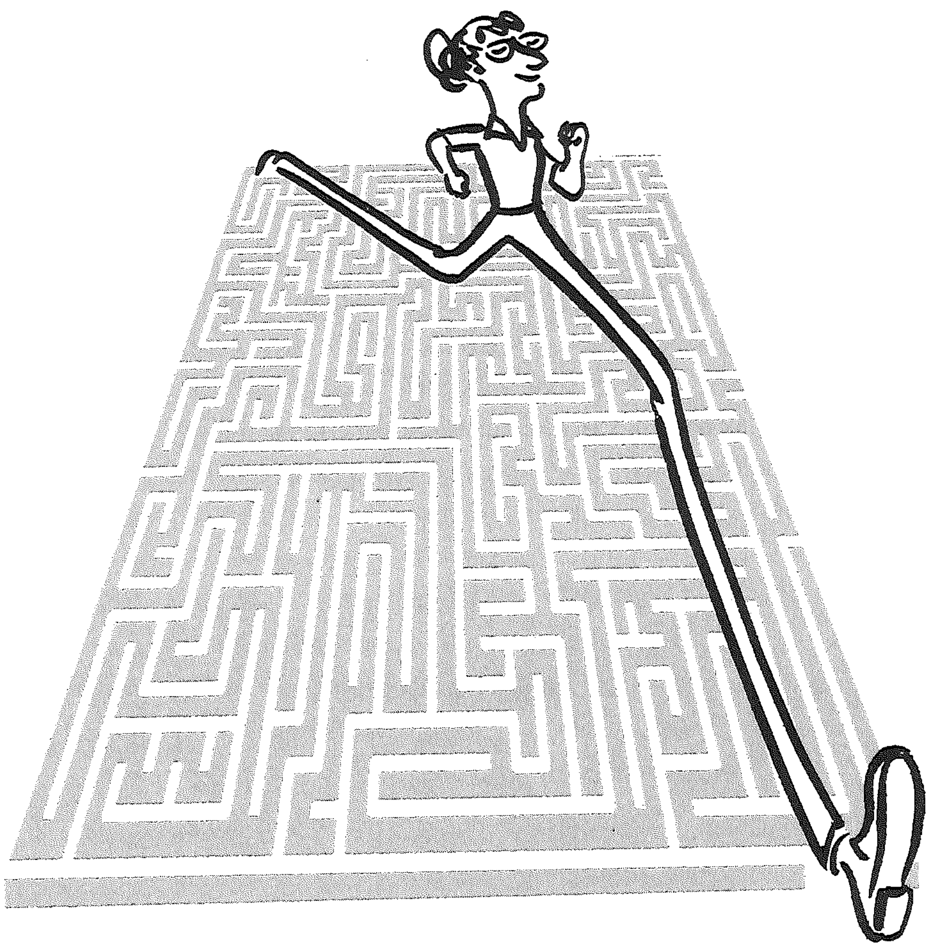

Introduction—Lessons Learned from the Front Row

In July 2003, Eric Schmidt had been the CEO of Google Inc. for two years when he received an email from one of the company's board members and investors, Mike Moritz, a partner at Sequoia Capital. It included a suggestion:

> you may want to think about picking a three hour slot in mid-august when the management presents to the board our campaign to compete with finland. (i do not think we should wait until the september meeting. this is far too important a topic and we've all learned that the best way to discover how short a year happens to be is to compete with finland.)

To the uninformed, this note might have been confusing. Why would Google, a several-hundred-employee, five-year-old Internet start-up based in Mountain View, California, be competing with Finland, a country of five million people that was over five thousand miles away and generally considered to be a friendly, peaceful place?

The Finland email arrived just when Eric felt like he was finally settling into Google. He had come from Novell, where he had been the CEO, and had also worked at Sun Microsystems and Bell Labs. After growing up in northern Virginia, he graduated from Princeton with a degree in electrical engineering and received a master's degree and PhD in computer science from the University of California, Berkeley, so not only was he no stranger to working with engineers and computer scientists, he *was* one. Still, when he got to Google he stepped into a place very different from anywhere else he had been.

His "I have a feeling we're not in Kansas anymore" revelation started on his first day. When he arrived at the office that had been assigned to him, which was already quite modest by big-shot CEO standards, he found that it was occupied by several software engineers. Rather than kicking them out, he decamped to the next office over, which was more of a closet with a window than an actual office.

Then, a few weeks later, it got worse. One morning, as he walked down the hall to his ~~closet~~ office, he noticed that his assistant, Pam Shore, had a troubled look on her face.[1] He soon found out why: He had a new officemate. It was one of the search engineers, Amit Patel, who explained to Eric that *his* office had five inhabitants, with another on the way, and that his solution of sawing one of the desks in half to make more space hadn't worked. In comparison to his current space, Eric's spot seemed quite roomy, so Amit moved in. (The facilities crew had refused to move Amit's stuff into Eric's office, so he had done it himself.) Amit and Eric ended up sharing the office for several months. Clearly, this was not a measure-your-importance-in-square-feet kind of place.

Beyond the unusual facilities arrangements, the rest of Eric's transition into the company was fairly smooth. His relationship with the two founders, Larry Page and Sergey Brin, was strengthening every day. The company's advertising platform, AdWords, was starting to generate significant amounts of revenue (when the company filed for its initial public offering in 2004, the financial statements astonished most observers... in a good way), and even though "Google" as a verb

1. For Pam, anything other than a warm smile counts as "troubled."

wouldn't be added to the *Oxford English Dictionary* for another three years,[2] for millions of users Google search was already an important part of everyday life. The company was growing too, adding dozens of employees every month, including a new head of products, Jonathan Rosenberg, who came on board in February of 2002. Jonathan, like Eric, was the son of an economics professor. He joined Google after stints at Excite@Home and Apple, to build up the company's product management team and round out Eric's staff.

As Mike's email pointed out, though, there was a major competitor on the horizon, and it wasn't really our Nordic friends across the Atlantic. Finland was our internal code name for Microsoft,[3] at the time the most important tech company on the planet.[4] Eric knew that a huge chunk of Google's traffic came from people using Microsoft's Internet Explorer browser. Like everyone at Google, he believed that the Internet was the technology platform of the future and that search was one of its most useful applications. Therefore, it was only a matter of time before our friends from Redmond would take a real interest in what we were doing. And when Microsoft took a real interest in things start-ups were doing, things had a way of getting really interesting.[5]

The future of the company was at stake, and what to do was far from obvious. Moritz's note was a call to action. He asked Eric to rally the team and create a plan that would establish clear deliverables across

2. The *Oxford English Dictionary* added "Google" on June 15, 2006. Other new words added in this update included "geocaching," "mash-up," "self-storage," and "texting." See Candace Lombardi, "Google Joins Xerox as a Verb" (*CNET News*, July 6, 2006).

3. In fact, "Finland" is a code name for the code name we actually used. If we used the actual code name in this book, it wouldn't be much of a code name, would it?

4. To get an idea of the awe in which Microsoft was held in those days, just look at the titles of some of the books about the company: *Microsoft Secrets: How the World's Most Powerful Software Company Creates Technology, Shapes Markets, and Manages People* (1995), *Overdrive: Bill Gates and the Race to Control Cyberspace* (1997), and *How the Web Was Won: How Bill Gates and His Internet Idealists Transformed the Microsoft Empire* (2000).

5. In the 1980s and '90s, it was virtually impossible for Silicon Valley technology entrepreneurs to get funding for their companies without first articulating to their investors their Microsoft strategy. If you didn't have a clear plan, you wouldn't get a check.

the company: product, sales, marketing, finance, and corporate development. Every aspect of how Google operated was on the table, and there was even talk about transitioning the company from its quirky start-up structure to a more traditional one organized around business units, to make it easier to develop new revenue streams (another thing the new plan was supposed to address). Most important, the plan needed to establish milestones and a roadmap of which products would ship, and when. In short, Moritz wanted what any sensible, normal board member would want: a comprehensive business plan.

He closed the note with a flourish:

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so why not pick an evening in mid august to mark the
completion of the plans for the mightiest campaign
any of us will ever be in.
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Since products would be the crux of this plan, Eric gave the project to Jonathan. His instructions: "I would like to review this in two weeks."

There was a problem, though, besides the fact that a huge company was coming to compete with us. Moritz was right: To take on the biggest gorilla in the jungle, we needed a plan. But he was also wrong, and to understand why he was wrong, and why he was inadvertently putting the two of us in a rock-and-hard-place sort of situation, it helps to first understand just what kind of company Google was.

"Just go talk to the engineers"

When Sergey and Larry founded Google in 1998, they had no formal business training or experience. They considered this an advantage, not a liability. As the company grew out of its first home in a Stanford dorm room, to Susan Wojcicki's garage[6] in Menlo Park, to offices in

6. Susan went on to become an employee and eventually the leader of all ad products and then YouTube, but her first Google title was landlord.

Palo Alto and then Mountain View, the founders ran it on a few simpl principles, first and foremost of which was to focus on the user. The believed that if they created great services, they could figure out th money stuff later. If all they did was create the world's best searc engine, they would be very successful.[7]

Their plan for creating that great search engine, and all the oth great services, was equally simple: Hire as many talented software eng neers as possible, and give them freedom. This approach suited a com pany born in a university lab, since in academia the most valuable asset intellect (also, for some American universities, the ability to throw a foo ball fifty yards). But while most companies say that their employees a everything, Larry and Sergey actually ran the company that way. Th behavior wasn't corporate messaging, and it wasn't altruism. They fe that attracting and leading the very best engineers was the *only* way f Google to thrive and achieve its lofty ambitions. And they really mea engineers: The founders stopped Eric's first attempt to hire the estimab Sheryl Sandberg, now Facebook's COO, because she wasn't an engine (Sheryl went on to spend over six very successful years at Google.) As t company grew, the founders relented in this single-mindedness, but on a little bit. To this day the rule of thumb is that at least half of Goog employees (aka Googlers) should be engineers.

The management tactics the founders used to run the compa were equally simplistic. Like the professors in their Stanford compu science lab, who did not dictate what their thesis projects should be b rather provided direction and suggestions, Larry and Sergey offer their employees plenty of freedom and used communication as a to to keep everyone moving in the same general direction. They had a ve strong belief in the profound importance of the Internet and the pov

7. Although as business neophytes Sergey and Larry didn't realize this, their "focus the user" mantra was consistent with Peter Drucker's idea of the purpose of busin "There is only one valid definition of a business purpose: to create a customer.... customer is the foundation of a business and keeps it in existence." From *The Practic Management*, (HarperBusiness, 1993 edition), page 37.

of search, and they communicated these points via informal meetings with the small engineering teams that populated the Google offices, and through company-wide "TGIF" meetings held every Friday afternoon, where any topic was fair game for discussion.

When it came to process, the founders ran things with a light touch. For years, Google's primary tool for managing the company's resources was a spreadsheet with a ranked list of the company's top 100 projects, which was available for anyone to see and debated in semi-quarterly meetings. These meetings were part status update, part resource allocation, and part brainstorming. The system was not very scientific: Most projects were prioritized on a scale of 1 to 5, but there was also room on the list for projects categorized as "new / far out" and "skunkworks." (Today we can't recall the distinction between the two, but at the time it all made perfect sense... sort of.) There was no concept of or recognized need for longer-range planning than this; if something more important came up, the engineers would figure it out and adjust the list.

This emphasis on engineering continued even as the company expanded the management team. The founders didn't hire Eric for his business acumen as much as for his track record as a technologist (Eric was a Unix expert and helped create Java—the software language, not the beverage or the island) and geek cred as an alum of Bell Labs. They hired Jonathan in spite of his economics and MBA degrees, because he was a proven product advocate and innovator from his days at Apple and Excite@Home. That we were business guys wasn't exactly a liability, but it wasn't a benefit either, at least not in Sergey's and Larry's minds.

Jonathan got a stark example of the founders' aversion to traditional business processes not long after he started at the company. As a seasoned executive in product management, he had plenty of experience in what's known as the "gate-based" approach to building products, which in most companies entails a series of well-defined phases and milestones, governed by various executive reviews, that escalate

slowly up the corporate food chain. This approach is designed to conserve resources and funnel information up from far-flung silos to a small set of decision-makers. Jonathan assumed that he was meant to bring precisely this type of discipline to Google, and he was supremely confident that he was just the guy to do it.

A few months later, Jonathan presented Larry with a product plan that was a manifestation of the gate-based approach at its finest. There were milestones and approvals, priorities, and a two-year plan of what products Google would release and when. It was a masterpiece of textbook thinking. All that remained was for him to receive a rousing round of applause and a pat on the back. Sadly, this was not to be: Larry hated it. "Have you ever seen a scheduled plan that the team beat?" he asked. Um, no. "Have your teams ever delivered better products than what was in the plan?" No again. "Then what's the point of the plan? It's holding us back. There must be a better way. Just go talk to the engineers."

As Larry spoke, it dawned on Jonathan that the engineers he was talking about weren't engineers in the traditional definition of the role. Yes, they were brilliant coders and system designers, but along with their deep technical expertise many of them were also quite business savvy and possessed a healthy streak of creativity. Coming from an academic background, Larry and Sergey had given these employees unusual freedom and power. Managing them by traditional planning structures wouldn't work; it might guide them but it would also hem them in. "Why would you want to do that?" Larry asked Jonathan. "That would be stupid."

So when Mike Moritz and the board asked us to create a traditional, MBA-style business plan, we didn't want to be stupid. We knew that the Google patient would reject a formal, regimented plan as if it were an alien organ transplanted into its body, which in many respects it would be. As experienced business executives, we had joined Google with the idea of bringing "adult supervision" to a chaotic place. But by the summer of 2003 we had been at the company long enough to realize that it was run differently than most any other place, with employees who were uniquely empowered, and operating in a new, rapidly evolving industry. We understood the dynamics of our new industry enough to get that the way to fend off Microsoft was continuous product excellence, yet we also understood that the best way to achieve that excellence was not via a prescribed business plan, but rather by hiring the very best engineers we could and then getting out of the way. We understood that our founders intuitively grasped how to lead in this new era, but they—by their own admission—didn't know how to build a company to the scale where it could achieve their ambitious vision. They were great leaders of computer scientists, but we needed more than computer scientists to create a great company.

We also understood that the rules to guide us in this endeavor did not even exist yet, and they certainly couldn't be found in the type of traditional business plan that Mike Moritz wanted.

So we found ourselves, at this critical moment in the company's history, stuck in the middle. We could do what Moritz wanted and write a traditional business plan. That would keep our board happy, but it would not motivate or inspire our employees, it would not help attract the new talent the company so desperately needed, and it wouldn't address the strategic dynamics of this brand-new industry. Most important, the company's founders would kill it before it ever saw the light of day. And maybe fire the two of us while they were at it.

The Finland plan

The plan that we ultimately presented to the board bore a close enough resemblance to a traditional business plan that the members departed the meeting satisfied that, yes, we have a business plan! Looking back now on that document, we are surprised in how many ways it was spot on. It was all about how Google would focus on its users and build excellent platforms and products. It said that Google would always offer higher-quality services and make those services easily accessible.

It proposed that our foundation be built on users, and that more users would draw more advertisers. There were a few tactical points covering how we would fend off competitive threats, but basically the way to challenge Microsoft, we said, was to create great products.

Which was, as it turned out, exactly the right thing to do.

Microsoft did aggressively challenge us, reportedly spending nearly $11 billion[8] in an attempt to knock Google off its perch as a key player in the Internet search and advertising business. Microsoft programs like MSN Search, Windows Live, and Bing, and acquisitions like aQuantive, failed to achieve true prominence, not because they were poorly executed but because Google was so well prepared for them. We worked incessantly to make search better. We added images, books, YouTube, shopping data, and any other corpus of information we could find. We created our own set of applications, such as Gmail and Docs, and made them all web-based. We improved our infrastructure by leaps and bounds, so that we could more quickly crawl an index of online data and content that was growing exponentially.[9] We made search faster and available in more languages, and improved our user interface to make it easier to use. We added maps and better local results. We worked with partners to ensure that it was always easy for users to access us. We even expanded into some areas where Microsoft excelled, such as browsers, launching Google Chrome and making it the fastest and most secure browser in the industry from day one. And we monetized all of this with highly efficient and effective ad systems.

Eric used to warn his team that "Microsoft will come at us, wave after wave." They did, and still do, nevertheless the business plan that Moritz pushed us to develop worked beyond our wildest dreams. Today Google is a $50-billion company with over forty-five thousand

8. Jay Yarow, "Steve Ballmer's Huge Reorg of Microsoft Could Bury One of the Company's Biggest Embarrassments" (*Business Insider*, July 9, 2013).

9. This was remarkably challenging. Imagine repeatedly climbing a mountain that is rapidly growing in size, and every time you climb it you need to get to the top faster than your previous trip. That's what it was like, except the mountain was made out of data, not dirt and rocks.

employees in over forty countries. We have diversified from Internet search and search advertising into video and other forms of digital marketing, successfully transitioned from a PC-centric world to a mobile-centric one, produced a successful suite of hardware devices, and pushed the technology edge with new projects that promise, for example, to bring Internet access to everyone and create cars that drive themselves.

One of the biggest reasons for our success, though, is that the plan we delivered to the board that day in 2003 wasn't much of a plan at all. There were no financial projections or discussions of revenue streams. There was no market research on what users, advertisers, or partners wanted or how they fit into nicely defined market segments. There was no concept of market research or discussion of which advertisers we would target first. There was no channel strategy or discussion of how we would sell our ad products. There was no concept of an org chart, with sales doing this, product doing that, and engineering doing some other that. There was no product roadmap detailing what we would build and when. There was no budget. There were no targets or milestones that the board and company leaders could use to monitor our progress.

There were also no tactics on how we would build the company or, more specifically, how we would stay loyal to Larry and Sergey's "just go talk to the engineers" ethos while building an enterprise that could take on the world's most powerful technology company and achieve our audacious global ambition of transforming lives by the billions. We left that out for the simple reason that we didn't know how we were going to do it. When it came to management tactics, the only thing we could say for sure back then was that much of what the two of us had learned in the twentieth century was wrong, and that it was time to start over.

When astonishing isn't

Today we all live and work in a new era, the Internet Century, where technology is roiling the business landscape and the pace of change is accelerating. This creates unique challenges for all business leaders. To

understand those challenges, it helps to step back for a moment and consider just how amazing things are.

Three powerful technology trends have converged to fundamentally shift the playing field in most industries. First, the Internet has made information free, copious, and ubiquitous—practically everything is online. Second, mobile devices and networks have made global reach and continuous connectivity widely available. And third, cloud computing[10] has put practically infinite computing power and storage and a host of sophisticated tools and applications at everyone's disposal, on an inexpensive, pay-as-you-go basis. Today, access to these technologies is still unavailable to much of the world's population, but it won't be long before that situation changes and the next five billion people come online.

From a consumer perspective, the convergence of these three technological waves has made the impossible possible. Taking a flight somewhere? On the day of your departure, your phone will remind you when to leave for the airport, tell you the terminal and gate from which the flight departs, and let you know if you will need an umbrella when you get to your destination, all without you having to ask. Want to track down any piece of information? Type or speak a word or two, and the answer pops up almost instantly, picked from a giant pile of information comprised of most of the world's knowledge. Hear a song you like? Hold up your phone, tap a button, identify the song, buy it, and then listen to it on any device, anywhere in the world. Need to know how to get somewhere? Your phone (or your glasses or watch) will literally tell you how, and show you the traffic along the way. Traveling to a foreign country? Talk into your phone (or your glasses or watch) and see or hear your words translated into practically any language on the planet, or point it at a sign and read it in your native tongue. Like art? You can virtually walk through many of the world's greatest museums

10. It's called "cloud computing" because the old programs to draw network schematics surrounded the icons for servers with a circle. A cluster of servers in a network diagram had several overlapping circles, which resembled a cloud.

and see their paintings in far greater detail than anyone ever has, except perhaps the artists who created them. Want to know if that restaurant you picked for tonight's date has the right ambience or easy parking? Virtually drive there, walk through the front door, and take a tour inside. Table 14 looks perfect!

When we went to college in the late 1970s and early '80s, we called home once a week, on Sundays, always before five p.m. because that's when the rates went back up. When Jonathan's son was studying in Australia a couple years ago, he occasionally joined the family back home in California for dinner, via video Hangout, on a laptop that sat at his place at the table. For free.

What's most astonishing is that these astonishing things aren't astonishing at all. It used to be that the most powerful computers and the best electronics were at the office, and once you left work you had to get by on phones attached to walls, maps on paper, music from radio stations that played what they felt like playing, and televisions brought in by two big guys and attached to cables or antennae. These aspects of life remained practically unchanged for years. Today, though, wow innovations are commonplace.

Speed

As much as technology has affected consumers, it has had an even bigger impact on businesses. In economic terms, when the cost curves shift downward on a primary factor of production in an industry, big-time change is in store for that industry.[11] Today, *three* factors of production have become cheaper—information, connectivity, and computing power—affecting any cost curves in which those factors are involved. This can't help but have disruptive effects. Many incumbents—aka pre-Internet companies—built their businesses based on assumptions of

11. For those of you who don't speak economist, "downward shifting cost curve" means "stuff that was expensive is now cheap."

scarcity: scarce information, scarce distribution resources and market reach, or scarce choice and shelf space. Now, though, these factors are abundant, lowering or eliminating barriers to entry and making entire industries ripe for change.[12] We saw this first in the media business, whose entire product can now be rendered digitally and sent around the world for free. But practically every industry is, at some level, information-driven. Media, marketing, retail, health care, government, education, financial services, transportation, defense, energy... We can't think of an industry that will escape this era unchanged.

The result of all this turmoil is that product excellence is now paramount to business success—not control of information, not a stranglehold on distribution, not overwhelming marketing power (although these are still important). There are a couple of reasons for this. First, consumers have never been better informed or had more choice.[13] It used to be that companies could turn poor products into winners by dint of overwhelming marketing or distribution strength. Create an adequate product, control the conversation with a big marketing budget, limit customer choice, and you could guarantee yourself a good return. Ever eat at a Bennigan's? A Steak and Ale? In their heyday in the 1980s, these chains had hundreds of locations in the United States, all of them offering perfectly decent food and service.

Things are different today. Cities and suburbs have unique

12. Technology visionary George Gilder has observed that every economic era is based on a key abundance and a key scarcity. (When horsepower was scarce, for example, land was abundant—but the opposite was true in the industrial era, when the cost of horsepower fell to just pennies per kilowatt hour.) The result of cheap bandwidth, as Gilder wrote in a remarkably prescient 1996 essay, is "a completely different computer architecture and information economy. . . . Feeding on low power and high bandwidth, the most common computer of the new era will be a digital cellular phone with an IP address." See George Gilder, "The Gilder Paradigm" (*Wired*, December 1996), reprinted from an issue of the *Gilder Technology Report*.

13. Peter Drucker anticipated this development back in 2001, when he wrote that the center of power has shifted from the supplier to the distributor, and that "in the next thirty years, it will certainly shift to the customer—for the simple reason that the customer now has full access to information worldwide." See Peter Drucker, *The Essential Drucker* (HarperBusiness, 2011), page 348.

restaurants for every taste—locally owned as well as chains—and prospective diners have access to a wealth of information about their quality, from both professional critics and citizen reviewers, on sites ranging from Chowhound to Yelp. With so much information and so many good choices, it's harder for an incumbent, crummy restaurant (chain or not) to survive, regardless of the size of its marketing budget, and easier for a new, high-quality place to gain a word-of-mouth foothold.[14] The same is true of cars, hotels, toys, clothes, and any other product or service that people can research online. The customer has abundant choice, with practically infinite digital shelf space (YouTube has well over a million channels; Amazon sells over fifty thousand books about business leadership alone). And the customer has a voice; provide a bad product or lousy service at your peril.

We've experienced this phenomenon firsthand several times in the Internet Age. When Jonathan worked at Excite@Home and wanted to strike up a search partnership with Google, his CEO decided not to do the deal, telling Jonathan that "Google's search engine is better, but we'll out-market them." Excite@Home is gone, so that obviously didn't work out very well. (On the plus side, the "@" symbol has gone on to be a huge sensation!) Excite@Home's management wasn't unique in its belief in the power of brand and marketing to carry less-than-brilliant products. Have you ever heard of Google Notebook? How about Knol? iGoogle? Wave? Buzz? PigeonRank?[15] These were all Google products that, while they had some merit, never caught on with users. They weren't good enough, and so they died a deserved death. The tailwind of Google's marketing and PR engine and brand wasn't nearly strong

14. An economist at the Harvard Business School studied the impact of Yelp on restaurant revenues, finding that positive reviews boost sales in independent restaurants (as opposed to chains). As a result, in markets with a high level of Yelp use, chain restaurants have lost customers. See Michael Luca, "Reviews, Reputation, and Revenue: The Case of Yelp.com" (Harvard Business School Working Paper, September 2011).

15. PigeonRank utilized "pigeon clusters (PCs)" to compute the relative value of web pages. Its demise was particularly quick: It launched on the morning of April 1, 2002, and was shut down at midnight that same day.

enough to overcome a headwind of mediocrity. As Jeff Bezos, founder and CEO of Amazon, says: "In the old world, you devoted 30 percent of your time to building a great service and 70 percent of your time to shouting about it. In the new world, that inverts."[16]

The second reason product excellence is so critical is that the cost of experimentation and failure has dropped significantly. You see this most dramatically in high-tech industries, where a small team of engineers, developers, and designers can create fabulous products and distribute them online globally for free. It's ridiculously easy to imagine and create a new product, try it out with a limited set of consumers, measure precisely what works and what doesn't, iterate the product, and try again. Or throw it out and start over, that much smarter for the experience.

But experimentation costs are lower for manufactured goods as well. One can model prototypes digitally, build them with a 3-D printer, market test them online, adjust their design based on the resulting data, and even raise production funds online with a prototype or slick video. Google[x], a team working on some of Google's most ambitious projects, built the first prototype of Google Glass, a wearable mobile computer as light as a pair of sunglasses, in just ninety minutes. It was quite crude, but served a powerful purpose: Don't tell me, show me.

Product development has become a faster, more flexible process, where radically better products don't stand on the shoulders of giants, but on the shoulders of lots of iterations. The basis for success then, and for continual product excellence, is speed.

Unfortunately, like Jonathan's failed gate-based product development framework, most management processes in place at companies today are designed with something else in mind. They were devised over a century ago, at a time when mistakes were expensive and only

16. Quoted in George Anders, "Jeff Bezos's Top 10 Leadership Lessons" (*Forbes*, April 23, 2012).

the top executives had comprehensive information, and their primary objectives are lowering risk and ensuring that decisions are made only by the few executives with lots of information. In this traditional command-and-control structure, data flows up to the executives from all over the organization, and decisions subsequently flow down. This approach is *designed* to slow things down, and it accomplishes the task very well. Meaning that at the very moment when businesses must permanently accelerate, their architecture is working against them.

The "smart creative"

The good news is that those same economics of abundance that are roiling industries are churning up workplaces too. Today's work environment is radically different than it was in the twentieth century. As already noted, experimentation is cheap and the cost of failure—if done well—is much lower than it used to be. Plus, data used to be scarce and computing resources precious; today both are abundant, so there's no need to hoard them. And collaboration is easy, across a room, a continent, or an ocean. Put these factors together, and you suddenly have an environment where employees, from individual contributors to managers to executives, can have an inordinately big impact.

The default term today for these employees—the ones working in information-based jobs who, to put it way too simplistically, think for a living—is "knowledge workers." This is a label that management guru Peter Drucker first coined in 1959 in a book called *Landmarks of Tomorrow*.[17] Much of Drucker's subsequent work talked about how to make these knowledge workers more productive, and use of the term has risen steadily since the 1960s. Typically, the most valuable knowledge workers are the ones who thrive in the straitjacketed world of corporate process, by building deep expertise in a narrow set of skills. ("Morty? He's our spreadsheet guy. Vicki? She's our warehouse go-to. Pete? He runs the basketball pool.") They don't seek mobility; organizational status quo is where they excel. Great companies such as IBM, General Electric, General Motors, and Johnson & Johnson offer management tracks for people with the greatest potential, whereby these stars rotate in and out of different roles every two years or so. But this approach emphasizes the development of management skills, not technical ones. As a result, most knowledge workers in traditional environments develop deep technical expertise but little breadth, or broad management expertise but no technical depth.

17. Peter F. Drucker, *Landmarks of Tomorrow* (Harper, 1959).

When we contrast the traditional knowledge worker with the engineers and other talented people who have surrounded us at Google over the past decade-plus, we see that our Google peers represent a quite different type of employee. They are not confined to specific tasks. They are not limited in their access to the company's information and computing power. They are not averse to taking risks, nor are they punished or held back in any way when those risky initiatives fail. They are not hemmed in by role definitions or organizational structures; in fact, they are encouraged to exercise their own ideas. They don't keep quiet when they disagree with something. They get bored easily and shift jobs a lot. They are multidimensional, usually combining technical depth with business savvy and creative flair. In other words, they are not knowledge workers, at least not in the traditional sense. They are a new kind of animal, a type we call a "smart creative," and they are the key to achieving success in the Internet Century.

The primary objective of any business today must be to increase the speed of the product development process and the quality of its output. Since the industrial revolution, operating processes have been biased toward lowering risk and avoiding mistakes. These processes, and the overall management approach from which they were derived, result in environments that stifle smart creatives. Now, though, the defining characteristic of today's successful companies is the ability to continually deliver great products. And the only way to do that is to attract smart creatives and create an environment where they can succeed at scale.

And who, exactly, is this smart creative?

A smart creative has deep technical knowledge in how to use the tools of her trade,[18] and plenty of hands-on experience. In our industry, that means she is most likely a computer scientist, or at least understands the tenets and structure of the systems behind the magic you see on your screens every day. But in other industries she may be a doctor, designer, scientist, filmmaker, engineer, chef, or mathematician. She is an expert in doing. She doesn't just design concepts, she builds prototypes.

She is analytically smart. She is comfortable with data and can use it to make decisions. She also understands its fallacies and is wary of endless analysis. Let data decide, she believes, but don't let it take over.

She is business smart. She sees a direct line from technical expertise to product excellence to business success, and understands the value of all three.

She is competitive smart. Her stock-in-trade starts with innovation, but it also includes a lot of work. She is driven to be great, and that doesn't happen 9-to-5.

She is user smart. No matter the industry, she understands her product from the user or consumer's perspective better than almost anyone. We call her a "power user," not just casual but almost obsessive in her interest. She is the automotive designer who spends her weekends fixing up that '69 GTO, the architect who can't stop redesigning her house. She is her own focus group, alpha tester, and guinea pig.

A smart creative is a firehose of new ideas that are genuinely new. Her perspective is different from yours or ours. It's even occasionally different from her own perspective, for a smart creative can play the perspective chameleon when she needs to.

She is curious creative. She is always questioning, never satisfied

18. The English language requires that we choose a gender when using pronouns, and we find that using pronouns makes the task of authorship easier. In this section, we describe our smart creative as a she. In others, she's a he.

with the status quo, seeing problems to solve everywhere and thinking that she is just the person to solve them. She can be overbearing.

She is risky creative. She is not afraid to fail, because she believes that in failure there is usually something valuable she can salvage. Either that, or she is just so damn confident she knows that even in the event that she does fail, she can pick herself up and get it right the next time around.

She is self-directed creative. She doesn't wait to be told what to do and sometimes ignores direction if she doesn't agree with it. She takes action based on her own initiative, which is considerable.

She is open creative. She freely collaborates, and judges ideas and analyses on their merits and not their provenance. If she were into needlepoint, she would sew a pillow that said, "If I give you a penny, then you're a penny richer and I'm a penny poorer, but if I give you an idea, then you will have a new idea but I'll have it too." Then she would figure out a way to make the pillow fly around the room and shoot lasers.

She is thorough creative. She is always on and can recite the details, not because she studies and memorizes, but because she knows them. They are *her* details.

She is communicative creative. She is funny and expresses herself with flair and even charisma, either one-to-one or one-to-many.

Not every smart creative has all of these characteristics, in fact very few of them do. But they all must possess business savvy, technical knowledge, creative energy, and a hands-on approach to getting things done. Those are the fundamentals.

Perhaps the best thing about smart creatives is that they are everywhere. We have worked with plenty of smart creatives who boast computer science degrees from elite universities, but plenty more who don't. In fact, smart creatives can be found in every city, in every school, in every class and demographic, and in most businesses, nonprofits, and government organizations: the ambitious ones of all ages who are eager (and able) to use the tools of technology to do a lot more. Their common characteristic is that they work hard and are willing to question the status quo and attack things differently. This is why they can have such an impact.

It is also why they are uniquely difficult to manage, especially under old models, because no matter how hard you try, you can't tell people like that how to think. If you can't tell someone how to think, then you have to learn to manage the environment *where* they think. And make it a place where they want to come every day.

A fun project for the two of us

Which brings us back to our journey at Google. By the time we delivered that business plan to the board back in 2003, we knew that we had to do what so many business leaders are faced with today: reinvent our rules for management and create and maintain a new kind of work environment where our amazing smart-creative employees could thrive, in our case in a company growing by leaps and bounds. While we were brought into Google to provide "adult supervision," to succeed we ended up having to relearn everything we thought we knew about management, and our best teachers were the people who surrounded us every day at the Googleplex.

We've been working on this ever since, and along the way, like all good students, we kept notes. Whenever we heard something interesting in a staff meeting or product review, we scribbled it down. When Eric wrote his periodic memos to Googlers about the company's priorities, Jonathan would note its best sections and stow them away for later use. When Jonathan sent emails to the product team, lauding a practice that was working well or calling out one that wasn't, Eric would add his own opinions and analysis. Over time, we started to create a framework for how to manage in this new world.

Then, a few years ago, Nikesh Arora, who heads Google global sales and business operations, asked Jonathan to give a talk to a group of Google sales leaders from around the world. Nikesh is himself a

prototypical smart creative. He holds a degree in electrical engineering from the Indian Institute of Technology and joined Google in 2004 to run sales in Europe, despite not having much experience leading a sales organization of that size. He came to California in 2009 to run the global business team. Nikesh always excels, so Jonathan knew the bar was set very high for this particular talk. Google had passed its first decade and was growing like crazy, and Nikesh wanted Jonathan to pass some of the tribal wisdom that he and Eric had accumulated about managing at Google to our next generation of leaders. This was a perfect opportunity to pull together all of those notes on what the "students" had learned from the "teachers" over the years.

The talk was very well received, so we turned it into a management seminar for Google directors, meeting with small groups of Google leaders to review our principles and swap stories about managing smart creatives. Finally, Eric did what all great managers do when they want something to happen: He proposed an idea. His email read:

> I'm sufficiently impressed with the work here that I propose that Jonathan and I write a book on management.
>
> Of course due to the principles we will espouse in the book Jonathan will do all the work and I will get all the credit :) that was a joke.
>
> In any case I think it would be a fun project for the two of us.
>
> Jonathan what do you say?

Eric was inspired by a John Chambers talk he once heard. Chambers, the highly respected CEO of Cisco, said that in the early 1990s he had often met with Hewlett Packard CEO Lew Platt to talk strategy and management. At one point an appreciative John asked Lew why he was investing so much of his valuable time to help out a young executive at a different company. "This is the way Silicon Valley works," Mr. Platt replied. "We're here to help you."

Steve Jobs, the late founder and CEO of Apple, who often provided his neighbor Larry Page with advice, had a more colorful way of expressing this same spirit. Our friend Leslie Berlin, the Silicon Valley historian, was researching a biography on Intel cofounder Bob Noyce, and asked Steve during an interview why he had spent so much time with Noyce early in his career. "It's like what Schopenhauer said about the conjurer," Steve replied. He retrieved a book of essays by nineteenth-century German philosopher Arthur Schopenhauer, and read her a passage from one with the chipper title of "On the Sufferings of the World": "He who lives to see two or three generations is like a man who sits some time in the conjurer's booth at a fair, and witnesses the performance twice or thrice in succession. The tricks were meant to be seen only once, and when they are no longer a novelty and cease to deceive, their effect is gone."[19] (We suspect that the ability to pull out a Schopenhauer quote during an interview was precisely one of those tricks.)

We both came to Google as seasoned business executives who were pretty confident in our intellects and abilities. But over the humbling course of a decade, we came to see the wisdom in John Wooden's observation that "it's what you learn after you know it all that counts."[20] We had a front-row seat as we helped our founders and colleagues create a magnificent company—you might say that we saw the conjurers at work—and used it to relearn everything we thought we knew about management. Today we see all sorts of companies and organizations, big and small, from all industries and all over the world, come to

19. Arthur Schopenhauer, *Essays and Aphorisms* (Penguin, 1970).

20. Coach Wooden, who died in 2010 at the age of ninety-nine, won ten national championships while coaching men's basketball at UCLA. But he coached there for fifteen years before winning the first of those championships, so he knew something about learning. See John Wooden and Steve Jamison, *Wooden on Leadership* (McGraw-Hill, 2005), page 34.

Silicon Valley to see if they can soak up the insights and energy that make it such a special place. People are eager for change, and that's what this book is about: In the spirit of our forefathers here in Silicon Valley, we'd like to share some of the conjurers' secrets and translate them into lessons that anyone can use.

Our book is organized to mirror the development stages of a successful, growing business or new venture, which can become a self-perpetuating virtuous cycle, sort of like a snowball rolling down the hill, getting bigger as it picks up momentum. We prescribe a series of steps businesses can follow to attract and motivate smart creatives, each of which propels the business to the next step. The steps build and depend on each other, but none of them is ever completed and all of them are dynamic.

We open by discussing how to attract the best smart creatives, which starts with culture, because culture and success go hand in hand, and if you don't believe your own slogans you won't get very far. We then cover strategy, because smart creatives are most attracted to ideas that are grounded in a strong strategic foundation. They know that business plans aren't nearly as important as the pillars upon which they are built. Then, hiring, which is the most important thing a leader does. Hire enough great people, and the resulting intellectual mixture will inevitably combust into creativity and success.

The team is hired, the business grows, now the time comes to make hard decisions. This is where we talk about consensus and how to get there. Our following chapter is about communications, which become vital (and harder) as the organization grows. Innovation is up next, since the only way to achieve sustained success is through continuous product excellence, and an environment of innovative primordial ooze is the only way to get there. We conclude with some thoughts on incumbents and how to imagine the unimaginable.

Pyramids unbuilt

None of this is easy, and many of our lessons we learned the hard way, through long meetings, contentious struggles, and errors. We also humbly acknowledge our great luck in having joined a spectacular company, run by brilliant founders, at the unique moment in history when the Internet was taking off. We weren't quite born on third base thinking we had hit a triple, but first or second sounds about right.

We certainly don't have all the answers, but we have learned a lot about this new world where technology reigns supreme and employees are uniquely empowered to make a big difference. We believe that these lessons could perhaps provide insights and ideas for leaders of all types of organizations, from large enterprises to new start-ups, from non-profits to NGOs to governments, or at least provoke informed discussions of how our experiences at Google might apply in other companies and realms. But mostly, our hope is that we can give you—along with a good read—the ideas and tools to go build something new.

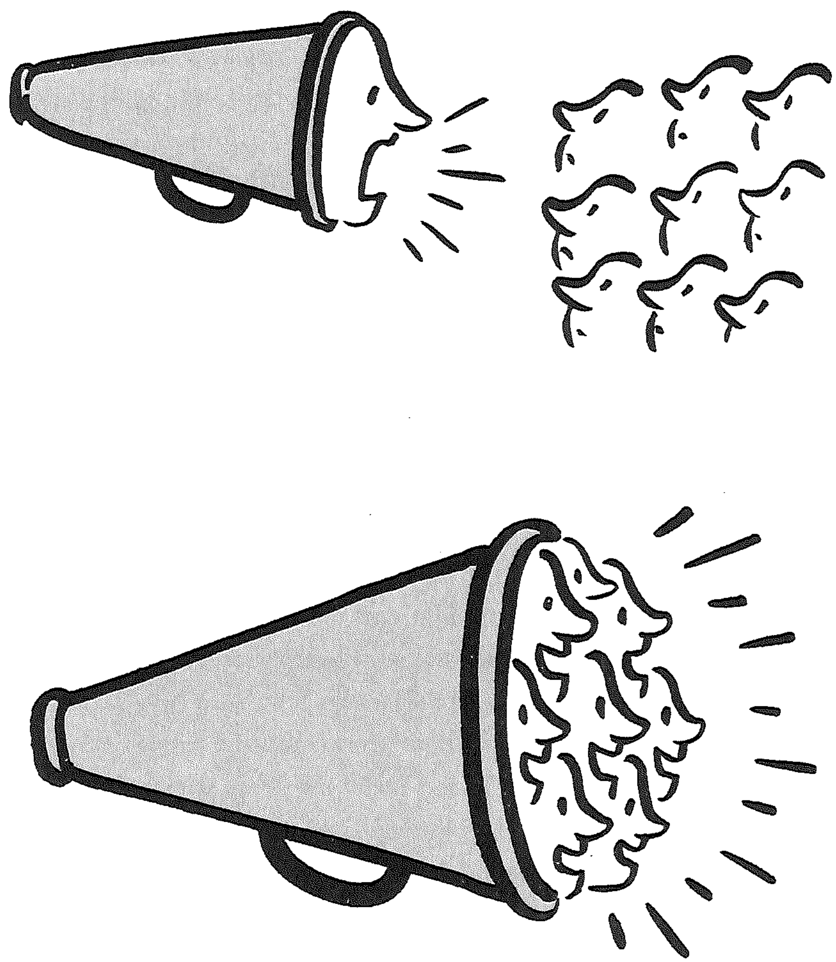
And when we say "you," we mean you, entrepreneur. You are out there. You may not think of yourself as an entrepreneur yet, but you are. You have an idea you're sure will change everything; you might have a prototype, or even a first version of a product. You're smart, ambitious, and hunkered down in a conference room, garage, office, café, apartment, or dorm room, alone or with your small team. You think about your idea even when you're supposed to be doing something else, like studying, performing your day job, or spending time with your kids and partner. You are about to launch a new venture, and we'd like to help.

And when we say "venture," we aren't restricting ourselves to the technology start-ups that surround us here in Silicon Valley. Employees expect much more from their companies now, and they are often not getting it. This is an opportunity: The principles that we talk about apply to anyone who is trying to start a new venture or initiative, either from scratch or from within an existing organization. They aren't just for start-ups, and they aren't just for high-tech businesses. In fact, when skilled leaders can harness all of the great assets of an ongoing organization, that organization can have a far greater impact than a start-up. So just because you don't have a hoodie and a seven-figure check from a venture capitalist, that doesn't mean you can't create the next big thing. All you need is the insight that your industry is transforming at a rapid pace, the guts to take a risk and be part of that transformation, and the willingness and ability to attract the best smart creatives and lead them to make it happen.

Is that you? Are you ready? As Peter Drucker pointed out, the Egyptian who conceived and built the pyramids thousands of years ago was really just a very successful manager.[21] The Internet Century brims with pyramids yet unbuilt. Let's get started.

And this time, with no slave labor.

21. Peter F. Drucker, *The Essential Drucker* (HarperBusiness, 2011), pages 312–13. Drucker writes, "Management as a *practice* is very old. The most successful executive in all history was surely that Egyptian who, forty-seven hundred years or more ago, first conceived the pyramid—without any precedent—and designed and built it, and did so in record time."



Culture—Believe Your Own Slogans

One Friday afternoon in May 2002, Larry Page was playing around on the Google site, typing in search terms and seeing what sort of results and ads he'd get back. He wasn't happy with what he saw. He would enter a query for one thing, and while Google came back with plenty of relevant organic results, some of the ads were completely unrelated to the search.[22] A search for something like "Kawasaki H1B" would yield lots of ads for lawyers offering to help immigrants get H-1B US visas, but none related to the vintage motorcycle to which the search query referred. Or a search for "french cave paintings" delivered ads that said "buy french cave paintings at . . . ," with the name of an online retailer that obviously did not stock French cave paintings (or even facsimiles of them). Larry was horrified that the AdWords engine, which figured out which ads worked best with which queries, was occasionally subjecting our users to such useless messages.

At that point, Eric still thought Google was a fairly normal start-up. But what happened over the next seventy-two hours completely shifted that perception. In a normal company, the CEO, seeing a bad product, would call the person in charge of the product. There would be a meeting or two or three to discuss the problem, review

22. When you do a Google search, there are two types of results that come back: organic and paid. Organic results are the "natural" search results returned by Google's search engine, while paid results are placed by the ads engine.

potential solutions, and decide on a course of action. A plan would come together to implement the solution. Then, after a fair amount of quality assurance testing, the solution would launch. In a normal company, this would take several weeks. This isn't what Larry did.

Instead, he printed out the pages containing the results he didn't like, highlighted the offending ads, posted them on a bulletin board on the wall of the kitchen by the pool table, and wrote THESE ADS SUCK in big letters across the top. Then he went home. He didn't call or email anyone. He didn't schedule an emergency meeting. He didn't mention the issue to either of us.

At 5:05 a.m. the following Monday, one of our search engineers, Jeff Dean, sent out an email. He and a few colleagues (including Georges Harik, Ben Gomes, Noam Shazeer, and Olcan Sercinoglu) had seen Larry's note on the wall and agreed with Larry's assessment of the ads' relative suckiness. But the email didn't just concur with the founder and add some facile bromide about looking into the problem. Rather, it included a detailed analysis of why the problem was occurring, described a solution, included a link to a prototype implementation of the solution the five had coded over the weekend, and provided sample results that demonstrated how the new prototype was an improvement over the then-current system. While the details of the solution were geeky and complex (our favorite phrase from the note: "query snippet term vector"), the gist of it was that we would compute an "ad relevance score" that would assess the quality of the ad relevant to the query, and then determine whether and where the ad would be placed on the page based on that score. This core insight—that ads should be placed based on their relevancy, not just how much the advertiser was willing to pay and the number of clicks they received—became the foundation upon which Google's AdWords engine, and a multibillion-dollar business, was built.

And the kicker? Jeff and team weren't even on the ads team. They had just been in the office that Friday afternoon, seen Larry's note, and

understood that when your mission is to organize the world's information and make it universally accessible and useful, then having ads (which are information) that suck (which isn't useful) is a problem. So they decided to fix it. Over the weekend.

The reason a bunch of employees who had no direct responsibility for ads, or culpability when they were lousy, spent their weekends transforming someone else's problem into a profitable solution speaks to the power of culture. Jeff and gang had a clear understanding of their company's priorities, and knew they had the freedom to try to solve any big problem that stood in the way of success. If they had failed, no one would have chastised them in any way, and when they succeeded, no one—even on the ads team—was jealous of their progress. But it wasn't Google's culture that turned those five engineers into problem-solving ninjas who changed the course of the company over the weekend. Rather it was the culture that attracted the ninjas to the company in the first place.

Many people, when considering a job, are primarily concerned with their role and responsibilities, the company's track record, the industry, and compensation. Further down on that list, probably somewhere between "length of commute" and "quality of coffee in the kitchen," comes culture. Smart creatives, though, place culture at the top of the list. To be effective, they need to *care* about the place they work. This is why, when starting a new company or initiative, culture is the most important thing to consider.

Most companies' culture just happens; no one plans it. That can work, but it means leaving a critical component of your success to chance. Elsewhere in this book we preach the value of experimentation and the virtues of failure, but culture is perhaps the one important aspect of a company where failed experiments hurt. Once established, company culture is very difficult to change, because early on in a company's life a self-selection tendency sets in. People who believe in the same things the company does will be drawn to work there, while people who don't, won't.[23] If a company believes in a culture where everyone gets a say and decisions are made by committee, it will attract like-minded employees. But if that company tries to adopt a more autocratic or combative approach, it will have a very hard time getting employees to go along with it. Change like that not only goes against what the company stands for, it goes against its employees' personal beliefs. That's a tough road.

The smart approach is to ponder and define what sort of culture you want at the outset of your company's life. And the best way to do that is to ask the smart creatives who form your core team, the ones who know the gospel and believe in it as much as you do. Culture stems from founders, but it is best reflected in the trusted team the founders form to launch their venture. So ask that team: What do we care about? What do we believe? Who do we want to be? How do we want our company to act and make decisions? Then write down their responses. They will, in all likelihood, encompass the founders' values, but embellish them with insights from the team's different perspectives and experiences.

Most companies neglect this. They become successful, and *then* decide they need to document their culture. The job falls to someone in the human resources or PR department who probably wasn't a member of the founding team but who is expected to draft a mission statement that captures the essence of the place. The result is usually a set of corporate sayings that are full of "delighted" customers, "maximized" shareholder value, and "innovative" employees. The difference, though,

23. One of the most important academic expressions of this idea appeared in a 1987 journal article by organizational psychologist Benjamin Schneider, "The People Make the Place" (*Personnel Psychology*, September 1987). In this influential paper, Schneider lays out an attraction-selection-attrition model (ASA model) of how organizational cultures evolve from the traits and choices of individuals. "Attraction" refers to the tendency of job seekers to flock to organizations with which they sense a good fit; "selection" means that a company's current employees tend to hire people who are like them; "attrition," too, isn't random, as employees tend to leave organizations with which they are no longer compatible. As attraction, selection, and attrition processes play out over time, an organization becomes increasingly homogeneous in its culture.

between successful companies and unsuccessful ones is whether employees believe the words.

Here's a little thought experiment for you: Think about someplace where you've worked. Now, try to recite its mission statement. Can you do it? If so, do you believe in it? Does it strike you as authentic, something that honestly reflects the actions and culture of the company and its employees? Or does it seem like something a group of marketing and communications people conjured up one night with a six-pack and a thesaurus? Something like: "Our mission is to build unrivaled partnerships with and value for our clients, through the knowledge, creativity, and dedication of our people, leading to superior results for our shareholders."[24] Boy, that sure checks all the boxes, doesn't it? Clients—check; employees—check; shareholders—check. Lehman Brothers was the owner of that mission statement—at least until its bankruptcy in 2008. Surely Lehman stood for something, but you couldn't tell from those words.

In contrast to Lehman Brothers' leaders, David Packard, a founding member of our all-time Smart Creative Hall of Fame, took culture seriously. He noted in a 1960 speech to his managers that companies exist to "do something worthwhile—they make a contribution to society. . . . You can look around and still see people who are interested in money and nothing else, but the underlying drives come largely from a desire to do something else—to make a product, to give a service, generally to do something which is of value."[25]

People's BS detectors are finely tuned when it comes to corporate-speak; they can tell when you don't mean it. So when you put your mission into writing, it had better be authentic. A good litmus test is to ask what would happen if you changed the statements that describe culture. Take "Respect, Integrity, Communication and Excellence," which was Enron's motto. If execs at Enron had decided to replace

24. Susan Reynolds, *Prescription for Lasting Success* (John Wiley and Sons, 2012), page 51.

25. The full text of Packard's March 8, 1960, speech appears in David Packard's *The HP Way: How Bill Hewlett and I Built Our Company* (HarperCollins, 2005).

those concepts with something different—perhaps Greed, Greed, Lust for Money, and Greed—it might have drawn a few chuckles but otherwise there would have been no impact. On the other hand, one of Google's stated values has always been to "Focus on the User." If we changed that, perhaps by putting the needs of advertisers or publishing partners first, our inboxes would be flooded, and outraged engineers would take over the weekly, company-wide TGIF meeting (which is hosted by Larry and Sergey, and where employees are welcome to—and often do—voice their disagreement with company decisions). Employees always have a choice, so belie your values at your own risk.

Think about your culture, either what you want it to be or what it already is. Imagine, months or years from now, an employee working late, unable to make up his mind about a tough decision.[26] He walks to the kitchen for a cup of coffee, and thinks back on the cultural values he heard expressed at company meetings, talked about with colleagues over lunch, saw demonstrated by that company veteran whom everyone respects. For this employee—for all employees—those values should clearly and plainly outline the things that matter most to the company, the things you care about. Otherwise they are meaningless, and won't be worth a damn when it comes to helping that smart creative make the right call. What values would you want that bleary-eyed employee to consider? Write them down in a simple, concise way. Then share them, not in posters and guides, but through constant, authentic communications. As former General Electric CEO Jack Welch said in *Winning*: "No vision is worth the paper it's printed on unless it is communicated constantly and reinforced with rewards."[27]

26. Culture theorists going back to at least Émile Durkheim have argued that through shared beliefs, values, and norms, culture shapes people's thoughts and behaviors. Contemporary social scientists, most notably the social psychologist Hazel Markus, have used controlled experiments to show that even when people aren't aware of it, their culture (such as Japanese vs. American, working-class vs. professional) sways the everyday choices they make. For a popular account of this research, see Hazel Rose Markus and Alana Conner, *Clash!: 8 Cultural Conflicts That Make Us Who We Are* (Hudson Street Press/Penguin, 2013).

27. Jack Welch with Suzy Welch, *Winning* (HarperCollins, 2005), page 69.

When Google went public in 2004, Sergey and Larry recognized the IPO as the perfect opportunity to codify the values that would guide the company's actions and decisions. And not just the most important actions and decisions and not just management's actions and decisions, but *everyone's* actions and decisions, big and small, every day. These values had guided how the company had run since its founding six years earlier, and were deeply grounded in the founders' personal experiences. Inspired by the annual letter Warren Buffett writes to Berkshire Hathaway shareholders, they drafted a "letter from the founders" to include in the IPO prospectus.

The Securities and Exchange Commission initially ruled that the letter did not contain information that would be relevant to investors, and so didn't belong in the company's investment prospectus. We argued and eventually won the right to include it. Still, some of the statements in the letter gave the lawyers and bankers heartburn, and at one point Jonathan found himself in a conference room facing a battalion of them picking at this point or that. He steadfastly defended the text of the letter, using two main arguments: (1) Larry and Sergey had written the letter themselves, with input only from a small group of Googlers, and wouldn't change a thing (it's easy to hold the line in a negotiation when you are, in fact, completely unable to get your side to budge!), and (2) everything the letter said was heartfelt and true.

When it was published in April 2004, the letter generated a lot of curiosity and some criticism. What most people didn't understand, though, was exactly why the company's founders had spent so much time getting the letter exactly right (and why Jonathan dug his heels in every time one of the bankers or lawyers tried to change something). The letter was not primarily about Dutch auctions, voting rights, or showing off a blatant disregard for everything Wall Street. In fact, if we Wall Street have offended, think but this, and all is mended:[28] The founders didn't care about maximizing the short-term value and

28. With apologies to that notable smart creative, Puck.

marketability of their stock, because they knew that recording the company's unique values for future employees and partners would be far more instrumental to long-term success. As we write this today, the arcane details of that IPO a decade ago are a matter of history, but phrases like "long term focus," "serving end users," "don't be evil," and "making the world a better place" still describe how the company is run.

There are other aspects of Google culture—about things like crowded offices, hippos, knaves, and Israeli tank commanders—that didn't make the letter. But these, as we shall see, would become integral to creating—and sustaining—a culture where a simple statement like "These ads suck" is all that's needed to make things happen.

Keep them crowded

A new visitor to the Googleplex will immediately notice the dazzling array of amenities available to employees: volleyball courts, bowling alleys, climbing walls and slides, gyms with personal trainers and lap pools, colorful bikes to get from building to building, free gourmet cafeterias, and numerous kitchens stocked with all sorts of snacks, drinks, and top-of-the-line espresso machines. These things usually leave visitors with the correct impression that Googlers are awash in luxuries, and the mistaken impression that luxury is part of our culture. Giving hardworking employees extra goodies is a Silicon Valley tradition dating back to the 1960s, when Bill Hewlett and David Packard bought a few hundred acres of land in the Santa Cruz Mountains and turned it into Little Basin[29]—a camping and recreational retreat

29. In 2007, HP sold the Little Basin campsite to a pair of nonprofits, Sempervirens Fund and Peninsula Open Space Trust, who then sold it to the California state parks department. Today it is part of Big Basin Redwoods State Park and open for public use. See Paul Rogers, "Former Hewlett Packard Retreat Added to Big Basin Redwoods State Park" (*San Jose Mercury News*, January 14, 2011).

for employees and their families.[30] In the 1970s, companies such as ROLM started bringing the amenities closer to work, with full gymnasiums and subsidized cafeterias that served gourmet food, and Apple chipped in with its legendary (at least among the hookup-hopeful geek set) Friday afternoon beer busts. In Google's case, our approach to facilities was grounded in the company's beginnings in a Stanford dorm room. Larry and Sergey set out to create an environment similar to a university, where students have access to world-class cultural, athletic, and academic facilities . . . and spend most of their time working their butts off. What most outsiders fail to see when they visit Google is the offices where employees spend the bulk of their time. Follow your typical Googler (and probably LinkedIn, Yahoo, Twitter, or Facebook employee, although the last time we tried we got stopped by security) from the volleyball court, café, or kitchen back to their workspace and what will you find? A series of cubicles that are crowded, messy, and a petri dish for creativity.

Are you in your office right now? Are your coworkers nearby? Spin around and wave your arms. Do you hit anyone? If you have a quiet conversation on your phone while sitting at your desk, can your coworkers hear you? We're guessing no. Are you a manager? If so, can you close your door and have private conversations? We're guessing yes. In fact, your company's facilities master plan was most likely specifically designed to maximize space and quiet (while minimizing cost). And the higher you are on the corporate hierarchy, the more space and quiet you get. Entry-level associates are shoehorned into interior cubicles, while CEOs get the big corner office with lots of space outside the door to house assistants and act as a barrier against everyone else.

30. Decades before Google hired its own chef, Bill Hewlett and Dave Packard seemed to understand how much employees and customers prize free food. HP employee John Minck noted: "Some production line donut and Danish trays were set over the top of several soldering irons, set up with variable power transformers to heat them up without burning them. Those breaks were all company furnished and used to amaze customers [whom] we were touring through the plants." Quoted in Michael Malone, *Bill & Dave: How Hewlett and Packard Built the World's Greatest Company* (Portfolio/Penguin, 2007), page 130.

Humans are by nature territorial, and the corporate world reflects this. In most companies the size of your office, the quality of your furniture, and the view from your window connote accomplishment and respect. Conversely, nothing reduces smart people to whiny complainers as quickly as a new office floor plan. It's not uncommon for interior design to become a passive-aggressive means of literally keeping people "in their place." When Eric was at Bell Labs, he had a boss whose office was chronically cold, so he bought a carpet for his cement floor. HR made him take it out because he wasn't a high-enough-level employee to have such a fine amenity. That was a place where all privileges were accorded by tenure, not need or merit.

Silicon Valley is not immune to this syndrome. After all, it's the place that turned the Aeron chair into a status symbol. ("It's because of my back," a legion of dot-com CEOs claimed. Really? At over $500 a pop, those chairs had better fix your front and sides too.) But the facilities-first culture needs to be killed, shot dead before it gains an insidious foothold in the building. Offices should be designed to maximize energy and interactions, not for isolation and status. Smart creatives thrive on interacting with each other. The mixture you get when you cram them together is combustible, so a top priority must be to keep them crowded.

When you can reach out and tap someone on the shoulder, there is nothing to get in the way of communications and the flow of ideas. The traditional office layout, with individual cubicles and offices, is designed so that the steady state is quiet. Most interactions between groups of people are either planned (a meeting in a conference room) or serendipitous (the hallway / water cooler / walking through the parking lot meeting). This is exactly backward; the steady state should be highly interactive, with boisterous, crowded offices brimming with hectic energy. Employees should always have the option to retire to a quiet place when they've had it with all the group stimulation, which is why our offices include plenty of retreats: nooks in the cafés and microkitchens, small conference rooms, outdoor terraces and spaces, and even nap pods. But when they go back to their desk, they should be surrounded by their teammates.

When Jonathan worked at Excite@Home, the company's facilities team leased a second building to house customer support. But when the time came to move everyone to the new space, the management team overruled facilities and kept the support staff crowded in its original offices for a few more months. The new building was used to host lunchtime soccer games (making the new corner offices corner-kick offices). The soccer games brought people together, whereas putting people in that uncrowded space would have pulled them apart. Keeping people crowded also has the collateral benefit of killing facilities envy. When no one has a private office, no one complains about it.

Work, eat, and live together

And who should be in those jam-packed cubicles? We think it's particularly important for teams to be functionally integrated. In too many places, employees are segregated by what they do, so product managers might sit here but the engineers are kept in that building across the street. This can work for traditional product managers, who are usually good with PERT and Gantt charts[31] and at making themselves seem critical to the execution of the "Official Plan" that management bought into after seeing a fancy PowerPoint that projected financial returns above the company's cost of capital hurdle rate. They are there to deliver against the defined plan, navigate any obstacles, "think outside the box" (which has to be the most inside-the-box phrase ever uttered), and obsequiously pander to late requests from the CEO and figure out how to push their team to get them done. This means that it's OK, and sometimes better, for product managers to sit in a different location from engineers, as long as they can depend on regular work-process updates and detailed status reports to keep their finger on the pulse of their product. Not that we have any strong opinions on the matter, but

31. Hideously complex and highly useful tools of the project management trade.

let's just say this is a twentieth-century product manager's job, not a twenty-first-century one.

In the Internet Century, a product manager's job is to work together with the people who design, engineer, and develop things to make great products. Some of this entails the traditional administrative work around owning the product life cycle, defining the product roadmap, representing the voice of the consumer, and communicating all that to the team and management. Mostly, though, smart-creative product managers need to find the technical insights that make products better. These derive from knowing how people use the products (and how those patterns will change as technology progresses), from understanding and analyzing data, and from looking at technology trends and anticipating how they will affect their industry. To do this well, product managers need to work, eat, and live with their engineers (or chemists, biologists, designers, or whichever other types of smart creatives the company employs to design and develop its products).

Your parents were wrong—messiness is a virtue

When offices get crowded, they tend to get messy too. Let them. When Eric first arrived at Google in 2001, he asked the head of facilities, George Salah, to clean up the place. George did, and was rewarded with a note the next day from Larry Page saying, "Where did all my stuff go?" That random collection of stuff was an icon of a busy, stimulated workforce.[32] When she was at Google, Facebook COO Sheryl Sandberg gave people in her sales and support team fifty dollars apiece to decorate their space, while Jonathan ran a worldwide "Googley Art Wall" contest that had teams decorating office walls with Google logos fashioned from Rubik's Cubes, photomosaics, and paint shot from paintball guns (the Chicago office, decorating Al Capone–style).

32. *Xooglers* blog, April 9, 2011, http://xooglers.blogspot.com/2011/04/photo-of-pre-plex .html.

The late Carnegie Mellon professor Randy Pausch, in his notable *Last Lecture*,[33] showed off photos of his childhood bedroom with walls covered with his handwritten formulas. He told parents in the room, "If your kids want to paint their bedrooms, as a favor to me, let 'em do it." Messiness is not an objective in itself (if it was, we know some teens who would be great hires), but since it is a frequent by-product of self-expression and innovation, it's usually a good sign.[34] And squashing it, which we've seen in so many companies, can have a surprisingly powerful negative effect. It's OK to let your office be one hot mess.

But while offices can be crowded and messy, they need to provide employees with everything they need to get the job done. In our case, Google is a computer science company, so the thing that our smart creatives need most is computing power. That's why we give our engineers access to the world's most powerful data centers and Google's entire software platform. This is another way to kill facilities envy among smart creatives: Be very generous with the resources they need to do their work. Be stingy with the stuff that doesn't matter, like fancy furniture and big offices, but invest in the stuff that does.

There is a method to this madness, and it's not profligacy. We invest in our offices because we expect people to work there, not from home. Working from home during normal working hours, which to many represents the height of enlightened culture, is a problem that—as Jonathan frequently says—can spread throughout a company and

33. Randy Pausch, *The Last Lecture* (Hyperion, 2008), page 30.

34. A 2003 study concluded that "the members of our study groups displayed the most creativity when the other group members individuated them and offered them verification for their self-views." (At least we *think* that supports our point. It's hard to tell when a study uses "individuate" as a verb.) A 2013 study shows the creativity-enhancing effects of messy desks: "Orderliness seemed to encourage a general mind-set for conservatism and tradition, and disorder had the effect of stimulating the desire for the unknown." 2003 study: William B. Swann Jr., Virginia S. Y. Kwan, Jeffrey T. Polzer, and Laurie P. Milton, "Fostering Group Identification and Creativity in Diverse Groups: The Role of Individuation and Self-Verification" (*Personality and Social Psychology Bulletin*, November 2003). 2013 study: Kathleen D. Vohs, Joseph P. Redden, and Ryan Rahinel, "Physical Order Produces Healthy Choices, Generosity, and Conventionality, Whereas Disorder Produces Creativity (*Psychological Science*, September 2013).

suck the life out of its workplace. Mervin Kelly, the late chairman of the board of Bell Labs, designed his company's buildings to promote interactions between employees.[35] It was practically impossible for an engineer or scientist to walk down the long halls without running into a colleague or being pulled into an office. This sort of serendipitous encounter will never happen when you are working at home. Google's AdSense[36] product, which developed into a multibillion-dollar business, was invented one day by a group of engineers from different teams who were playing pool in the office. Your partner or roommate is probably great, but the odds of the two of you coming up with a billion-dollar business during a coffee break at home are pretty small, even if you do have a pool table. Make your offices crowded and load them with amenities, then expect people to use them.

Don't listen to the HiPPOs

Hippopotamuses are among the deadliest animals, faster than you think and capable of crushing (or biting in half) any enemy in their path. Hippos are dangerous in companies too, where they take the form of the Highest-Paid Person's Opinion. When it comes to the quality of decision-making, pay level is intrinsically irrelevant and experience is valuable only if it is used to frame a winning argument. Unfortunately, in most companies experience *is* the winning argument. We call these places "tenurocracies," because power derives from tenure, not merit. It reminds us of our favorite quote from Jim Barksdale, erstwhile CEO of Netscape: "If we have data, let's look at data. If all we have are opinions, let's go with mine."[37]

When you stop listening to the hippos, you start creating a meritocracy, which our colleague Shona Brown concisely describes as a place where

35. Jon Gertner, "True Innovation" (*New York Times*, February 25, 2012).

36. The ads product where Google places ads on a large network of publisher sites.

37. Bob Lisbonne, a former SVP at Netscape, compiled a list of Jim Barksdale's witticisms, which Lisbonne had jotted down at meetings with the boss, and posted them on his personal website. See lisbonne.com/jb.html.

"it is the quality of the idea that matters, not who suggests it." Sounds easy, but of course it isn't. Creating a meritocracy requires equal participation by both the hippo, who could rule the day by fiat, and the brave smart creative, who risks getting trampled as she stands up for quality and merit.

Sridhar Ramaswamy, one of Google's ads leaders, told a story at a Google meeting that illustrates this nicely. It was early in the days of AdWords, Google's flagship ads product, and Sergey Brin had an idea for something he wanted Sridhar's engineering team to implement. There was no doubt Sergey was the highest-paid person in the room, but he didn't make a compelling argument as to why his idea was the best, and Sridhar didn't agree with it. Sridhar wasn't a senior executive at the time, so as the hippo, Sergey could have simply ordered Sridhar to comply. Instead, he suggested a compromise. Half of Sridhar's team could work on what Sergey wanted, and the other half would follow Sridhar's lead. Sridhar still disagreed, and after much debate about the relative merits of the competing ideas, Sergey's idea was discarded.

This outcome was possible only because Sergey, as a smart creative, deeply understood the data being presented, the technology of the platform, and the context of the decision. The hippo who doesn't understand what's going on is more apt to try to intimidate her way to success. If you are in a position of responsibility but are overwhelmed by the job, it's easier to try to bluster your way through with a "because I said so" approach. You need to have confidence in your people, and enough self-confidence to let them identify a better way.

Sergey also didn't mind ceding control and influence to Sridhar, because he knew that in Sridhar he had hired someone who was quite likely to have ideas better than his own. His job as the hippo was to get out of the way if he felt his idea wasn't the best. Sridhar also had a job to do: He had to speak up. For a meritocracy to work, it needs to engender a culture where there is an "obligation to dissent".[38] If

38. We heard this phrase from Shona Brown, who picked it up from her years at McKinsey & Company. McKinsey's website says it quite well: "All McKinsey consultants are obligated to dissent if they believe something is incorrect or not in the best interests of

someone thinks there is something wrong with an idea, they must raise that concern. If they don't, and if the subpar idea wins the day, then they are culpable. In our experience, most smart creatives have strong opinions and are itching to spout off; for them, the cultural obligation to dissent gives them freedom to do just that. Others, though, may feel more uncomfortable raising dissenting views, particularly in a public forum. That's why dissent must be an obligation, not an option. Even the more naturally reticent people need to push themselves to take on hippos.

Meritocracies yield better decisions and create an environment where all employees feel valued and empowered. They demolish the culture of fear, the murky, muddy environment in which hippos prefer to wallow. And they remove biases that can hamper greatness. Our colleague Ellen West related a story to us that was told to her by a member of the Gayglers (Google's diversity group for lesbian, gay, bisexual, and transgender employees). He told Ellen that the Gayglers had discussed whether or not Google could be considered the first "post-gay" company at which they had worked. The consensus was that it was close, since at Google "it doesn't matter who you are, just what you do." Bingo.

The rule of seven

Reorganization is one of the most despised phrases in the corporate lexicon, perhaps matched only by "outsourcing" and "eighty-slide presentation." An executive decides that the way the company is structured is the source of its problems, and if the company was organized differently everything would be puppies and sunshine. So the company lurches from centralized organization to decentralized, or from functional to divisional. Some execs "win" and others "lose." Meanwhile,

the client. Everyone's opinion counts. While you might be hesitant to disagree with the team's most senior member or the client, you're expected to share your point of view."

most employees remain in limbo, wondering if they still have jobs, and if so, who their new boss will be and whether they'll get to keep their nice cube next to the window. Then a year or two later some other executive (or quite possibly the same one) realizes the company still has problems and orders another reorganization. Such is the glorious "for loop"[39] of corporate life.

Organizational design is hard. What works when you're small and in one location does not work when you get bigger and have people all over the world. This is why there are so many reorgs: If there is no perfect answer, companies lurch between the less-than-optimal alternatives. To help avoid this dance, the best approach is to put aside preconceived notions about how the company should be organized, and adhere to a few important principles.

First, keep it flat. In most companies, there is a basic underlying tension: People claim that they want a flat organization so they can be closer to the top, but in fact they usually long for hierarchy. Smart creatives are different: They prefer a flat organization, less because they want to be closer to the top and more because they want to get things done and need direct access to decision-makers. Larry and Sergey once tried to accommodate this need by abolishing managers altogether; they called it a "dis-org." At one point the head of engineering, Wayne Rosing, had 130 direct reports. But smart creatives aren't *that* different; like any other employee, they still need a formal organization structure. The no-manager experiment ended and Wayne got to see his family again.

The solution we finally hit upon was slightly less draconian but just as simple. We call it the rule of seven. We've worked at other companies with a rule of seven, but in all of those cases the rule meant that managers were allowed a *maximum* of seven direct reports. The Google version suggests that managers have a *minimum* of seven direct reports

39. Computer science inside joke proudly written by Jonathan Rosenberg, economics major. Next footnote.

(Jonathan usually had fifteen to twenty when he ran the Google product team). We still have formal organization charts, but the rule (which is really more of a guideline, since there are exceptions) forces flatter charts with less managerial oversight and more employee freedom. With that many direct reports—most managers have a lot more than seven—there simply isn't time to micromanage.

Every tub (not) on its own bottom

When Eric was at Sun and the company was growing quickly, the business was getting complex enough that the powers-that-be decided to reorganize into business units. The new units were called "planets," because they revolved around Sun's core business of selling computer servers, and each of them had its own profit-and-loss structure. (People within Sun often explained the separate P&L structure by saying "every tub has its own bottom," probably because planets don't have bottoms, tubs don't rotate around the sun, or just saying "it's how most big companies do it" wasn't sufficient.)

The problem with this approach was that almost all of the company's revenue came from the hardware business (the sun, not the planets), so it required a team of accountants to look at that revenue and allocate it among the planets. The structure of how this was all supposed to run was itself a secret, so much so that leaders of the business units were not allowed to have their own copy of the document that codified it. It was read aloud to them.

We believe in staying functionally organized—with separate departments such as engineering, products, finance, and sales reporting directly to the CEO—as long as possible, because organizing around business divisions or product lines can lead to the formation of silos, which usually stifle the free flow of information and people. Having separate P&Ls seems like a good way to measure performance, but it can have the unfortunate side effect of skewing behavior: The leaders of a business unit are motivated to prioritize their unit's P&L over the company's. If you do have P&Ls, make sure they are driven by real external customers and partners. At Sun, the formation of the planets led to a huge loss of productivity, as leaders (and accountants) became focused not on creating great products that generate actual revenue, but on optimizing a number at the end of an accounting formula.

And whenever possible, avoid secret organizational documents.

Do all reorgs in a day

There are times when a reorganization actually does make sense. When that day comes, we have a couple of rules. First, beware of the tendencies of different groups: Engineers add complexity, marketing adds management layers, and sales adds assistants. Manage this (and being aware of it is a big first step). Second, do all reorgs in a day. This may seem impossible to accomplish, but there is a counterintuitive point working in its favor. When you have a company of smart creatives, you can tolerate messiness. In fact, it helps, because smart creatives find it empowering, not confusing.

When Nikesh Arora reorganized Google's business organization—a team of thousands of people spanning sales, operations, and marketing—in 2012, he moved quickly, announcing the changes to his team before all the details were worked out. Google's product line had expanded from just one main product, AdWords, to several offerings (including YouTube ads, Google Display Network, and Mobile Ads) in just a few years, spawning new sales teams and leading to some confusion in the field. Nikesh wanted—like many sales leaders with multiple products—to create a "One Google" organization that would return its focus to the customer. But unlike most sales leaders, Nikesh planned and executed the reorganization in just a few weeks (OK, it wasn't a day, but as Clarence Darrow might point out, sometimes a day doesn't literally mean twenty-four hours),[40] knowing that his team would jump in and finish the job. Over the next few months, the business team did make several adjustments, staying true to the intent of the changes while making them work better. The key was doing the reorg quickly and launching it before it was complete. As a result, the organization design was stronger than initially conceived, and the team was more invested in its success because it helped create the end result. Since there is no perfect organizational design, don't try to find one. Get as close as you can and let your smart creatives figure out the rest.

The Bezos two-pizza rule

The building block of organizations should be *small* teams. Jeff Bezos, Amazon's founder, at one point had a "two-pizza team" rule,[41] which stipulates that teams be small enough to be fed by two pizzas. Small teams get more done than big ones, and they spend less time politicking and worrying about who gets credit. Small teams are like families: They can bicker and fight, or even be downright dysfunctional, but they usually pull together at crunch time. Small teams tend to get bigger as their products grow; things built by only a handful of people eventually require a much bigger team to maintain them. This is OK, as long as the bigger teams don't preclude the existence of small teams working on the next breakthroughs. A scaling company needs both.

40. In case you dozed off that day in American history class, or grew up elsewhere, we're alluding to the Scopes Trial of the summer of 1925, in which Clarence Darrow, the renowned lawyer, defended high-school teacher John Scopes for teaching evolution in violation of a Tennessee state law. Darrow argued that the Biblical "days" of creation might not have been twenty-four hours long, and could have actually been longer, so therefore evolution was not incompatible with the teachings of the Bible.

41. Richard L. Brandt, "Birth of a Salesman" (*Wall Street Journal*, October 15, 2011).

Organize the company around the people whose impact is the highest

One last organizational principle: Determine which people are having the biggest impact and organize around them. Decide who runs the company not based on function or experience, but by performance and passion. Performance should be relatively easy to measure, but passion can be trickier to gauge. It is native in the best leaders—the sort of people who are elected captain of the team without even volunteering—and it draws others to them like iron filings to a magnet. Bill Campbell, the former Intuit CEO and ongoing coach and mentor to us both, often quotes Debbie Biondolillo, Apple's former head of human resources, who said, "Your title makes you a manager. Your people make you a leader."

Eric once chatted with Warren Buffett about what he looks for when acquiring companies. His answer was: a leader who doesn't need him. If the company is run by a person who is performing well because she is committed to its success, and not just by making a bundle by selling to Berkshire Hathaway, then Warren will invest. Internal teams work in much the same way: You want to invest in the people who are going to do what they think is right, whether or not you give them permission. You'll find that those people will usually be your best smart creatives.

This does not mean you should create a star system, in fact the best management systems are built around an ensemble, more like a dance troupe than a set of coordinated superstars. This approach creates long-term consistency, with a deep bench of high-performance talent ready to lead when the opportunity appears.

At the most senior level, the people with the greatest impact—the ones who are running the company—should be product people. When a CEO looks around her staff meeting, a good rule of thumb is that at least 50 percent of the people at the table should be experts in the company's products and services and responsible for product development. This will help ensure that the leadership team maintains focus on product excellence. Operational components like finance, sales, and legal are obviously critical to a company's success, but they should not dominate the conversation.

You also want to select as your leaders people who don't place their own interests above the company's. We see this a lot in companies with business units or divisions, where the success of the unit, as we noted before, can take precedence over that of the company as a whole. Once, when he was at Sun, Eric needed a new server. It was during the holidays, so rather than ordering one through the internal purchasing system he just went down to the warehouse and pulled a system from the shelves. He opened the box and found six "Read me first" documents, each one representing a division whose hippo felt its message was the most important.

A lot of government websites are guilty of this. (TV remotes too. At least, that's the only explanation we can conceive for why they are so horrible. Seriously, why is the mute button tiny and hidden, while the "on demand" button is big and a different color? Because the exec who runs the on-demand business unit has a number to hit, and no one gets paid when viewers mute ads.) You should never be able to reverse engineer a company's organizational chart from the design of its product. Can you figure out who reigns supreme at Apple when you open the box for your new iPhone? Yes. It's you, the customer; not the head of software, manufacturing, retail, hardware, apps, or the Guy Who Signs the Checks. That is exactly as it should be.

Once you identify the people who have the biggest impact, give them more to do. When you pile more responsibility on your best people, trust that they will keep taking it on or tell you when enough is enough. As the old saying goes: If you want something done, give it to a busy person.

Exile knaves but fight for divas

Remember the childhood riddle about knights and knaves? You are on an island with knights, who always tell the truth, and knaves, who always lie. You stand at a fork in a road. One way leads to freedom, the other to death. There are two people standing there, one a knight and the other a knave, but you don't know which is which. You get to ask one yes/no question to determine which way to go. What do you do?[42]

Life is something like that island, only more complicated. For not only are knaves in real life devoid of integrity, they are also sloppy, selfish, and have a sneaky way of working their way into virtually any company. Arrogance, for example, is a knavish tendency that is a natural by-product of success, since exceptionalism is fundamental to winning. Nice humble engineers have a way of becoming insufferable when they think they are the sole inventors of the world's next big thing. This is quite dangerous, as ego creates blind spots.

There are other things that classify people as knaves. Jealous of your colleague's success? You're a knave. (Remember that famous knave Iago, warning the smart creative Othello to "beware, my lord, of jealousy. It is the green-eye'd monster, which doth mock the meat it feeds on."[43]) Taking credit for someone else's work? Knave. Selling a customer something she doesn't need or won't benefit from? Knave. Blowing up a Lean Cuisine in the company microwave and not cleaning it up? Knave. Tagging the wall of a nave? Knave.

The character of a company is the sum of the characters of its people, so if you strive for a company of sterling character, that is the standard you must set for your employees. There is no room for knaves. And generally, in our experience, once a knave, always a knave. (Tom Peters: "There is no such thing as a minor lapse of integrity.")

Fortunately, employee behavior is socially normative. In a healthy culture of knightish values, the knights will call out the knaves for their

42. There are a few correct answers. You could point in one direction and ask either person, "If I were to ask you, 'Is that the road to freedom?' would you say yes?" If the answer is yes, then it's the road to freedom. If the answer is no, then it's the road to death. You could ask one of them, "If I ask the other person which way to go, what would he say?" Then do the opposite. Or you could act like some American presidents, and order an invasion.

43. Shakespeare, William.

poor behavior until they either shape up or leave. (This is another argument for crowded offices: Humans are at their best when surrounded by social controls, and crowded offices have lots of social controls!) This is pretty effective for most knavish offenses, since knaves are generally more motivated by personal success than knights, and if they sense that their behavior is not a route to success they are more apt to leave. As a manager, if you detect a knave in your midst it's best to reduce his responsibility and appoint a knight to assume it. And for more egregious offenses, you need to get rid of the knave, quickly. Think about the baby elephant seals (knaves) who try to steal milk from other baby seals' mothers; they are bitten not only by the nursing mother but also by other female seals (knights).[44] You *must* always be firm with the people who violate the basic interests of the company. Don't bite them, but do act swiftly and decisively. *Nip crazy in the bud.*

There are tipping points in knave density. It approaches a critical mass—which is smaller than you think[45]—and people start to believe they need to be knave-like to succeed, which only exacerbates the problem. Smart creatives may have a lot of good traits, but they aren't saints, so it's important to watch your knave quotient.

Knaves are not to be confused with divas. Knavish behavior is a product of low integrity; diva-ish behavior is one of high exceptionalism. Knaves prioritize the individual over the team; divas think they

44. Elephant seals mean business: "These bites sometimes resulted in serious injuries. If a weaner cried out as it fled, it attracted the attention of neighboring females who often joined in attempting to bite the fleeing animal. The result was that weaners caught trying to steal milk were usually chased out of the harem." See Joanne Reiter, Nell Lee Stinson, and Burney J. Le Boeuf, "Northern Elephant Seal Development: The Transition from Weaning to Nutritional Independence" (*Behavioral Ecology and Sociobiology*, Volume 3, August 1978), pages 337–67.

45. One of the most robust findings in psychology, true across a wide range of human experience, is that, as a famous paper puts it, "bad is stronger than good." In organizations it often takes only a few bad apples to spoil the barrel. See Roy F. Baumeister, Ellen Bratslavsky, Catrin Finkenauer, and Kathleen D. Vohs, "Bad Is Stronger Than Good" (*Review of General Psychology*, Volume 5, Issue 4, December 2001). For the bad-apple effect in organizations, see Will Felps, Terence R. Mitchell, and Eliza Byington, "How, When, and Why Bad Apples Spoil the Barrel: Negative Group Members and Dysfunctional Groups" (*Research in Organizational Behavior*, Volume 27, January 2006).

are better than the team, but want success equally for both. Knaves need to be dealt with as quickly as possible. But as long as their contributions match their outlandish egos, divas should be tolerated and even protected. Great people are often unusual and difficult, and some of those quirks can be quite off-putting. Since culture is about social norms and divas refuse to be normal, cultural factors can conspire to sweep out the divas along with the knaves. As long as people can figure out any way to work with the divas, and the divas' achievements outweigh the collateral damage caused by their diva ways, you should fight for them. They will pay off your investment by doing interesting things. (And if you have been reading this paragraph thinking "she" every time we mention diva, remember that Steve Jobs was one of the greatest business divas the world has ever known!)

Overworked in a good way

Work-life balance. This is another touchstone of supposedly "enlightened" management practices that can be insulting to smart, dedicated employees. The phrase itself is part of the problem: For many people, work is an important part of life, not something to be separated. The best cultures invite and enable people to be overworked in a good way, with too many interesting things to do both at work and at home. So if you are a manager, it's your responsibility to keep the work part lively and full; it's *not* a key component of your job to ensure that employees consistently have a forty-hour workweek.

We've both worked with young moms who go completely dark for a few hours in the evening, when they are with their families and putting their kids to bed. Then, around nine, the emails and chats start coming and we know we have their attention. (Dads too, but the pattern is especially true for the working moms.) Are they overworked? Yes. Do they have too much to do at home too? Yes. Are they sacrificing their family and life for work? Yes and no. They have made their lifestyle decisions. There are times when work overwhelms everything and they have to make sacrifices, and they accept that. But there are also those times when they sneak away for an afternoon to take the kids to the beach or—more likely—have the gang drop by the office for lunch or dinner. (Google's main campus courtyard on a summer evening looks like family camp, there are so many children running around while their parents enjoy a nice dinner.) The intense stretches may last for weeks or even months, especially in start-ups, but they never last forever.

Manage this by giving people responsibility and freedom. Don't order them to stay late and work or to go home early and spend time with their families. Instead, tell them to own the things for which they are responsible, and they will do what it takes to get them done. Give them the space and the freedom to make it happen. Marissa Mayer, who became one of Silicon Valley's most famous working mothers not long after she took over as Yahoo's CEO in 2012, says that burnout isn't caused by working too hard, but by resentment at having to give up what really matters to you.[46] Give your smart creatives control, and they will usually make their own best decisions about how to balance their lives.[47]

Keeping them in small teams can help too. In small teams, teammates are more apt to sense when one member is burning out and needs to go home early or take a vacation. A big team may think someone who takes a vacation is slacking off; a small team is happy to see that empty seat.

We encourage people to take real vacations, although not to promote "work-life balance." If someone is so critical to the company's

46. Marissa Mayer, "How to Avoid Burnout" (*Bloomberg Businessweek*, April 12, 2012).

47. There is no question that work overload can cause burnout—obviously, people's time and energy are finite. But the research on burnout shows that lack of control is a major culprit too. (Other culprits include insufficient reward, breakdown in community, absence of fairness, and conflicting values.) The leading researcher on burnout, psychologist Christina Maslach, sees burnout as a symptom of a mismatch between people and their jobs, and she places the burden on organizations to create more humane work environments. See Christina Maslach and Michael P. Leiter, *The Truth About Burnout: How Organizations Cause Personal Stress and What to Do About It* (Jossey-Bass, 1997).

success that he believes he can't unplug for a week or two without things crashing down, then there is a larger problem that must be addressed. No one should or can be indispensable. Occasionally you will encounter employees who create this situation intentionally, perhaps to feed their ego or in the mistaken belief that "indispensability" equals job security. Make such people take a nice vacation and make sure their next-in-line fills in for them while they are gone. They will return refreshed and motivated, and the people who filled their shoes will be more confident. (This is a huge hidden benefit of people taking maternity and paternity leaves too.)

Establish a culture of Yes

We are both parents, so we understand through years of firsthand experience the dispiriting parental habit of the reflexive no. "Can I have a soda?" No. "Can I get two scoops of ice cream instead of one?" No. "Can I play video games even though my homework isn't done?" No. "Can I put the cat in the dryer?" NO!

The "Just Say No" syndrome can creep into the workplace too. Companies come up with elaborate, often passive-aggressive ways to say no: processes to follow, approvals to get, meetings to attend. No is like a tiny death to smart creatives. No is a signal that the company has lost its start-up verve, that it's too corporate. Enough no's, and smart creatives stop asking and start heading to the exits.

To keep this from happening, establish a culture of Yes. Growing companies spawn chaos, which most managers try to control by creating more processes. While some of these processes may be necessary to help the company scale, they should be delayed for as long as possible. Set the bar high for that new process or approval gate; make sure there are very compelling business reasons for it to be created. We like this quote from American academic and former University of Connecticut president Michael Hogan: "My first word of advice is this: Say yes. In fact, say yes as often as you can. Saying yes begins things.

Saying yes is how things grow. Saying yes leads to new experiences, and new experiences will lead you to knowledge and wisdom. . . . An attitude of yes is how you will be able to go forward in these uncertain times."[48]

A few years ago the former head of YouTube, Salar Kamangar, had his own "attitude of yes" moment. It came during his weekly staff meeting, at which the testing of a new feature—high-definition playback—was being discussed. The testing was going well. So well, in fact, that Salar asked if there was any good reason the feature couldn't be launched right away. "Well," someone replied, "the schedule says it's not supposed to be released for several more weeks, so we can test it further and make sure it works." "Right," Salar replied, "but besides the schedule is there any good reason we can't launch it now?" No one could think of one, and high-def YouTube launched the next day. Nothing blew up, nothing broke, and millions of happy YouTube users benefited weeks early from one man's commitment to saying yes.

fun, not Fun

Every week, at Google's TGIF all-hands meeting, all the new hires are seated in one section and provided with multicolored propeller hats to identify them. Sergey warmly welcomes them, everyone applauds, then he says "Now get back to work." It's not the greatest joke, but delivered in Sergey's deadpan tone and slightly Russian accent it always gets a hearty laugh. Among his other great talents, one of Sergey's strengths as a leader of smart creatives is his sense of humor. When he hosts TGIF, his constant ad-libbed one-liners generate a lot of laughs—not laugh-at-the-founder's-jokes-or-else laughs, but real laughs.

A great start-up, a great project—a great job, for that matter—should be fun, and if you're working your butt off without deriving any enjoyment, something's probably wrong. Part of the fun comes from inhaling the fumes of future success. But a lot of it comes from laughing and joking and enjoying the company of your coworkers.

48. Steve Friess, "In Recession, Optimistic College Graduates Turn Down Jobs" (*New York Times*, July 24, 2009).

Most companies try to manufacture Fun, with a capital F. As in: We are having the annual company picnic / holiday party / off-site on Friday. There will be Fun music. There will be Fun prizes. There will be a Fun contest of some sort that will embarrass some of your coworkers. There will be Fun face painting / clowns / fortune-tellers. There will be Fun food (but no Fun alcohol). You will go. You will have Fun. There's a problem with these Fun events: They aren't fun.

This doesn't have to be the case. There's nothing wrong with organized company events, as long as they are done with flair. In fact, it's not hard to throw a fun company party. The formula is exactly the same as fun weddings: great people (and you did hire great people, didn't you?) + great music + great food and drink. While the fun factor can be endangered by those guests who are congenitally unfun (Aunt Barbara from Boca Raton, Craig from accounting), there's nothing a good '80s cover band and a fine brew can't fix. Everyone's fun when they're dancing to Billy Idol and swigging an Anchor Steam.

Then there are group or company off-sites. These are often justified as "team building" events that will help the group learn how to work together better. You go to the ropes course or chef's class, take a personality test or solve a group problem, and just like that you will coalesce into a fine-tuned machine. Or not. Here's our idea for off-sites: Forget "team building" and have fun. Jonathan's criteria for his excursions included doing outdoor group activities (weather permitting) in a new place far enough from the office to feel like a real trip, but still doable in a day, and providing an experience that people couldn't or wouldn't have on their own.

These rules have led Jonathan to take his teams on trips all over

Northern California: to Muir Woods, Pinnacles National Park, Año Nuevo to see the famous elephant seals, and the Santa Cruz Beach Boardwalk. These events don't cost much—fun can be cheap (Fun, usually not). The price of admission to Larry and Sergey's roller hockey games in Google's early days was nothing more than a stick, a pair of skates, and the willingness to be hip-checked by a founder. Sheryl Sandberg ran a book club for her sales team that was so popular in our India office that every single person participated. Eric led the entire Seoul team in dancing "Gangnam Style" with Korean pop star PSY, who had come by the office for a visit. (Eric doesn't adhere to Satchel Paige's advice to "dance like nobody's watching." When you're a leader, everyone is watching, so it doesn't matter that you dance poorly, it matters that you dance.)

Jonathan once made a bet with head of marketing Cindy McCaffrey on whose team would have higher participation in the company's annual employee feedback survey, Googlegeist. The loser had to wash the winner's car. When Jonathan lost, Cindy rented a stretch Hummer, caked it in as much mud as possible (to this day we don't know how), and then gathered her team so they could watch Jonathan wash the behemoth SUV and pelt him with water balloons while he was at it. Another time, Jonathan got the company basketball court built by bringing in a couple of hoop sets and challenging a few engineering teams to see who could put them together first. Some of these guys didn't know a dunk from a dongle, but they knew an engineering challenge when they saw it.

A defining mark of a fun culture is identical to that of an innovative one: The fun comes from everywhere. The key is to set the boundaries of what is permissible as broadly as possible. Nothing can be sacred. In 2007, a few of our engineers discovered that Eric's profile photo in our intranet system was in a public folder. They altered the background of the photo to include a portrait of Bill Gates, and, on April Fools' Day, posted the updated image on Eric's page. Any Googler who looked up Eric saw this:

Eric kept it as his profile photo for a month.

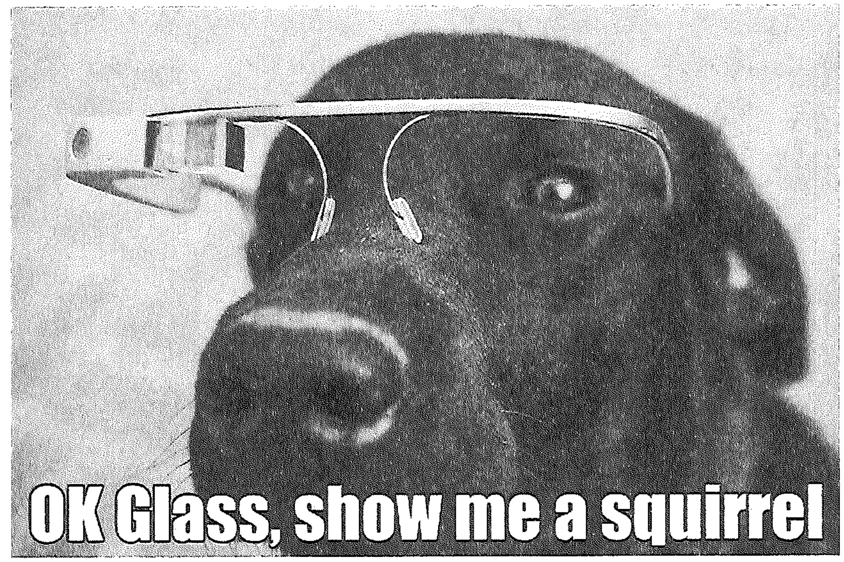
Smart-creative humor is often not quite as gentle as a photo of Bill Gates on a wall, which is where the loose boundaries come in. In October 2010, a couple of Google engineers named Colin McMillen[49] and Jonathan Feinberg launched an internal site called Memegen, which lets Googlers create memes—pithy captions matched to images—and vote on each other's creations. Memegen created a new way for Googlers to have fun while commenting acerbically on the state of the company. It has succeeded wildly on both fronts. In the fine tradition of Tom Lehrer and Jon Stewart, Memegen can be very funny while cutting to the heart of controversies within the company. To wit:

49. Before coming to Google, Colin was a cofounder of reCAPTCHA, which makes a software application that helps websites ensure their users are people and not bots. It's that thing where you read distorted text and enter it into a box. But certainly his greatest accomplishment is Memegen.

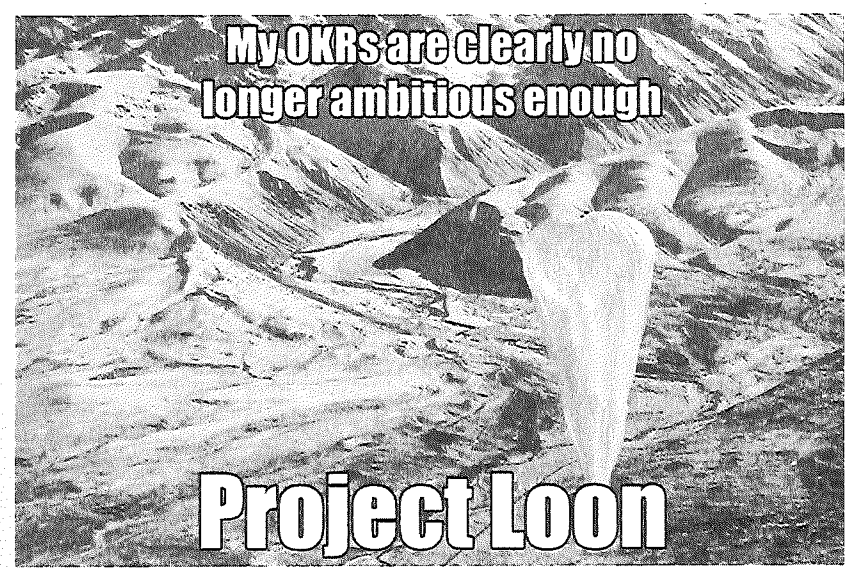
Eric is apparently popular with the memegeners:

Because a constant Google complaint is how things at the company used to be so much better:

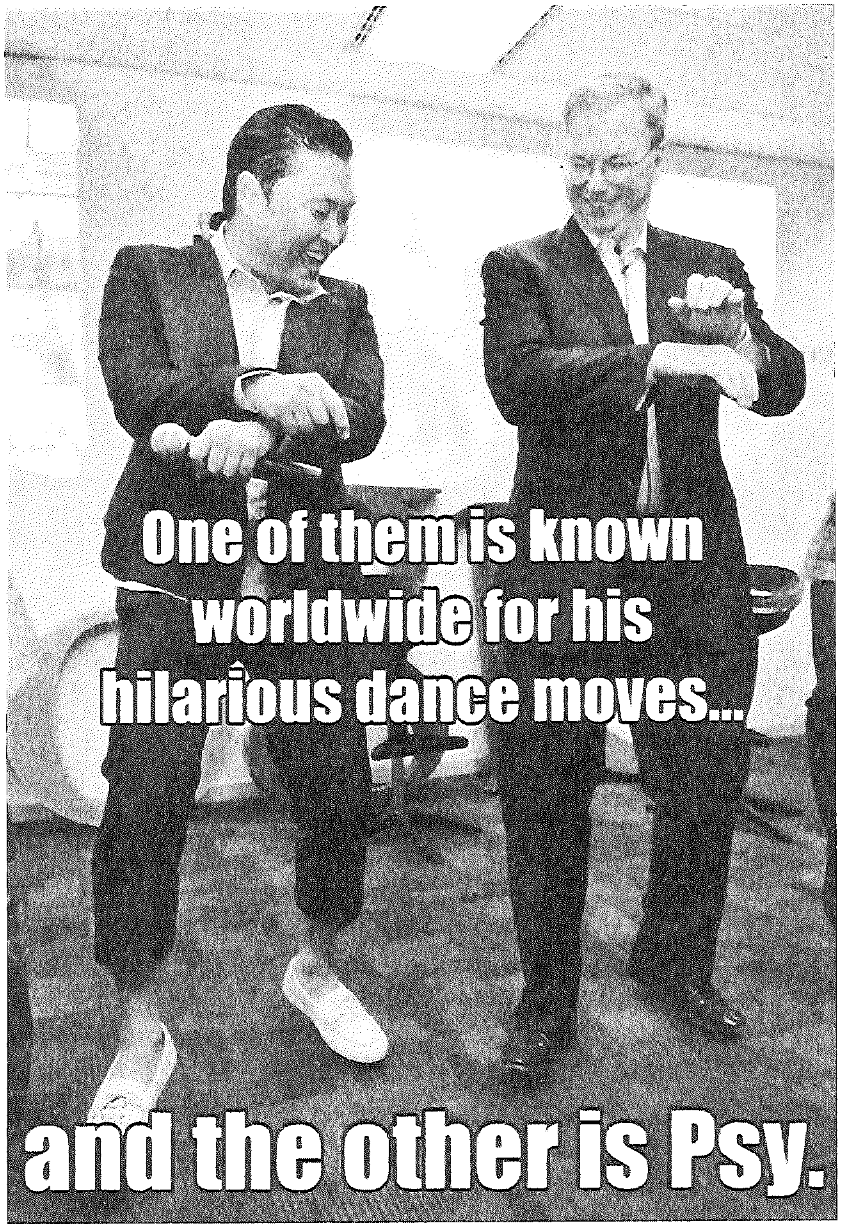
An idea for a new Google Glass app:



After Project Loon (which we explain in more detail later in the book) was announced, one Googler felt that his OKRs (quarterly performance goals—they are also explained further on) needed revising:



Seoul dancing with Korean pop star PSY:



This isn't Fun—it couldn't possibly be created by fiat. It's fun, and can only occur in a permissive environment that trusts its employees and doesn't defer to the "what happens if this leaks?" worrywarts. It's impossible to have too much of that kind of fun. The more you have, the more you get done.

You must wear something

Not long after he became the CEO of Novell, Eric heard a good piece of advice from an acquaintance. "When you are in a turnaround," the man told him, "find the smart people first. And to find the smart people, find one of them." A few weeks later, Eric was on a flight from San Jose to Utah (where the company is based) with a Novell engineer who impressed him. Eric remembered the advice he had received about turnarounds, stopped the smart engineer practically mid-sentence, and asked him to produce a list of the ten smartest people he knew at Novell. A few minutes later Eric had his list. He set up one-on-one meetings with each of the ten.

A couple of days later the first person on the list showed up in Eric's office, white as a sheet. "Have I done something wrong?" he asked. The next few meetings started off in similar fashion. Each of the smart people arrived at the meeting defensive and fearful. Eric soon figured out that the way people were let go at Novell was in one-on-one meetings with the CEO. He had inadvertently scared some of the best people in the company into thinking they were being fired.

This was one of our early lessons in how difficult it can be to change the culture of an ongoing enterprise. The advice to find the smart people was sound, but its execution was disrupted by an incumbent culture that Eric hadn't anticipated. While establishing a culture in a start-up is relatively easy, changing the culture of an ongoing enterprise is extraordinarily difficult, but even more critical to success: A stagnant, overly "corporate" culture is anathema to the average smart creative.

We have some recent hands-on experience with this scenario in our work at Motorola Mobility, which Google acquired in 2012.[50] There are a couple of important steps to take. First, recognize the problem. What is the culture that defines your company today (not the one described by the mission or value statements, the real one that people live in every day)? What problems has this culture caused with the business? It is important not to simply criticize the existing culture, which will just insult people, but rather to draw a connection between business failures and how the culture may have played a hand in those situations.

Then articulate the new culture you envision—to borrow Nike's advertising phrase from the 2010 World Cup, "write the future"—and take specific, high-profile steps to start moving that way. Promote transparency and sharing of ideas across divisions. Open up everyone's calendar so that employees can see what other employees are doing. Hold more company-wide meetings and encourage honest questions without reprisal. And when you get those tough questions, answer them honestly and authentically. When Motorola was the topic one week at a TGIF meeting, several Googlers asked challenging questions about the company's products, which were answered as well as possible. Later Jonathan overheard a few Motorolans wondering if the questioners would be fired. No, he told them.

Sometimes, when looking to redefine a culture, it can be useful to look at the original one. Lou Gerstner, who helped engineer a turnaround at IBM, notes in his book *Who Says Elephants Can't Dance?*, "It's been said that every institution is nothing but the extended shadow of one person.[51] In IBM's case, that was Thomas J. Watson, Sr."[52] Gerstner goes on to talk about rebuilding IBM based on Watson's core

50. Google announced that it was selling Motorola to Lenovo in 2014.

51. This quote is originally from Ralph Waldo Emerson, who wrote, "An institution is the lengthened shadow of one man." See Ralph Waldo Emerson, *Self-Reliance and Other Essays* (Dover Thrift Editions, 1993), page 26.

52. Louis V. Gerstner Jr., *Who Says Elephants Can't Dance?: Inside IBM's Historic Turnaround* (HarperBusiness, 2002), page 183.

beliefs: excellence in everything they do, superior customer service, and respect for the individual. But while building on the legacy of that founder, don't be afraid to scrap its obsolete trappings. Gerstner abolished the famous blue-suit, white-shirt dress code that Watson established, because it no longer served its purpose of showing respect for the customer. "We didn't replace one dress code with another. I simply returned to the wisdom of Mr. Watson and decided: Dress according to the circumstances of your day and recognize who you will be with."[53]

(Eric was once asked at a company meeting what the Google dress code was. "You must wear something" was his answer.)

This all takes a lot of time. The most important lesson from our Moto experience is something that many of you who work at incumbents may already know: Practicing what we preach in this book in the effort to change a culture takes a lot more time than expected.

Ah'cha'rye

As someone launching a new venture (or reinventing an established one), you are signing up for long days, sleepless nights, and maybe some missed birthday parties. You will hire people who need to believe in you and your idea enough to be willing to make the same sacrifices. To do all this, you have to be crazy enough to think you will succeed, but sane enough to make it happen. This requires commitment, tenacity, and most of all, single-mindedness. When Israeli tank commanders head into combat, they don't yell "Charge!" Rather, they rally their troops by shouting "Ah'cha'rye," which translates from Hebrew as "Follow me." Anyone who aspires to lead smart creatives needs to adopt this attitude.

Eric once had a meeting with Mark Zuckerberg at Facebook headquarters in Palo Alto. At the time, it was already clear that Facebook and Mark were going to be massively successful. The two men chatted

53. Ibid., pages 184–85.

for a couple of hours, wrapping up around seven p.m. As Eric was leaving, an assistant brought Mark's dinner and placed it next to his computer. Mark sat down and got back to work. There was no doubt where his commitment lay.

One of our early engineers, Matt Cutts, recalls how he would often see Urs Hölzle, the engineering executive who led the creation of Google's data center infrastructure, picking up small bits of trash in the hallway as he walked through the office. This is a common refrain you hear in Silicon Valley: the CEO who picks up the stack of newspapers outside the front door, the founder who wipes the counters. With these actions, the leaders demonstrate their egalitarian natures—we're all in this together and none of us are above the menial tasks that need to get done. Mostly, though, they do it because they care so much about the company. Leadership requires passion. If you don't have it, get out now.

Don't be evil

Eric had been at Google for about six months. By then he knew all about the company's "Don't be evil" mantra, which had been coined by engineers Paul Buchheit and Amit Patel during a meeting earlier in the company's life. But he completely underestimated how much this simple phrase had become a part of the company's culture. He was in a meeting in which they were debating the merits of a change to the advertising system, one that had the potential to be quite lucrative for the company. One of the engineering leads pounded the table and said, "We can't do that, it would be evil." The room suddenly got quiet; it was like a poker game in an old Western, when one player accuses another of cheating and everyone else backs away from the table, waiting for someone to draw. Eric thought, Wow, these guys take these things seriously. A long, sometimes contentious discussion followed, and ultimately the change did not go through.

The famous Google mantra of "Don't be evil" is not entirely what it seems. Yes, it genuinely expresses a company value and aspiration

that is deeply felt by employees. But "Don't be evil" is mainly another way to empower employees. The experience Eric had was not unusual (except for the fist pounding): Googlers do regularly check their moral compass when making decisions.

When Toyota invented its famous kanban system of just-in-time production, one of its quality control rules was that any employee on the assembly line could pull the cord to stop production if he noticed a quality problem.[54] That same philosophy lies behind our simple three-word slogan. When the engineer in Eric's meeting called the proposed new feature "evil," he was pulling the cord to stop production, forcing everyone to assess the proposed feature and determine if it was consistent with the company's values. Every company needs a "Don't be evil," a cultural lodestar that shines over all management layers, product plans, and office politics.

This is the ultimate value of having a well-established and well-understood company culture. It becomes the basis for everything you and the company do; it is the safeguard against something going off the rails, because it *is* the rails. The best cultures are aspirational. For each of the components we discuss in this chapter, we have given examples where we have lived up to our ideals. But we could have just as easily talked about cases where we fell short. There will be failures, but there will be more cases where people overdeliver, and when that happens the bar gets set even higher. That is the power of a great culture: It can make each member of the company better. And it can make the company ascendant.

54. David Magee, *How Toyota Became #1: Leadership Lessons from the World's Greatest Car Company* (Portfolio/Penguin, 2007).

Strategy—Your Plan Is Wrong

We have no idea what your venture is or even your industry, so we won't presume to tell you how to create a business plan. But we can tell you with 100 percent certainty that if you have one, it is wrong. MBA-style business plans, no matter how well conceived and thought out, are *always* flawed in some important way. Faithfully following that flawed plan will result in what entrepreneur Eric Ries calls "achieving failure."[55] This is why a venture capitalist will always follow the maxim of investing in the team, not the plan. Since the plan is wrong, the people have to be right. Successful teams spot the flaws in their plan and adjust.

So how can a new venture attract great people and other important things (like financing) without having a plan? In fact, it's fine to have a plan, but understand that it will change as you progress and discover new things about the products and market. This rapid iteration is critical to success, but equally important is the foundation upon which the plan is built. The tectonic, technology-driven shifts that characterize the Internet Century have rendered some of the commonly accepted strategic fundamentals we learned in school and on the job incorrect.[56]

55. Ries defines "achieving failure" as successfully executing a plan that leads nowhere because the plan was utterly flawed. See Eric Ries, *The Lean Startup* (Crown Business/ Random House, 2011), pages 22, 38.

56. Or it could be that we weren't learning the right fundamentals. For example, Peter Drucker wrote back in 1974 that "ten years is a rather short time span these days," noting that every major management decision takes years before it is really effective. Yet he