

DRIVING GROWTH 

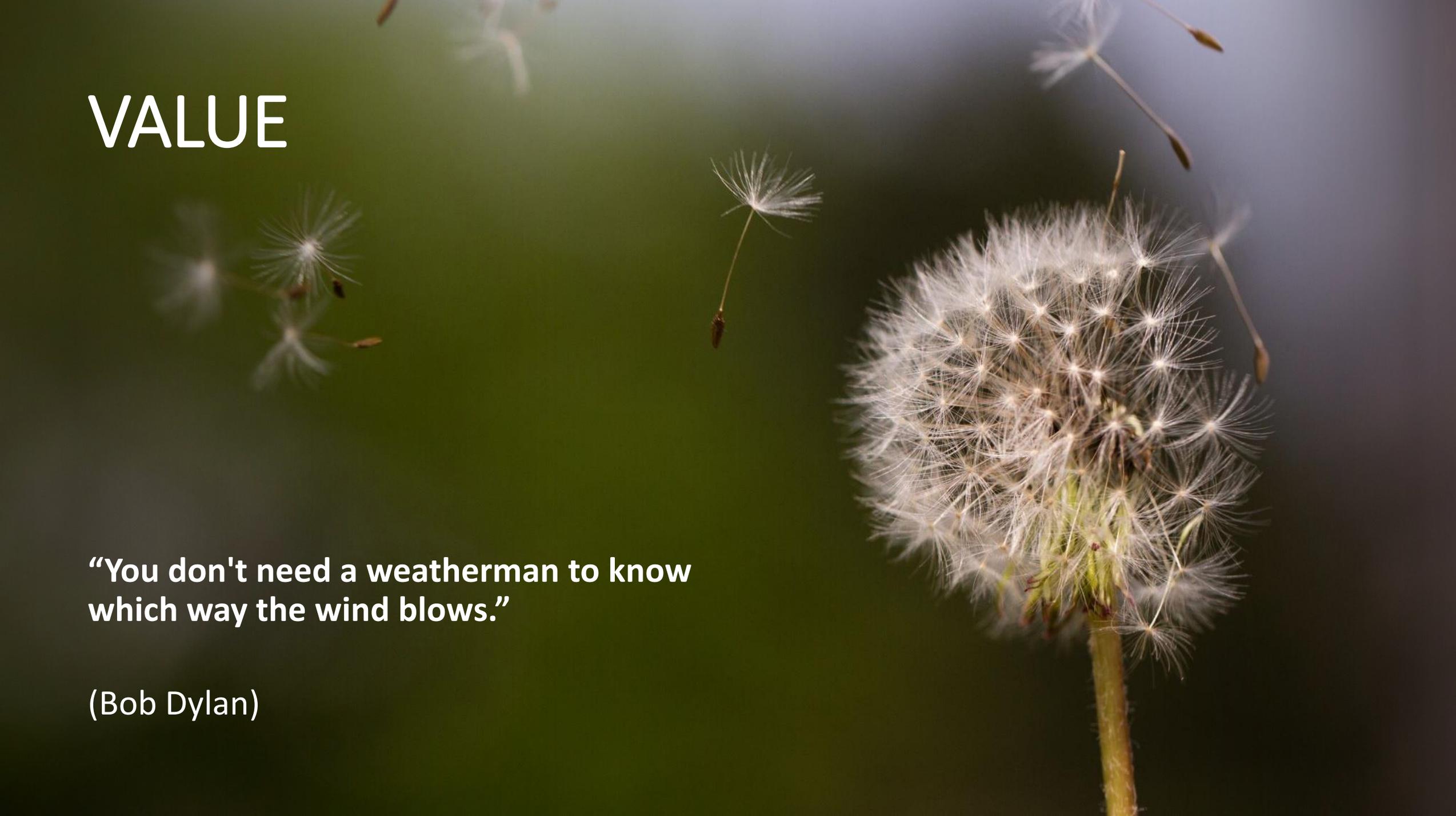
NPV Venture Capital

Leah Speser, JD, PhD, RTTP, NPDP 



RESEARCH
& INNOVATION
FOUNDATION

VALUE

A close-up photograph of a dandelion seed head. The seed head is on the right side of the frame, showing its intricate structure of many small seeds with long, feathery pappus. Several individual seeds are captured in mid-air, having been blown away from the head, scattered across the dark green background. The lighting is soft, highlighting the texture of the seeds and the stem.

**“You don't need a weatherman to know
which way the wind blows.”**

(Bob Dylan)



▶ **Value is determined by the End-User**

**If they don't use it
no-one will buy it**

**If no-one buys it there's
no money for anyone**

Presentations in the framework of Innovation Factory seminars – ΙΔΕΚ (research.org.cy)



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RIF

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EUROPEAN & INTERNATIONAL

Blog - Latest News

You are here: [Uncategorized](#) / [Presentations](#)

PRESENTATIONS IN THE FRAMEWORK OF INNOVATION FACTORY SEMINARS

Below you will find the presentations of the Innovation Factory seminars:

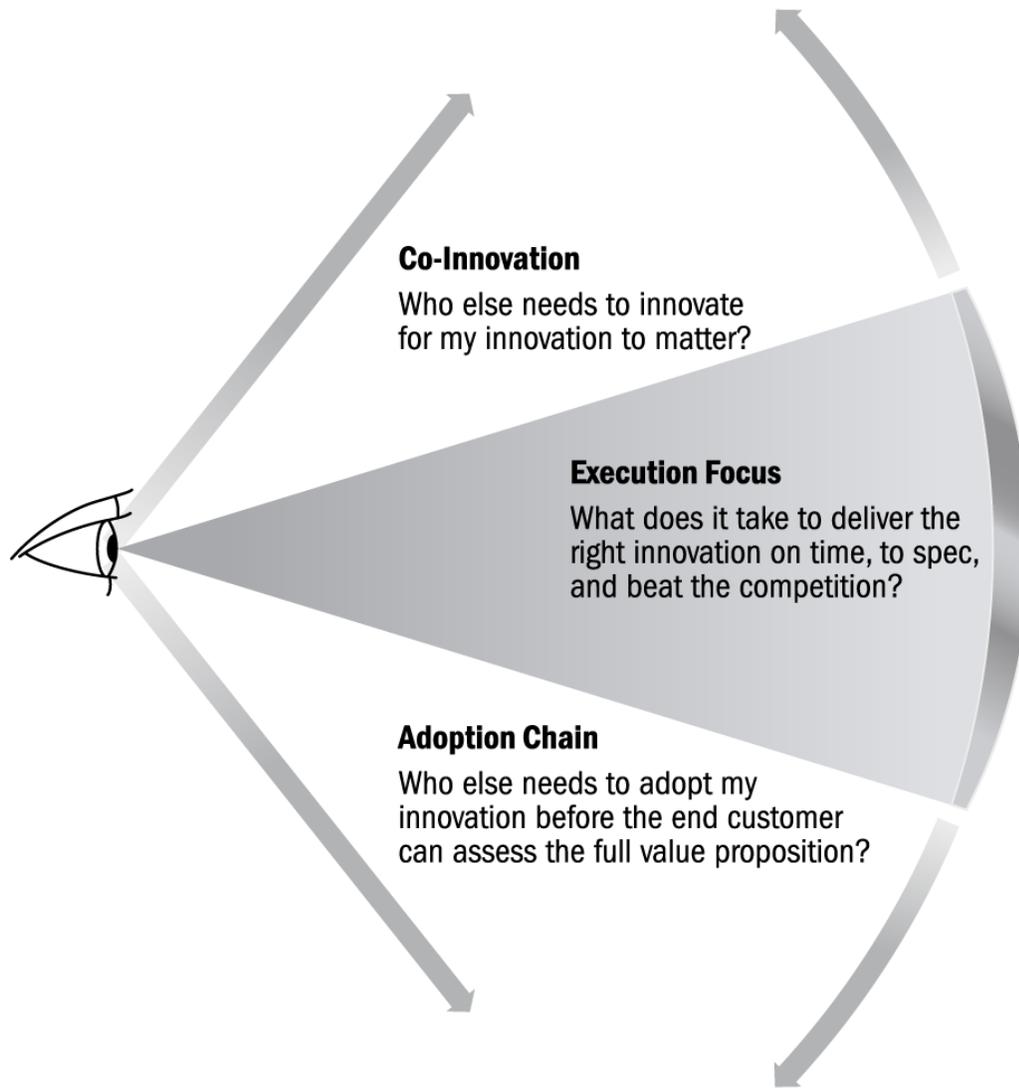
- 1) Building and Managing an Entrepreneurial Company
- 2) Voice of the Customer and Competitive Advantage
- 3) New Product Development
- 4) Swots and Selling
- 5) Value Chain

RISK

“Common sense is not so common.”

Voltaire

► Kinds of Risks



Ron Adner
The Wide Lens

(Revenues – expenses) x Discount Rate

NPV





Net Present Value

The Net Present Value tool helps calculate whether a product or service that is being developed is likely to meet its financial objectives, by estimating the value of cash flows in and out of the project over time. Learn how to use the Net Present Value tool

PDF **DOC** with an example of a completed tool

XLS .

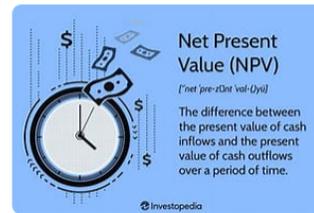
[Download the tool](#)

[Toolkit on New Product Development and Inventions in the Public Domain \(wipo.int\)](https://www.wipo.int/tisc/en/inventions-public-domain.html)

<https://www.wipo.int/tisc/en/inventions-public-domain.html>

About 1,020,000 results

Net Present Value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows over a period of time. It is used in capital budgeting and investment planning to analyze the profitability of a projected investment or project [1](#) [2](#) [3](#).



Learn more:

1 Net Present Value (NPV): What It Means and Step...

investopedia.com

2 Net Present Value (NPV) - Definition, Examples, ...

corporatefinanceinst...

3 Net Present Value Rule - Definition, Calculate, E...

corporatefinanceinst...

Feedback

People also ask

What is Net Present Value (NPV)?

The net present value (NPV) is a **financial metric that is used to assess the profitability of an investment**. The NPV is calculated by taking the present value of the investment's cash flows...

What is the purpose of Net Present Value?

Consider a project with the following expected cash flows:

Year	Cash Flow
0	-\$5,000
1	\$1,000
2	\$1,500
3	\$4,000

a) If the discount rate is 5%, what is the project's net present value (NPV)?
b) What is the Internal Rate of Return (IRR)?



How to value i...

Net pres using the functi... each ca subtract

Net present value

Valuation in finance

The net present value or net present worth is a way of measuring the value of an asset that has cashflow by adding up the present value of all the future cash flows that asset will generate. The prese...

Wikipedia

Using Net Present Value makes **sense for investors**



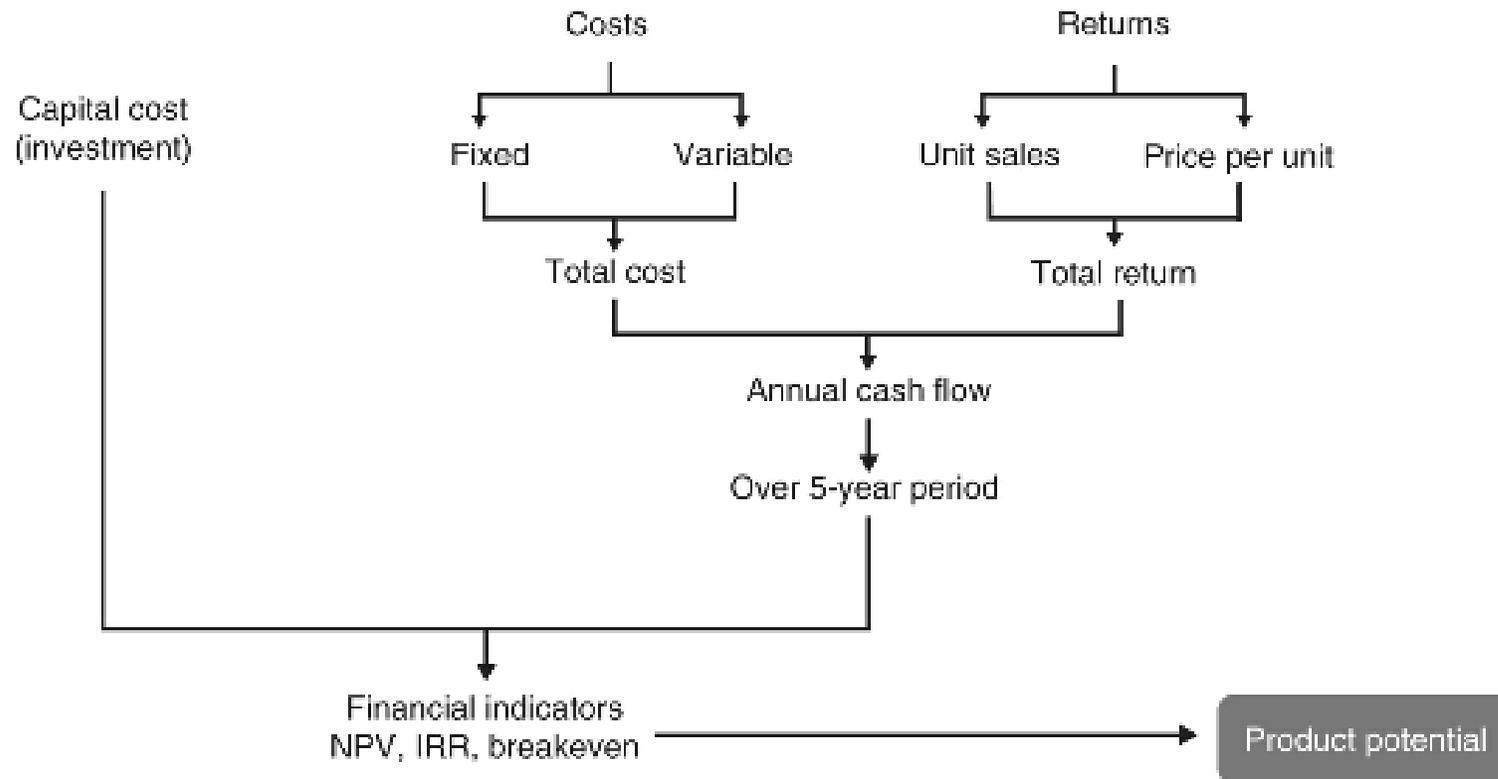
because it doesn't assume that cash flows will automatically go into the **Internal Rate of Return (IRR)**.

Income statement

**Revenues -
Expenses**



► Framework for Financial Analysis



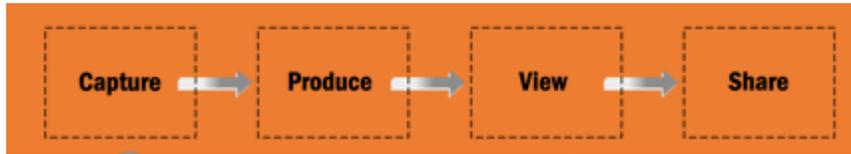
Anderson, Allan; McAllister, Chad; Harris, Ernie. Product Development and Management Body of Knowledge: A Guidebook for Product Innovation Training and Certification (p. 36). Wiley. Kindle Edition.

Use Generally Accepted Accounting Practices

Income statement

ABC Co. Ltd., as of March 31 (\$000s)	Year 2	Year 1
Revenue	1,100.00	1,000.00
Cost of goods sold		
Wages and benefits	165.00	145.00
Materials	220.00	198.00
Subcontractor fees	110.00	101.00
Other	40.00	34.00
Total cost of goods sold	535.00	478.00
Gross profit	565.00	522.00
Gross margin (gross profit as % of revenue)	51%	52%
Selling, general and administrative expenses		
Freight and shipping	65.00	52.00
Salaries and wages	187.00	175.00
Commissions	55.00	50.00
Credit card fees	28.00	25.00
Advertising and marketing	15.00	10.00
Meals and entertainment	5.00	2.50
Automotive expenses	7.50	10.00
Office expenses	10.00	8.00
Building expenses	12.00	12.00
Insurance expenses	1.00	0.50
Professional fees	2.00	1.70
Total selling, general and administrative expenses	387.50	346.70
Operating income	177.50	175.30
Other income / expenses		
Rental income	1.30	1.30
Gains (losses) on sale of assets	0.30	0.50
Gains (losses) on foreign exchange	(0.20)	-
Government subsidies	30.00	25.00
Total other income / expenses	31.40	26.80
Earnings before interest, taxes, depreciation and amortization (EBITDA)	208.90	202.10
EBITDA as % of revenues	19%	20%
Depreciation	20.00	31.00
Earnings before interest and taxes (EBIT)	188.90	171.10
Interest expenses	21.00	23.50
Taxes	27.60	23.50
Net income	140.30	124.10
Net income as % of revenues	13%	12%

Value Architecture



Value Chain

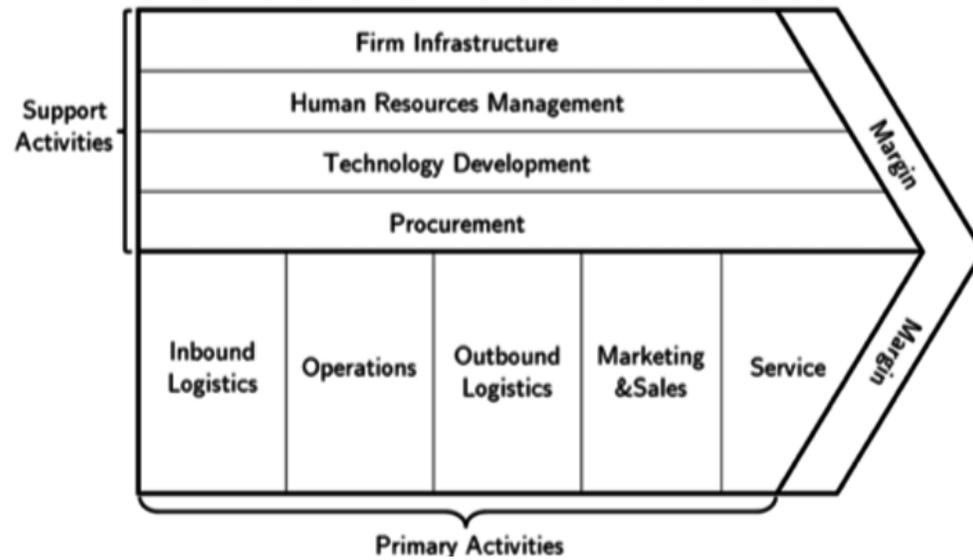
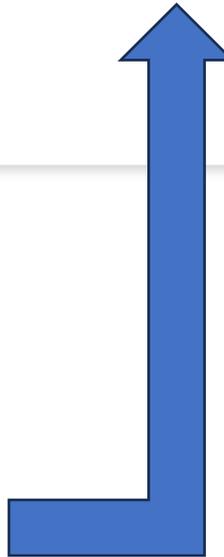


Chart of Accounts

Chart of Accounts			
Number	Description	Account Type	Financial Statement
1-001	Cash	Asset	Balance Sheet
1-010	Accounts Receivable	Asset	Balance Sheet
1-020	Prepaid Expenses	Asset	Balance Sheet
1-030	Inventory	Asset	Balance Sheet
1-040	Fixed Assets	Asset	Balance Sheet
1-050	Accumulated Depreciation	Asset	Balance Sheet
1-060	Other Assets	Asset	Balance Sheet
2-001	Accounts Payable	Liability	Balance Sheet
2-010	Accrued Liabilities	Liability	Balance Sheet
2-020	Taxes Payable	Liability	Balance Sheet
2-030	Payroll Payable	Liability	Balance Sheet
2-040	Notes Payable	Liability	Balance Sheet
3-001	Common Stock	Equity	Balance Sheet
3-010	Retained Earnings	Equity	Balance Sheet
3-020	Additional Paid in Capital	Equity	Balance Sheet
4-001	Revenue	Revenue	Income Statement
4-010	Sales returns and allowances	Revenue	Income Statement
5-001	Cost of Goods Sold	Expense	Income Statement
5-010	Advertising Expense	Expense	Income Statement
5-020	Bank Fees	Expense	Income Statement
5-030	Depreciation Expense	Expense	Income Statement
5-040	Payroll Tax Expense	Expense	Income Statement
5-050	Rent Expense	Expense	Income Statement
5-060	Supplies Expense	Expense	Income Statement
5-070	Utilities Expense	Expense	Income Statement
5-080	Wages Expense	Expense	Income Statement
6-001	Other Expenses	Other	Income Statement

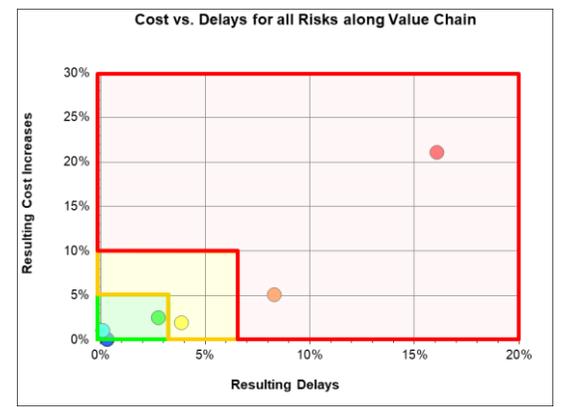
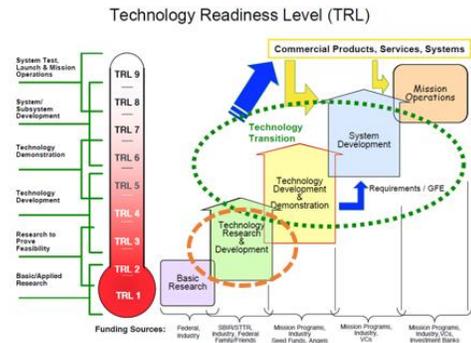
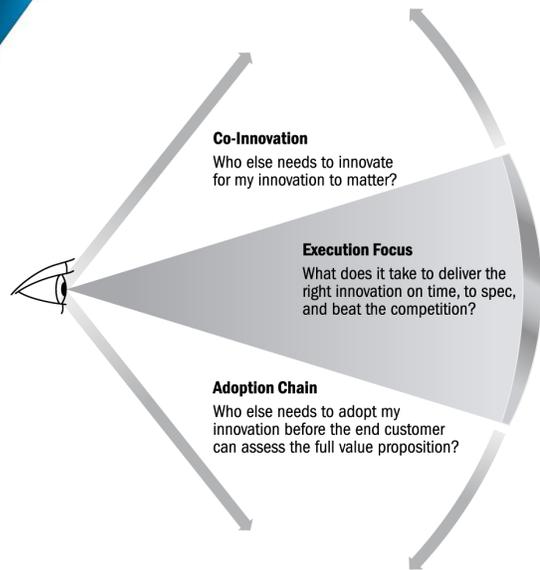




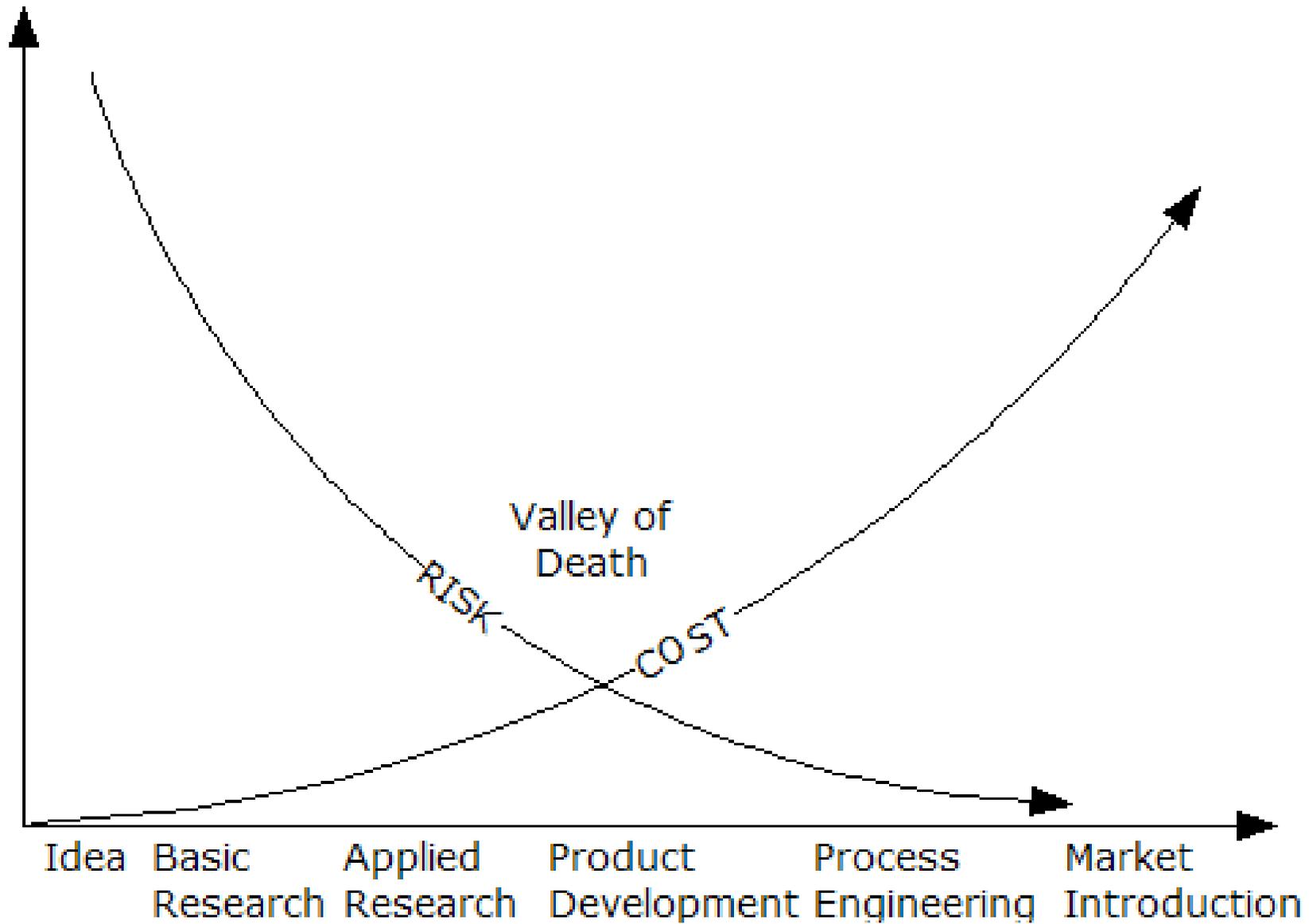
Discount Rate

Inflation

Interest (WACC) or Ground-Up



Significance/ /Likelihood of / Occurance	High	Low
High	Avoid	Mitigate (Contingency Plans)
Low	Mitigate (Contingency Plans)	Accept (Muddle Through)



THE DREAM TEAM







► Discount Rates

<u>Risk Level</u>	<u>Approximate DR(%)</u>	<u>Description</u>
Risk Free	10-18	Existing product, high demand, building more of the same
Very Low Risk	15-20	New well understood technology for an existing product
Low Risk	20-30	New features, well understood technology into an existing market
Moderate Risk	25-35	New product, well understood technology into market with competition
High Risk	30-40	New product, not well understood technology into an existing market.
Very High Risk	35-45	New product, new technology, new market
Extremely High Risk	50-70	New company, unproven technology, new market

Source: Richard Razgaitis, Early Stage Technology

Risk Factor Summation Method		
<u>Risk Factor</u>	<u>Rating (-\$500k to +\$500k)</u>	<u>Comment</u>
Management	+\$500k	Done it before
Stage	+\$250k	Prototype works
Funding Risk	-\$250k	Market tough
Regulatory	0	Unregulated market
Manufacturing	+\$250k	Nothing new
Sales & Marketing	-\$500k	Intl markets
Competition	+\$250k	Few in target market
Technology	+\$250k	Off shelf parts
Litigation	0	None anticipated
International	-\$500k	All revs international
Reputation	-\$250k	International issues
Exit	+\$250k	Likely early
= +\$250K		

[Venture Capital Valuations and Multiples | by Sergio Marrero | Rebel One — RBL1 | Medium](#)

A group of business professionals in an office setting, gathered around a table. They are looking at a tablet displaying a chart with two circular elements. One person is holding a smartphone, and another is holding a coffee cup. The scene is brightly lit, suggesting a window in the background. The text 'Using NPV in a company' is overlaid in the center in a bold, white font.

Using NPV in a company

Examples

- Are things on track GIVEN the hurdle rate (IRR)?
- Is this [project, product, unit] performing as anticipated?
- Is it time for a change?



Landing [at] Venture Capital



ENG ALT
PEN
ISE



RADIO CALL
N406MR

HIS HELICOPTER MUST BE OPERATED IN COMPLIANCE WITH THE OPERATING LIMITATIONS SPECIFIED IN THE APPROVED HELICOPTER FLIGHT MANUAL.
MINIMUM COCKPIT WEIGHT 170 LBS.
SELECTIVE PASSENGER LOADING
WHEN BOTH CREW SEATS ARE OCCUPIED ONLY ONE (1) MID PASSENGER IS PERMITTED UNLESS THERE ARE TWO (2) AFT PASSENGERS.
WHEN ONLY ONE (1) CREW SEAT IS OCCUPIED NO MORE THAN TWO (2) AFT PASSENGERS ARE PERMITTED UNLESS THERE IS ONE (1) MID PASSENGER.
ABOVE 4,150 LB GW ALTERNATE PASSENGER LOADING FROM SIDE TO SIDE REFER TO GW WEIGHT AND BALANCE FOR ADDITIONAL LOADING INFORMATION

VENT

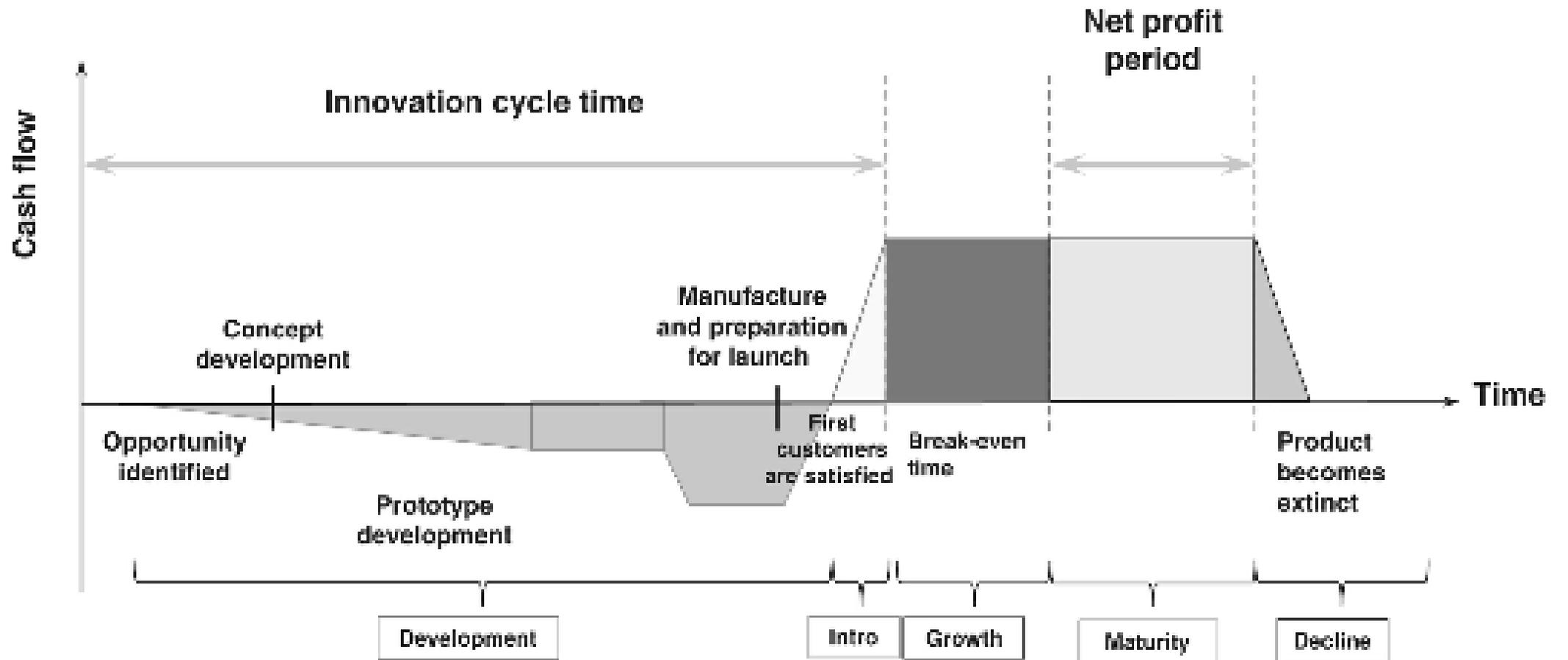


▶ **VC versus Research Grant**

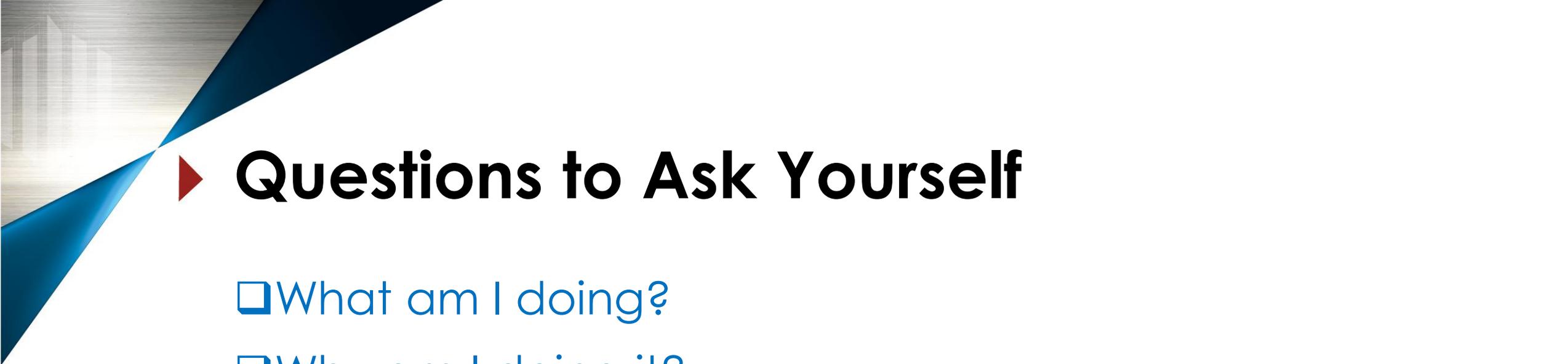
→ VC money is for building stock value.

→ Research grants are for knowledge (scientific and technological advances, inventions, and innovations).

→ Both have a quid pro quo, it's just different.



Anderson, Allan; McAllister, Chad; Harris, Ernie. Product Development and Management Body of Knowledge: A Guidebook for Product Innovation Training and Certification (p. 36). Wiley. Kindle Edition.



▶ **Questions to Ask Yourself**

What am I doing?

Why am I doing it?

Is it a really (REALLY!) big hit?

How much money do I need and when?

Why do I need OPM to do it?

What I am willing to do and give up to get OPM?

“There is no real ending.
It’s just the place where you stop the story.”

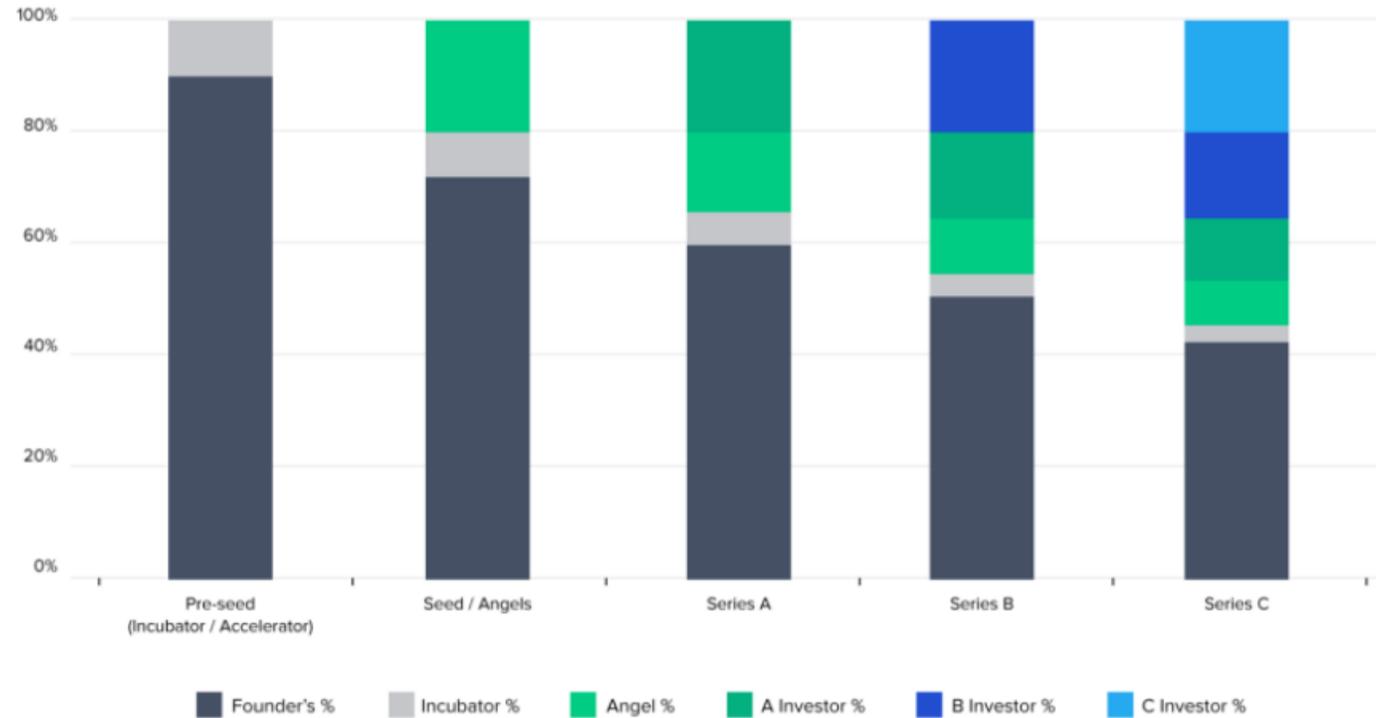
(Frank Herbert, Author of *Dune*)



▶ Franklin's Decision Algorithm Adaptation

Must Have	Nice to Have	Never Accept

► Dilution



From *Startup Financing for Founders* by Toptal

[Venture Capital Valuations and Multiples | by Sergio Marrero | Rebel One — RBL1 | Medium](#)

▶ Cap Table (Made-Up Example)

Spreadsheet, ideally with:

- Authorized shares
- Outstanding shares
- Unissued shares
- Shares reserved for stock options
- Valuation details of the last priced round (including pre-money valuation, amount of new equity raised, per-share price, and number of shares)
- Complete list of shareholders (including type of shares they own, total number of shares, and percentage ownership stake)

Pre-Seed Round of Funding					
Pre-Money Valuation:	\$1,000,000				
Amount Raised:	\$250,000				
Post-Money Valuation:	\$1,250,000				
% Ownership of new investors	20.00%				
Initial Outstanding Shares	1,000,000				
Post-Investment Shares	1,250,000				
New shares created for investors	250,000				
	\$ Invested	Existing Shares	Preferred Shares	Price-per-share	% Ownership
Founders + ESOP	n/a	1,000,000	n/a	n/a	80.00%
First Investor A	\$25,000	n/a	25,000	\$1.00	2.00%
First Investor B	\$225,000	n/a	225,000	\$1.00	18.00%
First Investor C	\$0	n/a	0	\$1.00	0.00%
First Investor D	\$0	n/a	0	\$1.00	0.00%
First Investor E	\$0	n/a	0	\$1.00	0.00%
First Investor F	\$0	n/a	0	\$1.00	0.00%
Total	\$250,000	1,000,000	250,000		20.00%

Examples of the Kinds of VC Out There

Each has a different set of requirements and expectations

Friends and Family

Angel Money

Crowd Funding

University VC

Government VC

Incubator/Accelerator
VC

Private VC

Corporate VC

▶ **Going for VC is Not Like What You See on TV**





▶ Comparables

→ Finding

- > Pitchbook
- > VC Conferences
- > Experts/Consultants, including the CKTO
- > Newspapers, trade and financial press
- > Government filings

→ Using

1. Create a reasonable baseline or average
2. Adjust to the specifics of your case



STOP

The data provide is for illustrative purposes only. Do not rely on it!

▶ Money by Round

UNIVERSITY
LP PARTNERS

TYPES OF FUNDING ROUNDS FOR YOUR STARTUP

Funding Round	Pre-Seed	Series A	Series B	Series C
Stage Focus	Proof of concept/ prototype	Revenue growth	Growth	Large scale expansions
Common Elements of Growth	Hiring	Development, Operations, Branding & marketing	Hiring, Market expansion, Buying businesses	Acquiring businesses, International markets
Amount of Investment	\$10K - \$1MM	\$10MM	\$15 - 25MM	~\$50MM

[Different Funding Rounds of Startups Explained - Beststartup](#)

RIF

Stage	Business Activity	Funding Sources
Pre-Seed	<ul style="list-style-type: none"> • Developing a business concept • Working on any partnership agreements • Getting any patents or copyrights • Creating a pitch deck 	<ul style="list-style-type: none"> • Self, family and friends • Micro VCs
Seed	<ul style="list-style-type: none"> • Creating a product or prototype • Getting business running • Fundraising 	<ul style="list-style-type: none"> • Self, family and friends • Angel investors • Early VCs
Series A	<ul style="list-style-type: none"> • Researching industry and markets • Writing a business plan • Marketing and advertising • Generating revenue • Planning to scale into new markets 	<ul style="list-style-type: none"> • Accelerators • Super angel investors • Venture capitalists
Series B	<ul style="list-style-type: none"> • Expanding consumer interest • Establishing a commercially viable product or service • Scaling production, marketing and sales 	<ul style="list-style-type: none"> • Venture capitalists • Late-stage venture capitalists
Series C & beyond	<ul style="list-style-type: none"> • Building new products and markets • Establishing a strong customer base • Acquiring other companies 	<ul style="list-style-type: none"> • Late-stage venture capitalists • Private equity firms • Hedge funds • Banks
Mezzanine	<ul style="list-style-type: none"> • Being acquired by another company or SPAC • Remaining private using VC funds to grow • Making an initial public offering 	<ul style="list-style-type: none"> • Private equity firms • Hedge funds
Exit	<ul style="list-style-type: none"> • Making an initial public offering 	<ul style="list-style-type: none"> • Sale • VCs • SPAC • Public stock

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Venture Capital Agreements

[\(25\) Activity | Phyllis Leah Speser | LinkedIn](#)

<https://www.linkedin.com/in/phyllis-leah-speser-55885222/recent-activity/articles/>



Venture Capital Rounds

The first thing to understand about venture is it only comes if there is a...
by Phyllis Leah Speser • 9 min read



Clauses in Venture Agreements: Getting some Perspective before...

As with licenses, there are three main types of clauses in a venture...
by Phyllis Leah Speser • 5 min read



"Oh Shit" Terms in Venture Agreements

Almost all the clauses in venture agreements are written from this...
by Phyllis Leah Speser • 2 min read



Economic Terms in Venture Agreements

The essence of a venture capital agreement is so much money for so...
by Phyllis Leah Speser • 10 min read



Boilerplate Clauses in Venture Agreements

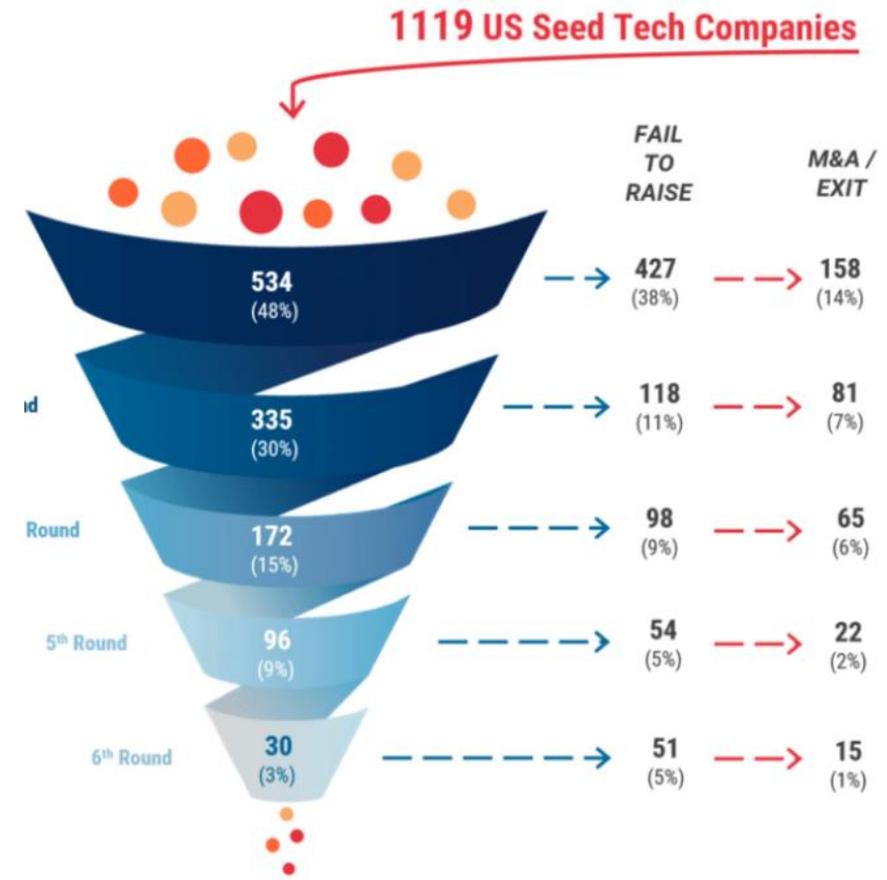
The boilerplate terms in venture agreements overlap with the econom...
by Phyllis Leah Speser • 4 min read

▶ Success Rates

 US Tech Companies That Raised a Seed Round in 2008, 2009, 2010

	Count	% of Previous Cohort	% of Original	Avg. Amnt. (\$M)	Median Amnt. (\$M)	Avg. Months in Between	Median Months in Between
Original Round	1119	***	***	0.67	0.35	***	***
2 nd Round	534	48%	48%	4.27	3.09	20	16
3 rd Round	335	63%	30%	11.09	7.30	20	18
4 th Round	172	51%	15%	23.57	15.4	20	18
5 th Round	96	56%	9%	56.85	25.00	20	19
6 th Round	30	31%	3%	119.83	40.00	15	13

Venture Capital Funnel by CB Insights



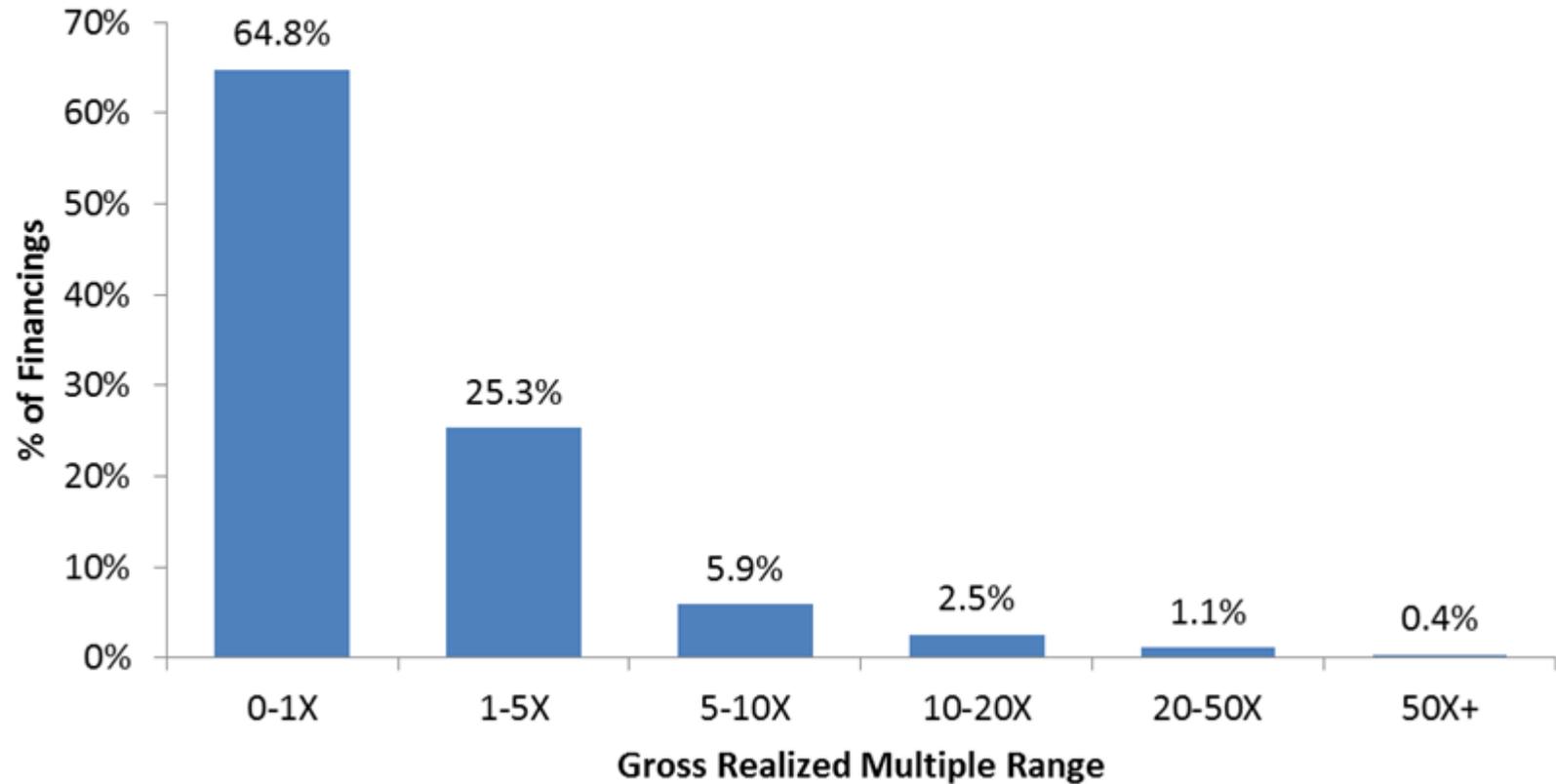
▶ Expected Exit Value

- Multiples Method: usually calculated as a multiple of the company's sales or EBIT revenues in the year of sale

Company Name	Market Data			Financial Data (FY+1)			Valuation (FY+1)		
	Price (\$/share)	Market Cap (\$M)	EV (\$M)	Sales (\$M)	EBITDA (\$M)	Earnings (\$M)	EV/Sales x	EV/EBITDA x	P/E x
Micro Partners	\$9.45	\$945	\$1,070	\$268	\$76	\$47	2.5x	14.1x	22.8x
Junior Enterprises	\$5.68	\$7,100	\$9,100	\$4,136	\$778	\$412	2.2x	11.7x	22.1x
Minature Company	\$18.11	\$906	\$931	\$443	\$96	\$56	1.9x	9.7x	16.7x
Average Limited	\$12.27	\$7,730	\$8,080	\$1,949	\$528	\$294	2.6x	12.2x	22.4x
Bohemeth Industires	\$9.03	\$13,545	\$13,545	\$6,622	\$795	\$423	1.7x	17.0x	28.3x
Average							2.2x	12.9x	22.5x
Median							2.2x	12.2x	22.4x

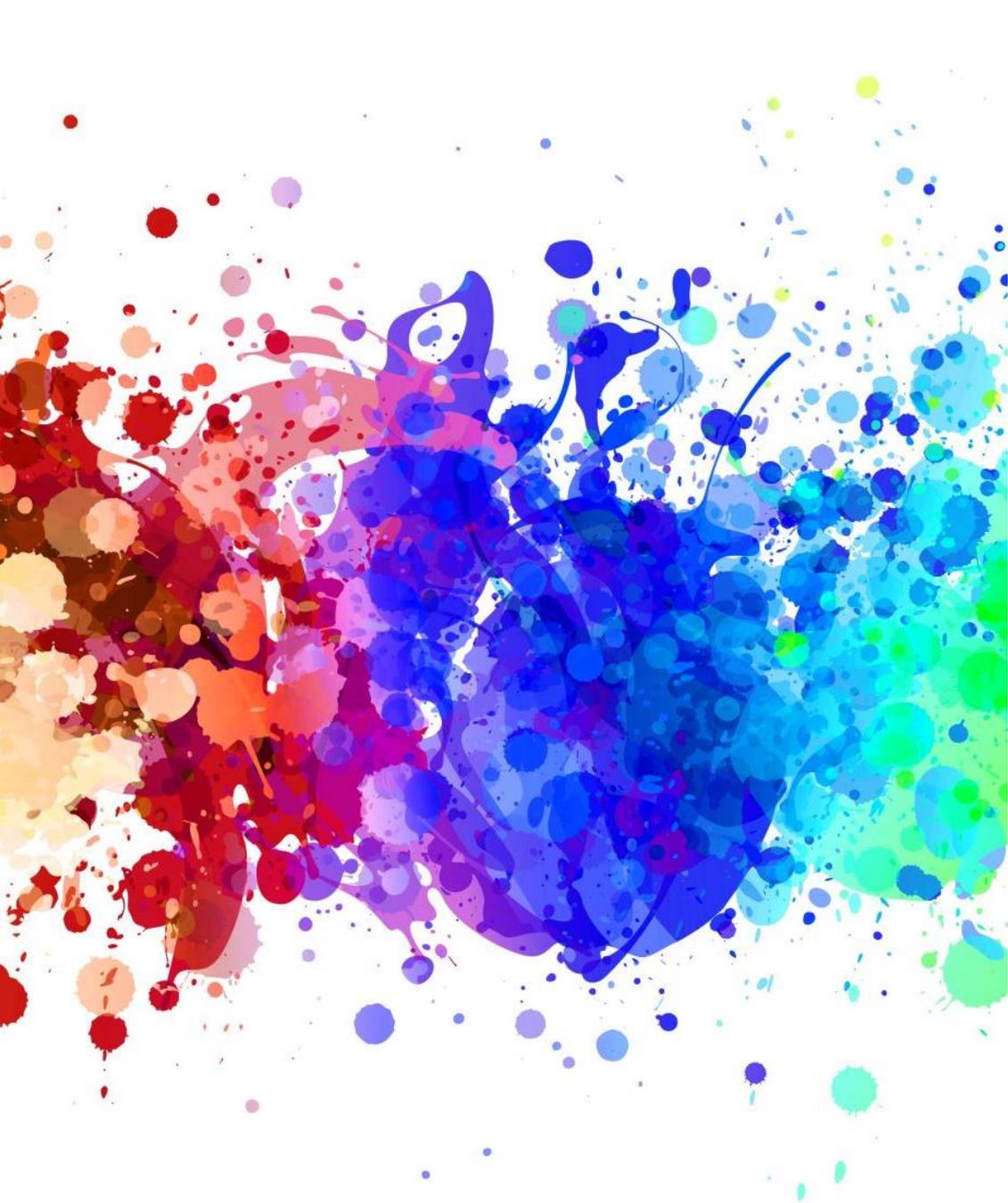
Right-Skewed Distribution of U.S. Venture Returns

By % of financings
in companies going out-of-business, acquired, or IPO 2004-2013
n=21,640 financings



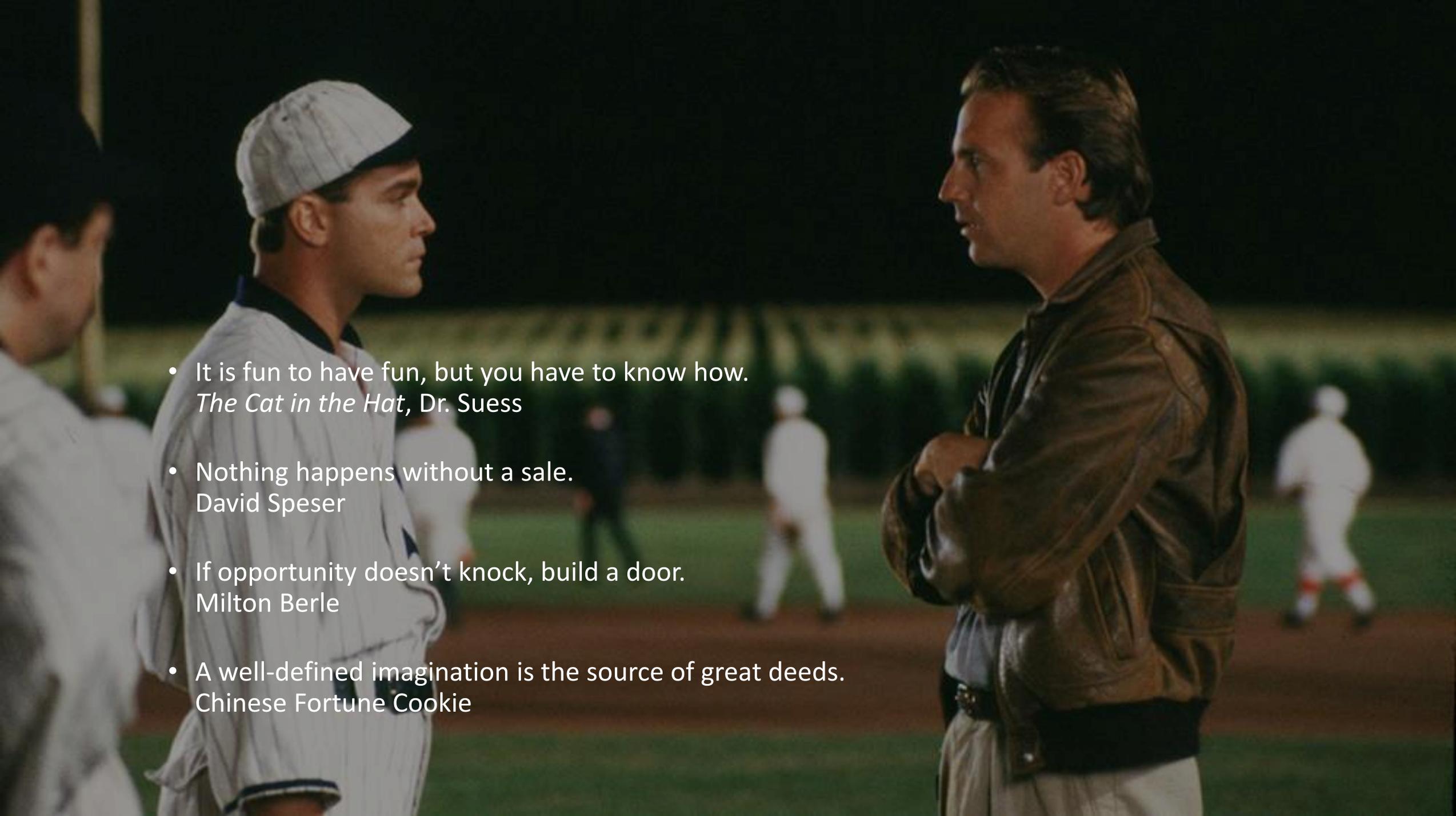
Includes data from Dow Jones VentureSource and other sources

[Venture Outcomes are Even More Skewed Than You Think - VC Adventure \(sethlevine.com\)](http://sethlevine.com)



Bottom Line on VC

- It's first and foremost about obscene amounts of money
- Very few get it because very few are likely to deliver that.
- If you get it you under emense pressures to perform or you are out.



- It is fun to have fun, but you have to know how.
The Cat in the Hat, Dr. Seuss
- Nothing happens without a sale.
David Speser
- If opportunity doesn't knock, build a door.
Milton Berle
- A well-defined imagination is the source of great deeds.
Chinese Fortune Cookie

▶ Thank you!

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