



Deep Tech startups in Southern California

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Deep Tech, Frontier Tech, Emerging Tech, Hard Tech ??

- **Proprietary tech** – generally “Ph.D. level” research - is a key competitive advantage
- Strong founding team with **deep technical along with deep industry** expertise
- Massive, disruptive, “**industry changing**” market opportunity

Why Southern California?

vs Silicon Valley

VC Eco-system Ranking

ECO-SYSTEM	TOTAL VC INVESTED	TOTAL VC FUNDS RAISED	VC INVESTED/ FUNDS RAISED	NET OUTSIDE VC CAPITAL
Silicon Valley	144.7	153.1	95%	-24.6
New York	33.9	43.6	78%	-9.7
Boston	30.7	41.2	75%	-10.5
Los Angeles	21.3	2.7	789%	18.6
San Diego	9.4	1.5	627%	7.9
Seattle	8.4	7.6	111%	0.8
Chicago	8.3	3.4	244%	4.9
Washington DC	8.2	4.8	171%	3.4
Austin	6.6	1.9	347%	4.7
Philadelphia	4.8	3.0	160%	1.8

Not surprising to see Silicon Valley and other prominent geographies like New York and Boston on top...

LA and SD has the biggest opportunity

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...but the more interesting story is that LA and SD are the 2 most underserved markets when looking at capital availability vs opportunity



Historically, Southern California - esp LA - has been known more for consumer brands...

Media

Disney

hulu

MAKER[®]

Gaming

RIOT
GAMES

ACTIVISION[®]

SCOPELY[®]

Social Media



tinder[™]

Grindr[™]

Commerce

PETCO[™]



DOLLAR SHAVE CLUB

Consumer
Products

Callaway[®]
GOLF

VIZIO[®]

ring

...But there are great technology companies with strong IP and engineering talent

Defense/Space/
Travel Tech

Semi-conductor/
Wireless/Hardware

VR/AR

Cyber-Security

Other

SPACEX

QUALCOMM®

JPL
Jet Propulsion Laboratory

BROADCOM®

OBLONG

CROWDSTRIKE



Sempra Energy®

hyperloop | one

ViaSat®

SONOS



Microsemi

oculus

CYLANCE™



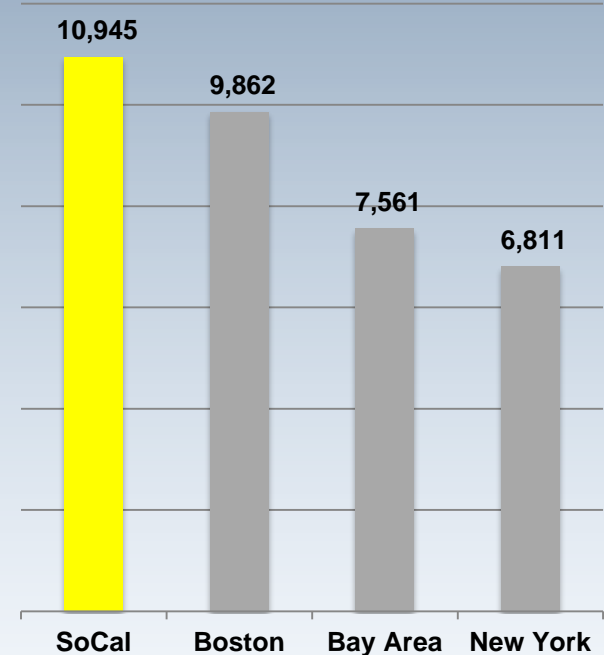
factual™

GENERAL ATOMICS

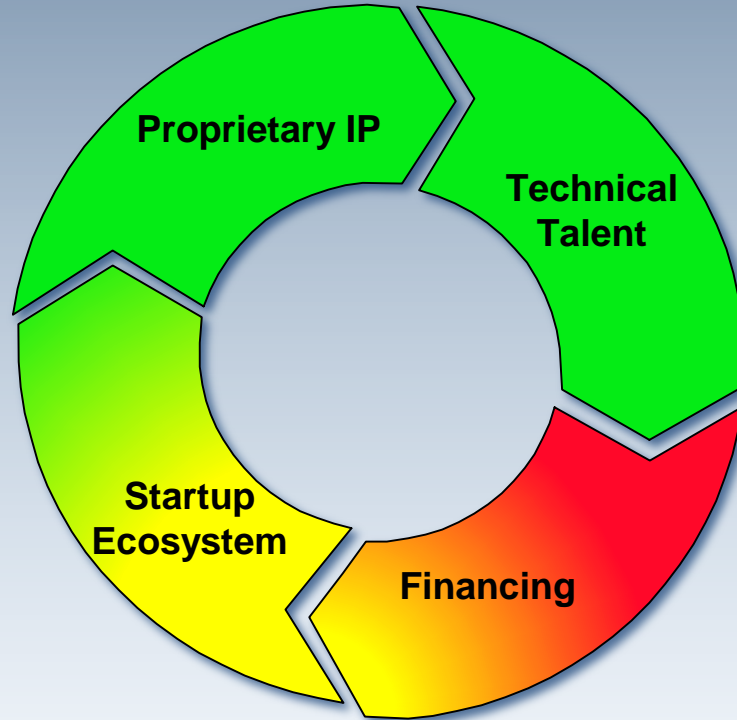
**Southern California has more Top 25
engineering/research schools than anywhere in the
country...**



**...and graduates the
most engineers**



Ingredients for entrepreneurs to start AND build Deep Tech companies in Southern California



It's already happening – Seed/Series A funded startups in SoCal focused on Deep Tech

Robotics/AI

- *InVia Robotics*
- *Miso Robotics*
- *Accel Robotics*
- *Embodied.me*

Drones/Defense/Space

- *Skysafe*
- *Shield.ai*
- *Dronebase*
- *Synapse Technology*
- *Phase Four*

Cyber-security

- *AttackIQ*
- *Fhoosh*
- *Obsidian Security*

Infrastructure/Compute/Data

- *FastData*
- *Deep 6*
- *Syntiant*

Transportation/Autonomous

- *Strobe*
- *Arrivo*

VR/AR Technology

- *Virtualitics*
- *ObEN*
- *Mira Labs*

Ag-Tech

- *Slant Range*
- *Provivi*

Wireless

- *uBeam*
- *nCore*

It's already happening – “Deep Tech” Investors

Early Stage

Later Stage



REFACTOR CAPITAL



For entrepreneurs - Why Deep Tech...

- Strong competitive barriers to entry
- Opportunity for massive disruption and company building
- Help define the cutting edge technology and platforms of the future

...in Southern California?

- Large base of engineering talent and IP from universities and large companies
- Less competitive for recruiting engineering talent than Silicon Valley
- Key industries in biotech, wireless, defense, aerospace, semi-conductors, VR/AR, cyber-security, and ag-tech

EMBARK || VENTURES

- \$45M fund – started in Jan 2017
- Pre-seed (pre-product) and seed stage focused
- \$250k - \$2M
- Some particular areas of interest
 - Robotics
 - AI, ML
 - Cybersecurity
 - Advanced Materials
 - Biotech and Health Technology