Founder, VC, Advocate

**Advocate**
Focused on increasing diversity in Tech

**Venture Capitalist**
Early stage investor in enterprise software

**Founder**
VC-backed high tech enterprise SaaS company
Illuminate’s Longstanding Pittsburgh Connections

While it started with Tepper MBAs – our lens has opened much wider

- Early years – “class agent” & recruited on campus for AT&T, ADL and Booz
- Tepper Business Board of Advisors 15+ years
- Advisory roles for Project Olympus and Don Jones Center
- Led investment in ETC spin-out (Wildpockets/SimOps Studios)
- Published INC article about Pittsburgh - a great place to start a business!
- Engaged Tepper research interns in Illuminate’s tech diversity focused white papers
- Offered commencement address for CMU Silicon Valley masters program
- Created Student-in-Residence Program at Tepper
- In process of launching “virtual office hours”

Seeking enterprise tech investments in the broader Pittsburgh region
Carnegie Mellon SiRs AND Researchers

Nathan Pitzer  
Sam Blake  
Max Mirho  
Lauren D’Souza  
Anna Fuller  
Joel Perdzock  
Lisha Prakash  
Nilvea Malave Torres  
Luisa Muniz Felix de Souza
Investment Market Discontinuity Impacts Startups

Escalating valuations at late stage consuming more investing capacity than ever

US VC $s all-time high

US VC activity by year

<table>
<thead>
<tr>
<th>Year</th>
<th>Deal Value ($)</th>
<th># of Deals Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>$369</td>
<td>4,727</td>
</tr>
<tr>
<td>2009</td>
<td>$272</td>
<td>5,409</td>
</tr>
<tr>
<td>2010</td>
<td>$313</td>
<td>7,882</td>
</tr>
<tr>
<td>2011</td>
<td>$447</td>
<td>9,301</td>
</tr>
<tr>
<td>2012</td>
<td>$415</td>
<td>10,573</td>
</tr>
<tr>
<td>2013</td>
<td>$475</td>
<td>10,740</td>
</tr>
<tr>
<td>2014</td>
<td>$710</td>
<td>9,200</td>
</tr>
<tr>
<td>2015</td>
<td>$830</td>
<td>9,489</td>
</tr>
<tr>
<td>2016</td>
<td>$772</td>
<td>8,948</td>
</tr>
<tr>
<td>2017</td>
<td>$830</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>$1,309</td>
<td></td>
</tr>
</tbody>
</table>

But, fewer first financings

US first-financial deal activity

<table>
<thead>
<tr>
<th>Year</th>
<th>Deal Value ($)</th>
<th># of Deals Closed</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>$5.8</td>
<td>1,726</td>
</tr>
<tr>
<td>2009</td>
<td>$4.0</td>
<td>1,631</td>
</tr>
<tr>
<td>2010</td>
<td>$4.5</td>
<td>2,033</td>
</tr>
<tr>
<td>2011</td>
<td>$6.1</td>
<td>3,206</td>
</tr>
<tr>
<td>2012</td>
<td>$7.0</td>
<td>3,457</td>
</tr>
<tr>
<td>2013</td>
<td>$7.2</td>
<td>3,683</td>
</tr>
<tr>
<td>2014</td>
<td>$7.6</td>
<td>3,460</td>
</tr>
<tr>
<td>2015</td>
<td>$9.0</td>
<td>2,734</td>
</tr>
<tr>
<td>2016</td>
<td>$7.3</td>
<td>2,748</td>
</tr>
<tr>
<td>2017</td>
<td>$7.4</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>$10.1</td>
<td>2,123</td>
</tr>
</tbody>
</table>
Atomization of Pre-A Investing

Early stage investing is continuing to evolve - and may not be to benefit of entrepreneurs

**New Norm can be 2-3 financing rounds prior to a larger than ever Series A**

- Early tranches of capital can result in significant dilution to founder prior to 1st institutional round
- As a result, the seed round with a normal ESOP can mean founders left with 30% ownership prior to A round

**Financing Round Illustration**

<table>
<thead>
<tr>
<th>Total Pre-Seed - including angel round conversion ($)</th>
<th>$1M to $1.5M</th>
</tr>
</thead>
<tbody>
<tr>
<td>Founding Team Ownership (%)</td>
<td>65-75%</td>
</tr>
<tr>
<td>Seed Round</td>
<td>$1.5M - $3.0M</td>
</tr>
<tr>
<td>Founders Ownership After Seed and Creation of ESOP</td>
<td>30-40%</td>
</tr>
<tr>
<td>Post Seed Round as Prep for Larger Series A (may be note with discount)</td>
<td>$1M to $2M</td>
</tr>
</tbody>
</table>

Many entrepreneurs are taking different approaches
Seed Stage Investments are Evolving

Companies further along before raising significant capital = win/win for entrepreneur and investor

What's Changed?

- Entrepreneurs bootstrapping
- Accelerators with value-add and cash
- Capital efficiency enabling pivots
- More spin-outs
- Larger angel rounds
- Non-Bay Area companies with traction

Sources: Illuminate Ventures and PitchBook

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Diversity in Tech

History of investigation for Illuminate

2010 Whitepaper

2000+ direct downloads... shared much more broadly
Many unique speaking engagements
>100 media citations in 2 years post publication

HIGH PERFORMANCE ENTREPRENEURS: WOMEN IN HIGH-TECH

WIRED  Forbes  The New York Times  FORTUNE
FASTCOMPANY  PE HUB  VentureBeat
What Can We Learn From Comparing Points Of View?

VCs ↔ Founders
Females ↔ Males
VC Perception of Female ↔ Male Founders
Voices of Founders and Funders

Gather input directly from current entrepreneurs and investors via survey

**Methodology**

Focus on understanding founder motivations and the barriers entrepreneurs face - and how they may differ by gender

Reached out to more than 1200 individuals across active founders, and current VCs

At least 1/3 female in each group

**Thank you to...**

our CMU students for their survey development assistance!

Lauren D'Souza

Anna Fuller
Entrepreneurial Motivations

Why do founders say they choose to be entrepreneurs?

Top 3 Motivations

<table>
<thead>
<tr>
<th>Rank</th>
<th>Female Founders</th>
<th>Male Founders</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Bringing Big Ideas to Market (70%)</td>
<td>Bringing Big Ideas to Market (60%)</td>
</tr>
<tr>
<td>#2</td>
<td>Create long-lasting company (9%)</td>
<td>Create long-lasting company (19%)</td>
</tr>
<tr>
<td>#3</td>
<td>Prove to myself (8%)</td>
<td>Financial Gain (15%)</td>
</tr>
</tbody>
</table>

Observations

- Significant similarity of primary motivation across male and female entrepreneurs
- Myth: Most entrepreneurs are primarily motivated by financial gain – regardless of gender, not primary (15% of men vs. 2% of women)
- Not one male founder selected “prove to myself” as motivator vs. 8% of female founders

Source: Gender Differences in Entrepreneurship, © Illuminate Ventures, 2018 www.illuminate.com/whitepaper
Male and female entrepreneurs think more similarly than you might guess

**Observations**

- Female and male founders agree on the top 2 attributes:
  - Resilience & Perseverance
  - Visionary with Passion for the Business

- Networks for Capital ranked much higher for women than men

- Men have better awareness of value of Domain Knowledge

- Should women be more focused?

**Attributes with the Largest Gap between Male and Female Founders**

Source: Gender Differences in Entrepreneurship, © Illuminate Ventures, 2018 www.illuminate.com/whitepaper
Attributes of Success – VC View

Significant similarity to founder viewpoint

<table>
<thead>
<tr>
<th>Rank</th>
<th>Female VCs</th>
<th>Male VCs</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>Resilience</td>
<td>Resilience</td>
</tr>
<tr>
<td>#2</td>
<td>Deep domain knowledge</td>
<td>Deep domain knowledge</td>
</tr>
<tr>
<td>#3</td>
<td>Visionary with passion for business</td>
<td>Ability to attract great team</td>
</tr>
<tr>
<td>#4</td>
<td>Ability to attract great team</td>
<td>Visionary with passion for business</td>
</tr>
</tbody>
</table>

Observations

- Domain knowledge is much more highly ranked by VCs versus founders
- Team building capability is also key to VCs

Source: Gender Differences in Entrepreneurship, © Illuminate Ventures, 2018 www.illuminate.com/whitepaper
VCs Perceiption of Male VS. Female Founders

VCs generally believe that women are less likely to display half of the success attributes

Success Attributes
Likelihood of being demonstrated by entrepreneurs

4 of 10
Ranked equal likelihood for male/female founders by all VCs

0 of 10
Ranked more likely for female founders by male VCs

1* of 10
Ranked more likely for female founders by female VCs

* Attribute = Smart risk-takers, which was ranked near the bottom of importance by all VCs

Source: Gender Differences in Entrepreneurship, © Illuminate Ventures, 2018  www.illuminate.com/whitepaper
Barriers to Success – Founder Perspective

Financial aspects of entrepreneurship perceived as most daunting for all entrepreneurs

Top 2

Both male and female founders selected:
Financial security & Access to sources of capital

~2x

Nearly twice the number of male founders vs female founders ranked Balancing family & work as a significant barrier

65%

Nearly 2/3s of female founders believe female-founded startups are disadvantaged overall

Source: Gender Differences in Entrepreneurship, © Illuminate Ventures, 2018 www.illuminate.com/whitepaper
Barriers to Success – VC Perspective

VCs view the strength of barriers very differently from entrepreneurs

Top Three Barriers to Success

<table>
<thead>
<tr>
<th>Barrier</th>
<th>Female VC%</th>
<th>Male VC%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to sources of capital</td>
<td>24%</td>
<td>11%</td>
</tr>
<tr>
<td>Having a great/unique idea</td>
<td>23%</td>
<td>20%</td>
</tr>
<tr>
<td>Access to networks to build team</td>
<td>12%</td>
<td>16%</td>
</tr>
</tbody>
</table>

Observations

The top 3 barriers VCs thought entrepreneurs face were the same, but the order and relative magnitude was significantly different.

No VCs ranked the following as barriers, compared to 25+% of the male & female founders:
- Balancing family & work
- Gaining support of family

Source: Gender Differences in Entrepreneurship, © Illuminate Ventures, 2018  www.illuminate.com/whitepaper
VCs' Perception of Male VS. Female Founders

VCs believe that women are more likely to be impacted by most of the common barriers to success.

**Barriers to Success**
Likelihood to experience a significant barrier

- **2 of 16** Ranked *equal* barrier for male/female founders by all VCs
- **14 of 16** Ranked *higher barrier* impacting female founders by all VCs
- **Parity**
  Equal barriers: Having a great/unique idea and non-coastal location

Source: Gender Differences in Entrepreneurship, © Illuminate Ventures, 2018  www.illuminate.com/whitepaper
Is There Equal Access?

Women VCs see 2X as many women founders as male VCs, and invest in them at a similar ratio as men

Male VCs

>2.5x more likely to meet with <10 companies a year with a woman co-founder

Female VCs

>3x less likely to have invested in 0 companies over 3 yrs with a woman co-founder

Source: Gender Differences in Entrepreneurship, © Illuminate Ventures, 2018 www.illuminate.com/whitepaper
Key Factors Founders Should Address in VC Pitch

It’s not just about market size, technical differentiation, etc. - early stage investors invest in people/teams

**Areas of Focus**

- Showcase your:
  - History of resilience
  - Big vision and passion
  - Domain knowledge
- Illustrate your ability to:
  - Attract/keep a team
  - Generate unique ideas
  - Gain access to capital

**VCs Less Interested**

- Your financial security
- Balancing family with work - although female founders may still need to debunk this as a barrier
Who is Illuminate?

• Operating executives
• Founders and early execs
• Investors
• Board members
• Choreographers of a platform
• Teammates
Investing in Continuous Digital Disruption

“Digital is the main reason over ½ of the Fortune 500 have disappeared since 2000.”

High Growth Markets
2017-25

- SaaS Applications with Big Data: $37B
- Enterprise AI: $5B
- Industrial Internet of Things: $72B
- Enterprise Mobility: $160B
- Cloud & IT Infrastructure: $30B
- Enterprise Blockchain: $2.5B
- Cyber Security: $110B
- Marketing 2.0: $2.5B

2018 Digital Transformation Technology Spend, IDC

$1.3T

2021 Digital Transformation Technology Spend, IDC

$2.1T
We Punch Well Above our "Weight Class"

By creating a platform of bespoke networks and resources that add value throughout the entire venture lifecycle

Illuminate’s Platform Elements

• Business Advisory Council
• Friends of Illuminate
• Student Interns
• Media
• Co-investors
• Students-in-Residence
Illuminate’s Inter and SiR Programs Offer Win/Win

Helping students gain hands-on experience and aiding Illuminate’s research efforts

8
2019 Interns/SiRs

30+
Intern Alums

Stanford
Cal
Wharton
Carnegie Mellon

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Results From Opening Our Doors Wider

High levels of founder diversity across Illuminate’s 23 portfolio companies

<table>
<thead>
<tr>
<th>Illuminate Ventures</th>
<th>Industry Benchmark</th>
</tr>
</thead>
<tbody>
<tr>
<td>~75% Of companies have a diverse founding team</td>
<td>&lt;25%</td>
</tr>
<tr>
<td>~40% Of companies have a female co-founder</td>
<td>&lt;25%</td>
</tr>
<tr>
<td>~70% Of companies have a founder born outside of the US</td>
<td>&lt;25%</td>
</tr>
</tbody>
</table>
Engage With Us!

Cindy Padnos
Founder & Managing Partner
cindy@illuminate.com
@illuminateVC
www.illuminate.com

Download full whitepaper

http://www.illuminate.com/whitepaper