UC Berkeley's Innovation & Entrepreneurship Ecosystem

Learnings for Engage 2026

UC Berkeley by the Numbers

Founded 1868 • Public, Land-Grant • First University of California Campus

~45,900
Students
~33K undergrad, ~12.8K grad

$1B+
Annual Sponsored Research

110
Nobel Laureates
2nd only to Harvard

- Top 10 globally, #1 public university in the US
- 2 Nobel laureates in 2025: John Clarke (Physics) & Omar Yaghi (Chemistry)
- #1 public university for venture-funded founders (PitchBook, 6 years running)

NO *One of the founders was Peder Sather, a Norwegian immigrant who helped finance the early university.*

2025 startup rankings

	University	Founder count	Company count
1	**UC Berkeley**	**1,804**	**1,650**
2	Stanford	1,519	1,380
3	Harvard	1,355	1,237
4	University of Pennsylvania	1,206	1,113
5	MIT	1,131	1,019

2025 female startup founder rankings

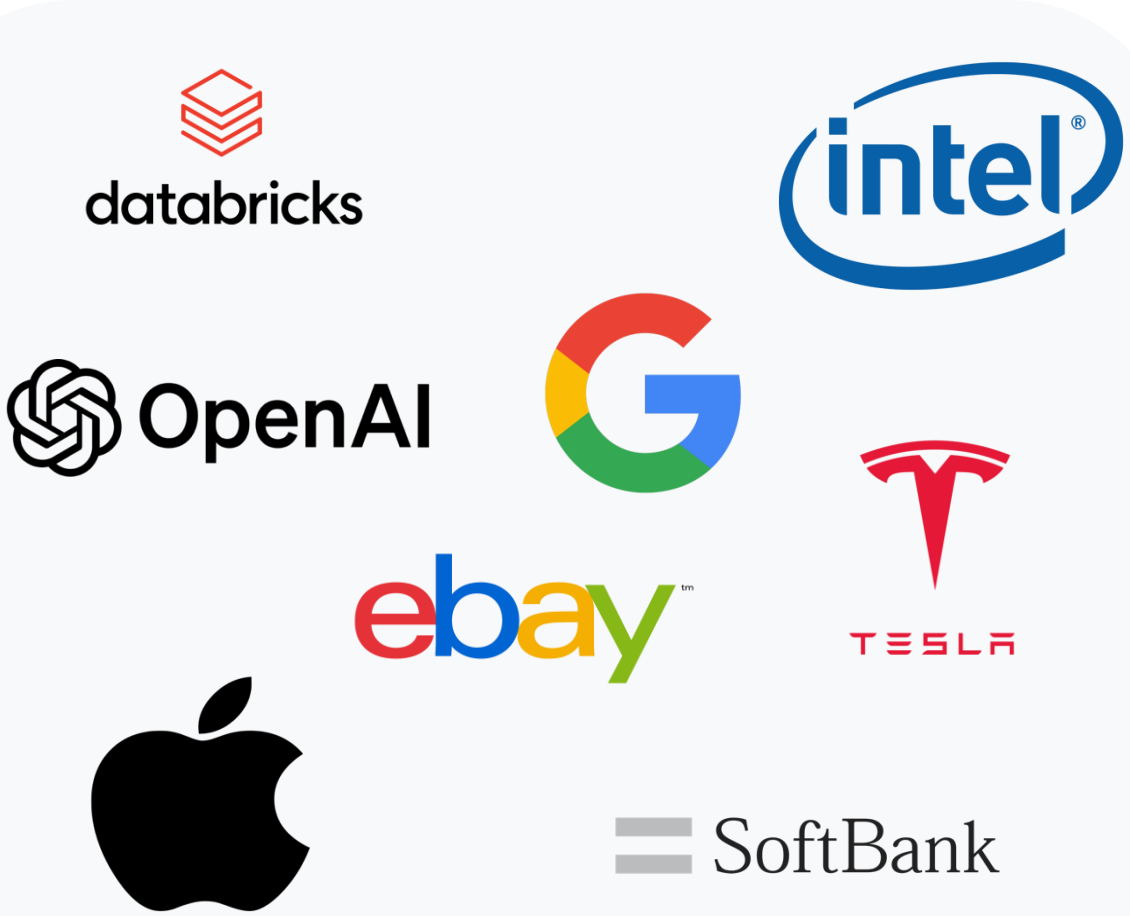
	University	Founder count	Company count
1	**UC Berkeley**	**291**	**289**
2	Stanford University	250	241
3	Harvard University	231	224
4	University of Pennsylvania	207	201
5	Cornell University	161	156

Notable Alumni & Founders

Berkeley graduates have founded or led some of the world's most transformative companies

- **Steve Wozniak**
  Co-founder, Apple
- **Marc Tarpenning**
  Co-Founder, Tesla
- **Pierre Omidyar**
  Founder, eBay
- **Eric Schmidt**
  Former CEO, Google
- **Gordon Moore**
  Co-founder, Intel
- **John Schulman**
  Co-founder, OpenAI
- **Ali Ghodsi**
  CEO, Databricks
- **Masayoshi Son**
  Founder & CEO, SoftBank

Some Notable Companies Founded by Cal Alumni



NTNU vs UC Berkeley — University Comparison

Metric	UC Berkeley	NTNU (Trondheim)
Type	Public research university	Public research university
Total Students	45,882	43,500
Undergraduate Equivalency	33,070	~25,500
Master's / Professional Equiv.	~7,800	~15,000
Active PhD Enrollment	~5,000	~3,000
Total Graduate Enrollment	12,812	~18,000
Doctorates Awarded Annually	821	497
International Students	~6,000	3,870
Total Employees	~13,400	8,960
Instructional Faculty / Academic Staff	2,643	5,700
Degree Programs	300+	507
Schools / Colleges / Faculties	15	8 Faculties
Campuses	1 (Berkeley)	3 (Trondheim, Gjøvik, Ålesund)

The Bay Area Context

"Everyone wants to be a founder." Entrepreneurship is the default high-status path on campus.

$17.6T

companies within ~50 km of campus

Apple **Alphabet** **Nvidia** **Meta** **Broadcom**

~8 million people live in the Bay Area

Berkeley are one of the two anchor research universities that built modern Silicon Valley.
Berkeley is the public anchor, the more relevant benchmark for NTNU.

University Governance

How does all this startup stuff fit with a public university like UC Berkeley?

Because its their mission...

UC's Mission

"The distinctive mission of the University is to serve society as a center of higher learning, providing long-term societal benefits through transmitting advanced knowledge, discovering new knowledge, and functioning as an active working repository of organized knowledge. That obligation, more specifically, includes undergraduate education, graduate and professional education, research, and other kinds of public service, which are shaped and bounded by the central pervasive mission of discovering and advancing knowledge."

Mission statement from the University of California Academic Plan, 1974-1978

The University's fundamental missions are teaching, research and public service.

University of California Mission #3

We provide public service

Which dates back to UC's origins as a land grant institution in the 1860s. Today, through its public service programs and industry partnerships, UC disseminates research results and translates scientific discoveries into practical knowledge and technological innovations that benefit California and the nation.

Berkeley views startups as public service translating research into practical knowledge and innovation that benefits society

Berkeley doesn't govern the ecosystem

- **Darren Cooke, Berkeley's Chief Innovation & Entrepreneurship Officer (CIEO)** describes his own role this way: "It's wrong to say governed"
- The university coordinates and connects, but it does not direct. No centralized approval, comities etc is required to launch an institute or entrepreneurship initiative.

With 100+ organizations and no central command, the CIEO's job is to solve information asymmetry

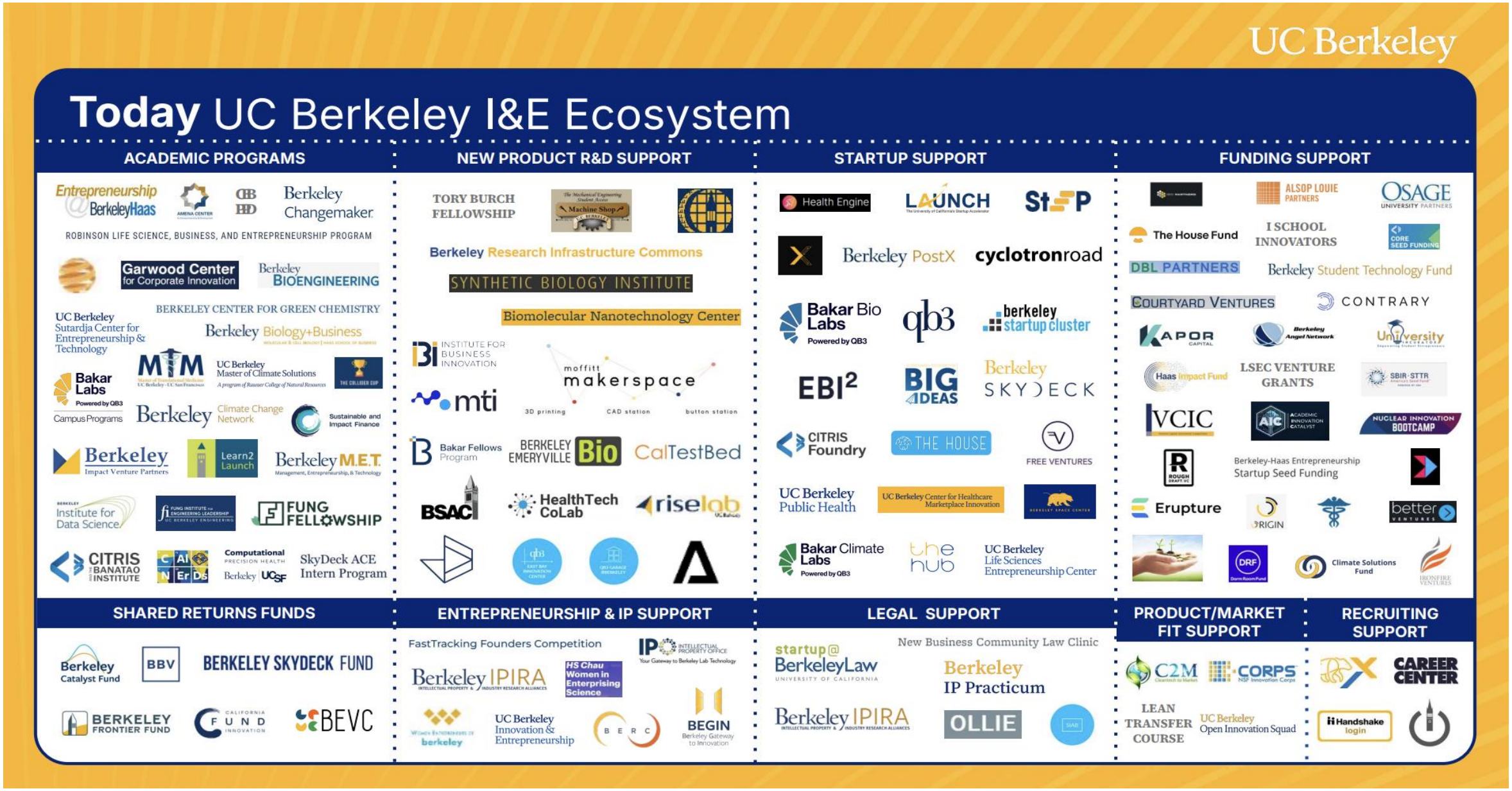
100+
Organizations

73
Unique Entities

No Central
Hub

- Berkeley has 100+ administration organizations and 73 entities in its Innovation & Entrepreneurship (I&E) Council, all operating independently
- The CIEO does not allocate budgets or approve projects. The role exclusively ensures that nodes in the network know about each other

Here's a snapshot of some of the organizations in Berkeley's I&E ecosystem



Anyone can start an initiative; if it needs money, the university helps you find it externally

- There is no approval process and no central budget allocation. A faculty member who wants to create a new institute simply goes and finds external funding from private donors or industry
- The university supports this search with infrastructure: ~100 frontline UDAR (University Development & Alumni Relations) staff are dedicated to routing private donors to faculty-led initiatives

Berkeley's tech transfer office is designed to keep founders building, not to extract value from them

IPIRA (Intellectual Property & Industry Research Alliances) handles how university research becomes companies

3–6% Equity Stake

- Berkeley also accepts SAFEs (Simple Agreements for Future Equity), founder-friendly instruments that delay valuation and paperwork so founders can focus on building
- Every invention must be commercially evaluated; most universities leave this optional. Berkeley's OTL requires it
- The result: founders stay because the terms aren't predatory. IPIRA acts as a retention tool, not an extraction tool

Berkeley engineered a narrative shift to overcome STEM faculty's resistance to commercialization

For decades, Berkeley's STEM faculty resisted entrepreneurship as "selling out." The university had to change the language before it could change the culture.

- Berkeley governance engineered a deliberate reframing: entrepreneurship was repositioned not as "making money" but as the most effective vehicle for translating basic science into public impact
- This narrative shift was the precondition for everything that follows, without it, programs would have had no faculty participants

The Bakar Fellows program operationalized the cultural shift and created a mentor cascade

$300K
Translational R&D grants

174
Fellows funded since 2012

- The Bakar Fellows Program gives faculty $300K translational R&D grants to move lab discoveries toward startup formation
- **Prestige signal:** Being named a Bakar Fellow reprogrammed faculty to view commercialization as a prestige metric, not a compromise of academic mission
- **Mentor cascade:** When professors become founders, entrepreneurial culture trickles down to students without any administrative mandate

Education scales through optionality, not a required venture creation program

- There is no required entrepreneurship program at Berkeley. Instead, professors and donors independently create offerings
- **Changemaker:** a campus-wide vocabulary that redefines entrepreneurship as "critical thinking and collaboration," deliberately bringing humanities and arts students in, not just STEM
- **MET & LSBE:** selective dual-degree programs that train "translators" who speak both deep technical and commercial logic

To stop founders leaving for San Francisco, Berkeley anchored them with physical infrastructure

- Berkeley's top founders were leaving for San Francisco after graduation, an "innovation drain." The governance response was geographic, not programmatic
- The Berkeley Startup Cluster and Bakar Labs (the largest university-owned biotech incubator in the US) anchor founders physically near campus
- Result: the campus boundary blurs into the city. Startups stay close to the labs, creating accidental collisions that accelerate commercialization

Berkeley Startup Cluster
Adjacent office and lab space connecting research to commercialization

Bakar Labs
Wet-lab incubator for biotech and deeptech startups born from faculty research

Public Funding

The Formative Constraint

Public funding shaped the ecosystem by what it could not do, not what it did

- Federal funding (NSF, NIH, DOE) flows strictly to basic research, not to ecosystem infrastructure. A top-down, centrally planned ecosystem was impossible because the public capital to build it did not exist
- The limited public money that does exist for commercialization is restricted to specific pipelines: NSF I-Corps, I-Corps @ NIH, and SBIR/STTR grants

Key Implication

Because public money couldn't fund ecosystem infrastructure, the parts of Berkeley entrepreneurship system had to be built from private capital, which is why donor and industry funding structures are so central to how it works

Private Funding

The Economic Engine & Architecture

A recent donor campaign raised $7.5B, and 97% of it was restricted to specific outcomes

$7.5B
LSIF Campaign Total

97%
Restricted by Donors

3%
Unrestricted Funds

- Donors don't give money to "Berkeley". They give it to specific things they want to fund. A donor works directly with a professor to build a specific program (e.g., the Sutardja family funded SCET; the Bakar family funded Bakar Fellows)
- Implication: even when Berkeley raises billions. The money is already committed to the things donors built with professors

Industry funds departments and shapes curriculum directly, keeping education on the technological frontier

- Industry donates directly to academic departments. For example, Apple funds Berkeley's EECS (Electrical Engineering & Computer Science) department and gets input on what the curriculum covers
- Departments accept capital in exchange for curriculum input. Result: education stays pinned to the technological frontier, rather than lagging industry by years
- Industry-funded labs also become de facto incubators: students get real-world problem exposure, and companies get first access to graduates

Berkeley pioneered shared-carry models to sustain the ecosystem without risking public funds

- Independent venture funds raise external private capital to invest in Berkeley startups. These funds sign agreements to share management fees and/or "carry" (a share of investment profits) back with the university
- The Chancellor's Fund supplements this: a donor-funded, university-directed fund that invests directly into UC startups
- Both channels accelerate spin-outs without touching state public funds, the ecosystem sustains itself financially

SkyDeck Fund
Invests in SkyDeck cohort companies; returns recycle into new cohorts

Chancellor’s Fund
Discretionary fund for strategic ecosystem investments across departments

Students don’t need university funding because external capital is actively looking for them

- Berkeley sits in the densest concentration of venture capital in the world. VCs, angel investors, and private institutions actively seek out Berkeley students for funding
- Student-facing accelerators and funds are external, not university-funded
- Implication: the university doesn't need to fund students because the Bay Area already does

SkyDeck
Berkeley's flagship startup accelerator, provides cohort-based mentorship, funding, and workspace to student

House Fund
Alumni-backed VC fund that invests early-stage capital in Berkeley student and faculty startups, external, not university-funded

General Venture Funds
Private funds that will actively seek out students to invest in

Berkeley's bottleneck has shifted from raising capital to triaging excess goodwill

"The problem is no longer raising capital — it is triaging the excess of goodwill."

900

alumni volunteered as SkyDeck advisors

50

advisor slots available

- Success breeds over-subscription: 900 alumni applied for just 50 advisor slots in SkyDeck
- The system is saturated with goodwill, not starved of it. The constraint has shifted from raising capital to ruthlessly triaging and routing inbound alumni mentorship

Students

Students start clubs by finding a faculty approver, and the rest works itself out

- The only requirement to start a club is finding a faculty member willing to approve it. Clubs aren't funded or curated by the university, but external sponsors actively want access to Berkeley students

Over 1600 + student clubs:

- **Cal Hacks:** worlds largest collegiate hackathon
- **Student-run VC funds:** Free Ventures and Berkeley Investment Fund manage real capital, investing in other students' startups
- **Technical clubs:** Blockchain at Berkeley, ML at Berkeley, sponsored by Microsoft, Google etc
- **Consulting clubs:** students consult for enterprise clients
- **General Interests**: for any student interest, there is a club for it at Berkeley: philanthropy, activism, books etc.

Blockchain @ Berkeley

Berkeley Consulting

Free Ventures

Cal Hacks – worlds largest collegiate hackathon

Cal Hacks hackathon

The university delegates real educational authority to students through DeCal

- **DeCal (Democratic Education at Cal):** a Berkeley-specific program where students design and teach credit-bearing academic courses themselves
- These are real academic credits, with real students teaching real students, education by students, not just for them

Why This Matters

DeCal means entrepreneurship education at Berkeley can update at the speed of student interest, not the speed of faculty hiring. A student who just built a blockchain project can teach a course on it next semester.

The floor is low ($2K) and the ceiling is uncapped (Tier 1 VCs)

$2K
Micro-Grants (Floor)

$200K
SCET / SkyDeck Stage

Tier 1 VC
Sequoia / a16z (Ceiling)

- **Low floor:** $2K Jacobs Hall micro-grants, makerspace access, and Big Ideas grants (up to $30K) let any student test a concept without a pitch deck
- **High ceiling:** students access SkyDeck (Berkeley's accelerator) and the broader Bay Area VC market, Sequoia, a16z, Greylock active on campus
- **Direct access:** students email faculty founders directly for mentorship. The gap between floor and ceiling is what scales the system

Interdisciplinarity isn’t engineered at Berkeley, it’s residual

- There are no central mechanisms forcing students from different departments to work together (no EiT equivalent).
- **Course structure enables this:** students choose most of their classes, even at bachelor's level. Few core requirements, wide breadth requirements across the university,
- A CS student can take humanities, arts, and business classes regardless of major. Cross-pollination emerges from course choice flexibility, not designed programs

Key Takeaway

Interdisciplinarity at Berkeley is a by-product of open course choice, not a centrally designed program. This transitions into the comparison section that follows.

Similarities and Differences

Similarities and Differences (1/3)

Question	UC Berkeley	NTNU	Comment
How is the ecosystem governed?	Coordinator role (CIEO) with no budget or approval authority. Direction emerges from faculty, donors, and students independently.	University directs. NTNU owns and operates the central arenas of the ecosystem.	Berkeley is unusually non-bureaucratic for a public university. The CIEO connects, not controls.
What is the university's role?	Platform. Provides infrastructure and gets out of the way. Founders treated as customers to retain.	Foundation. University is the source and operator of most ecosystem activities. Founders treated as students to support.	Berkeley competes for founders the way a company competes for customers, knowing they could leave for San Francisco.
How student-driven is it?	Highly. Student clubs operate as autonomous actors, raising own sponsorships and managing real capital.	Highly. Strong engagement through Spark*, Start NTNU, Fram, and others.	Both ecosystems are genuinely student-driven.
Who mentors students?	People with real experience and capital. Faculty founders, alumni founders, industry fellowships.	Other students. Spark* mentoring is peer-to-peer; ES Alumni Network supplements but is not primary.	The key difference is mentor talent density. Berkeley draws from a wider base of senior operators.

Similarities and Differences (2/3)

Question	UC Berkeley	NTNU	Comment
Who are the ecosystem actors?	University, students, faculty, donors, industry — all acting independently. The university is one actor among many.	NTNU at the center, with public agencies and fewer private partners (Sparebank 1 SMN, Equinor, DNB).	—
Where does financing come from?	Private donors and industry, restricted to specific programs. The university controls almost no central money.	Public soft funding (Aneo, NTNU Discovery, pitch competitions) and university budget.	Who decides what gets funded differs. At Berkeley, donors and industry pick winners. At NTNU, the university and public agencies do.
What is the global posture?	Passive. Berkeley sits inside the densest VC and talent market. International students and capital come automatically.	Active. Norwegian startups must seek international customers to attract VC.	Berkeley helped build Silicon Valley; global inflow is decades of compounding. NTNU must build outward connection deliberately.

Similarities and Differences (3/3)

Question	UC Berkeley	NTNU	Comment
What is the cultural default?	Founding is the most desirable thing a student can do. Bay Area culture treats risk-taking as high-status.	Stable employment is the default. Janteloven shapes attitudes toward visible ambition; risk is viewed with concern.	The largest single difference. It compounds: Berkeley's normalized founding produces alumni founders who fund the next cohort.
What scholarships and talent funds exist?	Small seed grants that connect students to the ecosystem. Big Ideas ($20–30K), Jacobs micro-grants ($2K).	Soft funding (SMN talent scholarship, Adolf Øien fond, STUD-ENT, NTNU Discovery) at small amounts.	Berkeley's grants work because they connect to a larger market. NTNU's grants are limited by the absence of that market, not their size.

Learnings & Recommendations

1. Platform, Not Director

Change the Role of the University

Shift posture from directing programs to enabling them

NTNU should map what exists and connect across silos, not design new programs

Ask of every program: does it remove friction or add it?

Treat founders as people you compete to retain, not students you teach

This is the foundational recommendation. The other four depend on it.

2. Reduce Founder Friction

Make the Default Answer Yes

Audit every founder-university touchpoint: tech transfer terms, equity stakes, IP, space, faculty access

Adopt Berkeley model: 3–6% equity on spinouts, accept SAFEs

Principle: the university takes less, founders build more, founders stay

3. Build a Faculty Founder Pipeline

Close the Mentor Seniority Gap

$

Fund the Transition

Faculty have research but no path to market. Bakar-style grants (~$300K) fund the gap between paper and prototype—without requiring faculty to leave academia first.

P

Remove the Career Penalty

Faculty avoid commercialization because it hurts their academic career. Count innovation transfer in tenure and promotion evaluations so the incentive structure stops punishing founders.

C

Create the Downstream Effect

Once faculty founders exist, they mentor students with real operational experience—closing the seniority gap that student-only mentors cannot bridge (slide 13).

4. Build Pipelines Outward to Capital & Talent

Grants Are Doors, Not Destinations

In a global market, NTNU's grants are small, the money alone is not competitively meaningful

Design every grant to come bundled with introductions: investor meetings, operator mentors, industry contacts

The grant gets a founder started; the connections it opens are what actually matter

Bring Capital to Trondheim

Trondheim is Norway's tech capital, leverage that history and NTNU's institutional weight to pull investors in, not push founders out

Build structured relationships with VCs in Oslo, Stockholm, London, and Berlin, and give them reasons to come to campus

The university's role is to be the connector, help students access networks without leaving Trondheim

5. Bridge the University-Industry Gap

Institutionalize Industry into Coursework

NTNU students connect with industry on their own, but the university itself does not build industry into teaching

At Berkeley, companies like Apple co-design EECS curriculum and practitioners teach modules

Create co-designed courses, industry-embedded capstones, and practitioner-taught modules at the department level

Berkeley embeds industry into curricula and campus life (slides 6, 20). NTNU can do the same, Trondheim's tech identity is the asset.

Key Takeaways

1. **Be a platform, not a director**

   Facilitate, connect, and get out of the way, Berkeley's CIEO model, not top-down direction

2. **Reduce friction at every founder touchpoint**

   Low equity stakes, simple IP terms, open faculty access, make the default answer yes

3. **Build a faculty founder pipeline**

   Fund the transition, remove the career penalty, and let the mentor cascade follow

4. **Design grants as connectors and bring capital to Trondheim**

   The money is small globally, bundle introductions; pull investors in, don't push founders out

5. **Embed industry into the university, not just student life**

   Co-designed courses, practitioner-taught modules, and company-in-residence programs at the department level

Questions & Discussion

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