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STRATEGY PRACTICE

## Eric Schmidt on business culture, technology, and social issues

**Google's executive chairman shares his strategies on hiring, running meetings, designing "mobile first" business models, and addressing joblessness and education reform.**



**When Eric Schmidt handed** the reins of CEO at Google back over to cofounder Larry Page recently to take on the role of the company’s executive chairman, with a more external focus, news reports predictably recounted his oft-made joke that his role at Google had been to provide “adult supervision” for the company’s cofounders, Page and Sergey Brin. Indeed, no one could argue that in Schmidt’s ten years at the helm, Google had grown up into an extraordinary force in global business. Schmidt’s track record atop the leader in Internet searches stands as remarkable story of steady growth, expanded reach and influence, and an innovative management style that will remain scrutinized as Schmidt, 56, takes on new duties.

Google now produces close to \$30 billion in annual revenues, and its domain is growing well beyond search. The company’s YouTube unit, with some 40 percent of the market for Web videos, is generating profits for the first time, and its Android operating system hums at the center of more smartphones than Apple’s iPhone.

Yet the organization that Schmidt was instrumental in building still depends on hiring and retaining the brightest talent, as well as encouraging deep collaboration and granting substantial creative free space to its teams. In this talk at a McKinsey conference in Washington, DC, in mid-March, Schmidt spoke with McKinsey director James Manyika and described Google’s approach to talent management, the mobile and data technology trends he sees shaping the coming years, and his views on public-policy issues such as joblessness and education.

### **Hiring and recruiting**

One of the things about companies is, as you build them, you get a chance to sort of determine the culture, the people, the style. And one of the things that I learned—and I learned a lot from Larry and Sergey—is that it makes an enormous difference who you hire at every level. And people don’t really sort of manage that. So we worked very, very hard on who’s going to be in our company.

And we spent more time, and pretty ruthlessly, on academic qualifications, intelligence, intellectual flexibility, passion and commitment. What bothers me about management books is they all say this stuff generically, but nobody *does* it. You need to develop a culture where people actually are going to do what they’re going to do, and you’re trying to assist them.

They don’t need me. They’re going to do it anyway, because they’re driven; they have that passion. They’re going to do it for their whole lives. It’s everything they ever wanted. And, oh yeah, maybe they could use a little help from me.

That’s the kind of person that you want. At Google, we give the impression of not managing the company because we don’t, really. It sort of has its own “Borg-like” quality, if you will—it just sort of moves forward. So you have the problem of, once you get started and get the

right seating of people, you're going to get this kind of behavior. Then you have to deal with the odd people. Because not every one of these incredibly smart people is a team player, and so forth.

So I would suggest that as part of the recruiting, you need to look at whether they're sort of compatible with the other people. Benchmark [Capital] is a company in [Silicon] Valley which has been a very successful venture company, and they had a rule that they would hire people if when they walked down the hall and they looked in the room, people smiled at them. They wanted them around. And we don't have that rule.

Because we basically want people—even if you don't want them around, we still need them. But you have to sort of figure the interpersonal stuff out. If you have a meeting, and you have consensus without disagreement, you have nothing. So basically what I would do in a meeting is I would see if everyone agreed, and then I would try to get some controversy. And if you can get one person to say something, then the person who's shy, or a little concerned about saying it, will speak up. Then you have a real conversation. So you need a certain amount of discord in your meetings. If you just have discord, well, then you have a university, right?

So what you want to do is you need a deadline. So discord plus deadline. Who enforces the deadline? Me. That's my job. Or whoever's running the meeting. So if you have discord and deadline, then you're likely to produce a consensus. And if you look at the academic literature, and all of the surveys and so forth, this is going to produce, on average, the best sort of business judgment kind of outcomes. And I think that's roughly right.

We use 70–20–10: 70 percent on our core business, 20 percent on adjacent business, 10 percent on others, as a sort of allocation principle, and we are constantly moving people around to achieve that percentage. Another thing we have is something called 20 percent time, where we tell people, especially in engineering, that they can spend 20 percent of their time on whatever they want. Now, these people are not that clever. They work on things which are adjacent to their areas of interest, which is what we hired them for.

They're not off doing opera. Unless it's the browser, right? So the 20 percent time is a very good recruiting tool, but more importantly it serves as a pressure valve against managers who are obnoxious. So the way it works is, if you're my manager and you say, "Eric, you know, we're on deadline, we've got a problem," and so forth. I'll look at you, and I'll say, "I'm going to give you 100 percent of my 80 percent of my time."

It serves as a check-and-balance. And in practice that conversation doesn't occur, because it doesn't need to occur. There are many, many other examples. When you're doing recruiting, make sure that you don't allow managers to hire their friends. Make sure you have a recruiting team, like universities do—a hiring committee.

We would allow people to have an arbitrary number of interviews. It got to the point where people were being interviewed 15, 16, 17 times, and then we were turning them down. So eventually, by fiat, I ordered that it be taken down to 8. And we've since statistically modeled that you can get a probabilistically correct outcome at 5 interviews. So if five people interview a person, you should be able to make a decision whether you're going to hire them.

### **'Mobile first' and the destruction of business models**

The answer is basically mobile first, and cloud computing. I think everybody's sort of heard the speech. But the 15 seconds is that mainframe PC, and so forth, being replaced by cloud servers that have impossibly fast servers, connected by these networks to these mobile devices, of which the iPad and mobile devices are examples.

The term I've been trying to use there is called "mobile first." And I observed that the top technical people are building the most powerful applications on mobile devices first. This is a big shift, architecturally. It has a big implication. So I think that's in the next year or two. To talk about it beyond that we enter into much more of an area of speculation. So if you think about it over a five- or ten-year period, imagine that the infrastructure of the world, at least in the developed world, becomes fiber to the tower—so you have a gigabit. Fiber to your home, so you have a gigabit.

And by the way, South Korea, Singapore, Asian countries tend to be already putting the fiber in place, at least to the apartment [rises]. And then you have the wireless explosion. Wireless, you know, let's assume, for purposes of argument, a sustained 10 to 20 megabytes. So what does that mean that you could do with this platform?

One of the more fundamental things that's going to happen is that it completely crushes the business models of a large number of organizations. A typical example is that many of the media companies are organized around content and distribution. Well, the distribution part just goes away, because distribution becomes bundled and/or free, as part of that. Because a gigabit is so capable of handling it, the distinctions between television, radio, HD, all of that just go away.

There's no reason to have all those things. They're structurally not correct. Incumbents will fight this, but companies like Google and others will try to set up these networks that are pure digital infrastructure, to separate out content and transport. So that'll have a big, big impact on all of those guys.

I'm one of these people who believes that most industries transform, rather than disappear. And what happens is the media like to write [about] "the death" of something. But most

industries morph, or they age, so they don't sort of go away. It's more a question of: can every business, can every industry be improved by real-time telemetry and analytics?

So why do I not know where the bus is, and how many minutes before the bus is going to come to my bus stop? Seems obvious. So why don't I know all of the detailed feedback about the car I'm buying, by crowd sourcing it? Seems obvious. When I check into a hotel, why doesn't it tell me what the guy before me paid, so I can negotiate to get that price?

When I go to a shopping center—a typical example is, I go to the equivalent of Wal-Mart, or one of those—it seems to me that I should be able to virtually visit the store, and using the equivalent of [Google Maps'] Street View, going down the stock, I should see, [in] real time, what's on the [shelves]. Do I really have to drive to the store to know that they already have it in stock? Why can't I look at a picture, real time, and see it?

Over and over again, those are hugely transformative to the economics of the businesses. But they don't go away. The only thing that went away was pagers, and maybe watches, except as ornaments.

Another obvious one has to do with medicine. When I walk to the doctor, why does the doctor have to ask me the same questions over and over again? I'm not stupid. Why can I not just provide the equivalent of a USB dongle, which has my entire medical history? Or the equivalent, which is a cloud-based service. Wouldn't it be more efficient? Imagine if we discovered that every human's disease profile was actually slightly different, and that the gross categorization, "Oh, you're a cancer patient," or "Oh, you have a liver problem," or "Oh, you have a lung problem," is in fact wrong. The correct way to diagnose me is to view me as the patient, as opposed to me as a cohort of a much larger group.

It's probably true that disease is really per person, not per archetype. And that we'll discover in the next few years that uniquely built designer drugs, which are designed literally for you, will ultimately save a lot more lives. So that's another example.

### **Big data**

In computer science, big data is one of the other great trends. I didn't highlight it so much because it's hard to sort of quantify. But the fact of the matter is that with modern telemetry, everything is recorded and measured these days. The amount of information that you can store and manipulate is phenomenal. We have, as I mentioned, developed data-mining algorithms, and so forth. They produce remarkable results. One of the more interesting ones has to do with statistical translation.

If you get enough pairs of things, you can basically translate from one to another. This is generically true, and so we can go 100 languages by 100 languages. And now we've recently

introduced [a technology that allows you to] actually speak to a telephone and have it come out in another language on the other side.

This is, you know, out of science fiction. This is done, technically, by the way, by a relatively straightforward process—we hear the voice, digitize the voice, send it to the server, [then] the server puts it through the voice-to-text maneuver. The text is translated to the other language, and then it goes through a speech synthesizer. So it's relatively routine but magical in its outcome. There are example after example where people can do regressions, fast-Fourier transforms<sup>1</sup>, and other kinds of things on this kind of data, and discover new things.

One of the things that's interesting about biology is that much of biology in the future is likely to be statistical in nature, rather than analytical. We have so much information now about biological processes and so forth that with the appropriate algorithms, you can probably discover all sorts of interesting new things about life and genes and disease and so forth and so on, literally using the same techniques.

### **Addressing joblessness**

The issue of joblessness is really a fundamental one, because a country that does not create new jobs, especially for its young people, is one that is essentially dying. I'm very, very concerned about the United States in this regard. Because everything seems fine; everybody I know is employed, the stock market's doing just fine, corporations have great earnings. As you know, we have \$2 trillion dollars sitting offshore, which will repatriate if they figure out a way to solve the repatriation problem, et cetera, et cetera.

It does not address the problem of young people who cannot get jobs. Now, the problem with this in the Western world is it's really a structural problem involving education, the way trade unions work, the way training works, and so forth.

If you look at what Germany did, which is a better model than the Asian countries, they had a deliberate pro-export, pro-manufacturing industrial policy, where they actually shifted resources for people who were not going to be able to operate at the McKinsey [or] Google level, into various forms of highly skilled manufacturing jobs, and so forth. And it worked. Germany's total exports are larger than the US exports. It's an amazing statistic. And this is a high-wage, high-unionization country. So there [are] at least some examples of models that work. So if you're a young person today in America, you're going to work in healthcare—because that's where all the jobs are going to be created, because that's where all the spending is going to go. That's a public policy decision.

With respect to the joblessness, it's a series of things. You need max strategies. In these large governments there are so many different levers on things that people don't have any

<sup>1</sup>An algorithm used to transform one function into another.

focus. So I suggested a number of max strategies. Let's go for a max energy strategy. Let's figure out a way to rebuild America's energy infrastructure by putting all those people to work, insulating buildings, which, as we know, and you've participated in a study that was quite coherent on this, that's in fact the best long-term economics.

By the way, it puts unemployed construction workers, who are the largest selection of unemployed people in America, to work. Let's do a max innovation strategy where we fund or come up with matching grants for the "Valley of Death" problem. There's a big problem in a bunch of industries, where the venture money is too small, and the debt financing is not available. They can't get from the idea to the plant. They literally can't build it. And I'm not suggesting the government fund it; I think you do some sort of shared risk, and there are a number of such models. There are green bank models, and so forth, and so on.

### **Reforming education**

One of the most clarifying points to make about education in our country is that the education system is currently run for the benefit of the adults, and not the children. The incentives, the measurement system, the governance is all organized around the people who run it, as opposed to the outcomes. So the first thing you do is you try to measure what the outcomes are. And the measurements that have been done over and over again tell you that the only thing that matters is teaching. And that all of the other things people care about—class size, order, topics, and so forth—the quality of the teacher determines virtually all of the outcomes. So that's it.

Notice the way I framed it. You start with a data point, as opposed to all these other points. The most interesting experiment that I'm aware of, which Google is helping fund, is [being led by] a guy named Sal Khan at the Khan Academy. If you have a child, or if you know children, or if you've been a child, you must look at this. Because what he figured out was that rather than having group conversation, if students are on individual programs which are measured down to the second, and the teacher becomes a consultant, you get statistically higher outcomes. And these trials are now being done.

What I would do is I would first figure out a way to change—the only way to change the labor union contracts in our country seems to be to have them go bankrupt. And public unions can't go bankrupt, as in other industries. So I hate to say it, but you have to do something terrible to get the contracts so that they're performance-based, as opposed to seniority-based. That's point number one. And performance can be measured.

And then the second thing is run enough longitudinal experiments with respect to these new forms of teaching, and then judge, based on the quality of the outcomes of the students, not the teachers, which ones you then standardize on.

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The best story I know about this is that in California in the 1970s, they imposed the “new math” on all these unsuspecting people in California. And they never did any *A, B* trials. They never did any—they just decided. Well, we know now from analytics and research that we can actually test these things. So let’s try a few things and see what works and do it based on the quality of the teacher. And that’s how I would do it. ○

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