



Creating a Culture of Innovation

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Eight ideas that work at Google

“The story of innovation has not changed. It has always been a small team of people who have a new idea, typically not understood by people around them and their executives.”

—Eric Schmidt, Chairman, Google

Some of the most frequent questions we get from CEOs and leaders of other companies are: How does Google innovate? Can innovation be planned? Can it be taught?

Ultimately, we think that company culture and innovation can't be separated. “You have to have the culture,” says Google Chairman Eric Schmidt, “and you need to get it right.” We also believe that to stay competitive, we (and every other company in the world) absolutely have to innovate.

So how do you create a culture of innovation? Google doesn't have a secret formula, though we've done our best to find one over the years. But we *have* distilled our thinking into a set of basic principles—ideas we believe can be adapted and applied at pretty much any organization, regardless of size or industry.

In this Google for Work perspective, we'll share these eight principles of innovation and show how we apply them inside Google.

1. Think 10x

True innovation happens when you try to improve something by 10 times rather than by 10%.

The notion of “10x thinking” is at the heart of how we innovate at Google. To put the idea simply: true innovation happens when you try to improve something by 10 times rather than by 10%.

Astro Teller's job title is Captain of Moonshots at Google X—the division of Google that focuses on producing major technological advances, like self-driving cars. Teller describes 10x thinking this way: “If you want cars to run at 50 mpg, fine, you can retool your car a little bit. But if I tell you a car has to run on a gallon of gas for 500 miles, you have to start over.”

In other words, a 10x goal forces you to rethink an idea entirely. It pushes you beyond existing models and forces you to totally reimagine how to approach it.

Google Glass is an example of 10x thinking in action. Rather than focus on small improvements to the mobile devices we're all familiar with—our smartphones—we set out to entirely rethink the mobile experience, deliver hands-free information and let users “talk” with the Internet via natural-language voice commands. That led us to reimagine the form factor and tackle all sorts of design and operability issues and use cases.

Google Glass is now commercially available, and we recently released a developers kit for Glassware—apps that run on Glass. We're excited to see how the Glass ecosystem expands and what new applications are created.

There are already some really fascinating use cases underway: oilfield workers using Glass to access and view technical data as they work on drilling equipment. Doctors looking at a patient's medical records as they deliver care. Firefighters scanning building floor plans as they battle fires. While it's still early, the possibilities for business applications seem almost unlimited, and that's just what we'd hoped for.

The beauty of this approach is that you get real-world user feedback and never get too far from what the market wants.

2. Launch, then keep listening

The restaurant business has a smart idea called the “soft opening.” Instead of hoping everything is perfect and inviting the entire public to arrive all at once, a new cafe will have a few days or weeks where they invite people in, learn what works, discover what customers love, and slowly grow (they hope) into a successful business that everyone is talking about.

We do something a little bit like that at Google. Early in Google's history we released some of our products as “beta launches” then made rapid iterations as users told us what they wanted more (and less) of. Today we continue to listen carefully to user feedback after each launch and revise products based on what we hear.

The beauty of this approach is that you get real-world user feedback and never get too far from what the market wants. Perhaps they want the features you were planning to add next ... or maybe something completely different.

Android, Google's mobile operating system, is an example of this approach. Launched in 2008, Android has been improved continuously, and today there are more than 1 billion Android users in the world. Another 1.5 million new Android devices are activated each day.

3. Share everything you can

At Google we believe that collaboration—that is, people working together in teams—is essential to innovation. And collaboration happens best when you share information openly. So as a company, we *share as much as possible* with employees. This doesn't mean every last business or strategic detail, but we do strive for transparency.



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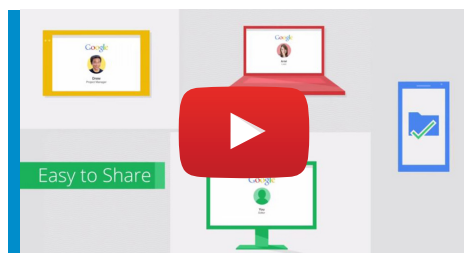
One practice that captures this idea well is our weekly TGIF meeting. It's an hour-long all hands that Googlers can attend in person in Mountain View or watch on livestream from offices around the globe.

Our founders, Larry and Sergey, still host the meeting as they always have. They talk about the week's Google news, industry changes or new acquisitions. Engineering teams present their upcoming products. Leaders from across the company—from areas like People Operations, Marketing, Legal and Finance—give updates on key topics.

Googlers have a chance to stand up and ask Larry and Sergey and other leaders any question they'd like: about management decisions, product direction, market trends, you name it. The meetings are recorded and shared on video for any employee who missed them. TGIF is a blend of business and fun—there's always food and drink, as well as music beforehand—and the spirit is much like a startup team coming together for a weekly wind down. Except that now it's for thousands of people.

We also rely on tools to share information across the company. Many of these are tools we've created and brought to market as products, so they're a good example of how innovation and company culture really are intertwined.

Google Drive for Work, Docs, Sheets and **Slides** are all about bringing content to life and giving people access to it wherever they need it. In fact, most of our content—documents, spreadsheets, presentations, video, collateral, etc.—is stored in the cloud on Google Drive for Work, so employees have access to the latest versions anytime and anywhere. Content owners control access and decide who can view, comment or edit the documents.



Google Drive for Work gives you all your work, safe, available everywhere and easy to share. [↗](#)

This is a huge change from the traditional corporate world where it could be impossible to find critical content fast because it was sitting in multiple versions on different servers, laptops and thumb drives all over the office (or the world).

Google+ brings a social layer to all of our products. We use Google+ as our internal social network; Googlers share information, content, links, photos and videos with other Googlers. We all use it to do things like tag content, +1 and comment on posts and set up communities of interest.

4. Hire the right people

Google has grown at a rapid rate: from 2,000 Googlers a decade ago to more than 50,000 now. What we hope hasn't changed is the kind of people who work here and the types of projects they like to work on. Ever since our very first hires, Google has worked hard to attract people who want to tackle big problems that matter and do great things for the world.

To keep attracting those people tomorrow, it's critical that we hire the right people today. So we set the bar very high. Rather than rely on the judgment of one or two people, we structure the hiring process to tap the "wisdom of the crowd" in several ways.

First, we encourage Google employees to refer other qualified people they know and we reward them when those people get hired. We get 2 million new resumes every year, but referrals from current employees have proven to be a great way to bring talented new people into our company.

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Second, we've set up a robust screening process. We look for people who are great at lots of things, love big challenges and welcome change. And when we identify a promising applicant, we engage them in a series of detailed interviews. The interview panel typically has four people, with not just the hiring manager, but three others who are asked to focus specifically on one or two areas during the interview.

These interviews assess the candidate in four different areas:

- **Role-related knowledge** (their ability to do this specific job)
- **Leadership** (and the ability to know when to follow, too)
- **General cognitive ability** (how they think and solve problems)
- **Personality** (a feel for what makes each candidate tick)

As a third step, the interviewers' notes, scores and recommendations are included in a complete packet of information which goes to a hiring committee for review. Following a discussion of all the available data, the hiring committee makes the final decision.

Here are some ways we use the tools we've developed to manage this process:

- Collaborating with [Google Docs](#), our document tool, our hiring team and interviewers can work in real time on job descriptions and interviewer roles. They also use [Google Sheets](#), our spreadsheet tool, to instantly share an applicant's status with all stakeholders.
- Connecting through [Google Hangouts](#), our video conferencing technology, we can conduct interviews when an applicant and interviewer can't be in the same room. We find these video interviews to be a huge step up from phone calls, both for us, and for the candidates.
- Building on the [Google Cloud Platform](#), we've developed our own tool, gHire, to manage hiring workflow.

5. Use the 70/20/10 model

We're firm believers in a concept first introduced in the early days of Google: the 70/20/10 model. Simply put, it means that:

- 70% of our projects are dedicated to our core business
- 20% of our projects are related to our core business
- 10% of our projects are *unrelated* to our core business

We have a few goals in mind here. One is that this model is a helpful way to allocate resources as we think about the big picture of our business each year. It keeps the focus on core needs while also encouraging a healthy stretch into new and related areas.

Just as importantly, the 70/20/10 model supports a culture of "yes" rather than "no." It promotes "what-if," out-of-the-box thinking. This positive framework feeds our core business while also encouraging new ideas and big dreams that can become huge wins for the company—those 10x moonshots we were talking about earlier.

In the long run, a few of those unrelated 10% ideas will turn into core businesses that become part of the 70%. And that's good for business and the bottom line.

"We hire for capability and learning ability before we hire for expertise."


—Laszlo Bock, Senior Vice President,
People Operations

6. Look for ideas everywhere

The best ideas can't all possibly come from any one team, one department or one company. We believe great ideas can be found anywhere, and we look for them everywhere.

For instance, we now crowdsource innovation to improve the quality of Google Maps. The idea emerged when one of our engineering teams in India realized that a lack of online map data would limit the usefulness of Google Maps in India. So they thought, why not create a platform where users could provide the missing data? That led to Google Map Maker, a tool that lets anyone make changes to Google Maps. Today, thousands of citizen cartographers around the world are literally putting their communities on the map.



Today, thousands of citizen cartographers around the world are literally putting their communities on the map with [Google Maps for Work](#). 

That's a great example of how Google connects to external contributors. But how about inside Google?

Like other large companies, Google has a lot of structured and unstructured information floating around. We've made it easier to connect people to that information by using tools like Google Drive for Work, the cloud-based storage solution we talked about earlier.

But what about connecting people with people, so they can share ideas and collaborate?

We've deployed our own internal version of Google+ which more or less converts our corporate directory into a social network. Googlers create their own "circles"—grouping people they work with by common objectives, interests and so on—and easily communicate and share information with the people in those circles. Googlers also use Google+ to set up internal communities of interest on topics ranging from artificial intelligence to Italian soccer. It's a great way for us to engage with each other on a more personal level and share information relevant to fellow employees.

7. Use data, not opinions

Data usually beats opinions. So at Google, data is a big part of every choice we make. We test and measure almost everything we do so that we have a continuous data stream to inform our decisions.

We also take this data-driven approach with what we call "People Operations," our human resources department. Relying on data helps us understand the specific dynamics of our own human interactions and management practices and allows us to make smarter choices.

Googlegeist is a perfect example of this approach. Googlegeist is an anonymous survey that goes out every year to all of our global employees. The response rate is very high: around 90% of Googlers worldwide. The survey asks employees for their views on a broad range of issues—their own well-being, the company culture, their managers, compensation, work-life balance, diversity and career opportunities.

The People Ops Analytics team slices this data in all sorts of ways—by department, by manager, by tenure, by region—and shares it with everyone at Google so we can all see where people are happy and where things could be better and so we can spread best practices across the globe and drive real change. Managers at every level get the survey results for their area and are urged to consider this data carefully and act on it.

Since 2009 we've been working on a long-term initiative called Project Oxygen. It applies that same data-driven approach to helping our managers become better managers. We carefully analyzed a wide variety of input, from feedback surveys to things like manager award nominations, looking for patterns that would help us understand just what makes a great manager. When we found things that worked, we started teaching them in our training programs.

The result: we've seen a measurable improvement in the performance of our managers. And Project Oxygen gives us a firm foundation for training better managers in the future. We'll keep tracking results carefully to see if we're moving the needle in the right direction.

8. Focus on users, not the competition

We believe that if we focus on users, everything else will follow. If you can build a robust and loyal base of people who love what you do, you'll have something rare and valuable. For us, that always starts with the desire to improve the lives of users.

When we introduced Gmail back in 2004, lots of people thought it was a mistake. There were plenty of well-established email products on the market. Did the world need another one? Was Google getting distracted from search?

But we had a different idea of what cloud-based email should be. We thought the existing products weren't intuitive enough and had too many limitations. We thought 2-4 megabytes of storage wasn't enough, so we offered a full gigabyte. (Some of you may not remember the days when you had to clear out room every few hundred emails.) We believed we could provide a better experience for users, and so we gave it our very best shot.

Ten years later, Gmail is the world's #1 web-based email service, with more than 425 million active users. We take that success as a humbling sign that any product, our own included, can be improved if you simply focus on how you can make life even better for users.

Looking ahead

Those are eight ideas that have helped us create a culture of innovation at Google.

The list is by no means complete; every company's situation is unique. We'll continue to study the data and learn from our own experience and the experiences of others.

Any product, our own included, can be improved if you simply focus on how you can make life even better for users.

Of course, no one knows for certain what the next great innovations will be or where they'll come from. But one thing we do know for certain is that innovation and disruption are happening faster and faster as we move further into the new digital age. For any company that wants to keep innovating, the first step is to get the culture right.

Google for Work brings the best of Google technology to companies and employees around the world. We begin with Google's popular consumer products and add the high-level security, performance and features that ambitious businesses need to build, innovate and thrive.
