The Washington Post

Business

LinkedIn connects big data, human resources

By Sarah Halzack August 9, 2013

Every second, more than two people join LinkedIn's network of 238 million members.

They are head hunters in search of talent. They are the talent in search of a job. And sometimes, the career site for the professional class is just a hangout for the well-connected worker.

LinkedIn, using complex, carefully concocted algorithms, analyzes their profiles and site behavior to steer them to opportunity. And corporations parse that data to set business strategy. As the network grows moment by moment, LinkedIn's rich trove of information also grows more detailed and more comprehensive.

It's big data meeting human resources. And that data, core to LinkedIn's potential, could catapult the company beyond building careers and into the realms of education, urban development and economic policy.

Chief executive Jeff Weiner put it this way in a recent blog post: "Our ultimate dream is to develop the world's first economic graph," a sort of digital map of skills, workers and jobs across the global economy.

Ambitions, in other words, that are a far cry from the industry's early stabs at modernizing the old-fashioned jobs board (think - Monster.com and CareerBuilder).

So far, LinkedIn's data-driven strategy appears to be working: It turned its highest-ever profit in the second quarter, \$364 million, and its stock price has grown sixfold since its 2011 initial public offering. Because its workforce has doubled in a year, it's fast outgrowing its Mountain View headquarters, just down the street from Google. In 2014, it'll move into Yahoo's neighborhood with a new campus in Sunnyvale.

The company makes money three ways: members who pay for premium access; ad sales; and its gold mine, a suite of products created by its talent solutions division and sold to corporate clients, which accounted for \$205 million in revenue last quarter.

When LinkedIn staffers talk about their network and products, they often refer to an "ecosystem." It's an apt metaphor, because the value of their offerings would seem to rely heavily on equilibrium.

LinkedIn's usefulness to recruiters is deeply contingent on the quality and depth of its membership base. And its usefulness to members depends on the quality of their experience on the site. LinkedIn's success, then, depends largely on its ability to do more than just amass new members. The company must get its users to maintain comprehensive, up-to-date profiles, and it must give them a reason to visit the site frequently.

To engage members, the company has deployed new strategies on all fronts: a redesigned site; stuff to read from the likes of Bill Gates, Jack Welch and Richard Branson; new mobile applications; status updates; targeted aggregated news stories and more.

By throwing more and more at users, of course, LinkedIn risks undermining the very thing that's made it the go-to site for recruiters: a mass of high-quality candidates, sorted and evaluated and offered up.

"I think there's a chance of people getting tired of it and checking out of it," said Chris Collins, director of Cornell University's Center for Advanced Human Resource Studies.

LinkedIn trolls a variety of sources for member data. There's the information users put into their profiles, listing current employers, past employers, certifications and skill sets. And then there's everything users do on the site. LinkedIn notes what kind of job postings they view or which company pages they visit.

In building 2016 on LinkedIn's Mountain View campus, its scientists pound away on keyboards, surrounded by walls covered in colorful data maps and windows scrawled with equations that look like something out of "A Beautiful Mind."

In real time, they study the site's every detail and move with an eye toward making their product more useful for members and recruiters.

For members, the data influence the suggestions that show up in a module on one's home page called "Jobs you might be interested in," with information on how to apply.

The algorithm that powers the module takes into account an exhaustive range of factors that go far beyond one's current field and city of residence.

For example, from analyzing the migration patterns of its users, LinkedIn has determined that a worker in San Francisco is more likely to move to New York for a job than to Fresno. LinkedIn's algorithm also factors in how often a user has changed jobs.

"Are they being promoted very quickly? In that case, maybe we should recommend jobs that are a step up for them," said Parker Barrile, senior director of product for the talent solutions division. "Or have they been stable in their career for the past several years? In that case, maybe we should present simply new opportunities at the same level."

LinkedIn says that more than 50 percent of job seeker engagement on its site comes from the "Jobs you might be interested in" feature.

Washington job seeker Walid Robert Norris regularly scans these recommendations in his hunt for management consulting positions as he wraps up a master's degree program. He said LinkedIn's suggestions have been well-tailored to his interests.

"I'd say more than half of the recommendations that come up are pretty reasonable," Norris said.

For corporate clients, LinkedIn mines its member data to assist them with a variety of strategic planning decisions. If a company is trying to decide where to open a new office, LinkedIn can inform that evaluation.

"For example, we could tell you what's the best city to hire voiceover IP engineers, based on both the supply of people available and the demand for people available," said Dan Shapero, vice president of talent solutions and insights.

LinkedIn also helps its corporate clients understand how they're stacking up against rivals when it comes to attracting and

retaining talent. By combing through the profiles of every member who currently or previously worked at a certain company, they can determine how often a firm tends to lose talent to its competitors.

"We can share with a CEO, 'Did you realize that Microsoft is winning talent from you three to one versus you to them?' "Shapero said.

It would all come together in the map. Weiner explained how he thought such a tool could be used.

"With the existence of an economic graph, we could look at where the jobs are in any given locality, identify the fastest growing jobs in that area, the skills required to obtain those jobs, the skills of the existing aggregate workforce there, and then quantify the size of the gap," he wrote in the blog post. "Even more importantly, we could then provide a feed of that data to local vocational training facilities, junior colleges, etc. so they could develop a just-in-time curriculum that provides local job seekers the skills they need to obtain the jobs that are and will be, and not just the jobs that once were."

Such a tool is hardly imminent; Weiner writes that it is an innovation he expects to materialize "a decade or more" in the future.

Even as many recruiting professionals say LinkedIn has dramatically transformed the way they do their jobs, some analysts say there are limits to the value that big data can bring to the talent search process.

David Lewin, a professor of human resources management at

UCLA, described using LinkedIn to search for talent as "a data mining exercise that I think is broad, but not deep."

Lewin said certain characteristics are critical to one's success in the workplace but are difficult to measure from a LinkedIn profile or from any algorithm-driven search process.

"The issue of predicting fit and performance with the company, that still remains, in my opinion, the big issue," Lewin said.

This could explain why the old-school referral, a highly personal recruitment approach that is much more art than science, remains the top source of external hires at U.S. employers.

"The social tools are good for reaching out to people and creating a brand," said Josh Bersin, principal and founder of talent consulting firm Bersin by Deloitte. "But they end up eventually coming through the normal channels" to apply and interview for a position.

While its data strategy seems to be the very fulcrum of its future, that's not the only area in which the company is pushing hard to innovate.

In fact, the imperative to think big is literally written all over their walls — on white boards plastered with color-coded Post-it notes and others covered in diagrams and numbers and then others with sketches of dinosaurs and Hello Kitty.

Barrile said one big target is the recruiter on the go. Like every other tech company, the growth opportunity in the mobile market is considered exponential. Smartphones and tablets now account for about 30 percent of visits to LinkedIn, but the company

expects that share to only grow.

This trend has forced Barrile and his team to learn how to tailor recruiting products for smaller screens and thumb typing.

"What we're learning is that they're in response mode — they're not in proactive mode," he said.

In other words, they likely want to be alerted to a new message from an applicant or forward a profile along to a colleague, but they're not likely to conduct a long, detailed search for a candidate while riding the subway.

In May, LinkedIn announced a new mobile application called CheckIn that is meant to be used at career fairs. Instead of collecting résumés at these events, recruiters can have candidates enter their names and e-mail addresses into the app. It will instantly add that person to the recruiter's LinkedIn dashboard, even if the prospect doesn't have a LinkedIn profile.

CheckIn was devised to solve a problem faced by LinkedIn's own talent acquisition team: They were burdened by the stacks of paper résumés at campus recruiting events.

"Literally you have to divide it up to make sure you can physically get it home so you're not over the weight limit with your luggage," said Brendan Browne, LinkedIn's director of global talent acquisition.

Also, once home, it took so much time to log the résumés that sometimes the candidates had already been scooped up by other employers. A paperless system would be much more efficient, and their colleagues on the products team came through with CheckIn.

A lurking challenge for the company is engagement. LinkedIn said in its most recent quarterly earnings filing, "a substantial majority of our members do not visit our website on a monthly basis, and a substantial majority of our page views are generated by a minority of our members."

The company has moved aggressively to move the needle. Last October, it launched Influencers, a series of published content written by business titans, thought leaders and even President Obama.

LinkedIn's home-page traffic has more than doubled compared with last year, an increase it credits in part to the success of the Influencer feature.

Two recent acquisitions also suggest an emphasis on user engagement: In April, LinkedIn purchased Pulse, a news reader for mobile phones; last year, it bought Slideshare, a service for sharing presentations.

Furthermore, LinkedIn debuted major redesigns this year of both its member-facing and client-facing Web sites in an effort to make the products simpler and more intuitive. In fact, the internal code name for one redesign was "Katy Perry," a nod that its creators were aiming to make it as catchy and accessible as the pop singer.

With these changes, LinkedIn is working to pivot from being a hub only for job seekers.

"The majority of our product effort is put into making LinkedIn a compelling place for the average professional to come and spend time, to get insights, to make them better at what they do," Barrile said.

Quality is another obsession — and making the site indispensable to its users.

Some talent professionals in high-demand fields say that LinkedIn's value has already dwindled for them: Workers, they say, deluged with messages from aggressive or indiscriminate recruiters, have become unresponsive.

Derek Zeller, senior recruiting consultant at Alexandria-based Advanced Resources Technologies, said he rarely uses LinkedIn to reach out to candidates anymore. He works to fill highly skilled information technology positions, and he finds many LinkedIn users in that sector are fatigued by all the messages.

"I know many programmers, contract programmers, walking away from it because of the spam they get," Zeller said.

LinkedIn says it is trying to train corporate clients to use the site in a targeted, thoughtful way.

But "this is definitely something that we're working through because the people that are in high demand, everyone wants to talk to them," Shapero said. "And we need to find a way to make sure that LinkedIn doesn't become noisy."

"Noisiness," after all, is precisely the characteristic that has made recruiters and job candidates alike turn their backs on traditional Web job boards. Recruiters often say these sites were delivering applicants that were unqualified, leading to a candidate pool that is high on volume and low on relevance.

As it aims to tackle these challenges, LinkedIn continues to rapidly grow its member base and pull in larger revenue. And through innovative use of its data and a focus on its members, it believes it

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can have a big impact.

"Hiring today is still an incredibly manual and laborious process on both sides," Barrile said. "And so our vision is to make it dramatically more efficient."

□ Comments

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