DIVIDING STARTUP EQUITY: KEEPING A PIECE OF THE BIG PIE

MANNY STOCKMAN, SENIOR ASSOCIATE, TECH

OSAGE UNIVERSITY PARTNERS

Carnegie Mellon University

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TODAY'S PRESENTERS

Manny Stockman

Senior Associate, Osage University Partners

Previously

- *Lead Member Engineering Staff,* Lockheed Martin Advanced Technology Laboratories

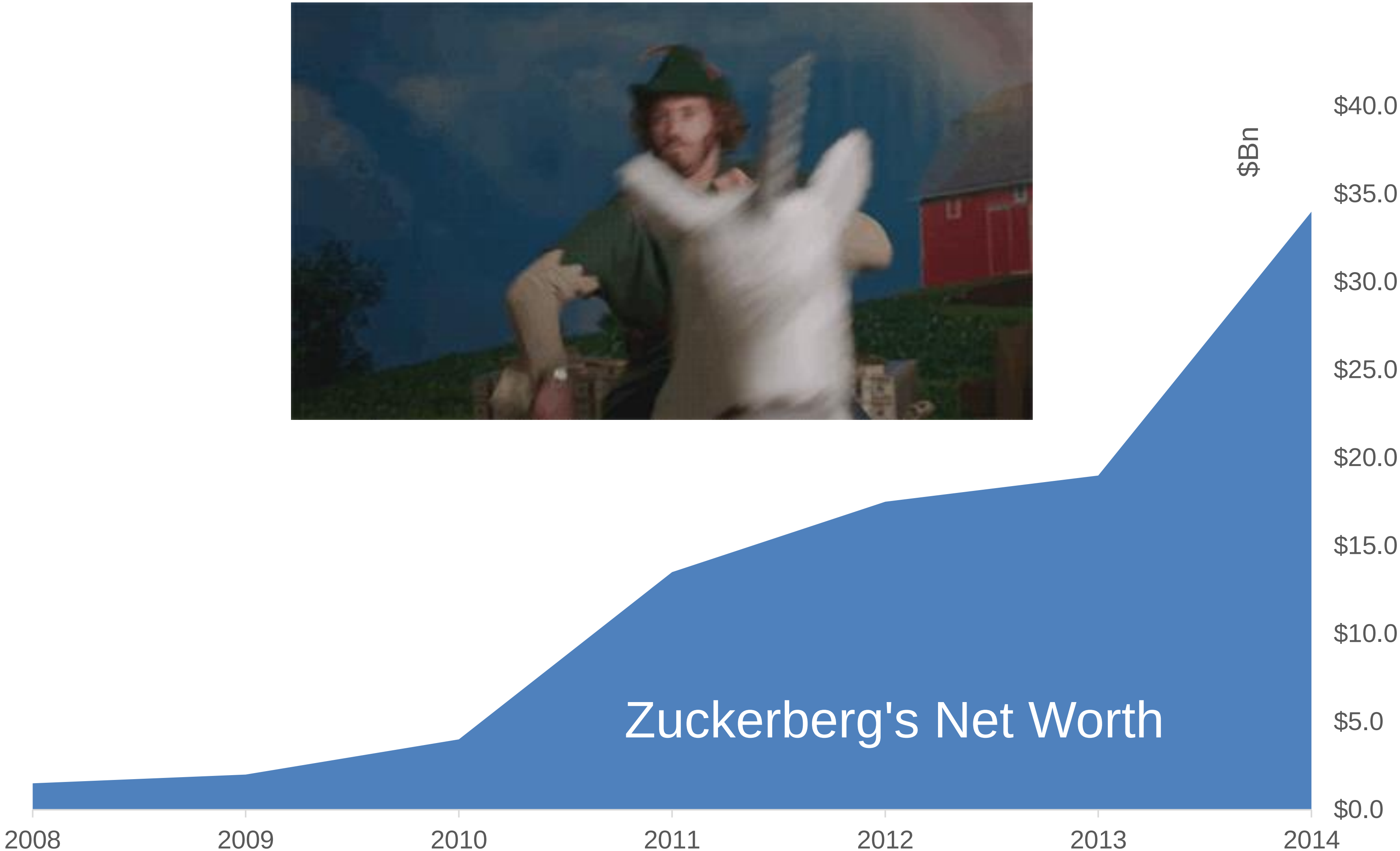
- *Senior Aeronautical Engineer,* Lockheed Martin Skunk Works

- Ph.D., Mechanical & Aerospace Engineering, Princeton University

- B.S.E., Mechanical Engineering & Materials Science – Duke University

FOUNDING TEAM EQUITY

MOST FOUNDERS THINK THIS WILL HAPPEN…



But Not This

theranos

quirky

better place

aoptix

webvan

FOURSQUARE

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SOLYNDRA®

AQUION ENERGY

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WHY GIVE EQUITY?

- Reward past performance

- Incentivize future performance

STARTUP SIRENS

- In Homer's Odyssey, the Sirens would entrance sailors with their music, causing them to shipwreck
- In startups, founders are tempted to treat each partner equally and distribute stock in such a way; which represents a serious red flag (Timmons, 1975)
- Disproportionate distribution amongst initial founders recognizes the contributions of each team member and explicitly aligns the incentives, expectations, and status throughout the team
- Misallocating initial equity can have substantial consequences

Timmons, J.A., 1975, The Entrepreneurial Team: An American Dream or Nightmare, Journal of Small Business Management, 13(4), October, pp. 33-38.

Consequences of Poor Equity Allocation

Parasitic Founders

- Once equity is granted, it cannot be taken back
- This can result in founders that are no longer incentivized to offer value to a startup and sit along for the ride on the cap table

Lack of Equity for Compensation

- Once options have been issued out, the company must expand their option pool to compensate future employees
- Each subsequent expansion of an option pool dilutes existing shareholders

(Un)Incentivized Employees

- Where there is not enough equity options to compensate existing and new employees, it can lead to low morale or employee exodus

Recapitalization

- To remove a shareholder, sometimes companies go through a recapitalization
- These are highly challenging for investors, who will typically pass on a deal rather than deal with cleaning up a capitalization table

Same Consequences apply for Bad Investors

Bad Venture Investors can sometimes mean:

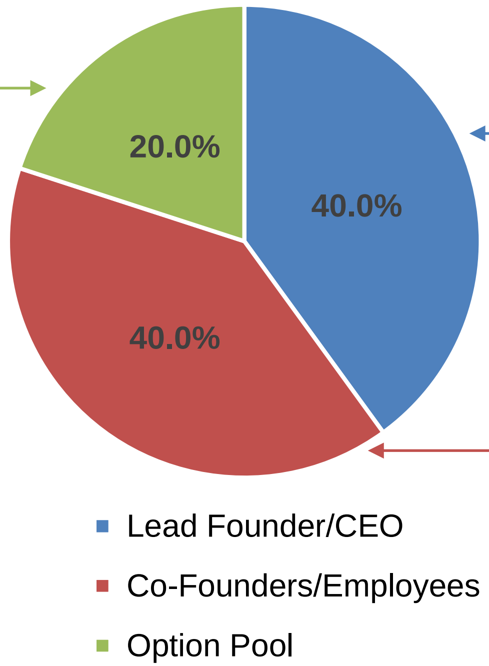
- Parasitic investors
- Lack of equity for new investors
- Recapitalization
- Poor culture around board meetings
- Obstructive behavior

Lookout for:

- Liquidation preferences
- Misaligned exit horizons
- Rights of first refusal
- Voting thresholds

Initial Founder Split

Example Initial Cap Table



- Initial CEOs/Lead Founders typically get the largest chunk of ownership
- These Founders are full-time
- Initial Equity ranges from 30-60% of the company

- Co-Founders and key employees includes founding scientists, C-level execs, VP, and any initial employee
- Investors will typically like to see an initial team in place before investing in a company

- Initial option pool is to incentivize new hires with awards (Day 1 + ~annually)
- A company typically refreshes their option pool at every financing round and targets 15-25%

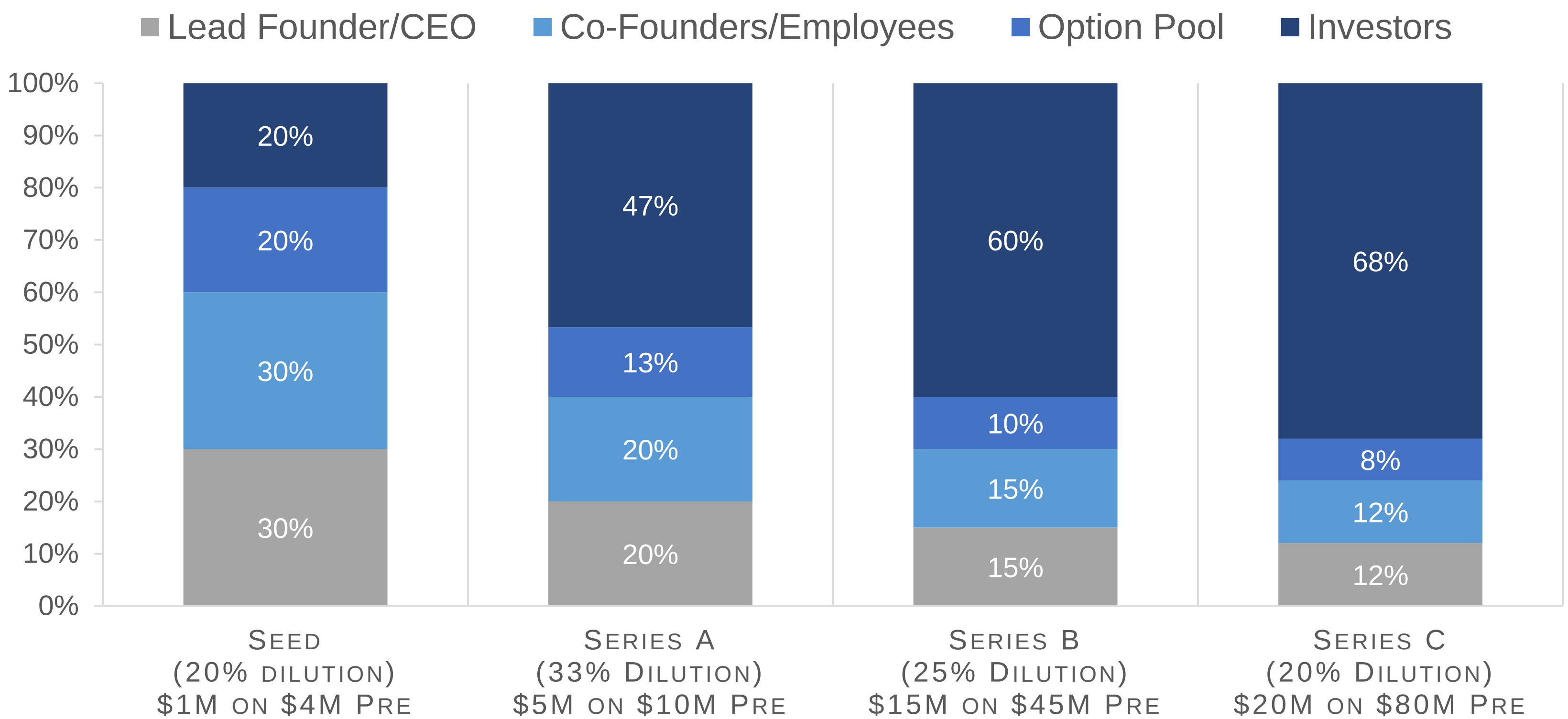
Typical Pre-Financing Equity

Position	Range %
Founding CEO	30-60%
Active Founding Scientist	**20-25%**
Passive Founding Scientist	**1-5%**
University Founding Equity	2-30%
Professional CEO (Series ~A/B)	5-10%
C-Level	2-5%
Lead Engineer / Scientist	1-2%
Engineer (5+ years)	0.66-1.25%
Engineer (Junior)	0.2-0.66%
Ind. Board Member/Advisor	1%

- Titles range from CTOs, CEOs, and Chief Scientist
- Many are part time, but spend at least 30% of time at startup
- Get 20% median and 25% mean initial equity
- The most highly compensated are founding scientist CEOs, which is rare
- Active founding scientist are more typical in tech companies

- Titles range from nothing, Advisor, Scientific Advisory Board to Chief Scientist
- Spending very little time at startup and some are not in touch with their companies at all
- Get less than 5% initial equity

SCENARIO: TYPICAL OWNERSHIP THROUGH ROUNDS



- The average successful startup raises $41M across 4 rounds of financing, exiting around $240M
- Most lead founders exit with around 12% ownership of their companies
- Substantial dilution every round from refreshing the option pool and new capital for salaries

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VALUE OF SCIENTIFIC FOUNDERS

- In Tech, some professors spend 1-2 years of leave at founding, but will often return to the university
- Once returning to the university its very challenging to stay up-to-date with a fast moving startup, therefore, their contribution inevitably diminishes
- In Life Science, professors typically stay at the university, but often participate on or chair the scientific advisory board

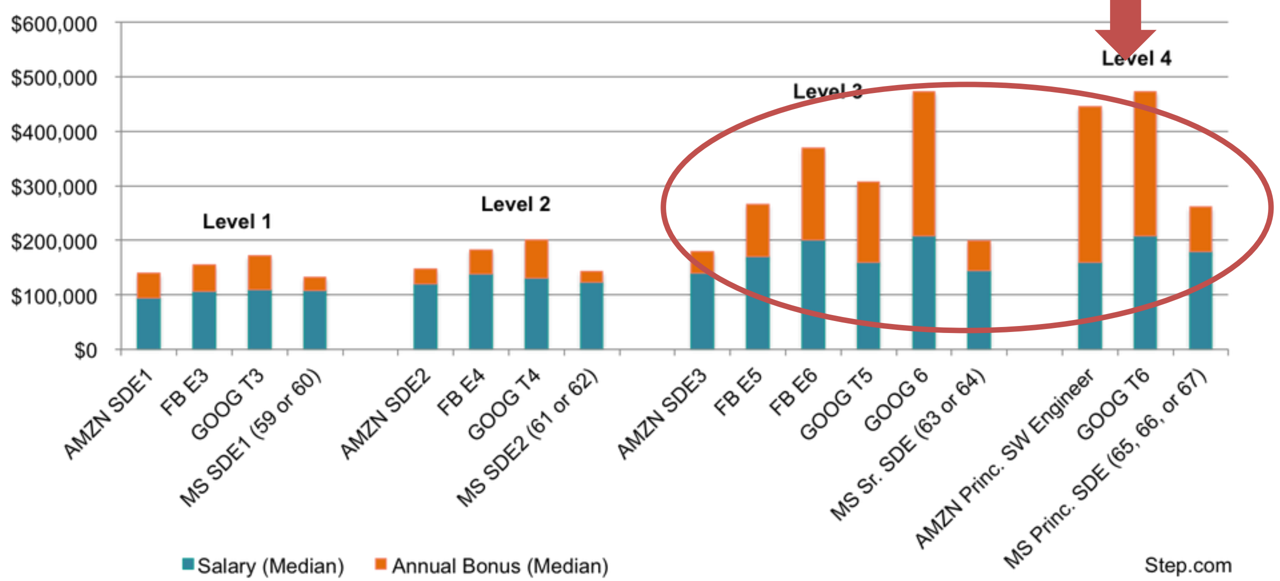
REASONS FOR ISSUING OPTIONS TO A SCIENTIFIC FOUNDER

- Continued thought leadership on the science
- New research contributions from lab – pipeline of innovation
- Pipeline for hiring students
- High level research connections with major companies – research collaborations and acquisitions
- Raising profile of company
- Cutting-edge outside view

WHY ARE OPTION POOLS IMPORTANT?

THIS

Pays For



HOW CAN STARTUPS COMPETE?????

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REFRESHING THE OPTION POOL

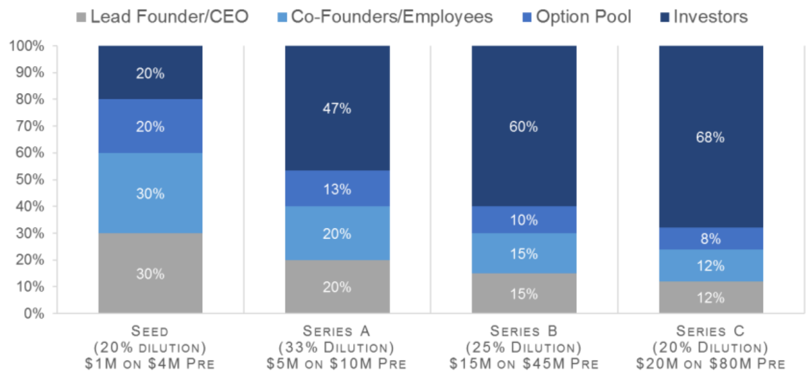
1. Building the Team

2. Turnover

3. Every time you raise money

Without a Team You are Nothing

Yes, you will be diluted



But without your..

You will get…

EXAMPLE: EQUITY DISTRIBUTION PLAN

Annual Equity Grant Chart by Position

New Hires
Grants are issued to new employees at market levels according to annual equity grant chart

Promotion
Promotion grants are given additional options to bring employee to the level as if you were to hire her/him today

Outstanding Performance
Once a year grants for 10 to 20% of employees, which are 50% of what you would hire that person for today

Evergreen
Starting at 2.5 year anniversary for every year, provide employee ¼ of what person would be hired for today

* Wealthfront, "https://blog.wealthfront.com/the-right-way-to-grant-equity-to-your-employees/"

Option Options

Restricted Stock Units (RSUs)

- Commitment to give stock based on vesting
- Taxable at vesting – good for founding equity as a “zero” value can be assigned
- Employee becomes a true shareholder in the company

Incentive Stock Options (ISOs)

- Does not trigger federal income tax
- ISOs receive long term capital gains treatment (must be held two years from grant and one year following exercise)
- In the case of early acquisition, may be taxed as income
- Can only be granted to employees (no advisors, consultants, or service providers)
- Require 409a valuation to avoid mispricing stock

Non-qualified Stock Options (NSOs)

- Taxes upon exercise (difference of strike price of option and fair market value of stock at time of exercise)
- Taxed at ordinary income rate
- Require 409a valuation to avoid mispricing stock

Being Real about Dilution

Capital = Time + OpEx + Capex

Valuation = $f(\text{Revenue} + \text{Product} + \text{CEO Experience} + \text{Market})$

$$\text{Dilution} = \frac{\text{Capital}}{\text{Valuation}}$$

KEEPING A PIECE OF THE BIG PIE

THE IMPORTANCE OF TEAM IN YOUR STARTUP'S SUCCESS

KEY AREAS OF DILIGENCE - TECH

Team

Market Opportunity

IP	Competition	Technology	Capital Structure & Exit Analysis

ENTREPRENEURS WE FUNDED

Sue Washer, *AGTC*

Sue**,** a serial entrepreneur, approached the University of Florida TTO for emerging opportunities. UF synced her up with the scientists behind AGTC and they launched the company, taking the company to IPO in 2014.

Brendan R, Dave W, Ben C, *PsiKick*

Two academic co-founders from Michigan and UVA linked up with Brendan Richardson, a first time CEO with operational and investing experience in the semiconductor industry. The group honed in on a big vision application space to raise significant capital.

A CEO SEARCH!

Quantum Qubit is a new photonic quantum computing hardware company building a quantum machine with compute power orders of magnitude higher than existing computers. Key facts:

- Expects to have a commercial product available in two years.
- Will develop both hardware and application software
- During the next two years, will establish close collaborations with corporate partners to define quantum computing use cases
- Will need to raise a $3mm seed round now, $20mm Series A in two years
- 3 person engineering team in place today

Candidate Profiles: Which Would You Pick?

- Candidate A: 10 years experience, first as an engineer at Broadcom, left to become VP Product Development at a networking startup that Cisco acquired for $200mm
- Candidate B: 3-time successful entrepreneur in software, hardware, and medical devices. 1 company went public, 1 acquired by Medtronic, 1 still private
- Candidate C: former General Manager at IBM's Quantum Computing group, prior to that CTO of server business unit at IBM
- Candidate D: Founding PI of company. Served as CTO of previous university spinout for 2 years in the resistive RAM memory space

DIGGING DEEP INTO CANDIDATE BACKGROUNDS

- Candidate A: 10 years experience, first as an engineer at Broadcom, left to become VP Product Development at a networking startup that Cisco acquired for $200mm
- Digging Deeper
  - **Track record of success?**
  - Interim promotions, in the right engineering group at Broadcom, was the work narrow or broad, etc.
  - Was the startup really a success? How much capital did it raise?
  - How critical was A's role at the startup? CEO report? How influential was A on the senior team?
  - **Transitions? Why did A leave Broadcom?**
  - Domain expertise: How do we get comfortable with A's quantum computing knowledge? How curious is A technically? What does A do to stay current?
  - Leadership: Given that A is a first-time CEO, can A be a leader?
  - **Did A's colleagues follow from Broadcom to the startup?**
  - Innate talent: How much raw talent does A have? Intelligence, force of nature personality, passion, continuous learner

Digging Deep Into Candidate Backgrounds

- Candidate B: 3 time successful entrepreneur in software, hardware, and medical devices. 1 company went public, 1 acquired by Medtronic, 1 still private
- Digging Deeper
  - Understand deeply **B's timing and role in each company, and the real success behind each company**
  - Founded first company 10 years ago, went public five years ago, trades at $1 billion today.
  - Medical device acquired by **Medtronic for $80 million, raised $50 million**
  - Private company still private, **funded by Sequoia and Accel**. CEO recruited his replacement after raising venture round because he thought company needed domain expertise
- Digging even further…
  - B was not at the first company at the time of the IPO, "left" three years earlier
  - Medical device buyout was $30 million upfront, $50 million earn-out not yet paid
  - With company that is still private, B was pushed out by the VC's because B executed poorly and recruited badly

DIGGING DEEP INTO CANDIDATE BACKGROUNDS

- Candidate C: former General Manager at IBM's Quantum Computing Effort, prior to that CTO of server business unit at IBM
- Digging deeper
  - C has very strong technical knowledge on quantum computing
  - C has been at **IBM for 30 years**
  - IBM's Quantum Computing Group had 250 people
  - C expects **$300k / year salary from the start-up** post funding

Digging Deep Into Candidate Backgrounds

- Candidate D: Founding PI. Served as CTO of previous spinout for 2 years in the resistive RAM memory space
- Digging Deeper:
  - D has lots of **industry connections** as corporations have begun exploring quantum computing
  - Several members of D's lab **want to follow** D into the company
  - D feels disgruntled after being forced out of previous company when new CEO was brought in. **D is determined to prove CEO skills**

KEY INSIGHTS FROM CANDIDATE REVIEW

- Lots of molds of successful entrepreneurs, not just one
- Many entrepreneurs seem strong at first, and it is **important to peel the onion**
- If they have experience, ensure that they have **a track record of some success**
- If they have failed in the past, make sure they acknowledge it (ethics question) and have learned from it
- If they have no experience, **ensure they recognize it and surround themselves with people** who do
- Also ensure their ego is such that they will **step aside later**
- Can spot if a candidate is too corporate
- How evaluate domain expertise?
- Ideally candidate knows the domain from direct experience
- If candidate does not have direct domain expertise, ensure the candidate has / is willing to attract domain experts and show that they can learn from them
- Is it a space **where domain expertise matters**?

Important Entrepreneur Characteristics

- Track record of success, including learning through failure
- Thoughtful with strong judgment, both tactical and strategic
- Continuous learner: curious, accepts input from others, learns from mistakes
- Domain expertise, either directly or indirectly
- Great leader
- Ability to attract and retain talent
- Intensely entrepreneurial and passionate
- Hands on driver and manager of team
- Clear examples of strong execution
- Good fundraiser and company salesman
- Scrappy: can accomplish a lot with limited capital
- High transparency / ethics
- Have they delivered on their promises?

CEO Requirements Change Over Time

- Initial Spinout
  - Ability to collaborate with inventors
  - Technically strong
  - Hands on
  - Strong recruiter
  - Strong fundraiser

- Product Development
  - Good at finding product-market fit
  - Strong salesman (i.e. for partnerships)
  - Strong recruiter
  - Strong fundraiser

- Commercialization
  - Great at sales & marketing
  - Strong manager
  - Strong recruiter
  - Strong fundraiser

How To Diligence Candidates?

- LinkedIn
- Find common acquaintances
- Look up former colleagues and direct reports
- Call previous investors
- Research past companies
- Use candidate’s references to get to other references
- Google searches
- Ask the candidate to do a project for you
- During reference checks
- Be upfront about any concerns you have on the candidate, and get their reaction
- Understand strengths and weaknesses in specific functional areas
- When asking for negatives, pregnant pauses are your friend
- Go for relative answers: not “is the candidate great?”, but “what decile would you put the candidate in?”
- Avoid confirmation bias

Personal Characteristics of a Great CEO

Vision

- Drive to be the leader in the space (2nd place isn't acceptable)
- Thinking high level, but taking care of the details

Realistic/Modest

- CEOs aren't expected to have every skill necessary to build out a company
- The best CEOs identify what they lack and will hire better people around them to make the company succeed

Communication

- Build and drive an internal team
- Sell the vision externally – communicate succinctly and be able to sell

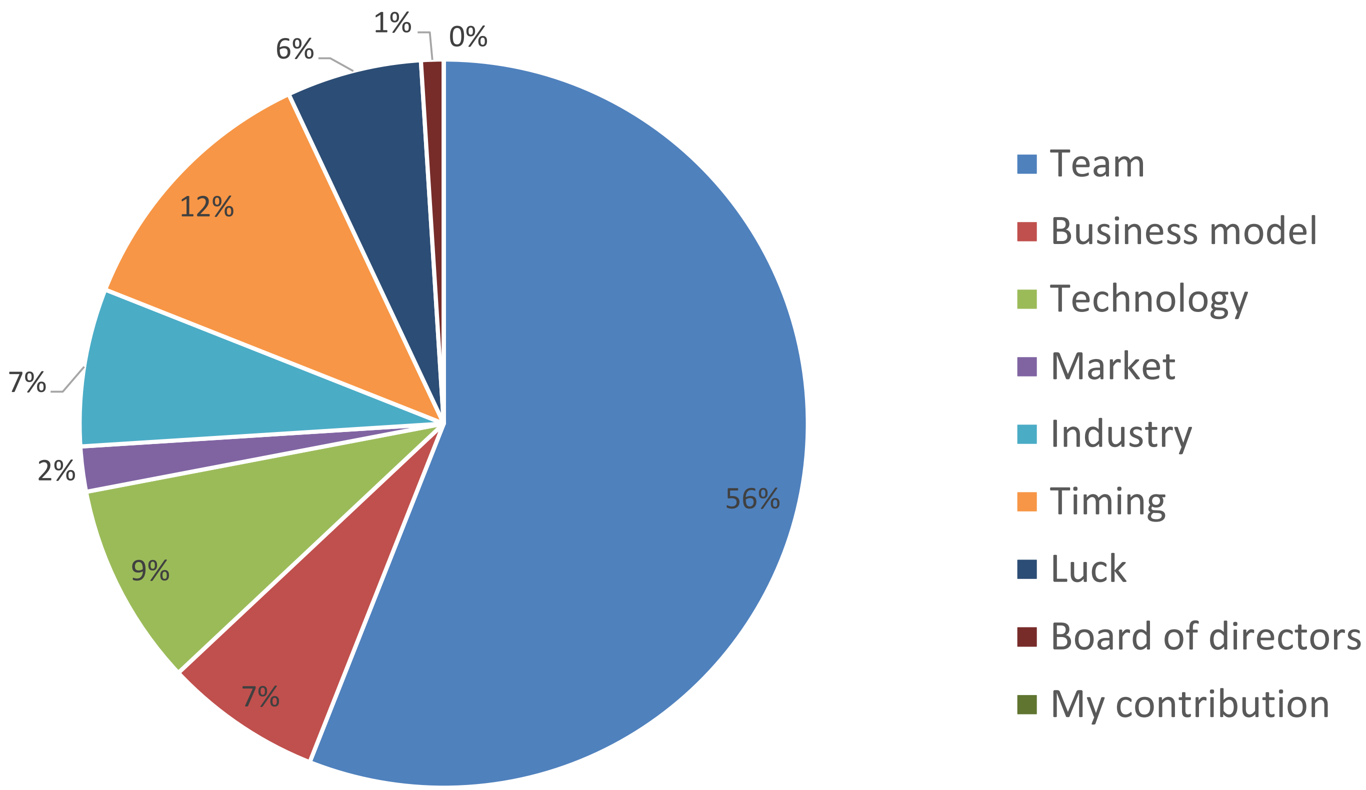
Low and high ego

- The best CEOs have a high ego to be irreverent about the industry they're disrupting, firm in their beliefs, and have significant grit when faced with problems
- They also have low enough ego to know that when they're not the right person to run a company or solve a problem, they step aside

Adaptability

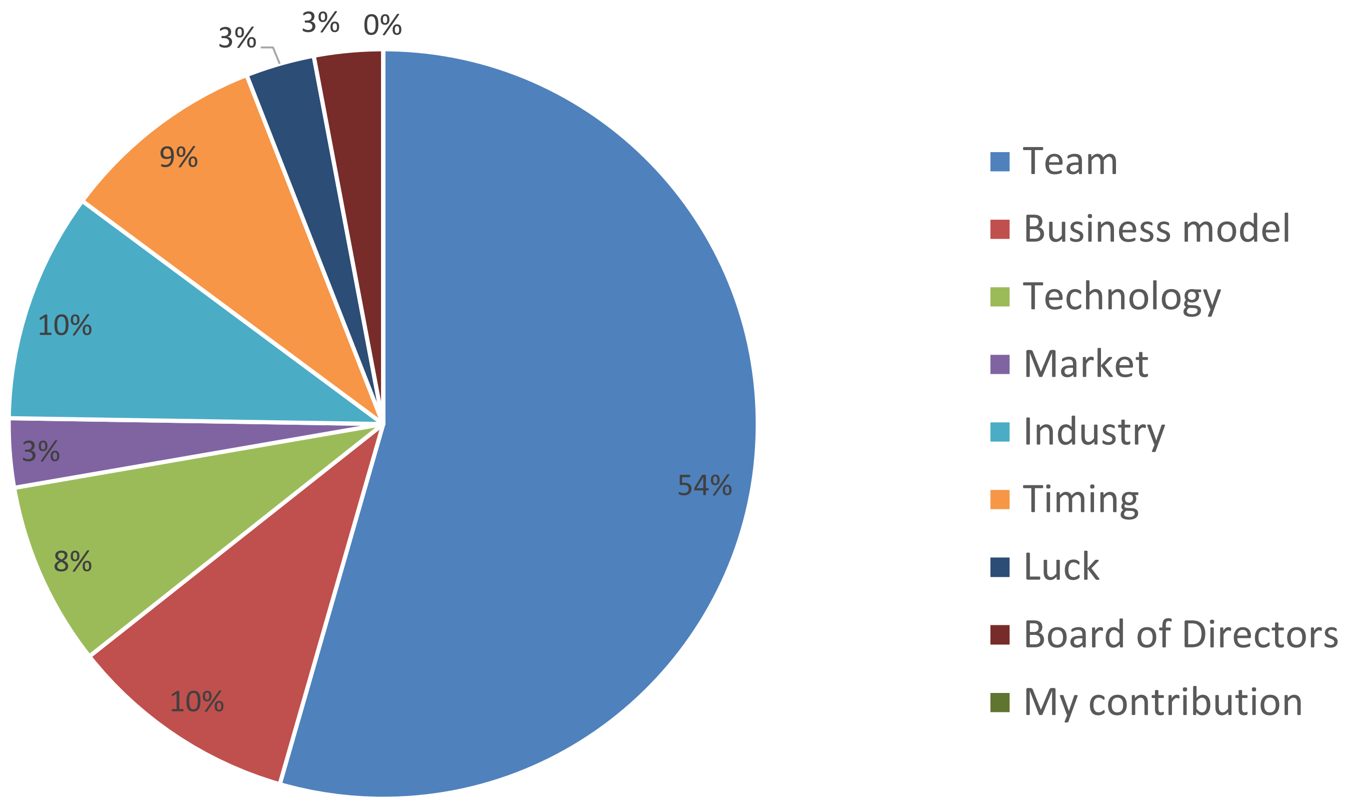
- See what's coming before everyone else and positions to take advantage of it
- The quicker CEOs admit they were wrong, the faster they can pivot

MOST IMPORTANT FACTORS THAT CONTRIBUTED TO SUCCESSFUL INVESTMENTS (%)



Source: [“How Do Venture Capitalists Make Decisions?”]

MOST IMPORTANT FACTORS THAT CONTRIBUTED TO FAILED INVESTMENTS



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Thank You

Contact Us

Manny Stockman
mstockman@osagepartners.com

50 Monument Rd, 201
Bala Cynwyd, PA 19004
484.434.2255
www.osageuniversitypartners.com

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