Case Study

Google
Alphabet, a multinational conglomerate, was created in 2015 to serve as the parent company for Google and other companies previously owned by or tied to Google. Alphabet’s main business line, Google, has continued to drive tremendous growth and success over the last decade, largely attributed to the democratic nature of its operations. Google isn't a company of managers, C-suites, and hierarchy; it’s an incredibly flat organization in which even the most junior employees are given the freedom and resources to create and innovate. Its main business unit—Google's internal innovation efforts—are supplemented by regular, strategic acquisitions of external resources that allow it to evolve and maintain the energy of a start-up company, even as its headcount nears 59,000 employees and six products with more than a billion users each.

A culture of openness and transparency is very much a part of what makes Google tick. According to Doug Merrill, Google’s former CIO and VP of Engineering, “We need a stubborn rebellious attitude in order to innovate. How do you encourage that? It’s a tricky balance. We have to walk the line between anarchy and absolute focus on Six Sigma efficiency. There are no pat answers to describe how to balance that contradiction. I need a process where the culture self regulates and balances these things out.”

As a result of its structure and strategy, Google is consistently hailed as one of the world’s most innovative companies: #2 on Boston Consulting Group’s List of 50 Most Innovative Companies of 2014, top of the list as #1 on Fast Company’s Most Innovative Companies of 2014, and #1 on Fortune’s 100 Best Companies to Work For from 2013-2015.

How does Google do it? It ensures that innovation is a top priority for each and every employee on its payroll. Read on to learn more and discover how you can apply some of Google’s best tactics to your own organization.
The Four Innovation Capabilities

futurethink’s Innovation Case Studies are designed to provide insights on today’s leading innovators. Information about each of the companies we feature covers the four key innovation capabilities: Strategy, Ideas, Process, and Climate.

Set a foundation that defines innovation objectives and mobilizes your efforts.
The notion of “serendipitous innovation” is dangerously outdated. The secret to success lies in crafting an action-oriented strategy. It means setting a vision for your company to follow and viewing innovation as an expected result, not a lucky one. Innovation should be handled like any business initiative: with an eye on growth, results, and profit.

Think differently to develop original ideas that drive business value.
In today’s economy, the ability to continually fuel innovation is what separates winning organizations from the rest. Idea generation should be managed, purposeful, and clearly linked to business objectives. Leading innovators succeed by balancing out-of-the-box thinking with sound management principles.

Create a streamlined and flexible approach to shepherd innovative ideas to market.
The reality in every organization is that money is limited. To make sure you’re spending effectively, you must have a streamlined process for innovation. A good process will help to consistently identify your best projects and enable you to move them forward more efficiently.

Build a thriving work environment that drives innovation across your organization.
We live in a world where the new replaces the old very quickly. Only organizations that keep pace with the shifting marketplace will be able to stay ahead. So how do the best companies adapt? They cultivate a climate in which employees are encouraged to innovate in a continuous and consistent manner. The companies that stay ahead have made innovation part of their DNA.

futurethink analysts develop case studies by drawing from a mix of extensive research, by conducting organizational and customer interviews (where possible), and by experiencing first-hand interactions with the organization. We want to thank those individuals who contributed to this case study and provided the information found herein, which made the Alphabet (Google) story so fascinating.

We hope the information contained on the pages that follow offers insights and inspiration for innovation in your organization.
Hire Great People; Give them Freedom, Flexibility, and Tracking

In 2014 Google’s Chairman Eric Schmidt and (early senior leader) Jonathan Rosenberg wrote a book: *How Google Works* to share how their company scales its innovation culture. They share stories and examples of how Google learned to avoid simply minimizing risk and instead maximized speed and flexibility to changes within the organization.

**Small Teams: Exile Knaves & Promote Divas**

Chairman Eric Schmidt describes early on the company made a commitment to hiring great people who are passionate generalists who wake up each day eager to solve a big challenge. Soon the company released that a secret to managing innovation was based on their approach to teams of ‘smart creative’.

Google found that the most successful teams are small. Within these small teams the most interesting character types are knaves and divas. Knaves are smart fallible people who might deceive others, shirk responsibility or take credit for someone else’s work. Knaves lack integrity and can bring down teams with their jealousy. Divas are smart people who display ‘high exceptionalism’ but may sometimes exhibit ‘diva’ ways in seeking too much attention.

Google found a secret to managing ‘smart creatives’ was to fight for the divas and exile the knaves. Managers found ways to harness divas to hold culture-shaping roles in pushing teams to see beyond today and fight harder for change.

Hiring great people has always been supported by a culture that expects and rewards freedom, flexibility and tracking. Google relentlessly focuses on staying true to its roots by maintaining the culture of a Silicon Valley start-up. The company is extremely generous with stock options (everyone from the chefs and secretaries to the engineers and VPs get them), and has a famously fun work environment. Beyond the foosball tables and free massages, however, Google is serious about its mission, “to organize the world’s information and make it universally accessible and useful.”

To achieve this, Google clearly outlines to employees which projects are top priorities for the company to focus on and how resources will be dedicated (the “70-20-10 rule”). Most important, each Google employee is personally invested in doing something to change the world. How and what they do is up to them, but many new hires are asked: “If you could change the world using Google’s resources, what would you build?”

**To Work or To Play? That Is the Question.** Google’s Mountain View, California, headquarters—the Googleplex—is famous for being one of the most interesting workspaces in corporate America. Throughout the Googleplex are game rooms, libraries, books, toys, magazines, and other knick-knacks intended to provide Google employees with ample diversion and food for thought. These perks are not just for fun, however—these public spaces are designed to help employees think outside the box, and are stocked with all the tools they need to step outside the world of computer programming.
Every aspect of the Googleplex and the Google culture has been designed to foster community, collaboration, and openness. Closed-off offices are few and far between, as most Googlers prefer to work in open, flexible spaces with their peers. Cube-assignments change every few weeks as teams are disassembled and shuffled around. The free-food policy, through which Google employees are entitled to gourmet meals at multiple cafés and micro-kitchens throughout the Googleplex, allows employees to take a break whenever they’re hungry and dine together on healthy, freshly prepared foods.

Of course these perks are designed to keep employees on location. Google employees could almost live at work if they wanted to—the Googleplex also boasts free dry-cleaning, childcare, hair salons, fitness centers, and tech support centers.

**70-20-10.** Known internally as “Sergey’s Resource Allocation Rule,” the 70-20-10 rule communicates management’s top priorities to employees. It dictates that search (quality, crawl systems, indexing), advertising (AdWords & AdSense), and applications (GoogleApps) are where Google will spend 70 percent of its resources, as these are businesses and operations that sustain Google as an enterprise (core businesses).

Google then allocates 20 percent of resources to “Strong Potential” projects such as Blogger, Google News, and Chrome—all of which represent adjacent businesses that are very popular in the marketplace. The company devotes the remaining 10 percent of resources on truly novel projects called “moonshot projects”—for example, projects like Google Glass, Project Loon (a network of balloons on the edge of space designed to connect people in remote areas with internet access), and various other technological enhancements that have evolved out of Google employee personal interest projects.

**Give Me 80 Percent.** Another famous allocation rule in Google is that 20 percent of an employee’s time will be spent on “Googlettes,” projects that can be completely unrelated to an employee’s day-to-day work. Googlettes are basically side projects that employees are given license to work on regardless of everything else that’s happening. It’s an incubator system, allowing for mini-startups to grow inside the company.

According to Eric Schmidt, Google’s CEO. “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. [This is] a systematic way of making sure a middle manager does not eliminate that innovation. If you’re the employee and I’m the manager, and I sit down and say, ‘Our product’s late, and you screwed up, and you’ve got to work on this really hard,’ you can legally say to me, ‘I will give you everything I’ve got: 80 percent of [my time].’ It means the managers can’t screw around with the employees beyond some limit. I believe that this innovation escape-valve model is applicable to essentially every business that has technology as a component.”

So far, many Googlettes have turned into Google products.
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Google News, for example, came about in 2001 when an employee spent time tweaking Google's Web crawler to pick up only the news and headlines related to the terror attacks of September 11th. He ended up sharing his news-specific crawler with his team, and his boss realized that it had potential to be a great topic-specific aggregator. And so, Google News was born.

In recent years, the process of harnessing 20% projects has been debated (and challenged) publicly. It is sometimes referenced as ‘120% time’ hinting that projects require allocating time on top of a full work load. Yet we continue to see references to ‘20%’ projects around issues such as workplace diversity training.

**Set 10x goals.** Since 1999, Google teams and employees have set Objectives and Key Results (OKRs) that their performance will be measured by on a quarterly basis. This exercise serves to help prioritize efforts and align individuals and teams with the larger company’s objectives.

Additionally, OKRs push the organization towards 10x change. Objectives are designed to be ambitious and uncomfortable, and all members of the Google community can view them. The push for stretch goals and transparency encourages individuals, teams, and the company as a whole to think big and hold each other accountable.

**Productive Play.** According to Schmidt: “The number one thing we do require is: You can do whatever you want as long as you track it. We have very sophisticated measurement systems at every stage of launch. We have what is called trusted testers. Then beta test, which is forever. We do these one percent launches where we float something out and measure that. We can dice and slice in any way you can possibly fathom.”

By tracking progress, and managing employees via hands-off systems such as Snippets (micro-blogs, which Googlers use to track their progress on projects—more on these later), Google ensures that projects are on track, and managers can intervene in a timely manner whenever necessary.

This means that managers aren’t spending time “managing” projects that don’t need to be managed, and employees aren’t wasting time providing updates and sitting in meetings solely for the purposes of bringing managers up to speed.

**Keep It Small, Stay Nimble.** Google is known to indulge in many product development experiments at one time. To manage this, it creates small, nimble teams to run innovation projects. New teams of three to four people are constantly created to allow for quick changes in direction. They are disassembled after three to six months if the project shows no potential.

**It’s Okay to Fail. Really.** Teams are encouraged to have “good failures” defined as those that:

- Help teams understand why they’ve failed, so they can apply the learning to the next project
- Fail fast and early

In fact, Google has a policy of celebrating failures that is fully supported by the leadership team. After Google Wave was shut down in 2010, then CEO Eric Schmidt told reporters, “We try things... we celebrate our failures. This is a company where it’s absolutely okay to try something that’s very hard, have it not be successful, and take the learning from that.” Even though Wave was “dead,” the company repurposed the technology behind Wave and applied it to future Google products.
Finding the Pick of the Litter. Google ensures that it finds the best talent available. “Google Code Jams” are global, intensive competitions where programmers (professionals and students) compete for large cash prizes and a potential career at Google. Since 2012, over 17,000 people, representing 150 countries, participated in the challenge where they were timed while they solved complex algorithmic challenges.

Managing and Collaborating on Ideas in the Virtual Google Sphere
In order to support the sharing and development of ideas throughout the company, Google enables employees to collaborate through various internal Web-based platforms. The intranet-based information management system is, much like the Web itself, searchable, taggable, sortable, and infinitely useful for managers and employees alike.

Google Ideas. Google keeps its idea pipeline full by maintaining an active, dynamic database of ideas that come from employees. Taking a cue from the “wisdom of crowds,” Google Ideas is organized by popular vote. Any employee can log into the database to submit a short description of a new idea. Google doesn’t ask for too much information at this stage—just the basics, such as which group might be responsible, customer need, Google capabilities required, etc. Once it’s in the system, each idea is viewable by all Google employees around the world. Employees can comment, express interest, make suggestions and critiques, and vote on individual ideas, which are then organized by popularity. The ideas at the top of the list are those that have gotten the most feedback from people throughout the organization. Once managers see this demonstrated interest, they can assemble a team to run with the idea.

The person who submitted the idea gets credit both within Google Ideas and on his or her own Google profile page. This is part of what makes the system so successful. Each employee’s page contains his or her idea submissions, comments, votes, interests, and a slew of other information.

Part of an employee’s success at Google has to do with his or her level of activity and involvement—and everyone within Google can see everyone else’s stats just by clicking over to that person’s page. Thus, the incentive to contribute and take part in innovation is driven from the bottom-up—people play along because it’s what everyone does, and inactivity and complacency do not go unnoticed.

“I went to a staff meeting [the] afternoon [I was hired] and got assigned to figure out how Google could launch Enterprise [applications for corporations] in Europe. I was told to come back with the answer at the end of the week. It was like, ‘Hey, New Guy, you don’t know anything about our business yet, and you don’t have any international experience, but here are some people who can help you. Go figure it out.’ We launched in Europe a few months later.”

—Matt Glotzbach, Product Management for Youtube
Snippets. As mentioned before, Snippets are essentially micro-blogs or task-lists that employees update regularly to communicate what they’re working on. Each day, employees update their Snippets to reflect the tasks they’ve completed and which ones they intend to work on next. Managers only spend a few hours each week looking over their teams’ Snippets to make sure all major projects are on track. They don’t have to call or email their employees to get this information, and only need to bug or micromanage employees when it seems like something’s unclear.

As an added bonus, Snippets live on each employee’s own profile page, which is publicly viewable within Google. Snippets serve as a sort of running resume within Google, and make it easy for team leaders to assemble groups to work on new projects based on a given person’s previous experiences, interests, and project work.

Moma. Given Google’s status as the king of all search engines, it’s only fitting that the company utilizes its search-and-organization prowess for its own good as well. Moma is Google’s intranet—a Wikipedia-like database for people, projects, ideas, and anything else you could imagine. Employees visit Moma hundreds of times each day, rather than interrupting one another with phone calls, emails, or instant messages. Looking for an expert on mapping software? Just go to Moma, type in your query, and you’ll find all the people within Google who have experience in mapping. Want to know what SQL means? Type in SQL in the query box, and the definition will pop up along with a few suggested resources to visit.

GVC. In another example of Google practicing what it preaches, globally dispersed employees connect with one another through Google Video Conferences, the internal version of Google’s Hangouts product. Instead of having conference phones, Google team meeting rooms are equipped with GVC monitors. Participants meet virtually and can easily share their computer screens to present or collaborate on a document. With such a global employee base, Google’s use of GVC cuts down on unnecessary travel and encourages clearer communication and collaboration.

Each of these applications mirrors the simplicity and searchability of Google’s public applications. It’s all about transparency at Google—if you want to know something, whatever it is, it’s pretty easy to find it out.

“Nearly everyone has access to user feedback, we all know what the problem areas are, where users are complaining.”

—Monika Henzinger, Former Director of Research

Open Collaboration

Bringing the Outside (Perspective) In. Another major influence on Google’s success over the years has been its ability to attract and retain diverse perspectives. While at its heart, Google is a technology company, non-technologists provide the company with some much-needed perspective when it comes to user experience, new ideas, and management.

In an interview, former CEO of Google’s YouTube brand Salar Kamangar discussed the importance of diversity on his team. “I enjoy problem-solving. If you have a seed of an idea, how do you operationalize that, how do you scale it, how do you bring together the best team to see it through?” Kamangar assembled an experienced team of people he could let loose on assignments and who could incorporate and capitalize on an outsider’s perspective. This senior team had many non-engineers on board. Kamangar himself did not have a technology background—he was pre-med at school and then joined Google upon graduating in 1998. What was behind this strategy? According to Kamangar, “Like search, video needs a business model that’s unique to video. Google didn’t just take the banner ads that were on other sites and slap them on the search-results page.” Kamangar, now a senior executive at Google, hopes his team will bring a fresh perspective to solving YouTube’s most pressing problem: a sustainable business model.
The addition of author and futurist Ray Kurzweil speaks
expands Google’s open-minded talent acquisition
strategy. Kurzweil, best known for his theories about
“The Singularity” (the point at which artificial intelligence
matches human intelligence), has been hired to “work
on new projects involving machine learning and language
processing.”

Pilot to Prevail. In spring of 2010, Google delighted Web
users everywhere by announcing that it would soon be
putting its new ultra-high-speed fiber network on trial.
High-speed Internet access is particularly dysfunctional in
the United States, demonstrated by the fact that a Harvard
University research center rated the country’s broadband
service 16th among developed nations. Many of the
barriers are geographic and economic, but it needs to be
resolved for Google to achieve its goals.

“To Build or to Buy or “Acquihire”? That Is The Question.”

Another important aspect of Google’s growth strategy is
acquisitions. It doesn’t try to reinvent the wheel when
someone else has already laid the groundwork. The
company has accelerated and diversified its acquisitions in
recent years. In 2013, Google had acquired 18 companies
for the year, and 139 overall. In 2014 the company
acquired companies in robotics (Boston Dynamics),
education (Renaissance Learning), aerospace ‘drones’
(Titan Aerospace) and so-called ‘connected device’
startups (Nest; Revolv).

Google also see acquisitions as a defensive strategy to
keep talent away from their competitors. It recently paid
more than $400 million for UK-based DeepMind. This
artificial intelligence focused company was viewed as an
‘acquihire’ strategy where Google purchased the company
for its human talent rather than product portfolio. Those in
Silicon Valley joke that the new start-up strategy is to build
a business that Google would want to acquire.

In late 2015 Google acquired a company led by VMware
Co-Founder Diane Greene to lead its cloud-computing
service aimed at expanding the company’s enterprise
solutions.

Google’s strategy of acquiring both start-ups and
established organizations has helped the company
maintain its innovative edge in a rapidly changing
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Create the Future

One of the primary reasons to shift into an Alphabet operating structure is to provide shareholders with a clearer picture of Google’s investments in core business vs growth business units such as Nest and its autonomous vehicle group. Many of these breakout units started as ideas inside Google’s X Lab.

Google X Lab. Not only is Google making big acquisition bets on the future, they’re driving technological innovation internally through Google X. This futuristic lab is run by Google co-founder Sergey Brin. Some of

Google’s most exciting and potentially life-changing products are coming out of this lab, including Google Glass—a wearable computer that displays information in the lens of a pair of glasses—and self-driving cars. This is where Google makes its big bets on the driving technology changes that will revolutionize lives, and maybe not too far away. In late 2015, Alphabet announced it would begin manufacturing self-driving cars in 2017. By dedicating resources to taking big risks, Google is positioning itself to be a leader in technology for the long run (10, 20, and even 100 years from now).

Big projects at Google X Lab in 2013–2015 include Project Loon and Project Energy. Project Loon is tackling the issue of providing internet to rural and remote areas by connecting a large network of high-altitude balloons and straddling them on the Earth’s stratosphere. Current pilots are being conducted in New Zealand. Project Energy plans to use wind turbines that are flown like kites 800–1,950 feet in the air while only attached to cords and robotic equipment. While up in the air, the turbines gather energy through the wing-tip blades and transfer that energy to earth through a conductive tether. They are movable, easy to deploy, and can be transported with ease.

One of the more intriguing projects announced in 2015 was Alphabet’s Sidewalk Labs which aims to create solutions for cities by focusing on the intersection of digital and physical infrastructures. The effort is intentionally broad and will create solutions for individuals, businesses and government agencies.

The company also remains focused on supporting application developers and entrepreneurs. In late 2015 Google announced Launch Lab as a six month accelerator program for startups seeking to innovate around mobile platforms.
What’s Next for Google?

With Google’s open-ended mission—to organize the world’s information and make it universally accessible and useful—the company has positioned itself to pursue just about anything. As the Web grows and evolves, so too will Google. Cloud computing? Google’s on it. Web-enabled emergency relief systems? Google’s on top of that one, too. The “search” company is actively looking to leverage its expertise in information in new and different ways, as well as constantly redefining the search experience.

Google is evolving from a ‘search engine’ to an ‘answer engine’ that leverages its Google Knowledge Graph and Google Now services. Google's Knowledge Graph is a massive effort to connect structured information that is largely disconnected on today’s World Wide Web. Changes are visible today. When you search ‘Lincoln’s birthday’ or ‘Weather in Kansas City’, Google is now shifting to showing you the answer as the result rather than tens of millions of web pages that might contain the answer.

Google Now uses a ‘card’ display interface that serves as an intelligent personal assistant that answers questions, makes recommendations, and performs actions such as telling you when the next train will arrive when you’re standing on the platform or informing you how much traffic to expect before you leave work.

Google will likely continue to explore radical business models in emerging industries such as robotics, bioscience and autonomous vehicles. Google acquired eight robotics companies in 2013, the most significant being Boston Dynamics and Schafft. Boston Dynamics is known for its human-like robot called “Atlas,” while Schafft’s human-like robot won the DARPA Robotics Trial in December, a contest whose ultimate aim is to eventually use robots to help in disaster response missions. What Google’s purpose is with robots is yet to be known, but there is some speculation that they plan to use them as part of a delivery service, perhaps to compete with Amazon’s new drone delivery service. xx Check out videos of “Atlas” and “Schaft”.

In a complete shift of strategic focus, Google is fully funding Calico, a biotech startup whose mission is to slow the aging process and fight diseases. It is being led by biotech guru, Arthur Levinson. xxi This idea has been fueled in part by futurist and Google exec, Ray Kurzweil (mentioned earlier), who believes that by the late 2020s humans will be able to eat whatever they want because they will have a nanobot injected into their bodies that will provide all the necessary nutrients while simultaneously eliminating fat and boosting the immune system. xxi

Among all of its futuristic investments it is the self-driving car that seems to capture the imagination of many people around the world. Since announcing to the world in 2012 that the company was testing self-driving Toyota Priuses in the Silicon Valley, Google has been mapping streets and roads around the United States.

Their vision is to create a mirror world map of the physical world that will allow self-driving cars to know in advance what to expect along the road. So an autonomous car will anticipate that a traffic light or stop sign is up ahead and focus on scanning for anomalies. In Fall 2015, Google announced it will transition its autonomous vehicles project into a full fledged Alphabet business unit in 2016.

Will Google achieve runaway success in all its endeavors? Probably not, but it’s got so many ideas in the pipeline—and a culture that supports their development—we’re sure they aren’t going to slow down any time soon.
What Can You Learn from Google?
Set a foundation that defines innovation objectives and mobilizes your efforts. Innovation at Google is about discovering new ways to change the world using an established set of tools and competencies.

- What are the guiding principles that define innovation for your organization?
- How can you formulate ambitious goals that inspire people both inside and outside your organization?

Think differently to develop original ideas that drive business value. No idea is too far-fetched at Google; that’s why it keeps tabs on every idea employees submit through a living, breathing system on its intranet.

- What fundamental driving forces and paradigm shifts (social, technological, political, economic, and environmental) should your organization address today to succeed tomorrow?
- Are there external partners you can leverage who can help you create new ideas faster or give you more credibility in the innovation areas in which you’re interested?
- How can you rethink the pathway to scaling your ability to generate and capture value?
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Create a streamlined and flexible approach to shepherd innovative ideas to market. Google is careful to avoid a burdensome process for innovation. Employees are put on short-term projects and expected to launch new products quickly.

- How are you encouraging your teams to be as resourceful as possible when it comes to implementation, and thinking outside the box?
- How can you better empower employees so that they're not killing good ideas too early?
- How can you leverage your intranet and other internal communication tools to foster collaboration?

Build a thriving work environment that drives innovation across your organization. Google’s culture is open, transparent, rebellious, and free—but employees know that they’re held to strict standards of quality and innovation. Innovation is everyone’s job and everyone has access to the tools and resources they need to innovate day in and day out.

- How do you keep your employees excited and engaged in innovation projects?
- How are you sharing your innovation successes and failures with the rest of the organization so that they might learn from others’ experiences?
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