aligns with your organization's goals.** Consider factors like scalability, level of financial investment required, ease of use, and time commitment, among others. Explicitly list and compare features that are crucial for your unique objectives when choosing wearable tech or a biometric stress-tracking app.

2. **Communicate to employees how their data will be used and shared.** Without clear and easy-to-understand language about an organization's goals, intentions, and policies, employees may assume the worst, and this will eventually detract from participation.

3. **Encourage senior leaders to participate in the initiative.** Leadership participation is a clear signal to employees that their organization takes matters such as employee stress and well-being very seriously. When employees see that leaders value a behavior, they will be more willing to engage in that behavior.

By following these best practices, business leaders can guide their organizations in effectively harnessing the rapid advancements in wearable technology. This strategic approach ensures not only the organization's success but also contributes to improved employee well-being by fostering a technologically empowered and efficient work environment.

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