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Dare to Do Legendary Things [Entire Talk]

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Mike Maples Jr., co-founder of the venture capital firm Floodgate, explains what entrepreneurs can learn from the very few technology startups that achieve hyper-exceptional success and market disruption. The Silicon Valley veteran urges tomorrow's innovators to "only do things that have a chance to be legendary" – because it takes just as much work to do something mediocre.

Transcript

So before I get started, I'm just curious, how many of you have ever heard of the term "thunder lizard" before? OK. So a few. So why don't I get started just level setting on that for a little bit? So yeah. So thunder lizard. So the metaphor actually comes from Godzilla. So I'm interested in not just companies that are doing a startup, but companies that are doing something hyper-exceptional. And I was seeking a metaphor to describe these companies. And I wanted it to combine the ideas of being big, adaptable, fearsome, radioactive. And it just didn't seem right to use a term like "disruptive innovation" or something to academic-y sounding, even though we are in an esteemed academic institution right now. So I came up with this term "thunder lizard" about 20 years ago.

And thunder lizards, for those of you who are not familiar with Godzilla, were hatched from radioactive atomic eggs. And this is actually the stage of the market that we, at Floodgate, like to invest in. And so we like to say that our job is to spot radioactive atomic eggs. When we invested in Twitter, they weren't sure whether they were going to call it TWTR, or TWTTR, or Voicemail 2.0. And when we invested in Lyft before it launched, we had to get comfortable with the legal ambiguity of that service. And so at the time that we see this stuff, it's hard to even know what it's going to mutate into. But the goal is to find companies that have radioactivity at their roots. And then they swim across the ocean, and emerge with an attitude. And then they begin to devour their startup competitors right as they hit the beach. And then not long after that, they begin to disrupt even more, swiping holes into the sides of buildings, and then eventually, they attack the incumbents.

The incumbents in the market are represented by those trains that he's eating like sausage links. So now you know what thunder lizards are. And I like to use that term, because we've been lucky to have worked with some people who have arguably created these kinds of companies. So we haven't been at this for very long. We got started a little over 10 years ago. But so far, the cumulative exit value of the companies we've invested in is more than $30 billion. And so some of those companies have ended up sort of breaking out in an exponential way. And so I thought it would be helpful-- you probably get a cross-section of speakers here. What I thought I would really focus on is, what can we learn from the people who build these truly exceptional companies? Not just the top 1% of companies, but the 0.1%, or the 0.01% of the very best startups. So I have two main thoughts.

The first thought is the exponential laws of entrepreneurship. And so there's three exponential laws I'm going to talk about. And I think they basically animate startup opportunity. I think that they are, fundamentally, the three asymmetric weapons of the startup. The first is one that probably most of you-- so how many of you have heard of Moore's Law? OK, everybody pretty much. So Moore's Law says that the performance of computing doubles every 18 months at a given price. Now it's funny. We take Moore's Law for granted. But Moore's Law is very profound. Moore's Law guarantees that the tech industry will remain magical.

And the reason that Moore's Law is so powerful is because of the power compound interest. Give me an incumbent of any arbitrary size, give Moore's Law enough time, and it will breach the advantage of any incumbent company, no matter how powerful that company's position is in the market. And so the thing that is so important for our industry about Moore's Law is it guarantees a continuous supply of new, awesome companies that change the way we view the world and that could be potentially disruptive. How many people have heard of Metcalfe's Law? Just a show of hands. OK, so not nearly as many people. So Metcalfe's Law is named after Bob Metcalfe. Bob Metcalfe is widely regarded as one of the prime movers of inventing the ethernet. And so Metcalfe's Law is about network effects. So Metcalfe's Law basically states that the value of the network is a function of the square of the number the nodes. And if you think about it, it makes sense.

Every new node that gets added to a network has the potential to connect to all the prior nodes of the network. And so as the network gets larger and has more nodes, some people argue that it's not 100% exponential, but it approaches exponential increasing returns. OK. How many of you have heard of the Power Law? OK. Not that many, as well. This might surprise you. So there are more than 10,000 startups in a typical year created. And actually right now, we're in a little bit more of a frothy time so it's more like 20,000 to 30,000. 10 of those companies create 97% of all the exit value in the industry. That's really hard for people get their mind around.

By the way, this is why venture capital and startups are not an asset class. Most asset classes follow things like the capital asset pricing model. Or they follow things like a normal distribution of returns, where you have a one sigma event this way for the better, and a one sigma event this way for the worse. That's not how power laws work. They work like this, right? So my first angel fund I had, it had Twitter in it. We made more than 500 times on our investment. It didn't matter that two other companies in that group of investments went public. Twitter dominated all the returns. In the next fund, we had Demand Force returned three times the fund by itself. Lyft has that kind of power in the fund after that.

And so here are some other statistics. So for example, what we find is in a typical startup year, the best startup of the year is generally more valuable than all other startups created that year combined. So Facebook was created in 2004-- more valuable than all other tens of thousands of startups combined created in 2004. Paul Graham once told me at Y Combinator-- and I think that the values have flipped now because this is about three, four years ago-- he told me at the time that Dropbox was worth more than all 550 other companies that they had run through their accelerator at the time. And that Airbnb was worth more than all the remaining combined, and so on. So what the power law basically states is that generally speaking, the value of the best outcome will exceed the combined value of all the remaining outcomes. And then the value of the second best outcome will exceed the value of all remaining outcomes, and so on. OK. So I said that the first key thought was about exponential reasoning. This is tech entrepreneurship in one slide.

It is leveraging the power of Moore's Law and/or Metcalfe's Law to create an extraordinary outcome. That's the whole business. Everybody I know-- well for the most part-- who's really done well in Silicon Valley was involved in one of those extraordinary companies, either as a founder, as an employee, maybe even as a lawyer. But it's like if you're not trying to be one of the top 10 companies of the year, you're competing with 9,990 other companies for 3% of the scraps in the industry. And so the first thing that I like to emphasize to people when they start a company is, start a company that's worthy of your talents that you think represents the absolute utmost gift you have to offer to this world in your life. Because to be one of those, that's what it takes. People shouldn't just be doing a startup. Well, I should back up. If you decide to just be doing a startup, that's fine. But that's kind of like the decision to join a nonprofit.

Or it's kind of like a decision to-- it's kind of a labor of love, it may make the world better. But don't do it because you think you're going to make money approaching it that way. Because that's not what the objective function of the industry is. So then about now, people often ask me, OK great. There's three exponential laws. There's Moore's Law, there's Metcalfe's Law. I want to combine them in some way to create a huge outcome. But how do I harness the potential energy of those three laws into the mechanical energy of an awesome startup that actually does the disrupting and achieves its thunder lizard ambitions? So that's what I wanted to work on. And this is a thought that is a framework that we like to use it at Floodgate that sort of captures a lot of what we've seen as patterns in some of the really good companies. And so we call the value stack.

The value stack is really, you could think of it as a hierarchy of powers. And so as you go up the stack, the force multiplication of each power builds upon the power beneath it and amplifies it even further. And so the first one we'll talk about soon is proprietary power. The purpose of proprietary power is to have an unfair advantage. The best way to compete is to choose not to. And proprietary power allows us to avoid the trap of competition. A product power is the thing that everybody talks about in Silicon Valley right now. It's build something people want, product market fit, awesome user experience, all that kind of stuff. But there's some subtlety there too. Company power has to do-- so before I jump into this topic, raise your hand if you've ever heard of the term technical debt or management debt.

OK. So technical debt is sort of like when you make short-term, expedient decisions in the technology that sort cost you later. Maybe in order to ship something on time, you had to cut some corners, and the architecture wasn't as elegant as it could've been, or just the attention to detail or bug fixing maybe wasn't as good as it could've been. And so when I was a kid,

there was this commercial-- Fram oil filters. And the guy would say, you could pay me now or you could pay me later. And so technical debt is sort of like when you put off some things that you have to solve later, but they cost you more money and time after the fact. And management debt is the same thing, but it's for lack of having management systems in place. And if you have too much management debt, if the company starts to take off and do really well, you don't have the internal capacity and wherewithal to scale to the speed that the opportunity might scale. And then the last thing is category power. This is something that I think, just like in the last 10 years-- like I remember getting to know Steve Blank really well about 10 years ago.

And he was working on this book called The Four Steps of the Epiphany. And it kind of ushered in this era of customer development. And then Eric Reese was talking about lean startups. I think category design, over the next couple years, will be one of the next frontiers that people start to talk about in Silicon Valley sort of at the same level that they had been talking about lean startups and customer development. So we're going to talk a little bit about that as well. OK. Let's start with proprietary power, avoiding the need to compete. So when I was in business school, if you'd ask the typical MBA student at the time, what is capitalism, they would have said something like, it is a system characterized by multiple firms competing for the preference of empowered customers in a free market, or something like that. And I guess I would assert that that's actually not true, that true capitalism and capitalists are opposites. I like to say that a capitalist is a person who aggregates capital based on an unfair advantage.

And so those are the best capitalists I know. And so why is that important? Well what I find is that too many people in Silicon Valley, too many entrepreneurs, too many companies, engage in what I like to call mindless competition. And you've probably seen pictures like this before where one of the slides in the deck has the company presenting, and then five other companies, and we check all the boxes, and the other companies check a fraction of the boxes. And when I see that slide, I almost always pass on the investment. And the reason is, it bugs me when somebody doesn't realize that being different is more important than being better. And that the best competitive strategy is to choose not to compete. We talked about this already. Sometimes I get in trouble for using the word "monopoly." That word offends people sometimes in other places. So let me just use a more benign word or term. Do you have a structural competitive advantage? And so first mover advantage, when you think about it, isn't a very durable advantage.

There's a lot of smart people in this world. But if you have a structural competitive advantage, what that means is that even at scale, your competitors can't attack you effectively. So you think about it, for example, Bing has now spent over $10 billion in search trying to dislodge Google, and has gotten nowhere trying. And that's because Google has a structural competitive advantage. We won't use the term monopoly to describe Google's search position. OK. Sources of proprietary power. This is the one that I think usually applies most to people like at say, Stanford. It's deep technology. And I like to say that really harnessing a technology advantage is a proxy for leveraging Moore's Law.

And so whenever I look at a company that says they have a technology advantage, I'm interested in a couple things. One is, just what is the advantage, and why would it be hard to copy? But then the other part of the question is, why now? Why did something in the world change to open the world for this opportunity? If you're doing topological data analysis, why couldn't that have been done five years ago? Why couldn't that have been done 10 years ago? Well it turned out that computational capacity in the cloud was improving, improving, improving at the rate of Moore's Law, and eventually converged at a critical point where it became practical. So there are two companies. The reason I like using these examples, apart from the fact that I just like the companies and the founders, is they both came out of Stanford. And they both have technology depth in their advantage. So the first one is AYASDI. How many of you have heard of AYASDI? Just out of curiosity. So quite a few. Well, a few. More than I thought, though.

So what AYASDI has is that-- I'm going to butcher it. Ann will probably not like the lack of precision that I used to describe it, but there's this capability called topological data analysis. And there were a bunch of PhDs and smart students at Stanford who'd been inventing this new way of analyzing data. And what topological data analysis does is it lets you run data through a system. And rather than start with a query-- I'm looking for this-- it lets you find unexpected relationships in the data. And it turns out that a lot of data has emergent properties, a lot of data's very complex, it's unstructured. And sometimes the fact that you think you know the question means you have a bias about what you're looking for. Sometimes you just want to say, run the data through this thing. Show me a fractal. And then I could see patterns I didn't even know I was looking for.

So it's more of a discovery-oriented way of finding patterns, rather than a query-based way of finding patterns. So when we funded AYASDI, you say to yourself, OK is anybody going to pay for that? We had no idea. When Ann chased down ... and tried to write him a check outside of his classroom, I think all it was was a set of math papers. There was no business plan. I didn't even understand it, to be honest. It was a bunch of calculus topological data equations. And I was like, OK that's great, but I thought we were talking about AYASDI and this business plan. And there's none of that. So anyhow, so in a company like that, you have high market risk.

You don't know if you're going to ever find a buyer for this technology. You don't know if you can even make a product that people will buy. But do you have a lot of risk that somebody's going to copy the technology? Not so much. Because the vast

majority of all of the people in the world who'd invented this TDA approach were early employees of AYASDI. And so if the world decides, oh boy I need me some of that topological data analysis, chances are AYASDI's got an unfair advantage in delivering that. Second company. Inscopix. So not all of you might be able to read this. Fluorescence microscopes. They are normally this big.

They're like the size of-- you fit them on a table. They cost like a quarter of a million bucks. You can't move them very easily. Unfortunately, in order to have this even be semi-legible, people probably don't realize this thing is smaller than a shot glass. It's like half the size of a shot glass. So you can plug it into the USB port on the side of a computer. You could put one of these things on the top of a mouse, literally as it's scurrying around and study how different neurons in the brain fire. So what happens when it discovers cheese? What happens as it learns a certain path in the maze? What happens if it sees cheese five times a row, and then the next time it doesn't? You begin to be able to explore the brain in new ways that you never could have before. And because these things are so small, you could put them in arrays. You can take them to developing parts of the world that can't afford these $250,000 big microscopes that are hard to move in the first place.

And so if you could build a full stack of software on top of these microscopes, then you might have something. But yet again, this isn't like one of the companies I invested in a long time ago that had network effects was Dig. And Kevin Rose started Dig for $1,500 over a weekend. And you're not just going to have somebody in a garage start this for $1,500 over a weekend. This is somebody with heavy duty, PhD chops, understanding stuff that nobody else understands. The reason I bring this up is that a lot of times when I talk to students, sometimes I'm an adviser in some of these classes. And I've noticed that a lot of times the startup idea they want to do in the class is like, OK we're like a social network, but for mobile phones. And people at college doing x,y,z. And I'm like, what a tragic waste of the opportunity. Because I think that a lot of you will appreciate someday, maybe more than now, but a lot of the stuff that you're working on is very cutting-edge.

Like when I was at Stanford, I just like, OK. There's this new thing coming out called C++, and it kind of seems like it might be a thing here pretty soon. And nobody's really using it yet. None of my friends back home know anything about it. But I guess I better learn C++. Why not? And so there's just things that happen where you're literally on the cutting edge of something, and you're in the right place at the right time to have a technical breakthrough in sight that the rest of the world doesn't widely understand yet. It's like I'm an old guy, right? I'm like in my 40s. And I've lived my entire life in Cartesian coordinates. Now one of you may discover, hey the world also runs in polar coordinates. And if that's all you've seen, if you're 20-year-old and the only way you've ever viewed the world is through polar coordinates, you don't have to do any translation.

You just know what to do, whereas old guy like me, I'm like, OK. Well how do I normalize that point in a Cartesian coordinate space with a polar space? You're always going to have a jump on me. And you're always going to have a jump on most people in the world. And so one of the things I encourage students is first of all, most people shouldn't start a company in college. They should be involved with great companies and stuff like that. We can talk about that later. But one thing I encourage students who are interested in the startup process to do is to spend time trying to figure out where the most breakthrough, cutting edge work is happening right here on campus that is technically deep, rather than trying to be the next social networking app, which will get a lot of attention if it takes off. Evan Spiegel, Snapchat. Congrats. ...

from Instagram. Congrats. But that's like saying, I want to be like the guy they got hit by lightning. It's very, very hard to deterministically do that. OK. And then the next advantage is network effects. These, in my experience, are more subtle. So we've had three investments that I think demonstrate it well. Twitter, Lyft, and twitch.tv. The thing that I would say about network effects is that if you're going to build a network effects business, I think it's important to ask yourself, what is my network? What are the nodes of the network? How do they connect with each other? Where are the connections strong? Where are they not strong? Is it a global network? Is it a hub and spoke network? What does it mean for me to be the network operator? Interestingly, network effect businesses have existed for a long time.

They existed with the railroads, they existed with canals, they existed with RCA, with records, and TV. They existed with Craig McCaw, and McCaw cellular. And all of those people thought of themselves as not just lean startup innovator iterators. They conceived of what the network was in the first place. And this is a book I highly recommend. It's by a guy named Yochai Benkler. He used to be at Yale. I think he just moved over to Harvard. The book is called The Wealth of Networks. And what I think is good about it is, it takes a very structured way of thinking to the approach of building networks.

And I think that just like you wouldn't build a deep technology business without really understanding the technology in depth, most people, when they build a network effects business, I believe, should have an ongoing hypothesis of their network at fine grained detail that evolves and migrates through time. OK. So now we're going to go to product power. This is kind of the mistake I see a lot of people make. I jokingly refer to it as the product escape process. Product gets built. It escapes out of the building, and into the market. And then we go get customers. And then we iterate. The customer says, oh no, no, no.

You're way off. And we say, OK well you wanted a left-handed smoke shifter instead of a right-handed smoke shifter. OK, I'll make it left-handed. But you know, the company just kind of gets off to a bad start because they have this wrong idea that

it's kind of this sequential activity, where I'm going to build a product and then I'm going to launch it and try to get some people to use it and then see if I'm right. And so Marc Andreessen has some great quotes, and I'll refer you to a blog that he wrote in a second. "In a great market, a market with lots of real potential customers, the market pulls product out of the startup. Conversely, in a terrible market, you can have the best product in the world, absolutely killer team. It doesn't matter. You're going to fail. The number one company killer is a lack of market." Andy Radcliffe has another way of saying it.

When a great team meets a lousy market, the market wins. When a mediocre team meets a great market, the market often wins. Have you ever seen a startup where you're like, how in the hell could they have been successful? It's because they met a great market. And sometimes, your product, your market, it just has the magic. You can't beat customers off with a stick. They just want it. I've had this happen to me before, where in spite of the fact that the product just seemed horrible on the surface, it just didn't matter. People wanted it really bad. I'll give you an example of this where the market was really good. At Chegg, we decided we wanted to do textbook rentals.

It was one of our early investments. I don't know. Does anybody ever use Chegg at Stanford? OK, cool. So we're like, OK are textbook rentals going to work? We're like, we don't know. We don't even have a warehouse. And so we're just like, OK what we do? So somebody would rent a textbook from Chegg, we'd ship it from Amazon. And they'd call us up and say, what's up with this? I thought I'm renting a textbook from Chegg and you shipped it from Amazon. What's the deal? And we'd say, oh it's just a clerical supply chain error. Would you please ship it back to Chegg? Here's our address. But people put up with it, because they just loved the idea of renting a textbook.

They're like, let me get this straight. Textbook costs me $100, you'll rent it to me for $35. Sign me up. And so they just kept renting them no matter how disorganized we seemed in the early days. So to me, product market fit is more of like a dance between the product and the market. You know it's like if you ever see two people doing the tango, I look at it like the product is leading the dance, but the market is tangoing with the product. I'll try to be G-rated in my language, but sort of an intimate sort of back and forth between them. And what I find is that if you want to get the tango right, the first thing is to really identify the market. Large, strong customer desire and the right time. You want to find markets where people gravitate to your idea and want it right now, as soon as possible, even if it's half done.

And then that market pulls the product. So it's interesting. When a market pulls a product, this is what it feels like inside the building. Nobody's debating what the features of the next version ought to be, because they're like, oh my god. This stuff is flying off the shelves, and our customer needs us to fix x, y, and z. And you're like, OK well let's fix it. And so that's what it feels like when the market's pulling the product. Whereas where the market's not pulling the product, the conversations in the building are arguments over, why aren't those customers smart enough to figure out how awesome our stuff is? And back and forth, and is my vision more right than your vision about what the product ought to be? And then the last part of it is delighting the customer in the other direction. So you know, the part of the dance where the customer follows is they're pulling product. And where you lead is you assimilate that information all the time, and then delight the customer.

So by the way, the first thing that I see-- we talked about this-- not doing the dance is the first mistake I see in people not achieving product market fit. And conversely, the people who do this well often get to there faster. The second thing is not clearing the threshold of delight. So a lot of people think their product is good and that rational customers ought to like it and buy it. But customers-- I won't use the exact words-- they need to say, WTF. I didn't know that that was even possible. Are you kidding me? So I'll give you an example. When Lyft first launched, we had an associate at the time. He's now at Rothenberg Ventures, Tommy Leep. And he was the Stanford treat, for those of you who've been here for a while.

And so we launched Lyft. Well, Lyft launched Lyft, and we're like, I hope it goes well. Two weeks after they launched, Tommy comes into the team meeting and says, we're going to crush it in this deal. And we're like, yeah, Tommy. We're excited about Lyft too. It's awesome. He's like, I've used it 10 times in the last week. He's like, have you tried it yet? We're like, well I'm going to get around to it. I haven't been to San Francisco, but I'll check it out. He's like, dude it just, it rocks.

You just get out your phone, there's a car on the map, you ask for a car, and it picks you up. And keep in mind, this is before Uber decided to react to Lyft with Uber X. Like nobody had ever had a service before where just some stranger in a car pulls up when you request the ride, and takes you where you want to go. And keep in mind at the time, the cabs in San Francisco were horrible. So you'd never get a cab in San Francisco. And so it was one of these experiences where I remember the first time I tried it, it was obvious to me that this product was going to be a huge success. There was just no doubt in my mind. How many of you have been a Tesla with the autopilot yet? OK. So let me describe how it works. You're driving the car.

And then there's this little blue thing that shows up. It looks like a steering wheel. And that means that it knows enough about the road that it could self-drive if you want it to. So you just double click back the cruise control stock, and it goes boom boom. And then it just starts driving itself. And the first time that happens you're just like, that did not just happen. You're just like, no way. It's like, there's like a hidden camera here. There's like somebody hiding inside the car, in the hood. This can't be real.

But what I'm finding is that more and more in today's world, that's the threshold that you want to clear. So we talked earlier about proprietary power. One of the things that I appreciated about the way AYASDI did its product was they didn't just have topological data analysis under the hood. They actualized that advantage in the product by making it look awesome with these fractals. And so the best places to delight the customer are in the areas where your fundamental advantage just sings. And if you stick the landing on that, not only do you delight the customer, but it's really hard for other people to do what you just did. OK. Suggested reading. Andreessen has a really good excerpt of a good blog entry, The Only Thing That Matters, it's called. It talked all about product market fit-- the theory of it, why it's important, how to get it, how not to.

I've always liked Steve Blank's book, The Four Steps of the Epiphany. And then The Innovator's Guide To Growth has a great chapter on mastering emergent strategies, and how to systematically dance that tango with the customer and turn assumptions about the product and the customer into facts. OK. I think I need to go a little quicker. Company power. This is for preparing for rapid scaling. There's really two things we're interested in here. One is a scalable business model, and one is the scalable management systems. Now if you think about it, if you have a product that people love and that only you can deliver, you'd have to be an idiot not to be able to make money with that. Because you have something people want that only you can deliver.

And so that's why getting the first foundational parts are so important. If you get proprietary product power nailed, you have a business model. You just have to discover it, but is there always. And then increasing margins and pricing power are proof that the first two layers are strong. It's axiomatic that if your pricing power is going down, the first two layers aren't that strong. Either that, or you're dumb at pricing. But it's more likely that you've overestimated how compelling your product is or how strong your competitive advantage is. I think that this book, Business Model Canvas, I think it's called Business Model Generation, but the framework is The Business Model Canvas by Alex Osterwalder is good to look at for this. But a lot of what I find about business modeling is it's just intuition. When you get to know the customer really well and what they value, it just seems to work.

The other thing I've found is that customers often will pay more money when the price is clear. And they will often resist paying less money when the price is unclear. And so being clear about the price is very often more important than having a high price versus a low price. So I would always tend to be biased towards having a clear, high price that the customer understands and relates back to your value. Scalable management systems. I put these up only just because ... call them out. Culture. Do you define it or do you just kind of let it happen? So a lot of the good companies that I've seen actually proactively define their culture. And they emphasize what that is their first 20 employees, and then it kind of takes a life of its own.

Why do you want that? It's sort of like when ducks fly south for the winter, you don't have to tell the ducks in the back of the v, get in the v. They just know. And when a company gets into blitz scaling mode, you don't have time to tell the hundreds of new employees that you hire, here's how decisions get made here, here's what we value, here's how we make trade offs at the margin. They have to be programmed in the DNA of how they participate in the company. Basic management systems. This has to do with just one-on-one meetings, board meetings, team meetings, forecasting frameworks. You know, what gets covered in those meetings, what shouldn't get covered in those meetings. Just having a sort of a philosophy of that going in can save a lot of time and avoid a lot of management debt. Compensation strategy. I'm very surprised how few companies, if I go to them and say, what is the role of cash, stock, and bonuses in your company, what is the strategic logic for why you have each one, usually they can't answer that.

And being able answer that both helps you retain the awesome people, but it also helps you recruit people with a competitive advantage, because those people, rather than just put you in a line in an auction say, oh wow. This is a real company. This company has a philosophy of how they compensate. That must mean that they actually have a point-of-view about what makes the company great, what makes the people at the company great. Hot teams we could get to at the Q&A It's one of my favorite topics, but I don't know if I'm going to have time. I'll do the quick version. So NASA landed on the moon in 1969. And people were like, how the heck did that happen? HP didn't even have a pocket calculator yet. And they discovered that there were some teams that were 1,000 times more productive than normal teams.

One team had to put an antenna on top of a mountain, and there were no roads up to the mountain. So like, what do we do? They say, let's ask our boss. We're behind. We've got to do something. They said, oh no if we ask management, nothing will ever happen. So one person says, who has the biggest helicopter in the entire world? And they say, I don't know. I don't know. So they find out. It turns out it's the US Navy. They say, hey it's NASA.

US Navy, can you loan us a helicopter? Navy says, screw you, NASA. You don't get my helicopters. They say, OK, here's the deal. If we don't get your helicopters, we can't do this antenna. And if we don't do this antenna on top of the mountain, we're not going to land on the moon in 1969 like JFK said we would. And so they say, how many do you need? So flew all the parts of the antenna on top of the mountain, assembled the antenna. And the NASA moon landing was 1,000 examples of that. And so when you're in a startup, you want to have that vibe of, the goal is super important and you can make it happen. And in fact, if you don't make it happen, it won't happen. Forget performance reviews.

Great startups have hot teams that cut through the crap and get through whatever obstacles are inevitable to come along the way. OK. These are three books I recommend. Andy Grove's is awesome, High Output Management. I like Sutton's new book, Scaling Up Excellence. And then I also like the notes from Reid's class, Reid Hoffman, on blitz scaling. OK. Category power. Category kings, they don't just make something to sell to people. They introduce the world to a new category of product or service.

Category kings, they replace our point-of-view from what we understood yesterday to what we now believe. And ultimately, they change how people in businesses spend money. Here's some examples. When I was a kid, people didn't pay multiple dollars for a cup of coffee. But Starbucks convinced me and a whole bunch of people to rethink our spending habits, as it related to coffee. Amazon Web Services, not just a service, a whole new category. There weren't any digital music players that would play thousands of songs in your pocket before the original iPod. In fact, I would argue that Jobs' great genius in his second act was he invented three new categories-- the digital music player, the smartphone, and the tablet. This is an example I kind of like, Elvis. So Elvis changed our point-of-view from jazz on steroids to rock and roll.

So Elvis defined the category of rock and roll. Category kings usually capture 70% to 80% of the profit pool in a given market. These guys, I think, are doing some really interesting work. playbigger.com. Christopher Lockhead, Al Ramadan have been friends for a long time. They're going to come out with a book pretty soon that talks about category design, but I think their website does a good job of talking about some of these issues. I believe that category design is going to become an increasingly prevalent topic in how people think about building value in their startups. OK. So I'm going to go quickly through this. What is the purpose of a seed round? Primarily, it's to marry proprietary product power.

If using a seed round, I can prove that I've created something that people love that's defensible, that was a good seed round. And then I just lay early groundwork in company power and category power. The next round, what I call the execution round, usually it's the A or the B round. It's creating the flywheel for blitz scaling. It's hiring those early executives. It's sort of creating the infrastructure to be able to scale when product market fit becomes understood in the company. And then the later stage rounds is about capturing the profit pool from an emerging category. Final thought. OK so you're going to be surprised about this. You don't have as much time as you think.

You all are much younger than I am, but I can promise you that sitting where you're sitting feels like yesterday. And you're in a position of privilege. Most of you in this room are Stanford students. And so the thing that I would highly urge you to consider is to only do things that you think have a chance to be legendary. It takes just as much work to do something mediocre as to do something legendary. And the mistakes you'll make, if you make them in the next decade or so, will be because you didn't take the time to consider if the next thing that you were going to do was truly legendary. Don't let yourself be 30 years old, having been at four mediocre startups. That's a bad use of your first decade out of school. A good use of your time, regardless of whether you do startup or not, in my opinion, is to always work with the people who excite you, who you think are excellent, who will make you better, to engage with the projects that you think are going to make a difference. And just to commit yourself without exception to doing kick-ass exceptional work.

Just don't forget that. You have your whole life ahead of you to get the cumulative benefits of that. There will be temptations. There will be chatter and noise. But just turn off the noise and the hype, and just stay focused on that. And I think that if you can do that and put all your energy and enthusiasm into those things that have a chance to be truly legendary, that's how you get involved in exceptional things that you're proud of, and that you look back on and you get to enjoy your life twice, because you get to remember all the cool things that you did. So anyway, I should probably stop and do Q&Anow. Are there any questions? I should probably take your question. Since you sat in the front row, I should probably take your question first. I just have a question about thunder lizards.

Yes. Do you care if a thunder lizard is too radioactive? What I mean by this is how do you assess the liability of a product? I think, in special regard to technical advantage as you were mentioning, do you care how long the incubation period is when you're thinking about ... thinking about how much potential a product has. If it's not viable in the next five years, is it worth really thinking about at this point? Yes. So let me see if I can phrase the question right. So you're kind of saying, OK how patient are you with these kind of technologies that are radioactive, but maybe they never turn into a monster. They're just kind of sitting in a beaker, and they look radioactive, the Geiger counter's kind of going off, but nothing's really happening. It's funny. I like to make fun of my ability to predict what any of these startups are going to do. And so my investment style is to invest in projects that have super high potential energy, but very ambiguous, what I like to say, mechanical energy.

I don't know what it's going to become, but I know it feels very radioactive. So like twitch.tv. It started out as justin.tv. Justin ... walks into a coffee shop. I'd never met him before. I was talking to guys from Weebly. And Justin walks in. They say, hey we think you're a cool guy, and we would like you to meet Justin. He'd like to pitch you.

He walks in. He's got a baseball cap camera and wires going into a backpack. I mean, I thought that security would stop him somehow. And he says, I'm going to live-cast my life. And I'm like, Justin, come on. That's stupid. That's ridiculous. And I'm

like, but how do you even do that? He says, well the internet's kind of a hostile networking environment. It's really hard to do live video on the internet. So we've invented a bunch of technologies.

And there's me, and there's a couple guys from Yale, a couple guys from MIT, and we've invented this way to stream live video over the hostile networking environment that's the internet. And I was like, that's my kind of deal. Because I was like, OK I could see live video might be a thing someday. Now it ended up morphing into twitch, which you could say arguably is not really live video. But I've made more money on those kind of bets. Evan Williams, of Twitter, he did this company called Odeo, podcasting company. Went out of business. He gave me my money back. I said, you don't owe me my money back. He said, well you need to take it because some of the other investors want it back.

I'm like, I'll take it back only if you let me do your next thing. So he's like, I'm working on a side project. I'm going to call it Voicemail 2.0 or Twitter. And I'm like, what does Twitter do? And he says, you say what you're doing. And I'm like, then what happens? And he says, 140 characters or less. And I'm like, what's the roadmap? There is no roadmap. What's the revenue model? There is no revenue model. Well, why do you think this is a company Evan? I figured I did blogger software. A million people wrote blogs. I figure if 10 million people do micro blogs, the burden of proof is on the people who are negative.

And I was like, that's my kind of thing. And so I believe that at my stage of the market, people try too hard to predict what's going to happen. And they let all the things that could go wrong with their prediction cause them not to invest. Whereas if I see exponentially high potential energy, I have a portfolio and only, say, a third of them do we have to be right that they're going to find the promised land. And so I tend to favor the high potential energy, and just let the great entrepreneurs do their work. Yeah, sure. Any other questions? Yeah, I'll take it. Yeah. Thank you, Mike. I'm Lawrence.

Thank you for being here. You were talking about structure advantage. Structural competitive advantage, yes. How about when you have a network effect, but it's hyper-local. So ... like Lyft, Uber, or food delivery. How do you-- What some of those companies get wrong-- so what Lyft got right is they crushed San Francisco before they went to other towns. Where they could have gotten themselves in trouble would've been to say, well we've got the first mover advantage. Let's go into five cities right away and spread out, spread their efforts too thin. And so it kind of goes back to sort of network theory.

We knew that Lyft, if it worked, was going to be almost like a hub and spoke network where you prove the network effect in one town, and then based on the success metrics of that proof, you raise money to go into other towns. I think the other thing that Lyft got right is they understood that they were going to have to raise a lot of money to build this kind of network. And so if you're going to have networks that start local and then spread, you have to convince yourself, in my opinion, that you have the team, and the idea, and the credibility to raise a whole lot of money if you succeed locally fast. I think you also have to succeed locally fast. Like if you're kind of busting your pick against succeeding locally, you just get trapped there and never-- so you want the network, locally, to hyper-accelerate. And then you need to be the kind of team that can walk in to Andreessen Horowitz like the Lyft guys did and say, I want $60 million to spread this idea. But there's a very important timing and sequence to doing that. But then others raise money in China, wherever, and-- Yeah. And by the way, it's a very good point. There are all kinds of companies that are raising money for food delivery, network effects kind of stuff.

And I don't understand how they raised. Like a lot of these companies, I don't know how they ever make money, but I am thankful that they'll deliver my food to me. Thanks, Sandhill Road. But yeah. Yeah. You mentioned that in any given year, 10 out of 10,000 companies take 97% of the profits. So that's one in 1,000. That's a terrifying thought to any investor. How do you convince rational people to put up their money for this kind of risk? OK, so the question is let me get this straight. You invest in an asset class where 10 out of 10,000 make 97% of the money.

That sounds super risky. What person would ever give you money to go invest in that approach to this? OK. What we find is that venture capital is kind of like a lottery game where the same people seem to keep getting winning tickets. And so the way you convince someone to invest in a venture fund is you convince them that you have some proprietary insight, or attack vector, or unfair advantage into accessing those top 10 companies. I think that if you do not have that, by the way, your venture capital fund doesn't have business. So I would say, conversely, if you don't have an unfair advantage to getting those winning lottery tickets-- and this is, by the way, why so many venture firms lose money. Almost every single venture firm loses money. And then a small fraction that keep getting the winning lottery tickets make crazy good money. And so the key is just like when you're a startup, the key is, as a fund, to convince the investor that you're a hyper-exceptional venture fund. And in the end, I think you either have to have a great strategy or you just have to have the results and say, it's an existence proof.

Yes, Tina. So you've told us these great stories about these companies that we all know about. What about the things you're investing in now that you're most excited about? Oh gosh. Let's see. What should we talk about? Because some of them may not want us to talk about it yet. There's a company that we invested in in 2014 called Lob that is doing sort of like APIs for physical print. So they're kind of in the genre of like Stripe and Twilio. And they've gotten off to a very fast start, and they're doing very well. There's a company that's super early that I'm excited about called Dispatcher that was started by actually a computer science student here at Stanford that has closed some very large contracts, unusually large for how young they are.

So I think that they're doing a really good job.

Ann has an investment in a company that I think is showing a lot of signs of being interesting called Varagesale, which is moving pretty quickly. Ann, what else are some of the recent ones that you'd say? That we could talk-- the Greatest, I think, has a chance of being really good. And there's a few that aren't quite as famous yet that we feel like we've been working with for a long time that I think are good. Refinery 29. Dan Greenberg dropped out Stanford to start Sharethrough. They're doing really well. Yeah. And then there's a few I wish I could talk about, but I just don't want to put the guys on the spot yet. Not in front of your huge podcasting audience. Yes, sir.

So it seems like there's a lot of companies that are really in category now that weren't actually the original innovator in that field. Facebook, obviously, came after Friendster, but was able to take that first move advantage away from then. So do you feel like it's more important to be on the cutting edge of the technology, or to identify when there's a bud and then somehow overtake that advantage? The way I sort of look at it is first of all, there's a whole lot of randomness in startups. So a lot of this stuff's just super hard to predict. And after the fact, you can tell all kinds of stories about why the facts fit what happened. I sort of look at the value stack as almost like a preflight check. So I'm like, OK startup's a plane. I'm about to take off on the runway. And do I want to do that? Because like once I'm in the air, I'm going. And so I wouldn't necessarily say that proprietary power without product power, I would never do that investment, or that I've never seen a company succeed, or that I've never seen a company first mover be not the category king, or whatnot.

It's more I like to encourage entrepreneurs before they will that sucker into existence, to kind of ask the diagnostic questions that kind of give them a sense for, do I want to really commit my life to this? I think that Zuckerberg just got things incredibly right in Facebook. Not only the product and the team, but he was like a sponge in terms of asking people questions. He's always, always learning more, always wanting to learn as much as he could. And I just think he was just an incredibly gifted entrepreneur. He's at the right place at the right time. And you could argue some of the other people made mistakes. You could argue they were too early. And it's like all markets, their time comes. And sometimes being too early is just as wrong as being too late. Timing's a big deal.

And so he was at the right place at the right time. In fact, he was at a time when people were starting to not like social networks. They were like, well Friendster didn't work. Drive didn't work. This is one for colleges. Big woop. And so he benefited from the fact that not that many people cared anymore about social networking. He just quietly went about his business and hired awesome technical people, and made it happen. I think you will agree, this was incredibly educational and inspiring. Please join me in thanking Mike Maples.