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JOSEPH HADZIMA: OK. One of the things about having the financial sources panel is when it's over, the panel gets inundated with all sorts of great questions and people wanting to connect with them. So I'm sure they're amenable outside of class also.

But now we're going to turn to financial projections, as I said. You've done all this stuff before. We've talked about who's your customer, what's your business model, how to assemble a team, a bunch of legal things. Now you're ready to maybe figure out the resources you need in order to make this venture idea possible.

And so the core part of that is doing some of financial projections. And tonight, Steve Derezinski is going to lead us through financial projections. And even if you have done accounting and all that, you'll learn a lot from this. So Steve, will you take it over?

STEVE DEREZINSKI: Thank you, Joe. Oh my gosh, look at that. It's on. How are you guys doing? Thank you for joining me for Financial Projections in 10-250 on a cold January evening. I'm Steve Derezinski. I am a mechanical engineer by training.

So I bet you thought I was going to be a CFO or an accountant or something. I'm not. I've done a whole bunch of startups. A lot of the stuff these guys were talking about on the panel, I've done a lot of that stuff.

And I went down to Georgia Tech and I formed the first faculty venture studio, launching companies from university research down there. And then I came back up and went to Sloan and got a Sloan fellow degree.

So if it sounds like a roboticist is describing financial projections to you, you're right. It is a roboticist explaining that to you. And if it also sounds like an MBA is explaining it to you, you're right. If it sounds like an accountant, that's not me. I'm parroting Charlie, then, that would be coming from.

So today I'm running Kendall Square Cofoundry, which is forming a bunch of companies out of Kendall Square. And if you look up Georgia Tech Venture Lab, that's gone on to raise about $2 billion and launch a whole bunch of companies out of Georgia Tech University down in Atlanta.

OK, let's get into it. And I think, does everybody know the slides are available on the website as well as the spreadsheets? And I'm sure you're all going to love to dive into the spreadsheets.

Why do you want to have business plan financials? And what is it that VCs want to know? We're going to cover that. And the $100K judges I assume all of you guys are applied for. Or maybe it's already over. I don't even know. Is the $100K over? It's still about to happen? OK, you're going to make it happen.

What is a business model? You'll get my answer of what is a business model. I kind of like that question because it's open for interpretation. And maybe Joe has a specific definition. Building your financial projections, and then finally sharing the pie, which is an equity discussion.

So that's a very interesting conversation, especially as you guys are early in navigating kind of I'm the first founder and I'm bringing in a co-founder, and then I'm bringing in a third key employee. And how do we figure out how to share the pie and what's fair for everybody? A lot of scars by a lot of other founders on that. We'll talk about that at the last.

That's the pie at the end, if you will. And of course, I was exactly feeling this way when I was first starting my first company. I'm too busy to do this financials. Can't we just get an accountant to do it? What's the point? It's going to be wrong.

I don't need this. The VCs don't believe it anyway. It's like, yeah, yeah, it's up and to the right. We know that. Why are you boring me with all this stuff? I have more important things to do, like build a product, deal with the technology, find customers hire people. My team's all in disarray. I got to do all that kind of stuff.

So here's why you need good financial projections. And I have to tell you that this absolutely was me as an engineer. I'm like, ah, that's just the finance stuff. But then I've grown to love it and understand it.

Cash is the oxygen. We used to say cash was like the blood or the food of the venture. It's the oxygen. How long can you go without food? Pretty long time. How long could you go without oxygen? Not very long. So you really need to take care of your cash.

And financials are the scorecard and the roadmap to determine your cash needs. And if you don't have a good plan for that, you're in real trouble. It's also the vehicle to obtain that cash. So if you're talking to any financial advisor or any investor, they're going to want to know that you understand the financials of your business and what it runs-- understanding your business, the assumptions, the drivers, the milestones.

And then, of course, what every bank officer wants to know, which is what is your exposures or risks. So if any of you guys are financially trained, you know that that's how most people think, like, what's the downside?

As entrepreneurs, you're always like, rah, rah, here's the upside. And then you go meet a banker and they talk about what's the downside risk. Actually, I was just having a meeting the other day. And I was like, you guys just talk nothing but depressing things, like where are all the risks? Sure there's risks, but man, look at the upside. Let's rock and roll here.

And of course, the famous quote, failure to plan is planning to fail. So really what you're doing when you're driving into building a financial model is that you're developing this kind of visceral, direct understanding of exactly where your costs lie and what the revenue projections are going to look like.

And you can't AI your way into figuring that out. You have to dive into the spreadsheets and really understand it and flesh it around. And this set of spreadsheets are probably one of the best out there in terms of setting things up to give you that low level depth of where you can tweak things and then how that bubbles up to the high level that you present.

So, excited to show you guys this stuff. And of course, as the startup CEO, your job is to maintain the oxygen supply. So going back to all of that stuff about understanding your business, where your cash burn is, and everything else.

You do need to understand stuff like average selling price, gross margins. Like, I've got a whole team of researchers. What are they costing me? What's the burn on that stuff? And then as soon as I start to sell, what are my what are my marketing and strategy expenses there? And then, of course, that all rolls up to, how much money do I need to raise?

So you just heard a fantastic panel of VCs talk about what they want. But let's get into the numbers now. I think somebody over here asked, how much do you want to take from me? That was the question. What's the valuation of my startup? That's what you were getting at, I could tell.

And this kind of gets into more detail around what they were referring to in terms of having LPs that expect kind of their fund to return. So I think Jon has, what did he say, a $30 million fund he's raising? So the LPs are going to expect, three to five times that at the fund level back.

So when they look at your individual deal, you heard kind of how the power law works. They expect their 3 to 5x absolute return to blossom up into a gigantic return if they're going to make an investment across the board, given that they know-- they don't know. I mean, they expect a full return from every one of you, but they know that a bunch aren't going to work out because there's unknown risks.

So it becomes tricky from the VC side of things how to manage that, and then what that means for you guys in terms of what they're expecting. Also I thought that was a great comment that Jon made about not every deal is VC fundable. So it's like, if you're only going to grow a million bucks a year, it could be a fantastic business for you to run, but it's not really VC investable because the slope isn't high enough. The IRR isn't high enough.

So 4x in five years is an IRR of 32%. So that can just show you what the slope of the curve is on your financials. So they want to get a significant amount of the money they invest, at least $5 to $10 million, and own a significant ownership.

The formula is simply, if you don't know this already, the dollars invested-- so if I raise $1 million and my pre-money valuation was $4 million, then they get 1/5-- 1 over 4 plus 5. That's the percentage that they own.

And the argument in the discussion is the pre-money valuation that they were talking about and how you want to make sure you set that correctly. I thought that was a very interesting discussion about if you fly too close to the sun early on, then it's really hard to settle in. That was great insight.

And obviously, after you raise $1 million, if your pre-money was 4, your post-money valuation is now 5. Simple, simple math. I really like simple math. It kind of makes it all set. OK, so let's run through an example.

And this doesn't have pre-seed and seed on it. It just jumps right into series A. So $5 million on a $5 million pre, investor owns 50%. $10 million on a $15 million pre, investor owns 40% of the company at that point, in addition to the previous amount.

But the original one is diluted by 40%. So you see how that works, right? Once I've got-- well, you'll see a full spreadsheet in a second here. So the VC has invested $15 million. They own 70% of the business at that point. And in order to target the 3 to 5x return, that $15 million has to either turn into $60 million or $90 million.

So that portion, that 70% they own, means that the company has to be sold for at least $85 to $30 million, which also means, given that the type of company that it is, your revenues need to be between $40 and $60 million. So I just went through all that stuff. Hopefully you followed all along.

But I think the most important point about this slide is that you've raised $15 million, but you need to make sure your revenues are at least $40 to $60 million and growing from there in order for this to be a successful deal.

So a lot of times people focus on the press release of, hey, we raised $5 million. Isn't that great? I always think, well, if you raise 0, the bar is here. If I raise $1 million, the bar is here. If I raise $5 million-- so the bar continues to go up rapidly the more money you raise.

So when these guys have raised $15 million in this example, it's got to be at least $40 to $60 million in revenue ir order for this to be worthwhile. So just keep that in mind as you look to figure out the financials of your business and what is the right amount of funding to take in. It's a tough balance.

OK. So have you ever heard the phrase, prepare a standard set of financials? Do we have any accountants in here, anybody who's taking bookkeeping, CPA class, none of that? OK, all right. Good.

A standard set of financials is a balance sheet, an income statement, and a statement of cash flows. And keep in mind you're learning this from an engineer. So an income statement is probably what you all know. It's also known as a profit and loss. You show your revenues, you take the cost of goods sold off, and you show your profit margin.

That's kind of what we all know about a business, right? You're selling stuff. It costs a certain amount of money to sell it. You make a profit. Done, right? That's it. We're done. No, that's only the income statement.

The balance sheet shows the assets-- which cash is an asset, of course-- but all the rest of that, maybe you have some patents or maybe you own some piece of equipment or something that's going to go on the balance sheet. And then liabilities, if you have some debts or things.

And then the cash flow is probably the least popular financial statement of all of them. Some accountants love them. But it's kind of like a-- I don't know if you guys are into LIFO or FIFO cashes. It's like, money comes in and then the level goes up and down and money goes out.

I've got an image here in a second. It'll hopefully-- well, I think it's next. Oh, here you go. So since I'm a visual guy, you've got your profit and loss on the left, which is what you would expect. I think that's supposed to say revenue on the top, by the way. Revenue minus expenses, profit and loss.

But then you bring your profit over into the balance sheet side of things. That changes one of the assets that's cash. And then you see on the cash flow statement the kind of deposits and payments that actually impact the assets as well on the balance sheet.

So there's a lot more visualizations of financial sheets that I like to look at. But we'll go through them in more detail. Any questions so far? Clear as mud, as my grandfather used to say? No? OK.

All right. So let's just look at a generic technology company, sales of $50 $50 what? $50 million? $50,000? Doesn't matter, it's $50. Cost of goods sold, $20. And you'll notice these percentages on the side. That's a really good way to compare different business models and compare how you're performing year over year.

It's hard to remember absolute numbers sometimes, but a lot of boards and a lot of operating business units operate on measuring percentages of things as you go through. And it's typically percentages of revenue.

Sales and marketing expenses, R&D expenses, 10% of revenue. So that tells you a little bit something about the business. And then G&A-- which I love-- G&A here is shown as rent, accounting, HR, and IT. I mean, let's be honest, it's management, OK? All right. Anyways, it's supposed to be a joke. All right.

OK, so here's an example of a four-year income statement. And this is what investors will look at. They'll just say, OK, what's the top line revenue number? What's the percentage after four years now? This is not like immediately. This is like, what can the business turn into and how does that look percentage wise?

And then what's your operating profit? How much money are you going to make? That's what investors will look at. After four years 23%, that seems like a reasonable business. And then how does the actual revenue ramp up?

And then, of course, the overall gross margin is important too, because we all know that you can drive the expenses, the engineering expenses, the marketing expenses and sales. You can squeeze those a little bit if you want more profit margin in the business. But it's really hard to increase the gross margin, because that's usually baked into the product.

OK, what you should look at, same thing-- revenue, percentages. But then year one-- because as a startup entrepreneur, you need to believe that you're going to be able to get going, right? You're going to be able to start selling from zero to one product. That's a big leap, getting that first customer, that second customer.

And you want to know what your burn rate is. How much is that going to cost me? So in this example, we're making $1.27 million in the first year, but we spent $3.3 million. Some would say that's a terrible business.

If you just have that one year, it does look like a terrible business. But because you're showing this projection and you're showing the growth and there's an investment in a growth curve, then you can show what a promising business it could be.

So the reason why you look at year one and year two is because in this example, I've burned $3.3 million in cash, and then I've burned another $2.6 million in cash after the second year. So that means I better have about $6 million in the bank before I even get started on this thing. Otherwise, I'm going to be down to 0 very soon. And then I see I get to break even, and then I can grow the business from there on.

I usually like to graph the revenues and the profit so you can visually see what it looks like. And I think I have a chart here in a second that shows that. Lots of businesses have key performance indicators. They're typically things that are measured by the operating team or the business units, not necessarily posted in the financials.

But they can be really good metrics, like churn rate. Especially for a SaaS business, like are you retaining a lot of customers? Are they leaving? You've brought them in. Are they going to leave after a month? They're going to try the trial and then be gone.

And that kind comes into the committed monthly recurring revenue and the customer acquisition cost and the customer lifetime value. And then there's others that do customer lifetime value to customer acquisition costs. You can think about that as an investment vehicle.

Like if it costs me a certain amount of money to acquire a new customer and then they have a lifetime value, you can really start to play with ratios to figure out how you can inject more capital into that.

And a lot of investors like to see those kind of metrics because they can say, oh, OK, you get to this point. I can see how raising more capital is just going to make this business more valuable by pumping it into marketing, basically. The customer acquisition cost is a marketing expense. And then nonprofits-- I guess that's for Charlie. Thanks, Charlie.

Business model. Any questions so far, while I take a drink of caffeine? All right. So my favorite thing about the word business model is a lot of times if you're talking to investors-- and maybe if you're a technologist and you're talking about your technology, and the investor, you're explaining to them how the technology works. And you can see the glaze over their eyes.

And they finally wake up and they go, what's your business model? It's kind of like a fantastic generic question to ask that's always relevant. And you can always go into more detail on it. I mean, this is going off topic of financials, but usually to me, that indicates that they don't know what the heck I'm talking about and they really just want to cut to the chase.

Who are your customers? What's the product you're selling? And how much are you selling it for? And are you going to make money on it? That's kind of the guts of what they're trying to ask in that question.

And the other question that you get often is like, who's your customer? I understand you're going on about this technology thing, and that it's this new robot that's going to take over the world. But who's your customer? Who are you to sell this to? Great questions, but a lot of times it comes at interesting times.

Provides a superstructure of the financial plan and a blueprint of how your business will make money documented by the income statement. OK, so we went through the income statement, also known as profit and loss statement. Pretty simple stuff. But let's look at a two-- I want to just do two quick examples.

And I love these slides, because they're old school networking equipment company and Dell, like salt of the earth businesses-- actually tech hardware companies. Everything is normalized to the revenue, and you have the cost of goods sold, gross margin, R&D as a percentage of revenue.

So if you look here, you'll see Dell has a 1% R&D, which kind of tells me that they don't really invest a lot in R&D, and they're really just about pumping out the machines, as opposed to Cisco that has 13% R&D. So they really want to make sure they're on the cutting edge and they're investing more into their technology business. And they're trying to innovate ahead of the rest of the world.

And you can also see that from the operating profit. Dell has a very low operating profit. But in terms of annual revenue and revenue per employee, Dell is a lot higher than the other guys. So just different businesses, both in the technology hardware space. But it's a good way to compare them. I'm not comparing the absolute values. I'm just comparing the percentage numbers.

So let's look at software. And of course, Microsoft, Oracle and SAP are the software entities. And you can almost look at the software business model versus the hardware business model, because all of these guys have a lot higher R&D and a lot higher sales and G&A.

I guess these guys have pretty high sales and general administration-- SG&A expenses. Just shows you that there's more investment in R&D on a lot of these guys. And then the overall margins are higher, which you would expect from a software business. Questions on that? No? All good? Everyone gets it?

So if you're building your own financial model, what is your product or service? You want to figure out what the price is that it's going to be paid. How do you manufacture it? What is the unit cost of manufacture? And overhead to support that.

Distribution or sales strategy-- how are you-- are you going to sell it through partners? Are you going to sell it on your own? Are you going to hire salespeople to sell? And of course, just general guidelines, R&D should end up around 10% to 20% and G&A should end up around 5% to 15%.

But that's after four years. So you saw how in the early days, it was kind of weird with all of those losses. It's really hard to do percentages in those days when you're scaling up and you're spending money on a lot of things. And then a targeted operating profit of 15% to 20%.

So this is kind of focused on a product business. How do you sell your business? Are you using direct sales force or are you going through a distributor? So if you look at the way that the financials are built here if you're going direct, it's $100, but then you pay a commission to a sales agent. Or you go to a distributor and they already take $20 off the top.

So you end up booking revenue of $80 and then your sales and marketing expense is that much reduced. So you can see how the financials change a little bit one to the other. And it's kind of that high-level decision that you've made about how am I going to sell this.

And typically it's a function of the business that you're in, like everybody sells it through distributors, so I'm just going to sell through distributors like everybody else. Or do I have something that's so special that I need to have an individual explain to every one of the customers early on how it all works? And newsflash, that's probably you, the founders who are going to be the first salespeople.

OK. Yeah, so the distributor receives it. Yeah, you got that already. OK. I have never used any business planning software because I think-- and I don't recommend anyone use it.

What I said early on stands, which is that you really need to understand from a visceral perspective how all those numbers bubble up into the financials. So digging into the spreadsheets and really working with them to show exactly what your business can do and being able to defend them is really, really important. And you can't get that from a business plan software. Has anyone used any AIs to solve any financials? Has anyone? Have you?

AUDIENCE: Yeah.

STEVE DEREZINSKI: Which one? Just ChatGPT?.

AUDIENCE: Yeah mostly, now that it has a feature to read an input into an Excel sheet.

STEVE DEREZINSKI: Ah. So early on, ChatGPT was terrible. It was hallucinating. I mean, I knew-- thank you for admitting it. I'm sure everyone else has or they're all going to now that you said it.

I'm sure like early on, ChatGPT was terrible at numbers. It was like, how many R's are in strawberry? Two. It was just terrible. But now I think as it evolves more and quickly evolves, I think there's some legitimate things you can ask like, here's my business.

What key performance indicators should I use to measure this business? Stuff like that you could interact with an AI on and get some ideas from. I'm not so sure you can have it actually build out a spreadsheet for you. Did you do that? Did you try and have it--

AUDIENCE: I more just gave it to the sheet and asked it some questions and then asked it to modify things.

STEVE DEREZINSKI: Did it work? OK, all right. I like the text interaction where you're talking about strategy. Like, here's my business. I want to sell products. What should my key performance indicators be? And have it give you the arguments for a lot of things.

And then manually go-- sorry, maybe I'm old school. I want to actually enter stuff in the cells. Does everybody have a copy of the spreadsheet that's on the Nuts and Bolts website? I mean, if you don't, you can download it right now. Great. We're going to go into the details on those in a second.

So you have to build the sales projections from the bottom up, like selling to one person, selling to two people, and then build it up from there. Not the like, well, there's 6 billion people on the planet and we're going to get 1% of them.

That being said, it's important to know your market. So it's important to know that you're not projecting-- if you build it from the bottom up and all of a sudden you're at 300% of the global market, there is some reality check on that. So you want to understand and build your financial projections from the bottom up.

But you also want to know what percentage market you are projecting to own at some point. So I just want to put that in there. How will you sell? That's usually the hardest question for any early stage startup, because you guys are thinking about product and technology and cool stuff, like how are you actually going to get to the market?

Talk to salespeople. Talk to customers. That's crazy. And how long does it take? And how much can you sell per month? And then, of course, what are all your costs associated with doing all the selling?

Some people like to put in the financial growth projection what the best-case scenario and what the worst-case scenario is. The point of these financials is to explain to the investors what your business can do.

And I think you heard from some of these guys, like, what we want to hear from founders is conviction. So if you have, like, this is what our business can do and it's one value, that's kind of showing, this is what we're going to do. If you show, well, the best case it's going to be this. In the worst case, it's going to be that.

That's what they do. They take your conviction and they say, well, OK, let's talk about it internally. And maybe it could be better than that or maybe it can worse than that. What do we think about that? So we don't recommend putting in best case, worst case into a pitch deck.

These are Charlie's rules of thumb, which I like. It's focused on making it attractive to investors, but it's important not to push it too far. So if you have projections and they just don't look attractive to investors, don't try and force fit them, because you're just going to waste everybody's time. Eventually they're going to figure it out and be like, well, this is not a very good business, even though it looks like it.

All this stuff is that it's more relevant for technology companies, which is why we're here. And some of the numbers that we're going to show you may not apply to your industry. I mentioned the revenue too high. Like, as long as you measure it relative to the overall market size, you can correct that, and that the profit margin is too high in year four.

Typically, that comes because you just keep assuming that your expenses aren't going to grow, but your sales are going to grow. And you forget to realize that there are probably legal expenses and other things that pop up as your business gets bigger. OK.

Staffing typically drives departmental expenses. That's usually your biggest expense in any kind of organization. So this is a little bit old. I think your average employee salary is a little bit over $90,000 these days.

Employee benefits, rule of thumb is to just use 15%. Earlier today, I was talking about fringe benefits and other things. You can get more precise if you need to. But if you're at early stages, you can just use these kind of numbers. Excuse me. It'll be roughly 67% of your total expenses. All these things, you can just read these things. Sales staff, good stuff. OK.

Sales projections of $50 to $100 million in year five. Revenue per employee of $150,000 to $300,000 and per salesperson of $1 million to $3 million. Good rules of thumb to keep in mind. And you should have these from the slides.

Happiness is positive cash flow, or at least knowing that you're managing your cash. It's always good to have positive cash flow. But knowing when you're going to run out of cash and how you're going to raise more cash at the right time, that's really the best thing. Yes, sir.

AUDIENCE: Yeah, quick question. So how do we usually, as a company, determine all the values [INAUDIBLE]? For example, how much are you going to pay for each engineer per year, and then how much you're going to sell for every single target year?

AUDIENCE: Can you repeat the question?

STEVE DEREZINSKI: Yeah, so the question is, how do you figure out how much we're going to pay our engineers?

AUDIENCE: How do we determine that value? How we determine that. How do you decide that salary?

STEVE DEREZINSKI: How do you decide the salary? Oh, well, I mean, I'm sure you've seen the ad that it's competitive, right? I mean, it's up to the marketplace. So depending on what you're trying to hire for, you publish a lot of that stuff.

And you can just go out and look and find other job positions with a similar title or similar position and similar seniority. And you can find a whole series of salaries there. I think there's a lot of salary-- salary.com I think is one of the websites that publish a lot of stuff. Is that your company? Was I just promoting it?

AUDIENCE: [INAUDIBLE]

STEVE DEREZINSKI: Got it. So you want to understand your burn rate-- which is obviously monthly operating loss plus capital expenditures-- and do your cash flow projection so you understand when that's going to happen.

There is another factor called depreciation, which is an accounting function, which is if you have a piece of capital equipment, there's an amount that it goes down in value, which is totally a tax thing. And it doesn't impact cash, so you don't have to worry about it for purposes of this stuff. But your tax accountant will have to worry about it.

And this is how you pull it all together in order to figure out your total cash required in order to maintain your cash flow balance and maintain positive cash at all times. So one of the biggest questions we get is, how do you know how much to pay yourself?

I'm a founder of this company. I've raised capital. Hey, great. I raised $5 million. I want $1 million a year, right? Like I want $5 million a year. After a year, I'm out. That's not going to work.

But I really like this phrase of they don't want you to starve, but they want you to be hungry. And I think the best way to do it, minimum viable salary is really the right phrasing. Like, enough so you're not distracted by your bills, and so maybe your significant other is happy with what you're doing every day, like everything's taken care of at home. Everybody's happy at home.

But the equity is where the big payoff is. So if you do a comparison, if you go out into industry and you have a big salary and a teeny little slice of equity, and then this opportunity to work at a startup company where your salary comes down a certain amount, but your equity goes up a tremendous amount, the salary should come down. But it shouldn't come down to a ridiculous amount.

There's a lot of founders I know who just-- maybe they just enjoy starving. I don't know. Maybe they just find an extra adrenaline rush or something by doing that. But when you're talking to VCs, I think this is a really important piece. Don't be greedy, but also make sure that you're comfortable so that you can focus on the business. Because that's really the whole point of all this. OK, questions at this time? Yes.

AUDIENCE: One of the slides that you showed are examples that you use for bigger companies, [INAUDIBLE] VCs. But for startups, let's say, under $1 million or under $5 million, how do you allocate? So here we saw the 10% for R&D, 10% to 20% for marketing. But in reality, when it's a smaller company, what kind of metrics or numbers should be considered?

STEVE DEREZINSKI: So the reason why I wanted to show you those bigger companies is to just show you the percentages as how it compares to your projections after four years. So presumably, your small company, after four years, after raising $15 million, is not that small anymore. So it shouldn't necessarily be as gigantic as some of those big ones, but the ratios should be comparable. So that was the point of showing a tech hardware company versus a software company. Other questions? Joe has a question? Oh, I'm in trouble now.

JOSEPH HADZIMA: Just a comment. The point is, if you have a business model and you're saying you're going to do this, and your numbers are totally different than other companies that have been successful, people are going to say you don't know what you're talking about.

Unless you have an innovative business model that explains, we're not going to buy cars and run a taxi thing. We're going to orchestrate people using their cars. And that's Uber. So totally different economics than a taxicab company. So if your numbers are different, then understand why and be able to explain it.

STEVE DEREZINSKI: Thank you, Joe. Excellent point. Other questions or excellent comments? Yes, sir.

AUDIENCE: The details are very, very interesting. But to back off and look at the big picture, when you're talking about models, how do you like the model-- at biggest level, a black box. Input, you put a dollar. Output, what do you want? How about a $5, $10, or $20 bill?

Does that set the stage for-- at any year of operation, the big picture, you want whatever money goes in you'd like-- in the ideal world, wouldn't you like it to be generating in the black from day one, if you could? It's hard to get to, but if you could, wouldn't that be nice?

And so again, it's a simple model, black box, input for every dollar in, what's the output? And pick a number and use currency. A $1 bill, a $2 bill, $5, $10, or $20. If you can go for a goal of $20 and you make $10, well, that's 10 times on your money. What's bad about that?

STEVE DEREZINSKI: So I think there's two things there. One is thinking about it as an investor. So you're putting money in as an equity, in the black box, and you expect $1 coming in and $20 coming out. But there's the other aspect of it, which is just the operating business.

I might put a dollar into marketing and I might expect, like $1.10 to come out kind of thing-- $1.10 of profit margin. And if I can figure that out, then I know that I can just keep adding more money in and continue to grow it.

And then that operating business makes the overall equity portion a lot more valuable. So I think it's kind of two boxes there. But one is operating and one is investment. Yeah. Other questions? Yes.

AUDIENCE: Yeah. We talked about-- I asked the question of what kind of return was expected from venture capitalists or investors in general. What is the timeline for that? Could you talk about that?

STEVE DEREZINSKI: If you look at a 10-year fund life cycle, at first there's a J-curve return. So the first three to five years they make investments. And they exit a lot of investments. So they show a big loss.

And then after about five years is when the returns come in. So if you're one of the successful ones, they'll put money in the early phase. So it's about three to five years that they would expect some kind of return on your investment.

I saw a very interesting data that I'd love to share with you, because everybody's focused on pre-money valuation as absolute numbers. But the guys from Carta posted some numbers that said, basically every round of capital, you give up 20%. Like, in good years, it might be 17%. In bad years, it might be like 30%. But roughly it's 20% every single time.

Which is kind of weird, because you think about, well, if I want my company to be worth more, does that mean I just raise more cash? And the answer is, yes, if you can. I mean, if people will put more money in it, it should be worth more.

Which, it doesn't make a lot of sense from the current math. But if you think about it more, it's like, if I can reduce risk, I can add value. And one easy way to reduce risk is to just have more cash. So it almost should be worth more.

I like to talk about these things with you guys because it really makes your head scratch. What do you mean? There's pre-money valuation and post-money valuation. That's all there is, Steve. You can't talk about these crazy things. Does that answer your question or does that confuse you more? Sorry. OK.

AUDIENCE: Yeah, thank you.

STEVE DEREZINSKI: Yeah, sure. One more question. Yes, sir.

AUDIENCE: Thanks so much for showing all the different business models and all the ratios of this business. So I've learned a lot. And then my first question is, can I see some suggestions on how do we determine or how do we figure out what is the best ratio for our own company?

And the second question is, it's always good to keep the maximum quantity of income. So if you have that money, you can also spend it for some other or future funds. So the second question would be around, what amount of the cash will be good enough to keep it positive?

If you exceed that threshold, you can split it out if you need, to either R&D or some other thing to make the business grow. So what would be a good balance? How do you determine [INAUDIBLE] as well?

STEVE DEREZINSKI: So there's two questions there. Maybe I'll answer the second question first. How do you do budgets and how do you figure out where to spend your money the most wisely? Is that basically what you're getting at?

So these financial projections will help you figure that out. So as you get into the financial projections, you'll see where the biggest bang for your-- you should see where. You may not see it tonight, but you should see where the biggest bang for your buck is.

So a lot of times in SaaS businesses-- Software as a Service business-- it's in injecting money into customer acquisition costs. That is often-- not always, but that is often the place where you'll see the biggest bang for your buck and where you should spend any excess capital you have, because that will make the business grow more.

It sounded to me like you were thinking that you could have a party or something with your excess money. I'm not sure. I mean, certainly, employee morale is an important aspect of startups. I mean, there's elements of that too.

I should also say, I mean, early in my career when I had some venture capital financing, we had monthly board meetings. And there was a limit on what the CEO-- like, there's a $5,000 limit on what I could spend.

If I had to buy a $10,000 piece of equipment, I to go to the board and get approval for it. So it's not like, here's a check for $4 million. Go have fun, right? I mean, there are controls on all this stuff that happen.

But I mean, hopefully you have decent financial projections and you know exactly what your spend is going to be. Especially with that negative $3.3 million in the first year, negative $2.6 million in the second year, you kind of know where the money is going to go. It's going to go into people's salary mostly. All right? Good?

OK, so now is the fun time. So I realize that it's getting late, but this is the time that you really want to open up your spreadsheets and get into it, right? It's not time to crack a beer open and watch football.

This is from the spreadsheets that are available. And the way that they're set up is very handy and helpful. And I like to start with the end in mind, which this is the four-year profit and loss statement that comes as a result of what we're about to go through.

So I'm showing you the end result. This is what you show investors. And this shows you the negative $4 million, negative $2 million in the first and second year, and then the growth after the third year. But I want you to pay attention to the instructions on the bottom.

A red cell is input. So that's something that you have to enter into the spreadsheet. Magenta is sent off to another spreadsheet, black is calculated, and blue is brought in from another spreadsheet. So what should be shown on here is all blue.

So this is the roll up of all of the other tabs that are in that spreadsheet. So you don't have to do anything to this spreadsheet because it's from this particular tab. And as I mentioned, I like visuals a lot better, because this shows me that, OK, well, after the second year, this company turns a profit.

You can tell just visually. And if I add the two numbers underneath the curve or if I want to do an integral under the curve, I can tell exactly how much it's going to need before I turn a profit, which I think we know from the first one is about $6 million. But you better raise about $10 million, so have some oops money in there.

And then I can see the slope of the red line, which is kind of a rough estimate of what the IRR is going to be on the revenue side of things. So it gives me an idea of the growth rate of the company.

AUDIENCE: So this is what you suggest, to put up this statement?

STEVE DEREZINSKI: I like it, but I'm an engineer. So it's a visual--

AUDIENCE: [INAUDIBLE]

STEVE DEREZINSKI: I like this. I think VCs like it too. It's just a quick and easy way to see what you're doing. So the real challenge is, just about every single pitch deck has this. That's the downside of this. Because when you show it, it's like OK, up and to the right, that's what all of the pitches have.

How is yours different? It's in the explaining and the describing of the actual business details is where you establish credibility with your investors and where you really start to develop a true understanding of how your business is going to grow and run.

So this is it in the quarterly. But it's still blue. So we don't have to touch anything on this tab. And now we go into the sales plan, which is a separate tab in there. You have to decide how your selling is going to grow.

So you see up there we've got 20 in model 1 of whatever the product is we're selling. And this is stuff that you're just projecting. You're saying, this is how many we're going to sell. And then what is the cost? What is the sales price? So all those red cells you have to enter in.

But then it automatically rolls up into the product revenue. And then down further below, you see the supported base retention. That is how many people are buying support contracts from us and then how many are retaining them year over year.

So you'll see a support revenue basis. And then some of that falls off after a year because people don't renew their support contract. So those are the only things you have to put on here. So you can use this to do your own sales projections.

But I want you to keep in mind the-- and everybody does this super aggressively. Oh, we'll sell 100. We'll sell 10,000. The next one is, how are you going to hire salespeople to do that? And how are you going to hire-- sorry, this is the manufacturing. How are you going to hire the manufacturing to actually make the stuff? You need a VP of manufacturing. You need a supervisor.

So all of these people in red are hires that you have to make. And this goes into the financial model. What also goes into this is, if you have a hiring plan of all of these people, you need to have a pipeline of resumes, and you need to have an interviewing process and everything else, which goes into an overhead category that I think is coming up later into another one.

And then you have variable cost of goods sold. So early on in another spreadsheet you said, OK, we're going to sell this model for $10,000 and it's going to cost us $1,500 to make. So somehow you had to figure that out and it has to go into the model. But then the rest of it rolls up into the overall production COGS.

And then you have a facility. So you have a $15,000 per quarter facility, which is pretty cheap. And then I guess in the second year, we buy a second facility, so it's $30,000. And then all of the magenta stuff goes on to another sheet that rolls up.

And then other than the sales hiring plan, you have a staffing plan, where you have your CTO and your engineering team. And then this is the growth. And this is obviously a very heavy programmer business because you can see how many programmers we have in here. And so all the red there is input.

And then we have a rough annual salary. And then I wanted to point out the benefits slash cost of living adjustment percentage on there. So that's all baked into the model. So as I'm describing this all to you-- when you go through this-- and I don't think there's any shortcuts. I mean, I think ChatGPT can help, but there's no shortcuts.

When you go through this and you understand-- I need to hire this person, I need to hire these people, this is what their salary is going to be, this is what the growth rate is going to be. Then when you're in deep due diligence and somebody asks you a hard question about, well, what happens if the sales don't materialize as you projected them to be?

You can think about the work that you did on this model and say, well, we would push out these hires and we would push out the production side of things. And we could adjust the model so that we can get to break even sooner or we can get to profitability more effectively. You can't really say that intuitively with credibility, unless you've dug into this whole thing and built it from the bottom up, as we say.

Some other supplies, non-salary expenses. I see literature PR here, which is just marketing and going to trade shows. There's not a lot of hiring stuff. So if you're in a software firm, you're probably going to spend a lot of time reviewing resumes and talking to hiring firms. So that would go in this sheet as well.

Salaries-- oh, I guess staffing plan is one of the inputs to hiring people. And then your rent. I always love telephone and internet. I don't know why. Telephone and fax machine seems to stay forever with the accounting firms. They always have that as a line. But like, who has a telephone anymore? Who has a fax line anymore? So anyways, that all rolls up again to your profit and loss quarterly statement here.

And so that kind of gets back to the beginning where we started from. So we went through all of those sheets and we put in all the values that we wanted to get to in order to create this profit and loss statement. And then what comes out of it is CapEx and cash flow.

So the way to read this is-- you see where it says beginning cash flow? I kind of need a-- do I have a laser pointer on here? I hate to do it, but I'm going to do it. I'm going to do it.

So beginning cash flow-- this is how not to do a presentation. This is for OCW, right? Put my back to the audience and point at the screen. OK, beginning cash flow 0. I add $5 million investment, and then I spend a bunch of money, and I end up with $4 million. That $4 million pops up into the next year as my beginning cash. And then I subtract out a bunch of money and I get an ending cash.

So you can see how this becomes like a little doot doot doot doot doot. So because you do this, you know that if I've got $5 million here, well, I'm going to need to raise some more money. And I'm only down to less than a million bucks here. I better raise $12 million here.

So as long as your projections show that the things are working out well, you can raise the $12 million here. And that's what I was trying to show with the graphic of how a cash flow works. It is intuitive when I show it to you that way. But a lot of people just leave it off.

It's like, can we just look at your balance sheet and your income statement? I don't care about cash flow. It does help a lot of accountants understand where the ebb and flow is in the business, and if you get into trouble in certain areas, whether or not you're going to need to buffer it up with some kind of interim cash needs and stuff.

So I don't completely ignore it. But you might find that in your conversations, they just want to see the income statement. Just show me the income statement, which is kind of what we show here. So yeah, this is the end result.

Steady, consistent evolutionary model. So when you present the model during due diligence to an investor and then they ask questions and they kind of beat it up a little bit, or you ask your friends and they beat it up a little bit, it's good to continually iterate on it to really get a solid feel for where the limitations are.

Usually at this stage, there's no tax consequences or there's no tax consideration. That's more of an advanced topic. And especially when you're losing money every year, you don't need to worry about tax. And I don't allocate G&A expenses at this point. Was there a question? No? OK.

All right, so presentation suggestions for an executive summary, annual P&L for five years that shows the percentage, so they can kind of do-- so I think the other point about business models and comparisons is that one thing you heard from the VC panel is that there are pattern matchers.

So if they see, like, oh, your ratios look like this model that I know-- this successful business that I know-- then you fit in that category and they're more likely to lean in and look at the next phase of things.

You do want to have-- any kind of assumptions you make, you do want to have data and sources behind that. So you want to make sure that the average selling price, you have some level of precedent for why you're pricing things the way they are, what quarter you'll be profitable, and then your total cash requirement. So I think in this one it was $6 million. I always like to raise a little more than that.

And then the full business plan-- which, I don't know if people do full business plans anymore-- annual P&L, quarterly P&L for all four years, staffing plan, and quarterly cash flows. And this is when-- if the investment firm, if it's a large VC firm, they're going to have a CFO.

And they might dig in really deeply into this and push you on your staffing plan and why are you-- and push you on the tight parts of the cash flow and why things are the way they are.

And if you get big enough into the series A and series B, you bring your CFO to those conversations. So you have a finance professional on the team, and you can start to get into more of these sophisticated discussions. Questions? Questions on the financial plan? Otherwise, we'll get into equity and how to share the pie. Yes, ma'am.

AUDIENCE: I'm coming from [INAUDIBLE] corporate, working over there. For any initiatives, the only thing I needed to give to get money was NPV. Business case, if I have net present value is positive. So that was my only job.

So when I wanted to make a [INAUDIBLE], that was the way I thought about it. Hey, let's show that your value will be positive-- hopefully very positive. So is that enough? Is it necessary? [INAUDIBLE]?

STEVE DEREZINSKI: I mean, net positive value creation is the kernel of what you're trying to get at. What we're showing you with the full financial plan is, you need an infrastructure. You need overhead. You need rent. You need manufacturing. You need a hiring plan. You need a marketing plan.

So in a corporation, if you're a single business unit, you want to show that my product has net present-- has positive cash flow. But what's ignored is all the overhead around it. Here we're showing the whole thing.

But I think if you start with that as the kernel and you build up from there, I think that's not a bad way to look at things. Because if that's not net present value, then work on another business.

AUDIENCE: All the overhead, everything I was just putting people, marketing-- everything for me was people, putting the average salary for everyone, including overhead for the company. So I was just simplifying. I was like, [INAUDIBLE]. So does it make sense to go with that? Because that is where I very [INAUDIBLE]. I have done it a million times.

STEVE DEREZINSKI: I think when you're first starting, that's probably fine. But as you start to get into where people are going to really give you real money and they want you to really spend it on-- they don't want you to spend it on an average person. They want you to spend it on a real hire.

So that's when you have to get really more granular and more specific on it. So I think it can work out when you're just trying to flesh out business models and strategies-- to just kind of say, well, an average salary is this, and I'm going to need like five people to do that after three years.

That's a good way to back-of-the-napkin sketch things out. But what we're talking about here is, we're going to raise capital and we're going to actually spend all this money. So these are the real salaries of people.

AUDIENCE: Thank you.

STEVE DEREZINSKI: Yep. Other questions? Otherwise, we can go into equity. Oh, ChatGPT over here has a question. Prove you're not an AI.

AUDIENCE: They can do captchas now, so I really can't. My question was, when you're testing out different business models, that's what you put in the financial one, right? So for this year, we have this set of revenue streams and we're going to start testing this model to see if it works. Or do I stick with a small form management plan?

STEVE DEREZINSKI: I have somewhat of an answer to that, but I'm going to look at Joe and maybe he has a better answer. Typically, when you figure out the right business model that works, or what the technology is and how you're going to productize it, there's typically one business model that you're going to really go with.

And you can figure that out intuitively. So I'm not sure. Is there a more detailed example you can say where you want to test out other ones, like you want to test market other business models? Or are you talking about just like running your financials in two different ways to see which one looks better?

AUDIENCE: Well, for example, having a premium business model first, and then having one or two team accounts that are going to be either for credits, for example. For example, with an AI product it could be credit-based versus subscription-based. So how do I plan for that? Or just have two different financial plans for each account?

STEVE DEREZINSKI: So are you talking about different enterprise-- like team plan, enterprise-- like a SaaS business kind of thing? I think those are different product offerings. Those aren't necessarily different business models.

Unless you're planning on selling them completely differently, like you're going to license one or white label one, or you're going to sell it as a service just on a website. Are you talking about very different things like that?

AUDIENCE: No. I mean, you know how sometimes you buy a software subscription and you pay for credits?

STEVE DEREZINSKI: Yeah, yeah.

AUDIENCE: [INAUDIBLE] you pay a fixed subscription and upgrade if you add another user to that kind of detail. Would that be--

STEVE DEREZINSKI: I think you can totally model all those out and figure out which strategy you want to use. Is that what you're talking about? I think in that scenario, it's easy enough to just try out a bunch of different models and then see what makes sense.

I think ultimately it's going to come down to what do people buy? You can model it all to your heart's content. But until you get to the marketplace and people are like, I don't want that. That's too expensive. Or why would I want to buy all that if I just want this? You'll find out once you launch what really works. Other questions?

AUDIENCE: Thank you for this presentation. One of the very important things in the financial projections is, as you say, sales projections. And you said that we should take it from the bottom up.

But how do you start out the sales? [INAUDIBLE] year invoices year three or year four would be like would be radically different. So are there tools or resources available to better forecast sales or are there actual sales projections from companies?

STEVE DEREZINSKI: There are, but they're from companies that already exist. And you're a brand new company, so you've got to figure it out, my friend. I know what you're getting at. It's really hard, because you're predicting the future.

And I think that's why they said, we expect conviction from you, because we want you to show us your projections. And we want you to show that you can do this. And you've convinced yourself and your team that you can do this.

Because you're talking about going off into the future and saying what's going to be possible tomorrow. And last I checked, nobody could predict the future. But that's what we're all doing. A lot of times there's a lot of discussion about, like, you said were going to do this.

Well, we were all predicting the future, and you had a more rosy view of the future than I did, so it didn't work out that way. I don't know if you have any other answers to the sales forecast question, Joe. He does, of course. I love it.

JOSEPH HADZIMA: Yeah, I think you just have to think of what the model is that you're going to take. If it's a product, how long does it take to manufacture it? Is it a six month lag time? Is it a one month turnaround?

When do you have to start? If you have direct sales, how long does it take a sales person to get up to speed? What is the sales cycle in the industry? Now, if you're disrupting the industry saying, well, we're not actually selling you the product.

It's a subscription to a cloud-based thing, that's a different model. How many users? How quickly will people adopt? And play with those. You can even use Charlie's spreadsheet, where you can put different models or different actual revenue streams.

You have to then go down and say, well, to support that revenue stream, I might need some other rows. You have to really modify the spreadsheet. I use this base spreadsheet all the time. I've modified it for FDA and other kinds of things. But it's a good starting point.

STEVE DEREZINSKI: Excellent. Thank you. Other questions? Otherwise, let's talk about how do we split up the pie. Oh, got a question here? Oh, over here.

AUDIENCE: Thank you for the presentation. When I've done these things before, there's always been a question about what's your best-case and what's your worst-case scenario? What's the rule of thumb?

Because I've gone through a venture before, we had to actually create kind of a bandwidth of revenue projections. Just kind of curious as to what's the current thinking on this.

STEVE DEREZINSKI: So I usually get the a question, what are your biggest risks? So kind of beyond the financial plan, what are your biggest risks? And usually it has to do with not being able to make critical hires or some technology milestone gets missed or something.

AUDIENCE: Sales.

STEVE DEREZINSKI: Yeah, yeah. Well, the technology milestone gets missed, so the sales fall off. And I try and have some kind of scenarios planned behind the scenes so that I can show them. That's always what you want to do.

If you know the questions you're going to have, you have the appendix teed up with the answers to those questions. Because then that gets you the A-plus in the class. So that question about what are your biggest risks? And if you have them modeled, out you can say, well, this, this. But then we're working hard to solve them with these four different reasons.

That is a classic question that you always get. And I would recommend anybody include that in your financial projections or even in your pitch deck to have it in the appendix to make sure you can answer that well. Honestly talk about what the risks are and honestly talk about what your mitigation strategies for them.

AUDIENCE: Keep it in the appendix or just keep it aside, just in case you're asked?

STEVE DEREZINSKI: If I'm presenting and I'm controlling the slides, I keep it in the appendix. If I'm sending the slides, I don't send it. I hold it back until I have a conversation with them. Other questions? We got more question, then we'll get on to equity here. Let's see what we got here. Equity distribution, OK.

AUDIENCE: In one of the slides you mentioned it's better to say what quarter are you going to be profitable. I was wondering-- I have a question. [INAUDIBLE]. Without having concrete customers, how do we estimate that?

STEVE DEREZINSKI: You do the financial planning. It's tricky. I mean, what we're talking about here, this is at the zero stage. We don't even have the $5 million yet. And we're building out a financial plan for that. So as you build out the growth and what we think we're going to do, that tells you where the profitability comes in.

So what this is showing is kind of an iteration of a lot of different attempts at looking at the model. And I think the other answer to the other person's question earlier is-- how do you know? Well, you present this model to people and they beat it up.

And they go, you can't sell that fast or you can't manufacture that fast. And then you have to go back and go no, yes, I can, and argue for why that is. Once that's beat up, then you have a solid model that you think really holds legs, and you're taking the collective wisdom of all the advisors that you've talked to. And then you'll have the quarter that you become profitable.

So I think it's a little bit cheating to show the end result right in the beginning, because oh, look at this beautiful financial model. OK, we're done. But what we just showed you is all the blood, sweat, and tears that went into it. And luckily, this spreadsheet is a fantastic place to start with it. OK? Any other questions? Otherwise, we'll get on with equity and then we'll wrap up.

Of course we like to save the best for last. Equity is always the thing that's most fought over and most confusing. But as you think about building your team and as you think about distribution of equity, ownership of the pie, you want to compensate for people that have IP that are bringing it into the company, the level of commitment, the risk that you're at.

So if you're a pre-seed, you're really high risk. And in fact, I was talking to someone. And she will remain nameless unless she wants to offer herself. She did the NPV of staying in a corporate job versus doing a startup.

And staying in a corporate job would actually be much better, more lucrative in her overall career than doing a startup. But the passion drove her to the startup. So what are you going to do?

So I think it's important to recognize that. So when you're asking somebody, you need to quit your software job at Google and come work at this startup, it's like, I'm getting paid how much? And these guys said you want to drop your salary by a tremendous amount. But I think minimum viable salary is a good conversation to have with the early stage companies at that point.

And then past and future contribution. The sad reality is you may find people that bring a lot of stuff to the table right in the beginning, but really, the work that is yet to be completed is more valuable than the work that's already been done. I'm sorry, but that's just the way it is.

So when you have equity distribution, everybody vests for four years. So you have a one-year cliff where you come into the company, you get nothing for a year. And then you get, boom, one quarter of your equity after the first year. And then it's like monthly vesting after that.

So every month you stay, you get more of the equity. And that's important because early on, people might just want to rage quit, which is great, because then you get rid of them early on and you can move on.

But then as people commit and continue to stay with the business, you want to continue to grow that equity compensation for them. So let's go through some examples. These ownership percentage are after two rounds of financing. And these are not the founders. You have to look further down the chart to see that founding management gets two to three times that.

And this is after two rounds of financing. So this is not from the beginning. I don't want to scare you. The founding CEO after two rounds of financing should have 10% to 15%. And the employees might have 5 to 10x of all that.

There have been lots of times after a second round of financing that maybe the founding team got beat up too much and they're now losing interest, because it's like, well, my ownership is down to 1% and I'm a founder of this company.

There are lots of examples of where the board will get together and say, OK, we need to re-up their compensation package and make sure that they're in it to win it, because they're one of the key people that's going to drive value. And for whatever reason, their percentage ownership got beat up. So that's happened a whole bunch. And that's what you pay the lawyers for.

OK. This is a really good equity distribution example, I think, because it kind of lays out all the key questions that you have or all the key questions that I have. So at founding, we have three founders. And they're splitting it up 50%, 25%, 25%.

That's it. Nothing else is involved in any of this stuff. So I'm just showing you the number of shares-- 4 million total shares in the business, and that's it. So there's not a lot of value, right? It's like, three people get around and decide, I get half the business, you get a quarter, you get a quarter. OK, let's get into business.

Then after the next phase, I want to allocate some funding for some key employees. So I'm bringing on three more people and I'm also bringing on three board member advisors. So each one of those gets some shares as well. And those are granted. And they have a four year vesting cycle on it.

So it goes from 4 million shares to 4.5 million. But you can see how the dilution happens. So the founding CEO went from 50% to 41% at that point. What do we have now? We have three founding members, we have some key team members, and we have some board and advisors.

Do we have any money? No, but we have a great team and a great presentation to go and tell investors about our story. It's not just three people, it's three people plus some key employees, and it's also some advisors and some critical people from the industry. Those board/members are probably critical partners that we want to bring into the company.

Now we go and talk to angel investors. And the only difference between the previous column and this one is just simply that $500,000. And in this example, $500,000 is 500,000 shares, so it's $1 a share for that one. It's not true for the other columns.

So now we have 5 million shares. And you can see how the dilution flows up to the previous ownership. And then we actually raise-- there's a bunch of changes that happen here. One thing is we're adding an option plan for 1.6 million shares.

So we need to bring in some managers and senior engineers. And we need to give them stock options in the company. And we have an option pool of 12% to incent them to stay. And a stock option is a non-voting share. And all you do is get the value of the stock at the time that you join the company.

And so whatever the value increases while you're there is basically what the value of the stock option is. And in addition, we've raised $5 million, which we need to give out 6.6 million shares in order to be that 50% valuation.

And this is the $5 million, 50% valuation that we talked about in the beginning of the presentation. And then finally, post-VC round, the biggest change here is that additional 8.8 million shares for $10 million that we brought in.

And so that kind of gets you to 22 million shares. You can see how Jack has 9.1% and 4.5%. So that kind of gets back to he's got two times 5% as a founding CEO at that point. But hopefully, you're doing $100 million exit opportunity. So now Jack gets $9 million out of $100 million exit. I don't know. Is that great? I don't know.

So that's how it kind of rolls out. And there's a spreadsheet on the Nuts and Bolts site where you can just enter the things as you want them. And it does the calculations for you in terms of how much you want to raise and what kind of deal you get, like what kind of valuation you get on that.

OK. I think that's about it. Is that about it? Are we done? Summary. Well, you can read the summary. Questions? Go ahead.

AUDIENCE: So when VC says we want 5x, 10x return, how many years?

STEVE DEREZINSKI: When VCs say they want a return on their investment, it's typically three to five years is what they're planning for after they put money in you.

AUDIENCE: On the FDA approval of a clinical study, it takes like three years. So when your product is ready, everything is ready, it's a long time for medical devices.

STEVE DEREZINSKI: Yeah. So I was going to say, with the exception of the pre-seed guy, because he was put the pre-seed in. It's going to take six or seven years before I actually see an exit on that. So I think it's three to five years for a series A investor.

But if they're earlier than that, you have to add a couple of years to that. And for medical devices, those investors are extremely sophisticated. They understand the process. They understand what you're going through and how long is it going to take.

And then actually, one guy said, hey, we've got a whole network of lawyers. So depending on what phase you're at, we can tell you exactly which lawyers to choose from or which ones to interview with.

A medical investor would be like, OK, you need this FDA approval? This is the guy that's done my past five deals and you got to hire him. And this is what he's going to charge you. And we're going to be able to get through the approval process in a much faster time frame.

AUDIENCE: So for a business plan, it makes sense for a 10 year plan instead of five years, three years?

STEVE DEREZINSKI: If that matches exactly the regulatory problems and the time to get to market, absolutely. Yeah. I mean, this is just kind of tech, generic hardware, and software. So software you can compress. And now with AI software, you get down to six months or something. Time to exit in six months. So big return in a short period of time. Yes.

AUDIENCE: Yeah. Can we talk a little bit about control and when you should be-- because if you found a company and you're the initial founder of the company, eventually you're going to have to give up control. But there's a period where want to see your baby, at least to a point where you're confident in the people you hired, you're confident [INAUDIBLE].

And I've seen so many startups where the founders start to lose complete control of the company and really get screwed over by their investors at the end of the day. And that would be an example that I know quite well. And I was kind of curious what your thought is on something like that.

STEVE DEREZINSKI: So I thought Jon's comment was very interesting in the previous panel, where he said you really want to build a relationship with these guys because it is about trust. And a lot of times, if he's a pre-seed guy, he expects like three or four more rounds that he may or may not participate in.

And there are a lot of opportunities, if there is a very strong control element of the board of directors in the cap table, that they can just kind do whatever they want at some phase. I mean, unless you're at the table, right?

One of my favorite quotes is, you're either at the table or on the menu. I don't know why that just hits perfectly. I heard it in DC first, which totally makes sense. But now for this kind of activity, it's like if you're in the board meeting, then you know you're playing the game.

There's two levels of control in any company. And hopefully I'm not stepping on Joe's toes here. There's ownership control and then there's board control. So when you bring in outside investors, they typically have a separate series of stock, which is not really shown in here.

And with that series of stock, they get certain board access. So sometimes in pre-seed, there's no board access. Sometimes there's one or two board seats. And that kind of decision making power at the board is one level of control where things can happen and go awry if you're not careful. You don't know about that. So you got to be careful on that piece.

And then there's the cap table control. So in this example, it's like right off the bat 50%-- or I guess the angel investor was just 10%. But then it was like 50%. So there's not a lot of equity control at that point.

Presumably they maintain some board-level control on that. But I think the other side of it is it's really hard to manage that that closely and worry about it. If you develop a good relationship with the investors, the win is for the investors and the founders to make a lot of money together, because then that flows into their next investment.

Everybody hears about how great they did and how wonderful they are, and they want to keep doing it, as opposed to whatever happened in other scenarios where you get a bad reputation and then nobody wants to talk to you anymore. So anyways, hopefully that answers your question. Yes.

AUDIENCE: Thank you. It seems like this sheet is including the actual cash investment. How will the estimated value of the company change after each round of the investment?

STEVE DEREZINSKI: So the actual valuation at each column? So let's see, I guess we can figure that out. At post-angel, if I put in a half a million dollars for 10% of the company, what's the value? $5 million?

AUDIENCE: Not sure.

STEVE DEREZINSKI: Well, $500,000 is worth 10%, what's 100% worth?

AUDIENCE: [INAUDIBLE]

STEVE DEREZINSKI: Come on. This is basic math here. It's like $5 million, right? Roughly? Yeah. And then the next one, what is it? $5 million for 50% of the company? And that includes the 10% So that's a $10 million valuation. And then the last one is $10 million at $15 million pre-money valuation, so the total is $25 million.

So at the post-VC, it's valued at $25 million. But in the scenario that we talked about in the beginning, where if you raise the $15 million, you need to have at least $40 to $60 million so that your company is worth about $135 million, you have $46 million in revenue, so that the valuation of the company is $135 million. That was on one of the first slides. That's the exit scenario. So this is just what the VCs put money in.

So if I put $10 million at a $25 million post, then I want my $10 million to be worth a heck of a lot more when you sell the business for $100 and whatever million. Which it should be in that scenario. Make sense? Yes? OK.

AUDIENCE: How is the revenue being distributed across different [INAUDIBLE]?

STEVE DEREZINSKI: How is the revenue being distributed?

AUDIENCE: Yes.

STEVE DEREZINSKI: So this is a cap table. This is equity. There's no revenue on this cap table. This is just share ownership in the business. So this would be on the balance sheet. So you have assets and liabilities and equity. So this is equity piece there. Yes.

AUDIENCE: So how do you decide the percentage of equity to be allocated to key early employees and the board members?

STEVE DEREZINSKI: Yes, good question. I mean, there are some rules of thumb, but it varies all over the place. And I'd love to hear from Joe or others who have experience on this. What we're showing here is kind of the typical arrangement.

This is the typical scenario after two rounds of financing. And there are market rates for advisors and board members. Typically, if it's an outside advisor or outside board member, they get equity to compensate them for coming to board meetings.

If it's an investor who also has a board seat, they don't get any more equity than just their investment in the company at that point. And they get the board seat as part of that investment round. So that's negotiated with the valuation. But I don't know if you have any more comments on that Joe. That's a hot topic. It's negotiated. It's negotiable. Maybe some rules of thumb?

JOSEPH HADZIMA: Well, you have to remember, there is a market for people, and it changes over time. So you're going to be looking at salary.com and others to look at that. For things like advisors, board members-- you'll have an advisory board, maybe.

A typical step might be for someone to be on an advisory board. And then as they get to know you, maybe you say, would you join my board of directors? The difference is, if you're on the real board of directors, if have fiduciary duties and you should be thinking about the company weekly. If you're on an advisory board, you can call me and maybe I'll think. But I'm not thinking about it. So typically, maybe a quarter of a percent. It depends, half a percent.

STEVE DEREZINSKI: For an advisor?

JOSEPH HADZIMA: For a board of advisors, and maybe half a percent for an actual board or for somebody. And you might want to identify those people early on, because when the VCs come in, they're going to have their people. And there's usually an independent director.

And if you don't have somebody who you say I trust and is credible, they'll appoint somebody who's credible, but probably did other things for them in the past. So push comes to shove, they lean a little more towards the investor side. So you have to do your homework and then ask around.

That's one of the things, Venture Mentoring Service. Somebody here was commenting on that. There's a whole email list where people that are mentees can ask questions and get responses back. What did you give your major senior engineers? Or stuff like that. It's real life, honest data.

STEVE DEREZINSKI: I want to double click on one thing Joe said that I stumbled into early in my entrepreneurial career, which is asking someone to be an advisor to your business is really just asking for their support, and they get some equity compensation for it. And there's not a lot of liability there.

I mean, there's reputational liability. And there's knowledge liability and credibility. Asking someone to sit on your board of directors, there's a fiduciary responsibility. There's a legal obligation to do what's best for the corporation.

So one ask is pretty low level, low bar. The next ask is pretty high level, which is kind of why you want to work with them on an advisory board basis and make sure that you guys all get along, because as soon as you ask for that level, it's like, oh geez, really? I'm going to have to look at the financials and back this up if there's a lawsuit and stuff like that.

So it's a big ask. Which is why most of the time it's people that put a bunch of money in you that are like, OK, now we want to watch this money and make sure it's going for the right place. Question? Yes.

AUDIENCE: Do companies provide liability insurance for their board members?

STEVE DEREZINSKI: Yeah, it's called D&O insurance, Directors and Officers insurance.

AUDIENCE: [INAUDIBLE]

STEVE DEREZINSKI: I'm trying to think. The last policy I had was like $25,000 a year, I think. Something like that.

AUDIENCE: That covered the entire board?

STEVE DEREZINSKI: What's that.

AUDIENCE: It covered the entire board?

STEVE DEREZINSKI: It covers the board of directors, yeah, for certain liability obligations. Yeah. And I mean, I can tell you, when you're sitting in a board meeting trying to get certain budgets passed and stuff, the D&O insurance gets passed very fast, because everybody's like, yes, of course, that's the obvious choice for us.

That comes with outside VC investment. So it's like, OK, we're going to put a few million bucks in you. We want to make sure everything's clean and we want to make sure everybody's covered properly.

So that's when you get-- and Chubb is the big underwriter there. I don't know if they own the market. Sorry, am I advertising too much, Joe? I don't have any affiliation with Chubb. I just remember my attorney loved reading through the details of whatever the Chubb disclosure document was.

So anyways, other questions? 8:59, guys. Pretty good timing. Pretty good timing. Well done. All right. Thank you.

[APPLAUSE]