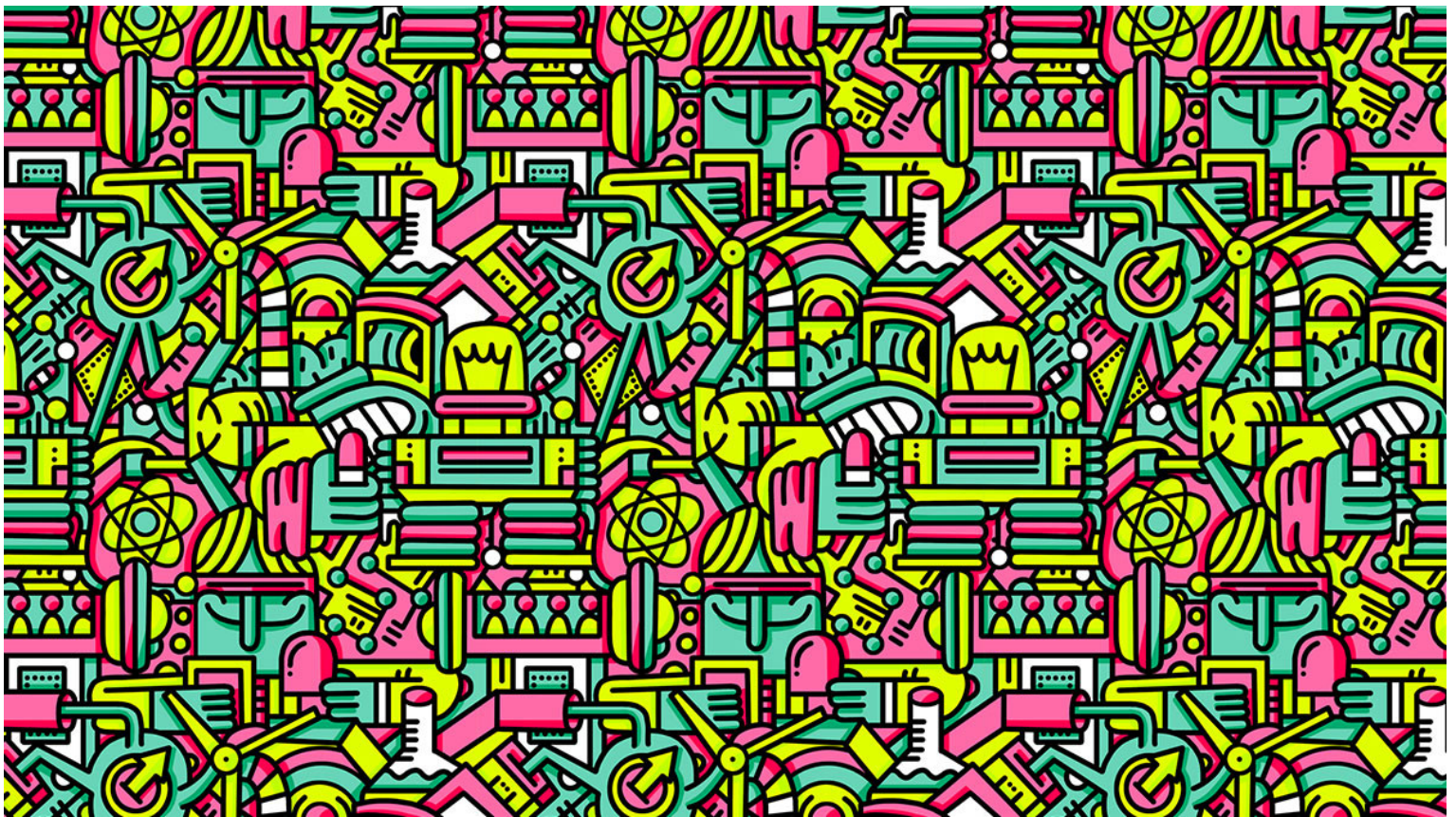


Data From 3.5 Million Employees Shows How Innovation Really Works

by Dylan Minor, Paul Brook, and Josh Bernoff

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Sales and marketing were once disciplines ruled by emotions. But somewhere along the way, we recognized that they were based on definable pipelines and applied technology to manage those pipelines. Today you can put a corporate dashboard in place to manage them and tweak the settings to try to boost your results.

What if we applied the same thinking to innovation? After all, innovation, like marketing and sales, is a pipeline. In one end go raw concepts and notions. Out the other end come actionable ideas that can move the business forward. With the right technology, could you manage this pipeline the way you manage a sales pipeline?

Our research shows that you can.

One of us, Dylan, has analyzed five years of data from 154 public companies covering over 3.5 million employees that have used an idea management system called Spigit. For the millions of employees of these companies, the idea management system functions a little like Facebook - people can post ideas, get votes, deliver or respond to feedback, and develop the ideas into innovations that make a difference to the company. The innovation teams at these companies use them to track and process all the ideas and whether the company committed to putting them into practice. Some companies use this software for process innovation; others develop new products; others seek efficiencies and cost savings.

Once you put innovation into a system like this, you can track everything. We know how many innovation challenges the companies are running, how many people are suggesting ideas, and how many ideas they suggest. We know how many people are participating in other ways - by voting or making comments, for example. And we also know how many of those ideas get through the endpoint of the challenge, which is where the company's management determines which ideas to pursue further. We used linear regression to analyze every potential measure the system includes over every 3-month time period when the system was active within the company.

But what we learned from our analysis of all this data is that innovation is, indeed, a science. And surprisingly, the variables that make for a successful innovation program are independent of whether the company is seeking disruptive or incremental innovations. It doesn't matter whether they're asking for process or product innovation, what industry the company is in, or even, for the most part, whether the company is large or small.

The key variable that we identified across all the companies in our analysis is the ideation rate, which we define as the number of ideas approved by management divided by the total number of active users in the system. Higher ideation rates are correlated with growth and net income, most

likely because companies with an innovation culture not only generate better ideas, but are organized and managed to act on them.

After reviewing dozens of variables that could potentially affect ideation, we identified four that drove the ideation rate. They weren't what we expected.

1. **Scale - more participants.** To succeed, an innovation program needs lots of participants. It's the wisdom of the crowd: a large mass of participants will always out-ideate a small group of smart people. On average, companies generate one idea for every four participants in the system.
2. **Frequency - more ideas.** To get to a set of promising ideas whose implementation would make sense, you need to sift through a lot of candidates. To succeed, a company needs to create frequent idea challenges for its employees. These challenges reinforce a culture of innovation and generate more ideas going into the pipeline. While there is a great deal of variation based on the types of ideas and the companies reviewing them, on average, it takes five idea candidates to generate one idea that the company judges to be worth implementing.
3. **Engagement - more people evaluating ideas.** It's not enough to get some people suggesting ideas. You need lots of other people figuring out whether those ideas are worth working on, or what it will take for them to become better. A successful idea management system is a ferment of commentary, with lots of feedback.
4. **Diversity - more kinds of people contributing.** You might think the most productive innovation system would be full of engineers or other problem-solvers. You'd be wrong. A successful system needs contributions from all over the organization, especially staff who are close to the front lines: sales staff, support workers, or people in close touch with the company's manufacturing processes, for example.

When a program like this is working, it churns out actionable innovations at a steady and predictable pace. What's that like?

One large industrial manufacturer has put an innovation management system to good use. The company has mastered frequency and scale: it has run 15 challenges in the last year with over 2,000 active participants. Hundreds of ideas have poured in, generating thousands of comments. In 12 months, the company selected over 50 ideas to implement.

For example, the company challenged its employees to find ways to serve customers better. Among the problems that surfaced was the difficulty of inspecting a particular aircraft part overnight. The inspection process typically took eight hours. The company's customers - airlines - found this frustrating because sometimes planes land late and need to take off early.

As the service techs understood, the problem wasn't actually the inspection. It was the process of threading the camera inside the aircraft part to inspect it. That took seven hours. The subsequent inspection took one.

An administrative assistant at the company who was familiar with the airlines' complaints responded to the challenge. She had recently seen the Tom Cruise movie *Minority Report*. She posted an idea, wondering, "Why can't we send a robotic spider into the part, like the ones in the movie?"

While a lot of people reviewing her suggestion found it silly, the company's Chief Technology Officer was intrigued. He tried putting a miniature camera on a remote control set of robotic legs and walking it into the part. It worked. He then turned the secretary's idea into a standard practice. Now the inspections takes 15% as much time as they used to, and the airlines are a lot happier.

A single idea like this is impossible to predict or optimize for - just like a single sale is impossible to predict. But when you treat ideas systematically with an appropriately designed system, you can manage the pipeline of those ideas. That pipeline engages the employees who best know how to solve the problems of the business, and generates a predictable stream of innovations. Those innovations drive the business forward. Our research shows how to generate that steady stream of ideas.

Once everyone is thinking about ideas - and imagining that their cool concept might actually move the company - you get the whole company effectively engaged in innovation. And in the Internet era, with the pace of innovation always accelerating, understanding the science of innovation could make all the difference in your ability to compete.

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