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JOSEPH HADZIMA: I'm Joe Hadzima. I'm going to be your guide on our six-session journey through the Nuts and Bolts of New Ventures. Tonight at the beginning, I'm going to try to give you a set of guideposts for you to think about as you go into detail on all of the topics we're going to cover over the next six sessions.

And in that regard, I'm going to ask you a bunch of questions that I want you to think about after every session that you come to. Because at the end, if you can answer those questions, or at least get closer to the answers, we'll have accomplished a whole bunch about your journey.

So the first question is, why are you here? It's a beautiful, warm night in Cambridge, wind chills in the single digits. Why are you here? I know it was for the three units of credit you're going to get for the students. Perhaps you don't know anything about entrepreneurship, and you'd like to find out something. You just want to dip your toe in the water.

So how many people here have not taken a formal course in entrepreneurship? OK, there you go. All right. [LAUGHS] Including Bob back there. So we're going to hopefully-- so this is a great environment for that. It's a two-week period during January where you don't have a lot of other distractions. And hopefully, we'll cover a lot of the things that will tell you a lot about entrepreneurship.

Maybe you see something that sucks and you want to make it better. Anybody have that? OK, good. Well, another student who had that was somebody who was taking a bus back from New York City after Thanksgiving back to campus, and he forgot his USB drive, and he couldn't get his files. And he said, I wasted the whole trip. I want to figure out how I can have those files anytime, anywhere I am.

And I said, well, you know, that's cloud storage, right? That's Google Drive. That's box.com. And he said, yeah, but they really suck, and I'm going to make something that doesn't suck. He went on to found something called Dropbox, and I've been using it ever since. And it certainly doesn't suck. It works quite well. So maybe that's something that you want.

Maybe you have an idea or an invention, and you want to bring it to life because you want to change the world. I think for most people that I run into in entrepreneurship, that's sort of a primary driving factor. They think they can make a big difference. And that's, I think, a real driver for most people.

Of course, being an entrepreneur is glamorous, and you can make a lot of money. How many people like that one? OK. There's good, realistic people in the audience. Well, we'll talk about that too. So many questions-- regardless of why you're here, so many questions you need to ask, and we're going to try to help you over the next six sessions.

How do I start? What actually do I do? What is the problem I'm solving? Does my solution provide an answer to that problem? Who cares about my idea? Specifically, who cares? Who's my customer? And how do I find these people? Bob Jones will be here in the second part of this evening, and he's going to be talking a lot about that. If you don't have a customer, you don't have anything.

How will I make money and make it a sustainable venture? That's the business model or the venture model, we call it. And we'll be talking about that tomorrow. How long will it take to bring my solution to market? What will it cost? What resources will I need? All of that stuff is about financial projections and thinking through the model that you have.

Will I need to set up some of entity to attract investors, other people to join me? And what should it be? Corporation. Maybe a limited liability company. And can I use that in any way to provide some ownership incentive for people? We'll be talking about that.

How do I keep people from stealing my idea? Maybe you want to put it out there for everyone, but maybe you want to control a little bit of how it gets used. So we'll talk about, can you do it? And how could you protect your idea?

Will I need co-founders? And what will our relationship be? Do we need some of an agreement, maybe a founders agreement? Tomorrow we'll have a panel on the founders journey. Some people that are in the midst of their journey, you can ask that question to them too.

How will I negotiate with employees, consultants, whatever? Entrepreneurs are always negotiating, right? Because almost by definition, you're trying to assemble things you don't really own or control to accomplish a vision you have. So you've got to negotiate in some way to bring on customers, to bring on people that are going to join your team, advisors and investors. We'll have a session on negotiation.

And the big one. How do I figure out what I don't know? And one simple answer to that is, well, maybe you find people that have done it before who can advise you. The reason I'm here and all the other presenters are here is we've been down this path. We have plenty of scars, and we can perhaps tell you what not to do or caution you on things.

What are the potholes in the road, and how will I recognize them? You know, you're going to make mistakes. If you don't, you're not doing it right. The problem is not making a mistake. It's making it twice, right? So if you make a same mistake twice, you haven't learned anything. The problem in entrepreneurship, really, is those things come at you in different clothing.

And there have been a number of cases when I've been down the road and I go, oh. I recognize this. I've been here before. I didn't see it coming. How can we give you some early warning things on that?

So there are a lot of moving pieces. So the next question is, why do this? These are personal questions for you that you ought to think about as you hear everything through the course. Oh, did I miss one? A lot of-- oh, why do this? Sorry. What's the reward? Fame? Fortune? You may recognize these people. Some of them were at the presidential inauguration yesterday.

OK. That may be the reward, but this is the reality. This is-- how many people have heard of Nvidia? Yeah. Jensen Huang, the founder, was interviewed. And he said he built $1 trillion company, give or take a couple of billion. That's what it's worth today. Would he do it again? He said, I don't think I would. If I'd known three decades ago what it would take, I wouldn't have done it.

This quote is amazing. "If we realized the pain, suffering, and how vulnerable you're going to feel, the challenges you're going to endure, the embarrassment and the shame and the list of all the things that could go wrong, nobody in their right mind would do it." So I must conclude from that, you guys are all crazy, right? [LAUGHS] But this is a guy who spent three decades to get there. The reality is only 10% of startups succeed. 10%. Nine out of 10 fail. Now, this includes everything from sandwich shops and things like that.

Now, many of you are interested in venture capital, I'm sure. What do you think the success rate is for venture capitalists? Out of every 10 companies they invest, how many successes do they have? Anybody? One. I hear one. Two. Anybody else?

Well, the most successful long-term firm was Kleiner Perkins, and they got three successes for every 10 companies that they invested in. Now, these are guys with money, smarts. With venture capitalists, you've got to realize they're always the smartest people in the room. Do make sure you understand that. [LAUGHS] They'll let you know.

And connections. And with all of that, they only win three out of every 10 times. Can you think of any other thing you could do where if you failed seven times out of 10, you'd be a hero?

AUDIENCE: Baseball.

JOSEPH HADZIMA: Baseball. Right. If you bat 300, you're probably leading the league, and you're probably making-- what do they make now? $50, $100 million a year? So if you really want to make money, go play baseball. But the point is, success is only 10% in general.

Now, there are many reasons when you look into them. I want to focus on the one in the bottom right, which says 99% of the time people fail-- by the way, these slides will all be available, but feel free to take pictures. 99% fail because of a lack of planning and experience. We're going to try to help you on the planning part, and with that, you'll get experience.

But even though 10% is a success rate, maybe all is not dismal. We're here at MIT. The Kaufmann report. MIT is known for entrepreneurship around the world. Kaufmann report in 2009 studied the roughly 26,000 active companies that were founded by MIT alum or faculty. Now, that's out of 120,000 living alums at the time, so that's one of every five that were out there.

These companies employed 3.3 million people. They had annual revenues of $2 trillion a year. And if you put them together as a single country, it would be the largest-- 11th largest economy in the world.

Now, does that mean we're better at success here? I don't know. But it might mean that when we do succeed, they're much bigger successes. With these statistics, people come from all over the world to try to figure out how MIT does it. Well, we'll give you a little hint about some of the things that can help on that.

OK. So why this course, after all of that? Well, this course is not about theory. It's about doing. The people that are going to be talking to you are not academics studying entrepreneurship. Every single one of them either are actively doing or have done what they're going to talk about.

And it goes back to the beginning of the course. I was teaching a course, which is now called Law for Entrepreneurs. And some students came up and said, you have some very practical things that you talk about. Could you do a course during January Independent Activities Period on how to start a company? And I said, oh, you know, I'll think about it.

Well, this was pre-internet, believe it or not. They went and somehow got the course in the catalog. And they called me up and said, we put it in the catalog, and we dare you not to show up. I said, boy, that's pretty gutsy. [LAUGHS] I was a little annoyed at that.

But then I said, you know, there's something here. These are like customers. These are people that want what they think I can deliver to them. They actually want it. I'm not looking for them. They came to me. So how am I going to do that? I didn't have time to really plan anything out, so at the time, we had four nights. And I thought, well, what are two things a night that we could talk about?

And I got on the phone, and I called people. And some I knew, and some-- I knew all the people I called. Some of them, I said, could you come and talk to a group of people at MIT, students about whatever the topic is? And to make it easy, just come and say, I wish-- here are the three or four or five whatever things that I wish somebody had told me about the area that I'm going to talk about when I started up, and then we'll just open it up for questions.

Now, about half the people that ended up showing-- that came to present, I didn't know personally. But I had people that I called and said, do you know anyone who could do this? And they've got to be able to keep it simple.

And then because I was worried that I was going to get all these people in the audience or these presenters to come, I said, I've got to have some people in the audience. So I called everyone else I knew, and we packed a room with 120 people. And people were sitting in the aisles. And it was a real good lesson for me. It was a great success.

And it was a real lesson, because what I did is I basically said, here's the goal. Here's what we want to do. I found good people. I gave them an idea of what to talk about or what I wanted them to talk about, and then I got out of the way, and they did a fantastic job. And we sort of refined that model over the years. So it's really about doing.

We call it new ventures. It's planning and executing new ventures. That could be business. It could be nonprofit. It could even be government. One year, we had the US Mint show up for class. They were thinking of launching some new thing, and they wanted to come and see about new ventures.

And by the way, it's the Sloan School of Management. It's not the Sloan School of Business, so it's in our DNA. Our goal is to increase the probability that you'll be in the 10%. That's what we're trying to do.

Now, you have to recognize that entrepreneurship is a lifetime incurable disease. If you get it, you will have it for the rest of your life. Fortunately, it's not fatal in most cases. It's highly contagious, and it's transformative. But what it really is also is a full-contact sport. So it's, again, not about theory. It's about getting out there and doing things. And again, the people that are going to be talking are doing or have done what's involved.

So let me give you an overview of the specifics we're going to cover and what you can learn during the six sessions. First, how to evaluate a venture from an impact and economic viewpoint. This is really a key thing.

What is the scarcest resource you have? Time. And if you're planning to do a new venture, you saw that Nvidia took three decades. It's not going to be a six-month thing. And if you're going to spend your time and effort working on something, you might think at the beginning, do I think this is going to work? Is this going to have impact? How do I do that? Because it's your time that you're burning up if you do that.

We had a-- I used to do a seminar on Tuesday nights. And I know we have some people from Harvard here, so I don't mean to disparage people from Harvard. But one night-- this was a seminar with 12 people. And one night, three people show up from Harvard Business School. And we're an open seminar. I said, well, great. Well, tell us, why are you here? What are you looking for?

And they said, well, we're taking an entrepreneurship course at the business school. OK. And we have to start a company. Excuse me? You have to start a company? Yeah, yeah. We've got to start a company.

Well, like, what is that? You've got to learn how to incorporate? No, no. We actually have to start something. I said, that's really stupid. If we spend four months with you looking at something and you realize this is something you shouldn't do, it means you're going to fail a course? And they said, I don't know. We're supposed to start a company. The point is, figuring out what to do and figuring out what not to do are a key part of entrepreneurship.

OK. So we're also going to figure out, who's your customer? How do I get financial resources for the venture? How do I scale it and make it sustainable? How do I build and retain a top-notch team of both internal and external people? How do I negotiate deals and resolve team conflicts? What are the legal pitfalls? And how do I pitch my venture idea?

And Bob is going to come-- Bob Jones will be back to talk about pitching your venture. And it's not only to investors. It's to all the people you need to convince to join you in whatever journey you're taking. So there are a lot of moving pieces here.

These personal questions, these are things you need to think about. Do you really want to do this? Right? Should you do it? Why? And should you do it now or later? If you're an MIT student now, you know how hard MIT is, and how you're getting by on meager resources, and your diet probably isn't the best in the world. Probably a good time to start a company, because you won't notice a difference. 10 years later, you're married with children. A whole different scenario.

And is this for me? So as you look at each of the sessions and we dig down into the nuts and bolts, think about these. And by the end, think about personally, what does this mean for you?

OK. So what's tonight's plan? We're going to talk about who you are. We're going to introduce the teaching team. I'm going to give you an overview of our frameworks-- I hate frameworks. I'm going to give you some things to think about to help you digest the stuff you're going to see in the future. Then we're going to do a break for team building, and we'll talk about that. And then Bob will be back with his magnifying glass, looking for binoculars, looking for customers.

So who are you? Well, you're students from all of these different departments. The first time we opened this up for credit, we didn't know who was in the audience. And it was really interesting. We had a clump of people over there and a clump of people over there. And I said-- and I'll do it tonight. How many people from Sloan? OK. How many people from science and engineering?

Oh, good. All right. You've done better than the first class, because all the Sloan people were there, and the science and engineering people were over there. And so I said to the Sloan people, look at the number on your seat. If it's an odd number, get up and go find an odd number. Switch, because we wanted to bring people together.

And then I'm thinking, god, how is this going to work? The Sloan people probably know everything I'm going to talk about, so I'm going to bore them to death. And the science and engineering people, this is all brand new, and they're really smart, but am I going to overload them? But I had what I had, and I just went forward. And it turned out to work well, because the things we were talking about were very practical things.

So the range of people here-- these are the interest groups that if you signed up on the email list that people were interested in. We'll talk about that at the break. We also have nonstudent participants. We have alums, some people that have done numerous companies successfully and are back.

We have, I think, some MIT Venture Mentoring Service people in the audience. We have people-- I think we have a faculty member or two. We have people from large companies who are looking to spin out something. This all came from when you signed up on the email list. What are you looking to get out of the course?

So the question is, how do we deal with all of that? Well, it's MIT, so we have to have an equation. H equals R divided by E. The goal is to maximize H. H is happiness. I know a couple of people have taken the course before. Don't answer the question. [LAUGHS] What is R and what is E? R?

AUDIENCE:	Reality?
JOSEPH HADZIMA:	Reality?
AUDIENCE:	[INAUDIBLE]
JOSEPH HADZIMA:	Huh?
AUDIENCE:	[INAUDIBLE] how many people [INAUDIBLE]
JOSEPH HADZIMA:	[LAUGHS] OK. Well, typically-- maybe-- this is good. Reality is the thing. The first time I did this, the Sloan people said, oh, it's very easy. Revenue is R and Expenses are E.

[LAUGHTER]

And I said yeah, that's great, but that's a subset of this equation. So R is Reality. What is E?

AUDIENCE: Expectations.

JOSEPH HADZIMA: Expectations. OK. So you're happy if reality exceeds your expectations, right? If you under-promise and over-deliver, are people happy? If you over-promise and under-deliver, are they happy? Not as much, right? So this is a universal principle. Happiness is reality divided by expectations.

Now, I'm tempted to say I can make you infinitely happy if you just stop having any expectations for this course. You have zero expectations, you're going to be happy. But I know that's not possible because on that email list, the things you wanted to know about, that E is very high. And we're going to try to deliver the R, and I hope at the end you're happy. We'll come back to that and do a poll at the end.

OK. So who are we? Again, we are highly unpaid volunteers who have done this. And I hate to say it, but the TAs are the only people getting paid in this course. And for them, it's nothing. [LAUGHS] It's like a couple lattes, right?

And now, why would these people come and spend cold nights in January to talk about this stuff and not get paid for it? Well, we're going to have some mugs or something, but other than that.

Well, because I think if you ask entrepreneurs who have been successful, especially one successful, and you've really got them in a quiet moment with a couple of beers or whatever, and they'd say, you know, I couldn't have gotten here without a lot help. And people helped me along the way, and I want to help the next generation coming by.

And I think that's really true. There's a real giveback in the entrepreneurial era. And when you guys succeed, please make sure you're mentoring and helping entrepreneurs after you.

So a little bit about me. I've done a bunch of ventures, everything from being the lawyer, the co-founder, investor, board member, advisor. A bunch of different companies. I'll talk about several of them a little bit later. I've been a lecturer at Sloan for a long time. I was a partner at Sullivan and Worcester, big law firm in Boston. I founded their High Tech New Ventures group.

I was chairman emeritus at the MIT Enterprise Forum, which no longer exists in its current form, but it had 20-some-odd chapters all over the world. A Director at Main Street Partners that commercializes technology, and I'm currently working on two companies, IPVision, which is an intellectual property analysis firm, and Neurostim Technologies, which is making low-cost medical devices.

Now, the most important people you need to know, our TAs. Janet, hands up. [LAUGHS] She's a 2026 Sloan candidate. Deloitte Consulting before that in media and tech. Psychobiology. I don't want to mess with you.

[LAUGHTER]

And Head of Operations at the MIT $100K Competition. There's a big connection between the $100K Competition and this class. The class was actually formed to see if we could help people entering the competition have more of an understanding of what a venture was and not what just ideas were. So tomorrow night, Janet and Supriya will present a little bit about the 100K. Hopefully, you'll be interested in it.

Supriya. Yep. 2026 also. Software engineer at Amazon Web Services in gaming. That's good. [LAUGHS] Was a Fulbright-Nehru scholar and co-founded a company there. And she's the Incoming Managing Director of the $100K Competition. So you've probably already been in contact with them on a lot of logistical questions, and they've done a great job so far. If they don't, let me know and I'll-- don't tell me. Tell them. [LAUGHS] OK. And I'll introduce the presenters when they present going forward.

OK. Now, new ventures. I said it wasn't about theory, but I wanted to leave you with three or four things to think about as you're looking at the nuts and bolts of each of the areas we're going to talk about, sort of some things to think about and help you digest it.

So the first one is my basic, very simple concept. Now in entrepreneurship, the questions are really simple. The answers are not. That's the real key, if you know what questions to ask. Finding the answer is hard. But if you do that correctly, you'll be a success.

So what do you need for success? Well, the first thing you do is you have to create value, because if you don't create value, you don't have anything, right? Now, there's a lot behind that like, what kind of value? For whom am I creating the value? How much value do I create? What does it cost me to create that value? How often do people want that value? A lot of things. We're going to talk about all that stuff.

So create value. But if you create value and that's it, you don't have a successful venture, because you've got to capture some of that value so you can do it again. In the for-profit world, that's eventually profit and cash flow. In the not-for-profit world, it can be creating enough interest that you can get other people to give you resources. It's the model that you're going to create that will allow you to capture some value that you create. Real simple. Create value, harvest value. So that's one way to think about the things you're going to look at during the six sessions.

Now, another way to look at it is what I've called the three whys. I've looked at probably several thousand business plans over the years and heard pitches, and I've talked to investors about what they're looking for, and I've talked to founders and other things. And I think it boils down to three basic why questions.

The first is, why this? Why is this idea that you're telling me about worth doing or investing in? Why? Is it the size of the market? Is it a problem worth solving? Amy Smith entered the $100K Competition probably-- I don't know-- 15 years ago. And she was at the Edgerton Center. Amy was big on the developing world, and D-Lab, I think, was part of what she did.

And she got into the finals of the 100K, and she got up on Kresge at the big auditorium. And I remember her pitch. It went like this. She said, 1.9 billion people on the planet don't have access to clean water. I mean, I was clueless. You're kidding me. 1.9 billion people? That's a big problem.

The only way to test for biological contamination is to incubate a sample of water. The only incubators in the market today are powered by electricity. The 1.9 billion people that don't have access to clean water by and large don't have access to electricity. I've got an incubator that doesn't require electricity. Would you like to hear more?

Big problem, right? Now, that's something I can get behind. [LAUGHS] She went on and did a bunch of things. Eventually won a MacArthur Genius Award. I haven't talked to her in several years, so I hope she's all right, but I just-- it was so riveting, her presentation.

So why this? Why is this a big idea? Why is this worth spending your time? Or if you're an investor, why would I put my money behind you? Or if you're trying to get me to come on board and be part of your team, why would I want to join the team? Why this?

The second why, why now? Why is now the right time to do this? Well, sometimes it can be the convergence of opportunity and solution. So one of the contestants in the 100K back in the day had an elegant plan for fixing the defects in the air traffic control system in the United States. I mean, it was really quite well done.

And the judges were there saying, well, that's all fine and good, but you know, [LAUGHS] you can't just fix part of it. You've got to fix the whole system. And they looked at us and they said, well, didn't you know that the FAA has put out a request for a proposal for a new air traffic control system? No. You didn't tell us that.

Well, now we have a timing. Why now? Somebody wants this now, and we've got the solution. If they had had that solution five years before or after the new system was put in place, even though it's a great idea, it may not be the right time to do it. So why this? Why now?

The third why, why this team? Why do we think these people will win? Great idea. Good timing. Why these people? Well, it could be prior experience, although that doesn't always count.

There was a company back in my law days that I represented called Encore Computer. And Encore was founded by the technical founders of Digital Equipment Corporation, Prime Computer, and Data General. The three biggest minicomputer companies at the time got together, and they were going to make a new generation of computers. Prior experience, out of the park amount. Did they succeed? No. A bunch of issues there. But prior experience got them funded.

But if you're a starting entrepreneur and you don't have prior experience, how do you show that this team is right? Well, it be a compelling model you have. It could be the people you attract around you. OK? So why now? Why this? Why now? Why this team?

And then the fourth question that comes up. Why won't this work? Now, salespeople will tell you when the prospect starts asking you a bunch of questions about the limits of the thing you're trying to sell, they know they've got you on a hook, because you're interested. You're trying to test it out.

So this fourth one is if you don't get through the first three, you won't get to the fourth. This is where you've got to start thinking about, what are the risks in what I'm doing, and how do I de-risk it? How do I anticipate things? What's my plan B? So that's another way to think about it. So we had the first concept, create value, capture value. The three why concepts for you to think about as you look at ventures.

Now I'm going to do some lesson learned from things that I actually worked on that would hopefully give you some ideas about how to look at things. And there are four critical components that I've distilled from thinking about all the things I've worked on over the years.

They're ideas. You need all of these components together. You need ideas. You need to be able to execute. You have to get the timing right, and you've got to get the people right. And if you do all of that, that's probably your 10% success right there. And maybe it's bigger. But if you don't get all of those things aligned, you're going to have a hard time. So let's look at it in a little bit more detail.

Ideas. You've got to have something, but ideas are a dime a dozen. That's an expression people use. Around MIT, there are ideas all over the place, everything from genomics to AI to nanotechnology to latest drug-type stuff. They're all over the place.

The question is, is it a valuable idea, or can it be made valuable? And the question is, to whom is this idea valuable? And how much value? This is, again, riffing on that create value concept.

And then finally, is it easily copied? Because if I have a great idea but anyone can do it, that may be still something you want to do. Maybe that's open source stuff. But you can't build a venture around that very well, so you have to have some good ideas.

The second component, execution. Thomas Edison. "Vision without execution is hallucination." Now, Edison, and the modern-day Edison, Dyson, spent-- how many experiments did they run to try to figure out? In Edison's case, it was to trying to find a filament that would work as a light bulb. And eventually, it was bamboo, of all things. And Dyson, I don't know what it is, but he talked about finding the 10,000 ways things didn't happen. But execution on that idea is key.

I'm going to tell you about two deals that I passed on because I had concerns about their execution. The first is ZipCar. People heard of ZipCar? OK. So ZipCar was a concept that, I don't need to own a car. If I want to get from here to there, I want to-- there's a lot of things I can do. I can own a car. I can get a cab. I can rent a car for a day or a week. But what if I could rent a car for an hour or two? That's a fundamental break in how transportation is done.

And they came and they talked. And I said, well, tell me about it. Oh, we're going to have this thing. We're going to have an app, and you can-- you'll see a car in a parking space on 6th Street. You'll swipe it, you'll do this, and then you can do it and take it back, and it's going to work that way.

I said, OK. Well, where are you going to start? Oh, we're going to start in Cambridge. I said, in Cambridge? I said, you clearly don't know the story about recruiting faculty in Cambridge where they say to the faculty, the would-be faculty member, I'm going to give you three things. You can pick one of them. We can give you tenure, we can give you the Nobel Prize, or we can give you parking.

And the smart ones say, I'll take the parking, because if I have parking, I can get to work and I can figure out how to get tenure and the Nobel Prize. Parking is a big deal in Cambridge. And if you've got to do that in every single city, that's a major execution thing. I don't understand how you're going to do it. And I said, I wish you well, but I'm just not going to be on that journey with you.

Now, it turned out they did eventually, I think, go public. It was a hard slog. The founders might have felt good that they changed a fundamental part of transportation, but in terms of their personal economic reward, it wasn't very much at the end of the day. But that's OK if I go back to the questions of, what am I looking for, if that works for you. But it didn't work for me to join them on that journey.

The second one was a precursor to eBay. It wasn't eBay, but the same concept that I saw before eBay. And I listened to them, and I said, OK, let me see if I can boil this down. I'm going to buy something sight unseen from somebody I've never met, and nobody's standing behind the transaction. Boy, that sounds like it could be fraught with fraud. I don't quite figure out how you're going to do it, and so I'm going to pass on it.

Well, eBay itself got going. And there's a great story about PEZ dispensers and all that stuff if you read about it. And eventually, they did have fraud. They did figure out how to get insurance. But the point is, there were a lot of execution things that were very difficult for me to understand, and I didn't think that I could help them on that journey. So that was two examples of execution issues.

Now, MIT, this is right at the heart of MIT. Ideas plus execution. The motto of MIT is "mens et manus." "Mind and hands." So this is not unknown that you need ideas and you need to execute. But those two are not-- they're necessary, but they're not sufficient for success, because you need the other two pieces.

And timing. "I've lost more money and time being ahead of the curve." This is a quote from somebody you know, me. [LAUGHS] Fortunately, I've been able to catch some waves, and I've done all right. I'm not complaining. But I've crashed and burned a lot of the time because I was ahead of the curve in thinking about stuff.

It can take-- this is especially for technology ventures. It can take a long time to be an overnight success. Nvidia, three decades. 3D printing over 25 years. The last night of the course, Marina Hatsopoulos is going to come and talk about some things that she's learned over the years. She was one of the founders of Z Corp, which was one of the first 3D printing companies.

And a couple of years ago, I was at an investment conference, and someone came up and said, you do stuff at MIT. Yeah, yeah, I do. They said, tell me about this new 3D printing. And I said, it's not new. The patents have expired, the original patents.

What has happened is in the last few years, there have been advances in material science, in sensor technology, and in microelectronics that have now made some of this stuff work beyond the simple area of 3D printing so we can do more broader things. The point is, it took a number of years for all the ancillary pieces of technology to come together to really make 3D printing what it is today.

And it's even-- the jury's out whether it's really that successful. There have been-- if you follow the news on this, there have been a lot of strain among some of the 3D printing companies that have gone public.

Another example is Prodigy. I doubt any of you have heard of Prodigy. Anybody? Oh, a couple of historians here. Well, Prodigy was a joint venture. It was one of the first online things. It was a joint venture between CompuServe and Sears and Roebuck.

And one of the things they were going to do was they were going to do on-- you were going to be able to go online and shop. And back then, they didn't have-- the browsers weren't anywhere near what they are today. They spent more than $1 billion trying to get that concept of the ground. And that's when $1 billion was real money. I guess it's still real money. [LAUGHS]

But today, how many people have bought something at Amazon? And don't raise your hand. I know you all have in the last month. That's here today, but it took a long time for that to happen.

The other one-- and this has a double meaning on it-- is fusion. People have been working on fusion for generating electricity for 50-plus years. Now recently, there have been some advances, or at least people investing. There's Commonwealth Fusion here in Massachusetts. Big bucks by people like Bill Gates, et cetera.

One of the problems with something like fusion-- and I call it my fusion problem-- is fusion doesn't work unless all of it works. It's not like 3D printing where you could make a little thing and do a little prototyping with a 3D printer. It either works, or it doesn't.

And if you're going down and looking at a venture that requires all of the pieces to come together, that's a risky proposition. And things like fusion, that's where the government long-term investment should be, to provide the stability to build out those technologies. So timing is important.

And then finally, people. People are the single biggest source of failure in most ventures in my experience. It's a quote from *Alice in Wonderland.* "One day Alice came to a fork in the road and saw a Cheshire cat in a tree. 'Which road do I take?' she asked. 'Where do you want to go?' said the cat. Alice answered, 'I don't know.' And the cat said, 'Well, then it doesn't really matter.'" Right?

And what happens-- let's say we decide that we're going to go watch the New England Patriots play football next week. Well, wait a second. There are a couple problems with that. First of all, they've had a terrible season, and they're not playing next week. So what if we wanted to go see the Celtics, all right? It's a pretty good team. So we agree we're going to go see the Celtics.

And we start off, and we hit a Road Closed sign. In Boston, there are two seasons, winter and construction. And recently, they seem to be the same season. But if we come to that Road Closure sign, we know where we want to go. We'll figure out how to get there. We might have to take a big, long, more expensive way to get there, but as a team, we'll figure it out.

A number of years ago, I had three MIT teams come into my office when I was practicing law, which was great, and they had some great ideas. And the first one came in-- and there were three of them. And the first person, I said, tell me one of your goals. What are your goals for this venture?

The first one said, I want this technology to be a standard in the industry. Oh, that's a pretty good goal. How about you? The next person. Oh, this is really big. I want to grow it and take it public. We can make a lot of money. Well, that's a good idea too.

What about the third person? Well, I think it's important, but I really-- I think we should be a collegial group. And we can make money, but we don't have to grow like gangbusters. I want a more of a-- I don't want to call it lifestyle, but I don't want it to go crazy. [LAUGHS] And I sort of put my pen down. I was writing and I said, did you three just meet in the elevator?

I mean, think about it. The one who wants the technology to be standard might want it to be open source. Give it away. I want it everywhere. The person who wants to go public wouldn't want that to happen unless they can figure out an open source model, right? Because I want to grow something fast and valuable.

And the third person, I don't know where they are. But when they hit their first bump in the road, what do you think's going to happen? And it doesn't matter if you don't know where you're going, all right? So maybe I've overblown it, but it was so stark. I really said, did you just meet in the elevator?

OK. Other people-related issues. This doesn't happen too often, but when venture money-- there's a lot of money chasing deals out there, and there are hot periods of time. AI is part of that now. You may get funded before you really understand what you're doing.

And an example, sort of an analogy example, is suppose your idea was you think people want to watch football. So you assemble a football team, and you buy a stadium, right? And then you go out to start to sell tickets. And what happens? People say, I want to watch basketball. It's cold out there. I don't want to go football.

Now you've got a situation where you've invested all this time and money with-- football players, great athletes, but they don't really play basketball the way that a basketball player would. And now you've got an internal pivot, right? Instead of looking at the customer, you've got this internal conflict like, who's going to get fired? We've got to change the model. I mean, it just starts to disintegrate all over the place.

And then not knowing what you don't know. So E-Ink came out of the Media Lab here at MIT. It was an ability to make a low-cost, at the time, black and white display that would display things electronically. Eventually, it ended up as the original Kindle reader.

And they came in, and they really knew what they were going to do. They were all gung ho. We're going to do this, that, and the other thing. And we listened to them and asked them questions. And we're thinking, I don't know about these guys.

How much do you think you're going to take to get there? Oh, $15 million. That should be more than enough. And I remember saying, I don't see how you're going to do it for less than $80 million, and I was off by $80 million. Eventually, they raised $160 million, and they eventually got it out. But they were so sure they knew everything that they were doing, they didn't know what they didn't know. And again, we didn't want to partner up with people that don't know that they don't know stuff and want to learn about it.

Now, this is a curve graph. You'll see it later this week. In the $100k competition, we bring together people. And after a few years, we realized that some of the teams were having internal problems and blowing up. And typically, there would be a technical founder and then a business founder. And they would try to figure out what they're doing.

And as I listened to all the cases of all the problems they were having, I came up with this graph. And the vertical axis is relative importance and horizontal axis is time. And if I have a technical founder, technical founder whose idea it is, his or her idea, working maybe in the lab, working 60, 70, 80 hours a week, just like crazy.

The business founder at the beginning may be working on another regular job, working on this in the evenings and weekends, trying to figure out the market and all that stuff. But until we have something that works technically, we don't have a business.

And now it comes to have a discussion about how we're going to split up the equity in the company. Where would you put the technical entrepreneur's view of the world at the beginning? Pretty high. What do you think the technical person's going to think about the business person? Pretty low.

Now, how do you build a team around that? What happens over time? The relative importance of the technology goes down. The relative importance of the business side goes up. Whether they cross or not doesn't matter. But when I put this graph together and they realize, you know, it really takes a team to make this work, it began to open up a whole level of discussions about, how do we structure ourselves? How is it going to work? A classic people issue. Happens, of course, with technology companies more than others.

OK. So there's what we're trying to get at. Now, I'm going to give you four actual companies I worked with, and I'm going to talk about how these came together or didn't and what we can learn from them.

The first I'll call SpeechCo. This had all of the four components. It went public. And basically, if you have Siri on your phone, that's where Siri came from. DARPA, the Defense Advanced Research Project Agency, had funded four or five universities across the US to do speech recognition and natural language processing.

So speech recognition was, what words were said? When I say something, what did I say? My accent is different than somebody from Scotland or somebody from the Deep South. So that's sort of a problem. What are those words? Then the question is, what do those words mean? Now this is before we've had the advances in AI that we've had today, but you can see the beginning of it.

So the technical founder came out of Victor Xu's lab here at MIT, and came to me, and we started talking about this concept. And he said, we can do this now in telephony. We can do telephone systems. Sparc workstations have the power. We don't need mainframes. We can make this work.

At the same time, there was a client of mine who had just sold his business to Adobe and was on a one-year earn-out, workout, noncompete-type thing. So I put the two of them together, and the three of us spent that year having endless meetings, Chinese food dinners, talking about, how could this all work? Because the business guy couldn't really work on it yet, because he was still working at Adobe.

By the way, I could usually figure out when a former client, after they sold their business, would be back. I could almost put it on my calendar. A year and a day after the deal closed, they'd be back wanting to do something else.

So we went out, spent all that time planning and thinking about it. They went out, and we raised money from a venture firm. There's a whole history of, if you haven't studied it in the world, of speech recognition, about some fraud that went on that these guys managed to avoid. They went public, and it worked out just fine.

And the reason is the idea was great. The timing was perfect because the compute power was there. The execution, back then, because of the way AI-- we didn't have the power, if you were going to do this, you normally wanted to do it in a domain of knowledge. And so you would learn from how people spoke in that domain.

So they managed to figure out how to do a deal with Eastern Airlines, which was one of the big airplane carriers back in the day. And Eastern thought this was great that they could do online or over phone reservations, but they didn't want to expose their customers to it. So they said, can you do this for our flight crews? So when you're a flight crew on a thing, you need to figure out how to shuttle back to your home, or whatever.

And so they set it up, and the flight crews were the ones that tested the system. And they learned the domain around it and how to deal with it. I need to be in Cleveland on Tuesday. Obviously, they wanted to fly. They weren't going to be renting a car or something like that. So the execution was great, and the people, because of that year they spent getting to know each other, they worked very well together. So that was a success.

The second one is also a success. I'll call it VideoCo, although I'm going to show you the name in a moment. This was somebody out of Sloan, technology out of the Media Lab. It was desktop video editing on the Macintosh computer.

At the time, if you were going to do video editing, the equipment was like $1 million kind of equipment. Usually, you'd go to a video editing studio and you'd spend a day there. And they said, the technology is such now, even though the Mac wasn't the most powerful computer, that we can actually do video editing on a desktop machine.

So the idea was good. The timing was good. The timing was good because the technology was there. The execution had me worried at the beginning. So the name of the company, when they incorporated it, was Macromedia Business Applications Corporation. And in short order, they got a letter from Macromedia, a bigger company, saying, hey, wait a second. That's our name. And trademark infringement. We're going to get you and everything.

And it turned out our guys used the word-- the term before Macromedia did. So Macromedia, the big company, said, well, can we buy out the name? So they said, here's $25,000. All you have to do is change the name of your company. Hey, a good way-- nondilutive equity-- non-equity funding.

So I got the check. All they have to do is file something at the state. Says change the name to anything. And two weeks go by and I'm calling. I said, what's wrong with you guys? [LAUGHS] Just give me any name. I don't care what. They said, well, we found some really cheap space in Cambridge. Why don't you come over and we'll show you what we're doing?

So I go over there, and they have a whiteboard covered with names. And I'm going, oh, god. These guys, they can't pick a name. How are they going to execute on anything? So what they did, eventually, this is the name that they came up with. Digital Video Applications Corp, they shortened it to Diva. Two years later, the largest video editing company acquired them.

The name of that company? Avid. Avid. Here's how avid is spelled. They weren't picking a name. They were picking a strategy. Diva is Avid spelled backwards. It focused everything they did. We went to the closing, and they gave me a t-shirt. They said, I know you didn't think we could execute very well.

They gave me a t-shirt. In the front that said Diva from home, and the back said Avid to Hollywood. [LAUGHS] So an example of a company that I had doubts about on the execution. The people part worked out well.

OK. Now some stories that didn't work out. I'll call this one HIV-Co. This was back when AIDS was just hitting a big epidemic. The two co-founders were the discoverers of the CD4, which is the main receptor as part of the immune system. They got funded by some very big Wall Street people names. You would know if I told you.

They had a science advisory board that included Anthony Fauci that's when I first met him-- and two other-- a couple of other people, but two very notable people at the time. Luc Montagnier from Institut Pasteur and Robert Gallo from the National Institutes of Health. In public, these two had disputes going about who first discovered HIV, enough so that eventually, President Reagan and President Chirac of France had to resolve the issue. But on that science advisory board, they were very collegial, and they got things done.

So what went wrong? Well, it was a people issue. The idea was great. The execution of what they actually decided to do was good. The question is, did they pick the right things? The timing was great. They were in the middle of an AIDS epidemic, and they had some solutions. It was a people issue.

The co-founders had massive problems with each other, turned out. They had never really worked together. It culminated in an all-night in Manhattan where, at the curb of the building, there were four or five stretch limos with drivers waiting for the high, big people on Wall Street that invested in this company. And they spent the evening basically hashing it out, how the company was going to work.

And at one point, one of the big Wall Street guys got up and said, if you guys don't figure this out, you're going to be radioactive, and you're never going to raise a dime from anyone, ever. I mean, it was that big of a moment. They got over it. The company eventually went public, but it had only moderate success. It was people issues on that one.

The final one I'm going to talk about is-- I'll call NanoCo. This was one of the first nanotechnology companies based on quantum chemistry. Concepts came out of some-- here at MIT.

We looked at a variety of different things to do, and the product we were trying to go to market with was called Nano Fuel. We were mixing diesel fuel and water together and running it in unmodified diesel engines. Now, you might say, you can't mix oil and water together. Well, if you figure something out, you can.

You could pour it into an unmodified diesel engine, and you got an emission profile cleaner than natural gas. We were running it in buses at Logan Airport for testing and in new buses, and in Costa Rica.

At the time, if you wanted to get clean transportation, people were talking about compressed natural gas. But the energy density for gas is much less than diesel, and so you need to have whole other new facilities to handle the natural gas you needed to change buses. The routes had to get changed. Our stuff, all you had to do was pour it into the tank.

We had to do some execution issues, including some skunk works, because we had some disputes going on in the lab. The lab people had their head up-- I won't say where. [LAUGHS] The timing was-- and there were some other senior management issues, but the timing was a big thing here.

When we were ready to go to market, the price of diesel fuel was at a 50-year low. It was $0.50 a gallon at the terminal. It wasn't that way when we started out. I did a calculation, and you couldn't even buy a gallon of distilled water for $0.50.

I did a calculation that said, well, if diesel fuel were $2 a gallon, this would be an economically neutral-type thing. It just wasn't going to work at the time. The company went off and did some other things, but eventually it failed.

And every time I get behind a big diesel truck or bus spewing fumes, I get-- it really annoys me that we had the solution, but we couldn't figure out how to bring that venture to market. So hopefully, those are some ideas. This allows me to do one of the cheesiest animations you're going to see. There you go. Success!

OK. All right. So if you get all these things right-- you get the idea right, you get the execution, you get the timing and the people, you're going to have to convey that to people in some fashion. And so I want to spend just a couple of minutes talking about conveying ideas.

One of the top-level things you're going to want to do is come up with a mission statement or a vision, sometimes called the value proposition. Steve Blank out of Stanford came up with this version of it. An example would be one sentence that says, we help X do Y by doing Z, where X is your target audience, Y is the goal or problem that they need solved, and Z is how you do it.

So an example here would be we help people without 3D printers bring their ideas to life by providing 3D printing services and a marketplace for 3D-printed products. I think you can pretty much see what they're about as a business with that statement. OK. So hopefully, by the end of this course if you're actually thinking about a venture, you might be able to do that with something you're working on, or you'll remember this when you're looking at other things.

Now, any vision needs to be supported. This is my famous pyramid. I'm looking at Bob. [LAUGHS] At the top is the mission statement. Below that is the elevator pitch. So each of these sort of leads to the next.

So an elevator pitch is something-- the term came about back in the days when the venture capitalists lived-- and their offices were in high-rise buildings. And you'd get in the elevator, and somebody would turn to you and say, well, tell me what your guys are doing. And you had the time it took that elevator to go up to explain what it is.

And the hope after that is they would say, well, come in and tell me more. Maybe come in or send me something. Do you have something you can send me, an executive summary, something written that could tell me about it? And then maybe if I like that, I'll invite you in to do a pitch to really get into it more.

So the mission statement is-- be a sentence or a paragraph. The elevator pitch, 30 seconds. When the VCs moved to low-rise buildings, it became harder. You had to do it quicker. The elevators were slower, but you still had time.

Executive summary. One, two, three, no more than four pages. And the pitch deck-- this is Guy Kawasaki. 10, 20, 30. 10 slides, no more. Not more than 20 minutes, and 30-point font on the slides.

OK, so all of that is sort of the sizzle. So underneath that, you need to have-- understand all of these other things to support that distillation of what you're doing to the top. And the stuff we're going to go through each night, we're going to talk about all these different things down here to help you support the plan you come up with, the venture idea.

Now if you get the sizzle right but you don't get the support right, you may end up like Thernos, Elizabeth Holmes, sentenced to prison, guilty on four of 11 charges. She promised all this stuff, and underneath it, there was nothing really there.

This was fake it till you make it, which can work in some things, but this is medical devices. This is blood testing. And if you didn't diagnose somebody, people could die. You don't want to end up here. So most of the people here are going to have the substance and have a hard time with the sizzle. But I've got to caution you, sizzle without steak is an empty meal.

So back to our H equals R divided by E. Well, I assumed that reality was a fixed constant, but people like Steve Jobs and maybe Elizabeth Holmes thought you can fake it till you make it, because we can do a reality distortion field. I wouldn't recommend it. Does this make sense?

All right. So some final thoughts. Vinod Khosla, a famous venture capitalist, invested in a company of a friend of mine. And my friend asked him, what advice do you have for us? And Vinod said, "You'll face a dozen real challenges in developing the technology and venture, which is common to most ventures.

Five of these you'll be resourceful enough to figure out from friends, colleagues, et cetera. And five of them you and your team are smart enough." You'll figure those out. My friend said, well, what about the other two? And Vinod said, for those two, you'd "better get darn lucky."

Well, "luck favors the well prepared," and we want you to be prepared. That's the goal in this course, again, to help you be in the part that succeeds if you decide to do a venture. If you look at something and decide it's not for you, that's success also, because you go find another one.

So with that, that's my overview of new ventures. We're going to do a break here. A little early for team building. Around the room, we've put on the walls different interest groups that you identified when you were signing up for the course. I'm going to suggest you go-- if you're interested in that, just go stand there. Meet somebody and see if you have some interest.

And we'll come back in 10 or 15 minutes, and we'll talk about course logistics and finding your customers. We also have a WhatsApp group that our TAs put together where you can actually sign up to a WhatsApp group on one of these interest things.

So we're at about 7:10. Why don't we come back at about 7:25, and we'll do the second-- we'll talk about the course logistics. And then we'll do a-- we'll have Bob come in and talk about customers.