



## Stanford eCorner

### Secrets at Apple's Core [Entire Talk]

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Adam Lashinsky, Fortune senior editor-at-large, shares an insider look at Apple, one of the world's most iconic and secretive companies. Based on his research into the technology giant's internal processes and approaches to leadership and building products, Lashinsky offers insights and surprises from his book, *Inside Apple: How America's Most Admired--and Secretive--Company Really Works*.



#### Transcript

Almost exactly a year-ago this week I published an article in Fortune magazine with the same title as you see in front of you, *Inside Apple*. We decided at Fortune that in Apple we had a company that the entire world thought they knew a lot about because the world knew about Apple's products. And they knew about Apple's advertising and its image and its brand and its logo and so on. When in fact the world knew and really still does know very little about how Apple does what it does, what goes on inside Apple? There is a reason for that and it's a major part of my thesis and what I've learned in researching this company intensely over the last year and that is that Apple doesn't want us to know what goes on inside Apple. Apple is professionally focused on telling us, telling you about its products. Not about it. As a business journalist, my job is not to be concerned with what Apple is interested in us knowing, but what my readers at Fortune magazine ought to know and want to know. And as a sort of rhetorical device, I've come to have the opinion that Apple does business differently from the way almost every other business does business, and in indeed differently from the way business is taught in business schools. And my challenge as I've gone around speaking about Apple, to business schools in particular, but to other businesses and other kinds of schools is that if Apple does things differently than the way you're teaching it and if Apple is the most successful, most admired, most valuable company in the world, shouldn't you at least be asking the question, are we teaching the right thing and should we be paying more attention to the way Apple does things. There is a heavy don't necessarily try this at home component to learning about how Apple does what it does.

Companies, people, entrepreneurs will want to learn about Apple, not necessarily copy Apple. There is a vibrant discussion going on in Silicon Valley in particular, to be a successful entrepreneur, do you need to be like Steve Jobs? And the undercurrent to that is - thank you. The undercurrent to that is do you need to behave the way that he behaved. I would submit that you do not and you do not need to have every aspect of your company be like Apple. But in managing a career, in managing a big company, in managing a small company, I think it really pays to understand Apple and to pick and choose what might be applicable. Before getting into the story of how Apple does what it does, it's really important to dwell for a moment on what Apple looked like in 1997 when Steve Jobs returned to the company. I found that it's difficult emotionally for us in 2012 to relate to the fact that in 1997 Apple was essentially a broken company. It was 90 days from insolvency, meaning that it was in serious danger of running out of cash. It was losing money, this was the year that Apple fired Gil Amelio, the year that Steve Jobs eventually became interim CEO, the year that Microsoft made what was for Apple a humiliating \$150 million investment in the company. A bit of history there, for Apple it was some cash and a promise by Microsoft to continue making Office for the Mac, which was critical for Apple, if Microsoft didn't make Office, it would make the Mac far less valuable for people who needed Office.

And for Microsoft it was important too, to keep the antitrust regulators at bay. Had Apple gone out of business which was a very real possibility in 1997, it wouldn't have been good at all for Microsoft. So what else characterized the Apple that Steve

Jobs returned to in 1997? He had been gone for 11 years. It was a bloated company. He would go on to fire about 4,000 middle managers. It had far too many products and keep that in mind because getting rid of those products simplifying is perhaps the core of the essential tenet of what Apple is all about. Apple at the time made a digital camera, ahead of its time. It had multiple computers and printers and the ill-fated Newton handheld organizer. Jobs got rid of in addition to those people, all of those products, and pared the company down to essentially four computers, two laptops, two desktops. The next year he hired an unknown supply chain executive named Tim Cook to fix Apple's extremely dysfunctional system of factories and warehouses.

Cook closed them and he emulated the model of the company that at the time was hands down the best at managing their factories in the world and that was Dell. And Dell did that with contract manufacturers primarily in Asia, primarily in China and all Cook did, I shouldn't say all he did, what Cook did was copy Dell's model of using contract manufacturers in China. So to fast forward to today, to flick on a topic that I don't dwell on, which is Apple's labor rights, labor conditions at Foxconn factories in China. This is a direct result of what Tim Cook did in 1998 by closing Apple's factories and warehouses that it had owned. The most important cultural thing that Steve Jobs did upon returning to the company in 1997 was to realize that Apple had become a fractionalized, divisionalized company of fiefdoms. Jobs decided that there would be no more fiefdoms at Apple, there would be one fief and he would be the feudal lord. He wanted one Apple, one company, one brand, one way of communicating about the company. He wanted to do away with this notion that's very popular everywhere else in the corporate world up to today of the General Manager. He did not want people running a business. He wanted people building products, he wanted people functionally oriented doing what it was that they do well and he was going to orchestrate all of that, not have them orchestrate little pieces of it.

An example, at the time there were 16 advertising budgets at Apple, Job said, from now on there is going to be one advertising budget. And if your product - if you think that your product deserves advertising support, then you come to me and you ask for it and I will decide whether or not we're going to commit dollars to advertise your product. An important point, this was not about cost cutting. Over the next few years Apple's advertising spend rose. It rose dramatically as a matter of fact, it rose even more dramatically as a percentage of revenue. So, as if you think 1997 heading into 2000-2001, there was a recession in the United States, Apple actually lost money for a period of time after regaining profitability, but its advertising spiked, why? Because he was making a long-term investment in the brand that we all know and love and feel very strongly about today. From an academic perspective, an important concept for understanding Apple's leadership up until August of 2011 is what the psychotherapist and business coach Michael Maccoby refers to as the productive narcissist. A narcissist is someone who is in love with themselves, who is visionary, who demands that people follow him or her, does not necessarily care about being loved, is willing to take great risks on behalf of the corporation and here you see the Greek God Narcissus staring fondly into the pond at his own image. What Maccoby understood was that - is that narcissists can channel their narcissism in a productive way in the corporate world and he coaches executives whom he identifies as narcissist. This is a clinical description by the way, not any sort of put down and get them to channel their narcissism in a productive way so that they can capture the best of their narcissism.

As I was reading a piece he wrote in the Harvard Business Review, it kept running through my mind, he is talking about Steve Jobs and he hasn't used the man's name yet. And then eventually he does in fact identify Jobs among others as examples of productive narcissists in the corporation and as a productive narcissist is how Steve Jobs ran Apple. He identifies by the way two other corporate personality types. The other is the productive obsessive. Someone who makes sure that the trains run on time, who pays attention to all of the boring details that have to be paid attention to for a company to run well, this person is often the side-kick to the productive narcissist visionary CEO, this person obviously was Tim Cook at Apple, now the CEO of Apple, which is a very interesting contrast to think about as this company goes forward. Third personality type Maccoby talks about are erotics, this is in the Jungian sense of erotics. An erotic is someone who very much does want to be loved. They're very sensitive. They don't necessarily take criticism well. These can be very good team members in a company, not likely to be the leader of a corporation that needs to take big bets and to be boldly led.

One of the essential tenets of business as we all know it is that the leaders should empower the people beneath them. They should give them rope with which to hang themselves, they should go do their jobs and then they should support them in their decisions. This is not the way Apple behaves. This is not the way Apple was managed under Steve Jobs, he micro-managed his people, they micro-managed their people, he micro-managed their people by the way as well. And my favorite example of this is the executive whose job it was before the - a major product launch. So you've all seen on the news or read in the newspaper about these keynote addresses at Moscone in San Francisco or on the Apple campus at their town hall building where they do product unveilings and there will be a keynote. As the keynote is happening, I'm sitting there in the room listening and e-mail will go out to Apple customers announcing the new product. It's a very important e-mail from a product marketing perspective. The executive whose job it was to prepare this e-mail would be tasked with sending the e-mail to Steve Jobs. And I describe how he and this executive and Jobs would go back and forth 15, 16, 17 times over the correct wording in this e-mail ultimately arguing about whether or not a comma, or a semi-colon was appropriate in a given instance.

Now, in the anecdote that I'm telling you about I review the grammar and I think Jobs was wrong, which as I'm sure you can imagine is totally beside the point. The point is that he gave a damn about whether or not it was a comma and a semi-colon and the CEO of this grand company was paying attention to this because he micro-managed the company and that's the message that he sent about what kind of company Apple was. Secrecy is incredibly important at Apple. Every company obviously keeps secrets. At Apple everything is a secret. It's a company of principles and Apple carries its principles out to the nth degree. This is a replica by the way of an actual T-shirt that you can go buy at the company store at 1 Infinite Loop, in Cupertino. There is already a few chuckles but I will read it for those of you whose vision isn't as good as the ones who are laughing. It says, "I visited the Apple campus, but that's all I'm allowed to say". It's evidence to me that Apple has a sense of humor about its corporate secrecy.

It's the only evidence I've been able to find if Apple having a sense of humor about itself, but there you have it. It's a company that has a culture of fear, you're made to be afraid that if you divulge the secrets you learn as an Apple employee that there will be consequences. How do you know this? Well, you were told this at employee orientation, which happens every Monday at Apple, except as I've been told with a straight face when Monday is a holiday, then there is no employee orientation on Monday. And the element of the new employee orientation that all new employees remember is the security briefing when a security officer comes in and explains in numerical detail the importance of keeping secrets at Apple, the monetary value of us keeping secrets, which I will discuss in a moment. What's the penalty for divulging these secrets? Well, you will be fired obviously and potentially sued if we can prove what damage you've caused by divulging these secrets. And remember, this is your first day as an Apple employee. So, why is it so darn important to keep secrets? Some of this is business 101 and completely obvious you don't want your competitors knowing what you're doing, that's something that every company strives for and that Apple is particularly good at. You also don't necessarily want your customers knowing what you're going to do because you want to delight them when the time comes to start selling your products. Many Silicon Valley companies have screwed up this basic notion of not letting people know what's coming until you're ready. Any customer knows that if you know something better is coming soon, you're going to be very unlikely to buy something that's on the store shelves and even more importantly from a business perspective the products that are on warehouse shelf, that stuff becomes close to worthless the moment that customers know if something new is coming and Apple has been very good over the years at managing its inventory down very gracefully and then delighting the public with its next new thing.

This will get more and more difficult with time as they get bigger and as they have more products and as more of us are on to their game, you've seen this now two quarters ago, Apple disclosed the fact that and I'm thinking, I'm trying to think if I - to make sure I have my fact straight, the world, the people who watch Apple expected a new iPhone, an iPhone 5 remember, it was supposed to be called last June. It didn't come. The iPhone 4S came in October and remember everybody was very disappointed by this and Apple went on to sell 37 million phones the quarter after that terrible disappointment. But the previous quarter, Apple disclosed that they actually suffered as - slightly lower than expected sales of iPhones because people had expected the phone in the June timeframe. This is an example of something that by and large Apple has gotten right over the years of not having people be so certain of what was coming because Apple was very good at surprising them. Now, far more important in my research to keeping secrets from the outside world is my realization that part of the Apple corporate culture and the way of doing business, and again anathema to the way business is run, is that Apple keeps secrets from itself. They keep secrets from their own employees. If you and I are - work at Apple, but we're not on the same exact team, your business is none of my business and my business is none of your business. What's the - what's an example of this? At Google, one of the reasons that is stated frequently for all the free food is that management wants people to come together and talk to each other in the cafeteria. Talk about what they're working on because there might be some serendipitous learning.

At Apple, where by the way you pay for your lunch, it's not free, you don't talk about what you're working on, because it's supposed to be a secret. The - I liken Apple employees to horses fitted with blinders. You don't look left, you don't look right, you look forward and you charge forward with 110% of your energy. On that day that I mentioned to you when journalists and partners gather at Moscone Center in San Francisco, Yerba Buena for product keynotes. Apple employees also gather often in the cafeteria in Cupertino where they watched the same presentation on closed-circuit broadcast television. Why do they go watch? Because it's the first time they're seeing the products that are being unveiled that day too. And that includes if they worked on those products because it's very likely that they would only have worked on some facet of the product and so they wouldn't have seen the whole thing. I've spoken to relatively senior engineers who work, let's say, on the hardware of an iPhone who had no clue what the user interface was going to look like, up until the day that the product was going to be announced because they weren't on the UI team and that was none of their business. Why do this? I know that someone in the room must be thinking. Well, if all you know what to do is what you're supposed to do, you're going to be incredibly focused on doing that.

You're going to be disciplined and you're not going to waste a lot of time because there isn't a lot of time to waste at Apple. Another cultural reason and again, I want you to keep in mind in my opinion this is different from many other company I've witnessed. It's more like a security agency and I have had people as I've gone around talking about this compare - I've met a former employee of the NSA who said that it sounded a lot to him like the way the NSA operates, where this person said to me

that he had a mirror on his computer because he had to be sure nobody was standing behind him while he was working, sounds very Apple like to me. A cultural observation. I've been told over and over that there are - that Apple is not a particularly political organization below a certain level. I approach this comment with journalistic skepticism: yeah, everybody says, there is not a lot of politics, but of course there is politics, because there politics everywhere, right? And then people kept saying it to me. And it dawned on me. Well, they're being truthful, there is not a lot of politics at Apple because when you don't have any information with which to play politics, it's not - it's unlikely that you will be able to play politics. So instead you go to work and you work and that's the - in a short version, the way of life at Apple. It's a need-to-know culture where there is a language of disclosure.

If we're going to have a meeting, I need to make sure that you're disclosed on the topic of the meeting, it leads to an awkward kabuki dance, how do I know if you're disclosed, if I can't mention the topic, but I - we try to figure it out. Physical barriers may go up because if you're not part of a secret project, your badge won't work to get you into that room and you shouldn't be able to see what's happening on the other side of the frosted glass or even the rooms with no glass, these are known as lockdown rooms on the Apple campus, nothing goes in and nothing goes out - information I should say, no information goes in or goes out of the lockdown rooms. This is an org chart of Apple that we created at Fortune magazine a year-ago. It was a controversial graphic in the magazine because Steve Jobs hated organizational charts. He didn't want anybody to write down the identities of the Apple Vice Presidents because he didn't want those people to be poached. This would be an example of the type of information that you as customers and I as a journalist and competitors don't need to know. You can't read the small print, but it's highly accurate. These are the names of most of the Vice Presidents at Apple. Now, it's starting to get a little dated as some people have started to leave, but it's very few, it's still mostly accurate. And what you can see about the organizational structure of the company, that at least in spirit is different from so many other companies is that you can how close the CEO is to everybody who matters.

The CEO need to reach only one level down to get to the Vice Presidents who are actually running the company. And I confess it was more dramatic when you had Steve Jobs in the middle, the Sun King with the planets revolving around him. Apple has made famous sweating the details, you'd think that sweating details would be something that all businesses do, but I'd submit that most are bad at it. Jobs famously wanted, he was very concerned about the makeup of the screws on the inside of the original Macintosh, which sort of build his reputation. Why in the world would you care about what the screws were like on the inside that nobody was going to see, but as we've come to understand that if you obsess over details like that, that leads to excellence. I like to recount the story of a package design room on the Apple campus where in the early days of the iPod, before the iPod was released, a package design engineer spent a great deal of time with hundreds of prototype boxes making sure that the little piece of adhesive tape that closes the box was put in just the right place, and this person would open and close and open and close and open and close over a period of weeks. Now this sounds like strange behavior or something that might seem like a detail that you could maybe let slide a little bit, unless anybody in the room in recent memory has purchased an iPhone or an iPad or an iPod and you can remember what it felt like to open that little piece of tape and open the box and you saw your device placed there neatly stacked on top of the literature and you took your device out, and it lifted out because there is a little spring in there and you held it in your hand and you felt like a better person for it. And you understand the attention to detail at Apple for something as mundane as a box and the adhesive tape that closes it. It's well known now that Apple doesn't do outward facing customer research. Jobs famously said why would we ask customers what they want when they don't know what's possible? This flies in the face of what every other consumer company does, they do intense customer research asking people what they want.

Keep in mind, don't confuse this with thinking that Apple doesn't pay attention to how customers use its products, they do. The issue is, once they've got them versus before they have them and what Apple is going to make for them. And just for fun I love this image of the Apple faithful standing in line at the 24/7 Apple Store on 5th Avenue in New York, in the rain, waiting for whatever it is that - whatever product it is that's going to be released to them that day. People who think about Apple understand now that part of Apple's greatness is its ability to integrate hardware and software, something that its competitors don't do well for a variety of reasons that we can discuss. Number one reason being that a different manufacturer makes the software from the manufacturer that makes the hardware and of course Apple has done very well by making the hardware and the software, old school vertical integration for the business school students. What's less well understood is that Apple integrates everything, it integrates product management, marketing, manufacturing, engineering and everything else that it does in a highly regimented milestone-oriented planned out way. It's not a serendipitous place like its beautiful advertising. And there is a reason I put design, the biggest, all in caps is that design is preeminent, it's paramount at Apple. At Apple would be preposterous for a financial person to tell a designer, oh, we can't do that because it's too expensive or we're not familiar with the kind of machines that it would take to build that. The designer would say it's as if you're speaking Greek to me, I just said this is what it's going to look like.

You go figure out how to make it and you figure out how to price it and how to cost it out. It's a mentality that is not going to work for everybody, but it's what led to something beautiful like an iPhone and that's just one of the beautiful things that the design-lead culture leads to. Key to this is a corporate culture that believes that saying no is more important than saying yes.

Jobs would say it's more important to say no even to good projects than it is to say yes too frequently, which is a mistake that most companies make. Now from a responsibility perspective, a fiduciary perspective, big companies in particular say yes because they're trying to hedge their bets, they want to place a lot of bets in the hopes that something will work. Apple takes just the opposite approach, they make big bets, they only do a few things, this is part of Jobs's mantra as well, but saying no means saying no to unnecessary components. This is the out-of-box experience on a PC that you might buy at retail and that's the out-of-box experience on an iMac. One has a bunch of junk and the other is beautiful and simple. I'm going to create another slide where I want to turn the monitor on the iMac and show a monitor on the PC so that you can see what you might see when you open the PC after buying it at a retailer and you would see on the screen what Steve Jobs referred to as crapware. It's easy to swear when you're quoting somebody else.

Crapware is the stuff that the manufacturer put on the screen to boost its margins to try to sell you something that you don't necessarily want. Apple would not do that. I never suggested Apple is perfect, but Apple doesn't try to insult its customers within the first ten minutes of them using their products. Because it says no to features it doesn't think that should be on the product, it says no to going into categories like serving big businesses although it's doing that now, it said no for a quite long time. It says no to new products for a good long time until it's ready. So we waited a long time for the phone that Steve Jobs said we'd never get and we seem to be waiting a long time for the TV that I think we all hope that we'll get because Apple says no until it's ready to say yes. Apple even says no to going to other people's events, so you won't see Apple people at industry conferences doing panels. They don't even go to Macworld anymore, which accounted for so much of their PR success. Their explanation was, well, we don't need Macworld, we've our own events like worldwide developers conference and we have our retail stores now where we communicate with customers every single day. We don't need to do your event.

Just for fun, I mocked up what it might look like to see an Apple executive on stage at the World Economic Forum in Davos because I promise you, you won't see that happening. Why would an Apple executive go all the way to Switzerland to have an airy-fairy conversation about the state of the world when that has nothing whatsoever to do with selling more iPads when we're far too busy in Cupertino doing things and to sit around hearing ourselves talk. If you see an Apple executive at the World Economic Forum in Davos, sell your Apple stock and short whatever you can because this will spell the demise of the culture that we've come to know about Apple. The DRI at Apple stands for the directly responsible individual. I characterize this as a brain-dead obvious business concept that Apple does that I can't believe that every company does. You go to a meeting at Apple, there will be a list of items on the agenda, next to the action item is a name, the name is the DRI, the one person who is responsible for getting that done, not the several people, not the two in a box executive management that other companies have, the one person. This is an example of how Apple has created a culture of accountability and responsibility in the corporation. Very controversial for a company with nearly 28,000 non-retail employees is what I told you at the beginning. Apple is not a divisionalized company. There are no general managers who run their domains.

People do functions across the company. So there is one P&L for example, for Apple that's run by the Chief Financial Officer. You don't hear about the head of the iPad division having a profit and loss statement. They've managed to an astounding degree, given their size and their heft to behave like a startup where it's appropriate. So, for example, when there is a new project, they'll create these kinds of rooms that I talked about and put those people in that room and let them behave as if they were in a small entity doing something completely fresh without the baggage of the company. I liken them by the way to rich kids, they are immature working on something new, but they've mommy and daddy's resources in that they work for a company with \$110 billion on their balance sheet. That number gets bigger every time I give my speech because they have so much money now. The top 100 is a top secret retreat that the top executives of the company go on about every year or so. For a company that is so secretive, it's an opportunity for this next layer down of management chosen by the way by who the CEO thinks are the most important people, not by rank or status to go to this meeting and see what's coming down the pike. Steve Jobs would require his executives to be bused from Cupertino to wherever the meeting was taking place, in Santa Cruz or the Monterey Bay area because he didn't want them to be driving themselves, he didn't want the meeting to be on people's calendars, he didn't want subordinates to know that people were going to this meeting, he made sure to sweep the room of bugs so the competitors wouldn't try to monitor what was going on.

At the last top 100, while he was alive, he wouldn't allow people to speak while food servers were in the room for fear that they might be spies for the competition. Apple is of course famous for marketing for its clear concise messaging, a thousand songs in your pocket, the original marketing message for the iPod is something so simple that a third grader could understand it. And Apple's key is when you have a good line like that to repeat it over and over again, the way it's written, the way we wrote it in our planning meetings, you don't deviate from the script because you may get tired of hearing the script, but the person who is hearing it is hearing it for the first time. And the key is to deliver it the way we wrote it so that they'll start saying it to their friends and they'll say it to their friends and it comes back around in the marketplace again the way we wrote it because we took care to write it that way because it's good, and that's one of the keys to Apple's marketing. Apple is a company of contrast, of paradoxes. On the one hand, they'll describe themselves as being resource-constrained, which I come to understand is really about people, they are constrained in terms of the number of people that they can get on a project because it's hard to get good people. Having said that, when they want to spend money they won't think about how much it costs to make their

product, to design their product and to sell their product. And the image that you're looking at comes from the time in 2005, if you can think back many years ago before high-def was popular, Apple for the first time introduced iMovie in high-def, iMovie HD. They knew because they do pay attention to how their customers use their product that weddings were a popular use for iMovie. So, to illustrate the - or to demonstrate I should say the new iMovie in HD, they wanted to shoot a wedding.

So they shot a wedding of an Apple employee at the Officers' Club in the Presidio in San Francisco, beautiful wedding, at night, gorgeous clothing and elegant setting and they showed it to Steve Jobs and he hated it. He said, it's too somber, it's too serious for what we're trying to express with iMovie HD, we need something tropical, something outside, I'd like to see feet in the sand at the beach at sunset and maybe a tear running down the father's cheek. And by the way, this conversation happened about three weeks before Macworld. So, at great expense, the marketing team talked to talent agencies in Hollywood and said do you know any beautiful models or actresses because remember in an Apple marketing - in Apple marketing material, these people need to be beautiful because that's what we want to feel like when we get our Apple products. Do you know anyone like that who is getting married in Hawaii shortly before New Year? And to make a long story short, they found somebody, at tremendous expense, they went and shoot the wedding, they offered to supply a video to the bride and groom as well as paying for the flowers, and they sent the footage back to Cupertino. Steve liked it. It went up on - it was used at the Macworld. This was for a 30 second clip, this is still from that clip. And I don't know how much it cost, but it was a lot of money for a 30 second clip and in Apple's way of viewing the world, it was worth it. And I'm not here to argue with them.

And so, wrapping up this theme of simplification, simplification is something that Apple takes seriously across the whole company. It's a company that edits down things that are extraneous. This is the second replica that I'm going to show you, it's what it says on an actual wall in a marketing building on the Apple campus, and so, when you go to work in this building each day to get to your office you walk around this wall to get to your desk only this isn't exactly how it appears. This is. And I just think that speaks for itself really, really well. Apple has a squirrely relationship with the press, and it gets back to the very first thing I told you. Apple wants the story about Apple to be about Apple's products. That's the most important thing, and as a business journalist I can't blame them. That is the most important thing. They're trying to sell products.

What they don't want is to have all these questions from people like me, how do you do that? That doesn't help us sell products. Now, if you do help them sell products, if you're a product reviewer for a major newspaper, then, Apple will show you quite a bit of love and I have a story that I've written about an engineer being called away from home a couple of days after his child being born to fix a bug in David Pogue's Apple TV, because it's very important that David Pogue have a favorable impression of a new Apple product. And Apple, by the way, also believes that there is one other important constituency other than product reviewers and that is celebrities because celebrities have a lot to say about a company's image. And so, why do I have a picture of Harry Connick Jr. because Apple has a concept of escalation. And this refers to the time when Harry Connick Jr. sent an e-mail to Steve Jobs saying I'm having a problem with my monitor. Jobs sent the e-mail to Tim Cook, who sent the e-mail to a senior executive in the supply chain organization, who sent the e-mail to a junior executive in the supply chain organization who got a new monitor on its way to Mr. Harry Connick Jr. within 30 minutes or so.

Now, my very last point, changing gears, I think my entire presentation could fairly be described as admiring of Apple, but one of the key challenges among the many that Apple will face going forward is that it's been led - it was led by one of the greatest entrepreneurs of our time, and in fact under occupation on Steve Jobs's death certificate his family listed entrepreneur. And it's a company that's behaved entrepreneurially, almost astoundingly given its size. Today, the company is not led by entrepreneurs. Tim Cook in the upper left here bled IBM blue for the first ten plus years of his career. Scott Forstall, the head of software, mobile software for Apple and a graduate of your fine university has worked for two companies in his entire career and they both were started by Steve Jobs, Next, and Apple. Jony Ive who is world renowned as a designer of beautiful products only briefly ran his own company, it was called Tangerine. It was a design consultancy in London, and I am waiting by the way for somebody besides me to pick up on the fact that the two companies he has worked for have had fruits for names. Thank you because that was completely irrelevant. But he gave an interview once where he said he didn't care for the business aspect of running his own firm. He really likes designing things, and bully for him that's exactly what he has done for the last 15 plus years at Apple but that's very different from being an entrepreneur and I have been too lazy to get Bob Mansfield, the head of hardware out of my slide, I don't think he's an entrepreneur but not nearly as important to my story as these other three leaders.

I would be delighted to take your questions and so thank you very much for your attention. I heard you right at the beginning about Tom Cook handling the supply chain. Tim Cook, yeah. Tim Cook, sorry about that. Tim Cook handling the supply chain at Apple, what are some insights into simplicity of supply chain and supply chain advantages that Apple has generated over the years from Dell to where they are today? So the question is yeah, the question is what are some examples of simplicity in Apple's supply chain, and how has it innovated since Dell? Well, I guess the most obvious example of simplicity in the supply chain was getting rid of all the crap that Apple owned at the time, and so that wasn't any different than Dell but Apple did simplify that way by not owning warehouses anymore and not owning factories. Since then, one of the ways that, one of the things that has characterized Apple's supply chain and part of the brilliance of Apple's supply chain has been its

willingness, as it has gotten richer and richer, to be bolder and bolder in using its money to buy things. And so the two examples that I'll give you, one is very specific and one is more general. When Apple knew that it was making the transition, when it knew secretly that it was making the transition from disk drives to flash memory in the iPod, and this was when Tim Cook was running supply chain. He went and spent some billions of dollars, they disclosed the exact number, to, if not to corner the market on flash memory, to secure all the flash memory that they needed for quite some time. It was a bold bet, it was predicated on the success of this new iPod, and it paid off brilliantly.

Since then, there are stories that I would love to know more about and I can only speak about generally, where Apple has said, well we want to do something with a product that no one has done before, and the only way to do it is to buy the machinery that would be necessary to do it, but the problem is, no one has ever used machinery like that for that product, at least not economically. And so again, generally one of the examples I know about is their desire to apply machinery that had previously only been used in the aerospace industry to making consumer products. Now the only way to make that work, if you assume that an advanced airplane sells for tens of millions of dollars, and even an expensive consumer device doesn't sell for more than a few hundred dollars, is to sell a lot of them, and that's obviously what they have done. So I don't think it's a good example of simplification in the supply chain, it is an example of bold thinking and a willingness to spend whatever it takes in the supply chain. Google and Apple have like diametrically opposed cultures. Yes. Do you think Apple would have been even more successful if they had been a more employee-friendly company? So the two observations, one is that, Google and Apple are diametrically opposed culture, absolutely true. And do I think that Apple would have been even more successful had it been a more employee-friendly company? I am not, I don't have the imagination or the creativity to imagine a way that Apple could have been a more successful company so far. But I don't want to brush off your question, could Apple be more successful if it were nicer, essentially, to its employees? I don't think so. I think that, first of all I don't think that Google has proven yet that being so kind to its employees has led it to any great success.

I don't think Google's success is directly attributable to its many wonderful perks. I don't think there's a correlation in other words, is what I am saying. Apple is a culture of work; it's not a culture of play. Now I am paraphrasing, but Apple doesn't believe that it's necessary to entertain their employees the way so many companies in the world do. They believe that it's important to give their employees the opportunity to do the best work of their careers. Now I know that sounds corny, but that's the way you hear Apple people talking about their experiences, it's difficult, it's stressful. I am not always - I don't always get a pat on the back, I am not necessarily celebrated for my successes, but boy, I am doing better work than I have done anywhere else and I feel privileged for the opportunity. That's Apple's way, I have written a lot about this and I have talked a lot about it. I try to present it in as non-judgmental a way as possible. I am not saying that every company can do this.

And furthermore, I have discussed this with executives in industries that have had their ups and downs, and they have said to me, when you go into your down period, you better be good - you better have been good to your employees or they're going to leave. Apple has been on a 15 year run of success, so we don't know what it will be like for their employees, if and when, I assume when they have some misses and they do go into a downturn. So, kind of, Microsoft and Apple were competitors, have been competitors, right? What if like Microsoft tried to behave like Apple, and focus a lot on the design and the user experience. Do you think that Apple would have been here, like where it is right now, like do you think everybody would have a desktop PC, everybody like even far-fetched countries where, you know. Do you think everybody would own an Apple computer? Well the question is, would Apple, could Microsoft have denied Apple's success by being more like Apple from the get go. It's more kind of like, would the PC be, like would the computer be there where it is right now, if Microsoft were like another Apple and there was no kind of - does that sort of make sense? Well, I mean that I am afraid it feels to me a little bit like, if only I had been four inches taller and had a stronger arm I could have been the high school quarterback, but as it was I didn't, I wasn't. I mean Microsoft exploited its unique talent in a really successful way to get to where it is today, I mean, which is something like what a billion units out there in the world, which is still bigger even than the number of units that Microsoft has, but the fact is they didn't do it with great design. I mean, are you asking me what if they had done it with great design, could they have been even more successful, could Microsoft have been, is that nature of your question? Yeah. And you know I hadn't thought of that. The beauty of the Microsoft business model was that by making Windows and Office what they were, they made it extremely easy for every hardware partner of theirs to go to buy it essentially and be a reseller of that software, and then sell it however they damn well pleased, and that was extremely successful for Microsoft.

Again I guess I am having trouble, having the imagination myself to imagine, well what if they had done beautiful design. It might have slowed them down, because it would have been a lot more expensive overall, so maybe they wouldn't have gone to a billion units. And I think the fascinating thing is that Apple 20 years later has figured out one of Microsoft's tricks, right, so, and they did it accidentally by the way, but now Apple has a way for developers, for partners, kind of like Microsoft's hardware partners once upon a time, to design products that fit very nicely with Apple's products and it's called IOS App Developers in the App Store. So Apple, which was so famously closed and is so famously closed still compared with the internet, compared with Google, has made a very easy way even though developers complain about how difficult it is, has made a very - the proof is in the number of people who have successfully developed for the IOS platform, and they have got all these partners, and I don't have the numbers off top of my head, but they flash the number every time they do a public presentation of people who

are thriving off the Apple platform. I really wanted to understand, if they don't derive inspiration from customers until the product is out, what is the inspiration, what inspires the design? So the question is, if they don't derive their inspiration from customers, then what is the inspiration for their products? You're going to be frustrated by my answer, because Steve Jobs' public answer to this question was, we are users of our product and we know what we want, and we know what we're dying to have and that's what we make. And so his example he gave, he would speak about this publicly was, and after the iPhone came out he'd say, we all hated our smartphones, they were crap. And we wanted a better one, so we made a better one. And you know the beauty is, and I'll sort of relate this to you in a way that I can understand as a magazine writer. They haven't made very many products over the last 15 years. They have made about five or six products.

And they felt passionately about each one. He felt passionately about each one. And it's in a sense that, when we put together a magazine we think about what is it that we would like to read. Now we do focus grouping. We're businesses, we're not Apple. But you know the mark of a good editor is knowing in his or her gut what readers want to read, and making decisions on their behalf. Now I completely understand this is antithetical to the user-generated content, long tail world, I am old school, I am telling you that, good magazines are made by editors who can feel what the product should be. Bad magazines and bad products are made by people who don't, or perhaps who listen too much to focus groups of people who don't know what's possible. So again I know you're frustrated by that, but it's the best I got. Would Apple have been as successful as it is now if its headquarters were on the East Coast as opposed to Silicon Valley? Great question.

The question is would Apple be as successful today if its headquarters were in the East Coast, for example. I don't know. Apple, Steve Jobs identified very much with California. He lived here his entire life, for example, except for, you know, when he was in Oregon or traveling in India. He bought an apartment at one point in Central Park West in New York and he never lived there. You would have thought that he would have been a sort of urban person with urban sensibilities and yet he lived his entire life not far from here in the suburbs and drove himself to work in a car, you know not a very urban thing to do. So I think California, especially this part of California was key to his DNA and is key to the Apple culture, but more importantly you've given me an opportunity to tell you another unique thing about Apple in 2012 is that Apple is a headquarters-centric company. Things happen in Cupertino, meetings happen face to face. They don't put important executives in New York and Mumbai and Boston and London and so on. It's not a video conference culture, it's not a teleconference culture.

If you're visiting factories in China, for example, you get the prototype and you come back to Cupertino and you talk about it where you can see somebody. And so beyond giving you the historical atmospheric of the company's importance to California and California's importance to the company, what I can say with more confidence is that wherever Apple's headquarters is, is what's really important to Apple. I think it maybe could have been in Boston, but Steve's feet would have gotten cold if he was walking around in the winter with no shoes on. Thank you. Couple of questions. First, who is Apple's most formidable competitor today, and then what is Apple's most significant challenge today. And then finally I am interested in how these challenges will play out, what could a competitor use with this knowledge about Apple to be more competitive? Okay, so I think I can remember your first two, and then if you can remind me of the third one. So you know who is Apple's most formidable competitor today and number one and number two, what are its biggest challenges? You know I don't have any great insight that that will shock you. Google is an important competitor because Google is engaging Apple in each of its key areas, most particularly in mobile hardware as of yesterday, and mobile software. And Google is an interesting competitor because it's taking a completely different approach in almost every way from Apple, so that makes Google interesting.

Samsung is interesting because it's also succeeding in the mobile device world. I mean Apple is almost exclusively about mobile devices now, despite its very healthy Macintosh business. I think Apple's biggest challenge is complexity. It's a - last year it had \$108 billion in sales, it has hundreds of stores around the world now. It is no longer the case that they can put all of their products on one conference room table, which they were fond of saying for a number of years, and I think as they get bigger and as there's more scrutiny on them, that will be a big challenge for them. So remember 10, 15 years ago, Apple's fans, the fan boys and the fan girls paid very careful attention to everything that Apple did, no one else did. Today we're all Apple fan boys and fan girls in one form, and I use myself as an example of this. I have been a PC user this entire time. I didn't care to make the switch to a Mac, even when I moved to Fortune which is a Mac shop, I wanted to stick with the PC. Then I got an iPod and I started using iTunes and eventually I bought iMac for myself with my own money at home and I got an iPad and so on, and I think this is a common experience.

I am the reason that Apple's a \$600 billion market cap company, not the fan boys and fan girls. And so my point is that the scrutiny will be so great, they'll be so under the microscope that it will be harder for them to keep all the balls in the air, I think. And then I thought I was going to go gracefully into your third question, and this is what I think competitors can use, I mean competitors can understand better how to go up against Apple by being more knowledgeable about how Apple does it. So Apple will allow a very few people to speak publicly about its products. Other companies will allow all sorts of executives, willy-nilly to go out talking about their products. I think as time goes by, with, partly with the work of people like me and others, the competition at least will have a better understanding of how Apple does what it does, and then it will be up to them to apply it. If you love what you do, you're not working. So has Apple been able to transcend in the psychological mindset of the people that

work for that company that they can be fearful of the secret leaking, but they don't have to be fearful of being so incredibly focused on what they are doing that they can do it without fear? So the question is, there's an assertion and then a question which is, if you love what you do, then you're not working, number one, and number two, has Apple been able to get people to not be afraid of getting the job done I guess, a fair paraphrase, and I, putting on my Apple analyst hat I don't agree with the assertion or the thesis behind the question. You can love it and it's still work, I mean it's still hard and that's the Apple mentality. You're still busting your butt to get it done.

I am sure boxers love to box but you wouldn't say that they are out for a stroll in the park, and it's not a bad comparison to what, life at Apple is a fight. They describe it that way. And so no, I think they are fearful and they are busting their butts to get it done and many absolutely love it, but that doesn't mean that they don't think about it as work. Do I have time for one more? Time for one more question. Sure. Over there. How does the modern Apple deal with internal mistakes, or do we simply not know about it because it's secret? How does the modern Apple deal with internal mistakes and or we not know about them; you know we hear bits of pieces, but not a lot, not as much as we might like. I'll make an observation, I mean generally there are mistakes happening all the time at Apple and we don't hear about them, they're accepting of mistakes. Mistakes means that something didn't work out right, and they're constantly tinkering and working on things that may never see the light of day. They have been blessed that the relatively few mistakes they have made publicly, over the last 15 years at least, have been minor ones and they have been tiny in comparison to the massive successes and so no, we don't know.

They say, by the way, that they are self-critical and they want to make mistakes and then correct them, but we don't have a lot of data on it. I don't have a lot of data on it. Well, join me in thanking Adam Lashinsky for this fabulous lecture. Thank you. Thank you everybody.