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TIME TO PREDICTIVE VALUE IN HCM SOLUTIONS

November 2016 | **Author:** Steve Goldberg, Research VP, HR Technology/HCM Strategies, HfS Research

A New Metric in HR Tech Selection

Introduction

As with the other three pillars of the SMAC (Social, Mobile, Analytics, Cloud) innovation wave in HR technology in recent years, advances in "people analytics" are creating new sources of business value, but also perhaps new sources of confusion for customers. The majority of HCM systems vendors now include analytics as part of their offering and value proposition, causing prospective customers to try to assess merits and degree of fit in an area laden with complexity and misconceptions, and often with only modest in-house analytics expertise.

Unlike talent acquisition, performance management, learning, payroll or any other target areas for HR technology enablement, analytics is rarely defined in business process terms. So the steps, actions and outcomes the system will be enabling are anything but linear and obvious in most cases. This can also make assessing the impact of analytics capabilities delivered a fairly challenging undertaking.

Case in point: An analytics dashboard reveals lower turnover than direct competitors are experiencing—great! Upon further exploration, it's discovered that while turnover is lower, more staff are lost to direct competitors than added from direct competitors. Not so good anymore. But continuing the investigation, apparently those being lost to direct competitors are largely bottom quartile performers. Great again. Indeed, HCM systems users inside and outside HR Departments don't have to be data scientists unless they need to build or interpret predictive models, play with algorithms, etc. But they probably ought to have a mindset that one metric or analytic rarely tells a meaningful story, and that any actions taken based on one or two data points is just as likely to be the wrong action.

Moreover, analytics capabilities within HCM solutions range from very simple headcount and turnover analyses to predicting to what degree different person, job, team, broader organizational contexts (e.g., culture) or external factors will impact employee engagement, retention and contribution. Predictive analytics are also applied to workers and business operatives we generally don't know as well as employees, including candidates, pre-candidates, contractors, and business partners, and to the relationships between all of these and customers.

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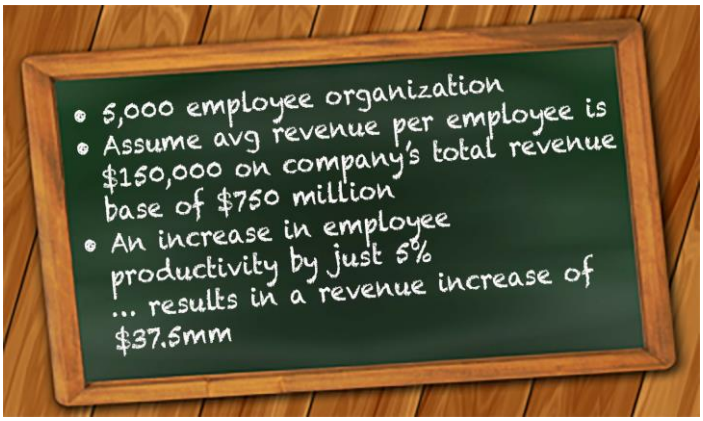
This POV proposes a new industry metric, albeit somewhat more conceptually than in a quantitative manner at this stage. The suggested metric is a guidepost that could help organizations more realistically and accurately assess the potential impact of sophisticated HR technology that includes predictive capabilities. **Time-to-Predictive-Value ("TtPV") is the average length of time it takes for a typical organization to consistently experience the predictive capabilities within a technology tool or system, and therefore derive meaningful and incremental business benefits from that solution.** Certainly the shorter the TtPV, the better.

"HCM Science" Drives Business Results

While predicting "employee retention risk" seems to be all the rage in the HR tech domain, sophisticated technology may not always be essential. There are clearly very logical factors and variables that will usually correlate with employee turnover trending up or down, and these can arguably be captured pretty effectively in a spreadsheet; e.g., changes in the competitiveness of compensation and benefits, changes in corporate culture (perhaps from a recent M&A), new or different management style, or investing less/more than customary in employee development or candidate screening. There are also some unique aspects to every organizational context. Therefore if commercial technology is deployed to identify employee retention risk—particularly among key employees, the commercial system will likely have to be calibrated or configured to those unique dynamics or elements.

One of the best illustrations of the benefits of leveraging science and predictive tools in HR / HCM relates to the ability to predict what factors or circumstances will have a positive impact on employee contribution or productivity. A major reason is that very modest (e.g., 5%) improvements in employee productivity can easily translate into tens of millions in additional revenue for many organizations.



Here's the math: In a 5,000 employee organization with an average revenue per employee of $150,000 (a conservative guidepost as this ranges across industries but can reach $1-2 million per employee in leading technology companies), an uptick in employee productivity by just 5% on the company's total revenue base of $750 million (5,000 employees X $150,000 revenue per employee) increases revenue by $37.5 million.

Other prevalent examples of leveraging HR analytics and predictive engines (=science) within commercially available enterprise software relate to the talent acquisition domain, which has clearly progressed past relying on validated assessment tests. Sophisticated algorithms are being used by a growing number of organizations to predict which candidates will make the best hires in different jobs, and also remain with their new employer, based on certain elements in the candidate's profile and background.

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These elements include skills, interests, observed or inferred behaviors, job progressions, communication patterns (e.g., including as evident in predictive video interviews), etc. Algorithms coupled with a machine learning component to ensure on-going validation and re-calibration of the predictive engine are typically beyond most company's in-house competencies. Hence HR tech buyers are increasingly looking at commercial solutions to access this potential.

Google's HR programs are often cited as a best practice, and it's frequently related to their investment in predictive HCM analytics, then acting on what the analytics are telling them. Google's workforce-related predictive analytics discoveries are also sometimes serendipitous –- as if they need the extra help! Indeed major insights have surfaced in the course of validating other predictive relationships. For example, when the company was developing algorithms to predict the best hires in different roles, they (unintentionally) also discovered that very little incremental value came from conducting more than four interviews. This dramatically shortened time to hire which of course yields many other business benefits, providing candidate quality is not compromised.

Let's now focus on the particular aspect of predictive HCM analytics highlighted in this POV: The time it takes for the predictive value to manifest itself, in other words, time to predictive value.

Showcasing One Innovative Recruiting Technology Product

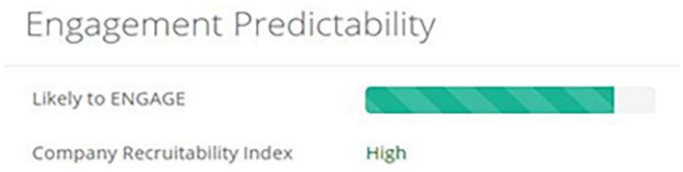
Predicting the Receptivity of "Hard to Find/Engage" Passive Candidates

While more and more HCM systems, and in particular recruiting technologies, now include capabilities to predict job fit and subsequent performance and retention, other interesting product innovations are emerging that also leverage predictive capabilities vis-à-vis job candidates—and even pre-candidates or "passives"!

As an example, HCM vendor ENGAGE Talent offers a unique cloud-based solution that not only identifies high-value "passive" candidates, but predicts when they'll be more receptive to having a job change conversation. Here's a screen capture of the ENGAGE dashboard:

> Passive candidates are generally considered the most sought after market talent… Companies that can engage these individuals by timing the outreach to when receptivity might be moving up have a distinct competitive advantage in hiring the best talent in the market.

ENGAGE Talent's customers zero-in on the industry's best talent when receptivity is highest



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The company's technology scans data from many thousands of macro and micro-level data sources including news sites, social media destinations, investment and stock rating resources, company reviews, compensation market data, and of course all potentially relevant information on market talent—the individuals themselves. The source information can be contained in public domain sites or even within the "deep web" (e.g., comments on discussion boards, Twitter, etc.) The product's underlying algorithms and millions of data points—both of which get continually refreshed and validated—do the heavy lifting to predict the right time to engage; and scores of passive candidates across 100+ industries are identified every week for use by ENGAGE Talent's customers. The data is presented in a dashboard for easy consumption, analysis, scenario building, and planning.

The dashboard shows a "Recruitability Index" for a relevant Company, and a "Likely to Engage" Score for targeted roles and people. Removing complexity is always helpful in driving system adoption and therefore ROI—by avoiding the need for customers to have their own data scientists to interpret data, tweak or adapt predictive frameworks, etc. Many HR Technology customer organizations have under-estimated the need for costly data scientists and/or consultants when they procure predictive tools, often due to the complexities of either applying the tool to different business contexts, or interpreting the information and guidance delivered.

Additionally, the notion of "Algorithmic Bias," an inherent risk (usually inadvertently) built into many predictive tools, is essentially rendered moot in the case of the ENGAGE recruiting tool for a few reasons:

- There is no purported cause-and-effect relationship or even publicized hypothesis that the predictive engine is supposed to prove out, so no underlying human bias or zeal to support one's hypothesis. This is about predicting a propensity or likelihood vs. a specific outcome or behavior. The latter requires significantly more rigor in every respect.

- Machine self-learning is also a non-issue because ENGAGE Talent's data scientists routinely test and re-validate the algorithms, so there is no systemic or hidden machine bias possibly resulting from faulty programming of a machine learning component. Moreover, a person is more likely to know when the data set is too narrow and unduly skewing results; e.g., predicting the likelihood of a female president just based on past U.S. presidents.

- In the case of ENGAGE, the most potentially damaging consequence of relying on information that might not be that predictive in certain anomalous situations (see the "other variable" concept above), is basically wasting time trying to engage with someone in the market to no avail. ENGAGE is not prescribing who to hire or not hire.

Predicting optimal timing to engage is obviously the ENGAGE product's secret sauce, and while the offering was only launched this year, proof points keep surfacing that demonstrate the algorithms are indeed working. Numerous executives and other key talent flagged by the system as more likely to engage have, in fact, changed their employment situation very shortly after being highlighted as ready to hear about other opportunities. As the ENGAGE Talent team points out, identifying passive candidates is only half the solution. Timing is everything!

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In short, the potential business value of using ENGAGE is securing the "inside track" on engaging with top industry talent at the most opportune time; and this value can be realized without being overly concerned about bad or missed hires—or misguided key decisions in general. The system is not recommending who to screen-in or out of the hiring process, just which under-the-radar great talent in the market should be among those your organization reaches out to—and when. And keep in mind the significant difference that very small spikes in employee productivity and contribution can have, as discussed earlier.

Reducing "TtPV" Is Key

The key to experiencing a favorable TtPV is the ability to account for, and minimize, a broad range of potentially relevant operational dependencies. The source of these dependencies—essentially impediments to enjoying a relatively short TtPV—can be product and/or end-customer related, and they include:

- Having a large enough relevant data set, sufficient analytics and data science competencies among staff if required
- Pursuing sufficient closed-loop validations with well-defined, representative scenarios
- Applying appropriate calibrations based on different data (e.g., job and organizational) contexts either performed by people or machines (via machine learning)
- Any other mechanisms needed to allow operations teams to leverage the predictive insights at the point of decision-making

These dependencies and conditions typically take time to be addressed—from months to even years.

As a more specific reference point, many data scientists deem the minimum period of time to collect data and build a large enough data set before predictive assertions are made as a multiple of 3-4x the typical frequency that a key variable changes. In other words, key data that changes every quarter should warrant at least 3-4 quarters before patterns are investigated and tested/validated further. Thus, customers of HR technology with predictive capabilities should have a sense of when they will see the predictive value manifesting itself, to both plan and manage stakeholder expectations around this period of time.

With the ENGAGE recruiting technology platform, as an example, customers don't need to spend time accumulating or building-up an adequate data set since they are also given access to a pool of millions of (uncovered) passive candidates from day one. This is critical to the company's value proposition. Also, the company data set and candidate pool is expanded and updated continuously, as are key changes or compelling events that impact companies or individuals. These updates trigger the solution vendor's data scientists and programmers to adjust weightings accordingly.

Additionally, with respect to the time potentially needed for a system to teach itself what data to focus on, the fact is that the time-consuming auto-correction and adjustment cycles with many predictive engines are replaced by auto-

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updating of the most relevant and recent person, company, industry and other external data. The machine is not developing logic through making and testing assumptions over time, just refreshing all potentially relevant data.

Finally, the initial experience of using ENGAGE, both within and outside the solution vendor, has highlighted that the factors that form the basis of the tool's predictive value are not industry-specific. The same core data points will almost always correlate with key people considering making an employment change that heretofore were pretty content. Many of the factors and triggers are logical, but there are an awful lot of them, and they need to be updated continuously and considered to the relative degree that yields the best predictive guidepost.

Why This Matters

TtPV is the average length of time it takes for a typical organization to consistently experience the predictive capabilities within a technology tool or system.

The business value of compressing TtPV in technology offerings is perhaps akin to the business impact of compressing time-to-productivity with employees. Therefore, it is our view that TtPV should be given serious consideration when procuring and deploying any commercially available enterprise software. The recruiting domain can be viewed as the "business value funnel" in every single organization under the sun. The benefits of having the top of that funnel be comprised of the broadest pool of top industry talent speaks for itself. What makes that competitive advantage even more compelling is when an organization is able to find and engage industry top talent that largely don't want to be found or engaged with. Moreover, as recruiting technology is only one component of the HR technology value sphere, generating solid ROI from one type of HR technology investment will usually pave the way for others where the magnitude of the investment can be much larger.

What to Watch

In a recent spirited conversation with Dave Weisbeck, Chief Strategy Officer at Visier, a Workforce Intelligence and Analytics company, he offered-up this insight to this TtPV discussion:

- Algorithms are imperfect because we never have all the data. However, predicting a propensity or likelihood puts you at a significant advantage over those that rely only on gut-feel.

- We are always limited when we predict because some data is in people's heads. But we can still make compelling predictions by uncovering what they are thinking about doing through behavioral proxies. For example, what are the behavioral hallmarks of not being engaged?

- The data set should not be limited to what you think has the potential for correlational or predictive relationships. Very often it is the surprise, or non-intuitive relationship, that has the greatest impact because the organization is not currently taking any action on this relationship.

Dave's points reinforce an overall conclusion that people analytics, and predictive capabilities in particular, will play an increasingly vital role in moving the HR technology landscape forward; and that customer adoption and value realization will also increase as we understand more about both its power and its limitations.

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About the Author

Steve Goldberg

Steve Goldberg is Research Vice President, HR Technology and Workforce Strategies at HfS Research. Steve brings to HfS a unique combination of insights and experiences from 30 years on all sides of the HR Technology domain.

Steve's previous roles included leading HRIS and Talent Management functions at investment banks in the US and Europe, heading up HCM Product Strategy and serving as primary spokesperson at PeopleSoft, co-founding a boutique HR Software company, operating as VP HR-M&A and HR Shared Services at industry consolidator Wayne Huizenga's corporate center, and even a stint as a principal analyst at Bersin & Associates.

In recent years, Steve's HR Technology and Change Management advisory practice has been engaged by over 30 solution vendors around the globe, and some fairly prestigious corporate HR clients in the US. He's also delivered dozens of compelling white papers, webinars and feature talks as part of the thought leadership services he's provided to his HCM solution vendor clients.

Steve's thought-provoking, but in true HfS fashion -- "keeping it real and making it actionable" -- research agenda will be shaped by the aforementioned experiences, his close collaboration with HfS colleagues, and his tireless commitment to knowing what keeps both buyers/end-customers and solution providers up at night. He is a proven industry influencer who enjoys being influenced just as much.

Specific focus areas of Steve's HfS research will likely include the relationship between As-a-Service themes and HR Technology themes, leveraging change management and other value drivers in deploying HR Technology. Steve will also focus on the changing face of HR Outsourcing (multi-tower and specifically RPO), best practices relative to people analytics roadmaps, frameworks for defining what global or vertical solutions really means, and the true sources of product differentiation within the HR Technology landscape.

Steve holds a BBA in Industrial Psychology and an MBA in Human Resource Management.

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