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Entrepreneurship & Innovation

Lecture notes on high-tech startups — from idea to company, capital, team and scale

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ABOUT THESE NOTES

A field guide to building a high-tech company

- A comprehensive guide to high-tech entrepreneurship and innovation, first written as a university course and **fully revised for 2026**.
- It covers the foundations, priorities, financing, recruiting, venture capital, business development, board governance, trends and statistics of startups.
- It also covers the founder's side: leadership, commitment, perseverance, goal-oriented problem solving and team building.
- Goal: give the reader the working understanding that has made Silicon Valley successful for 80 years — and show how it can be applied elsewhere, including Türkiye.

> New in this edition: 2025–2026 market data, the AI wave, SAFEs and today's model legal documents, unit economics for software and AI businesses, and the Turkish ecosystem.

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- **Founder & President of Ambeent**; founder of **MiSONE** (TrustFabric, GPTStone, Borgswat) — AI, wireless and data companies.
- **Co-founded WiChorus** in Silicon Valley in 2005 with tier-one venture capital; 4G (LTE/WiMAX) core gateways. **Acquired by Tellabs for $200M in 2009.**
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- Author of *Multi-Carrier Digital Communications: OFDM* (Springer, 2004), *Mobile Broadband: Including WiMAX and LTE* (Springer, 2009; Chinese edition 2011) and *Girişimci Kapital* (2015; expanded 2022). 50+ patent applications.
- **UC Berkeley** EECS MS & PhD, MA in International Studies, Haas Management of Technology; **METU** EE valedictorian (4.0/4.0).
- Founding board member of Europe's 5G platform (5G PPP / Networld2020); advisory board of UC Berkeley's Asia–MENA–Africa Entrepreneurship Program.



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01

Entrepreneurship

What an entrepreneur is, why entrepreneurs change industries, and why a startup is not a small business.

Definitions | History of the idea | Myths | Rewards and risks | Startup vs small business | Deadly mistakes

There is more than one way to change the world

- Some changes require masses of people; others need political consensus, ideology or vast amounts of capital. Almost all need a good dose of luck.
- Entrepreneurs — and their allies, venture capitalists — succeed most when the key ingredients are **a lot of innovation and vision, backed by a moderate amount of capital**.
- Those situations reward *entrepreneurial energy*: a focused team changes an industry through creativity and skill, not brute force.

> Not every great company has entrepreneurial energy at its core — but almost every great venture investment does.

Who is an entrepreneur?

- Someone who **creates a new business in the face of risk and uncertainty** to achieve profit and growth.
- They spot opportunities others miss and gather the resources — people, capital, partners — to act on them.
- They turn an **invention into an innovation**: something customers adopt and pay for.
- Today the toolkit is cheaper than ever: cloud, open source, AI coding and design tools and global payment rails let a team of 3 do what needed 30 in 2010.
- What has not changed: finding a real problem, building the right team and executing for years.

Defining entrepreneurship: recurring themes

The person

- The entrepreneur
- Vision, drive, risk tolerance
- A team, not a lone hero

The act

- Innovation
- Creating an organization
- Creating value

The outcome

- Profit or non-profit impact
- Growth
- Uniqueness — a process others find hard to copy

The idea through history

- **18th century** — Richard Cantillon describes the entrepreneur as someone who bears risk: buying at a known price to sell at an uncertain one.
- **19th century** — Jean-Baptiste Say: the entrepreneur moves resources from lower to higher productivity. Industrial inventors (Watt, Edison) become company builders.
- **20th century** — Joseph Schumpeter: *creative destruction*. New combinations of technology and business models replace incumbents. Peter Drucker: entrepreneurship is a discipline that can be learned.
- **21st century** — software and AI make experimentation almost free. Lean startup, product-market fit, network effects and platform economics become the common language.

Characteristics of entrepreneurs

Mindset

- Desire for responsibility
- Preference for **moderate**, calculated risk
- Confidence in their ability to succeed
- Future orientation

Behaviour

- Want fast feedback
- High energy and stamina
- Skilled at organizing people and resources
- Value achievement over money

Learned skills

- Selling — to customers, investors, recruits
- Learning quickly from failure
- Saying no to good ideas to focus on the best one

Myths of entrepreneurship

Myth

- Success takes only a great idea.
- Entrepreneurs are gamblers.
- You need a lot of money to start.
- Founders must be young.
- Startups are a solo act.

Reality

- Ideas are cheap; **execution and timing** decide.
- Good founders take **calculated** risks and reduce them step by step.
- First milestones are often reached with savings, angels or a small seed round.
- Many of the best founders start in their 30s–40s with deep domain expertise.
- Startups are built by **teams**; co-founders, early hires and investors matter.

Rewards and risks

Rewards

- Independence and the chance to shape your own work
- Building something that matters to customers
- Financial upside through **equity**
- Learning faster than in any other career

Risks

- Most startups fail; uncertain income for years
- Long hours, stress, strain on family
- Personal savings and reputation at stake
- Loss of control as investors join

> The reward is asymmetric: limited downside for the founder, unlimited upside if it works. That asymmetry drives the whole venture model.

Startup vs small business

Small business (SME)

- Serves a local or known market
- Grows with revenue, mainly self-financed
- Owner keeps control, often family run
- Steady income is the goal

Startup

- Searches for a **repeatable, scalable** business model
- Aims to become **as big as it can**, fast
- Raises outside capital and shares equity
- Hires professionals, gives stock options
- Exit (IPO or acquisition) creates the return

Both are valuable. But an ecosystem that only produces small companies does not produce growth, jobs at scale or new industries.

Why small businesses still matter

- In most economies SMEs make up **over 90% of firms** and the majority of jobs (OECD).
- They give local services, supply chains and first jobs.
- Many startups begin as small businesses and change course when they find a scalable product.
- Pitfalls to avoid: weak management, too little capital, poor cash management, uncontrolled growth, no strategy, wrong location or channel.

Nine deadly mistakes of founders

- Building something no one urgently needs — no product-market fit.
- Running out of cash; not knowing your runway.
- The wrong co-founder or team; unresolved founder conflict.
- Pricing too low; ignoring unit economics.
- Scaling before the model works — premature hiring and marketing.
- Ignoring competition or assuming there is none.
- Poor financial control and record keeping.
- Raising on the wrong terms: too much dilution, toxic clauses, misaligned investors.
- Not listening to customers — or listening only to them, without vision.

Ingredients of entrepreneurship

- Hard work and **agility** — changing course quickly when the data says so
- A team that complements the founder
- An idea that solves a real, painful problem
- Funding matched to the stage of the company
- A market large enough to matter, and the right timing
- An ecosystem: mentors, early customers, talent, capital

> There is no formula. Each founder's story is different — which is exactly why it pays to learn from many of them.

02

The Silicon Valley model

Why one region keeps producing world-changing companies — and what other ecosystems can copy.

- Invention vs innovation
- Ingredients of the Valley
- Why the US
- Immigrant founders
- Exit and scale
- Lessons for other ecosystems

Invention, innovation, execution

Invention

- A new idea or technology
- *Xerox PARC*: the GUI, the mouse, Ethernet — invention without capturing the market

Innovation

- Bringing an invention to market so people adopt it
- *Apple*: the Mac and iPhone — innovation on top of others' inventions

Execution

- Planning, perseverance, scaling, sustaining innovation
- *Google*: invented at Stanford, scaled by experienced operators
- *OpenAI*: the transformer came from Google research; ChatGPT made it a product

The new Renaissance

- The Renaissance brought free thinking and knowledge to ordinary people. Electronics did the same — it **personalized** computing and information.
- Personal computer → mobile phone → smartphone → internet for everyone → social networks → cloud.
- AI is the next step of the same trend: expert knowledge, coding and design skill become available to anyone with a phone.
- Each wave lowered the cost of starting a company and widened who could become a founder.

What Silicon Valley has

Capital

- Deep venture capital with an exit culture
- Angels who are former founders
- Liquid IPO and M&A markets

Knowledge

- Research universities: Stanford, Berkeley, UCSF
- Government research funding (DARPA, NSF, NIH)
- Corporate labs, open source

People and culture

- Talent from around the world
- "Wild" free thinkers; failure is not a stigma
- Job mobility; no enforceable non-competes
- A dense network: everyone is two introductions away

Factors of the Valley: speed wins

People who win

- **Fast** people — they decide and ship
- **Agile** people — they change course when the data says so

People who lose

- **Slow** people — the window closes
- **Mean** people — the network punishes bad behavior
- **Careless** people — reputation travels fast

> The ecosystem is a repeated game. Reputation, speed and willingness to help are its currency.

Why the United States?

- Strong science and technology education; universities can change curricula without government approval.
- Centers of research excellence and large public research budgets.
- A talent pool that **attracts the best from the world**.
- People in universities and companies are comfortable with **high risk, high reward**.
- Flexible labor law: hire and fire at will, stock options, broad-based equity.
- Deep capital markets: VC, growth funds, Nasdaq and NYSE for tech IPOs.
- Bankruptcy is survivable; a failed startup is a credential, not a scar.

Immigrant founders build America's biggest startups

59%

of US unicorns have at least one immigrant founder (455 of 775)

66%

founded or co-founded by immigrants or their children

24%

have a founder who came to the US as an international student

$5.0T

combined value of immigrant-founded US unicorns

Source: National Foundation for American Policy (NFAP), "Immigrants and US Billion-Dollar Companies", policy brief, June 2026 (data as of April 2026). The share was 55% in the 2018 and 2022 editions.

Foreign students and the talent flywheel

- Graduate programs in engineering and computer science draw the strongest students from every country.
- Many stay, join startups, then start their own — and later fund the next generation as angels.
- Others return home with networks and know-how: diaspora founders connect their home ecosystems to Silicon Valley capital and customers.
- For countries like Türkiye the question is not only "how do we keep talent?" but "how do we stay connected to the talent that left?"

Attributes of a fundable startup

The business

- Not a "me too" — a clear, defensible niche
- Differentiated technology with a lasting advantage
- A large market that is growing

The people

- An adaptable executive team
- Founders who know the customer deeply

The capital

- Investors who bring market and operating expertise, not just money
- A bank lends against assets; a VC **buys a share** and takes the risk with you
- Good VCs stay through hard times; bad ones pull out and start over

The local ecosystem: who plays which role

Universities

- Research, talent, spin-outs, tech transfer offices

Founders and operators

- Serial entrepreneurs, early employees who become founders

Capital

- Angels, accelerators, seed and venture funds, corporate VC, public co-investment

Customers and corporates

- First buyers, pilots, partnerships, acquirers

Government

- Rule of law, tax and visa policy, research grants, procurement

Services

- Lawyers, accountants, recruiters, media, events

Scale: become big — or be acquired

- In tech, markets often tend to **winner-takes-most**: network effects, data and economies of scale reward the leader.
- "Big fish eat small fish": if you cannot acquire, you will be acquired.
- That is why venture-backed companies reinvest instead of paying dividends, and why they raise more capital than a small business would.
- Growth must still be **efficient**: since 2022 investors look at burn multiple, net revenue retention and path to profitability, not growth alone.

The startup life cycle

Start

- Idea and team
- Prototype / MVP
- Pre-seed and seed
- Product-market fit

Grow

- Series A: repeatable sales
- Series B–C: scale the go-to-market
- Growth rounds: new markets, products, acquisitions

Exit

- Acquisition (most common)
- IPO
- Secondary sales and tender offers for early holders
- Or: profitable independence

Going public

- An IPO gives liquidity to founders, employees and investors, and access to public capital.
- Classic route: pick underwriters, file the S-1, road show, pricing, quiet period, lock-up (usually 180 days).
- Alternatives: **direct listing** (Spotify 2018, Slack 2019), Dutch auction (Google 2004), SPAC mergers (boom in 2020–21, mostly poor results since).
- The IPO window reopened in 2025: CoreWeave, Circle, Figma, Klarna and others listed; **17 US unicorns went public**.
- Companies now stay private longer — median age at IPO is over 10 years — so secondaries and tender offers matter more.

Source: PitchBook-NVCA Venture Monitor Q4 2025.

Venture capital is not the same as...

Bank loans

- Need collateral and cash flow; fixed repayment

Hedge funds

- Trade liquid public securities; short horizons

Private equity / buyouts

- Buy majority control of mature companies, often with debt, to improve operations

Venture capital

- Minority equity in young, high-risk, high-growth companies
- 7–12 year horizon; returns from a few big winners

Why don't we have more of this — and how can we?

- **Capital exists, but too little of it is venture capital** with experienced partners.
- Experienced operators and senior engineers are scarce; many work for large corporates or abroad.
- Risk taking is culturally costly; failure carries stigma.
- Family-owned structures dominate; sharing equity is rare.
- Regulation: hiring and firing, **stock options and restricted stock**, taxation of equity.

> Don't wait for critical mass — create it. Policy can help (option taxation, fund-of-funds, visas), but founders, angels and successful exits build the culture.

03

A short history of Silicon Valley

From radio hobbyists to semiconductors, software, the internet and AI — and the unusual law that let talent move freely.

Radio era · HP and Stanford · Shockley and Fairchild · Intel and Moore's law · Apple and the PC · The 1872 law · Route 128 · Eras of the Valley

Timeline: eight decades, one region

ERA	YEARS	DEFINING COMPANIES AND EVENTS
Radio & defense	1909–1950s	Federal Telegraph (1909), HP (1939), wartime electronics, Stanford Industrial Park (1951)
Silicon	1956–1970s	Shockley Semiconductor (1956), Fairchild (1957), Intel (1968), the microprocessor (1971)
Personal computer	1975–1980s	Homebrew Computer Club, Apple (1976), Oracle (1977), Sun (1982), Cisco (1984)
Internet	1990s–2000	Netscape (1994), Yahoo (1995), eBay (1995), Google (1998); dot-com bubble bursts in 2000
Web 2.0, social & mobile	2004–2015	Facebook (2004), YouTube (2005), iPhone (2007), App Store (2008), Uber, Airbnb
Cloud & SaaS	2006–2020	AWS (2006), Salesforce, Zoom, Stripe; software "eats the world"
AI	2017–	Transformer (2017), ChatGPT (2022), Nvidia passes $4T (2025), frontier labs raise $10B+ rounds

Before silicon there was radio

- The Valley's culture started with **radio around 1900**: engineers in hobby clubs borrowed equipment, spun out companies and built a meritocracy that rewarded whoever made things cheaper, faster and better.
- In 1909 Stanford graduate Cyril Elwell persuaded university officials — including President David Starr Jordan — to back **Federal Telegraph Co.** in Palo Alto.
- The same year Charles Herrold started a radio school and regular broadcasts in San Jose, one of the first in the world.
- US Navy contracts in World War I — the first, but not the last time defense money fueled the region.

Hewlett-Packard: the garage as a founding myth

- Bill Hewlett and David Packard, students of Stanford professor **Frederick Terman**, started HP in a Palo Alto garage in **1939** with $538.
- First product: the 200A audio oscillator; Disney bought eight for *Fantasia*.
- The **"HP Way"**: trust employees, flat hierarchy, open offices, profit sharing, management by walking around — the template for Valley culture.
- Terman, later called the "father of Silicon Valley", pushed Stanford to work with industry and encouraged students to start companies nearby rather than move East.

Stanford's role

- **Stanford Industrial Park (1951)**: university land leased to tech firms — Varian, HP, GE, Lockheed. The first university research park.
- Honors Cooperative Program: engineers from local companies could take graduate courses — knowledge flowed both ways.
- **SRI International** (1946): the mouse, early ARPANET node, hypertext demos (Engelbart's "Mother of All Demos", 1968).
- Later: Sun (Stanford University Network), Cisco, Yahoo, Google, Instagram, Snapchat, Nvidia's founders' network.
- Today Stanford, Berkeley and UCSF still feed AI, biotech and climate startups — often through accelerator programs and student founders.

Shockley and the "traitorous eight"

- William Shockley, co-inventor of the transistor at Bell Labs (Nobel Prize 1956), moved to Mountain View to be near his mother and founded **Shockley Semiconductor** in 1956.
- Brilliant scientist, poor manager. In 1957 eight of his best people left — Robert Noyce, Gordon Moore, Jean Hoerni, Eugene Kleiner, Jay Last, Julius Blank, Victor Grinich, Sheldon Roberts.
- With backing arranged by banker **Arthur Rock** from Fairchild Camera, they founded **Fairchild Semiconductor**.
- Hoerni's planar process and Noyce's integrated circuit made silicon chips manufacturable at scale.

> The pattern was set: talented employees leave, start a competitor, and the region — not the company — keeps the talent.

The "Fairchildren"

- Fairchild alumni went on to found or fund dozens of companies: **Intel, AMD, National Semiconductor**, Signetics and more.
- Eugene Kleiner co-founded **Kleiner Perkins** (1972); Don Valentine, a Fairchild sales executive, founded **Sequoia Capital** (1972).
- Arthur Rock financed Intel and later Apple.
- By the 1970s more than 60 chip companies in the region could trace their roots to Fairchild.

> One company's spin-offs created an industry — and the venture capital firms that would finance the next fifty years.

Intel and Moore's law

- Noyce and Moore founded **Intel in 1968**; Andy Grove joined as the first employee. First product: memory chips; then the **4004 microprocessor (1971)**.
- **Moore's law (1965, revised 1975)**: the number of transistors on a chip doubles about every two years.
- 1971: 2,300 transistors (Intel 4004). 2025: over 200 billion in a single accelerator package (Nvidia Blackwell has 208 billion).
- Scaling is slowing at the transistor level, but **AI computing keeps growing** through chiplets, advanced packaging, memory bandwidth and huge clusters.
- Since 2024 Nvidia — not Intel — sets the pace; in 2025 it became the first company worth $4 trillion, then $5 trillion.

Apple and the personal computer

- **1975**: the Homebrew Computer Club meets in Menlo Park; Steve Wozniak shows the Apple I in 1976.
- Jobs and Wozniak, high-school friends, start **Apple** in the Los Altos garage of Jobs' parents; the first 50 computers go to the Byte Shop.
- Mike Markkula, ex-Intel, invests $250,000 and brings management; Apple II (1977) becomes the first mass-market PC.
- 1980 IPO — the largest since Ford in 1956. 1984: the Macintosh brings Xerox PARC's GUI to consumers.
- Apple shows the difference between **invention and innovation** — then repeats it with the iPod, iPhone and App Store.

Government and military: the hidden investor

- Cold War defense and space programs bought most early transistors and integrated circuits — guaranteed demand at high prices.
- Lockheed Missiles & Space became the region's largest employer in the 1960s.
- **ARPANET (1969)** — the internet's ancestor — was funded by the Defense Department; GPS, Siri's origins (CALO) and self-driving cars (DARPA Grand Challenge) followed the same path.
- Today: CHIPS Act subsidies for semiconductors, defense-tech startups (Anduril, Shield AI) and public AI research funding continue the pattern.

> Government creates early markets and basic research; private venture capital turns them into companies.

Why California — and not another state?

- Many explanations: Stanford's unique role, the climate and lifestyle that keep engineers from leaving, Cold War defense money.
- One more is often overlooked: **an 1872 California law, written for gold miners**.
- It voided any contract that restrained someone from working in a lawful profession — so **non-compete agreements are unenforceable in California**.
- Today it is **Business and Professions Code §16600**: "every contract by which anyone is restrained from engaging in a lawful profession, trade, or business of any kind is to that extent void."
- In 2024 California went further (SB 699, AB 1076): employers cannot use out-of-state non-competes and must tell employees existing ones are void.

NCA vs NDA

Non-compete agreement (NCA)

- Employee promises not to work for a competitor for a period (often 1–2 years) after leaving
- Common in most US states and most countries
- **Void in California**; the US FTC's 2024 nationwide ban was struck down in court and withdrawn in 2025

Non-disclosure agreement (NDA)

- Employee promises not to reveal confidential information or trade secrets
- **Enforceable everywhere, including California**
- Trade-secret law (DTSA, 2016) protects companies when people move

California protects secrets, not jobs. Ideas move with people; companies compete by out-innovating, not by locking employees in.

From gold mines to chip fabs

- California became a state in 1850, in the middle of the Gold Rush (1848–1855).
- Miners and prospectors constantly changed partners and claims; disputes were often settled with guns.
- Lawmakers wanted freedom of movement and fewer reasons for violence, so contracts that tied a worker to an owner were made void.
- About a hundred years separated the first El Dorado County mining camps and the first tech firms in Stanford's industrial park — but the same rule applied.
- Result: engineers could leave Shockley, Fairchild or Intel the next day and start a rival. **Job mobility became the Valley's engine.**

Route 128: the road not taken

Boston's Route 128

- In the 1970s as strong as the Valley: MIT, Harvard, defense money, DEC, Wang, Data General
- Large, vertically integrated, secretive firms
- Enforceable non-competes; loyalty to the company
- Lost leadership in the 1980s PC shift

Silicon Valley

- Smaller, specialized, networked firms
- People switch jobs every ~2 years without moving house
- Loyalty to technology and colleagues, not to one company
- Information flows in bars and meetups — "competition demands continuous innovation, which in turn requires cooperation"

Source: AnnaLee Saxenian, *Regional Advantage: Culture and Competition in Silicon Valley and Route 128* (Harvard University Press, 1994). Boston has since rebuilt itself around biotech and robotics.

What made the Valley different

- **Job mobility**: in the 1980s average tenure was about two years; turnover at small and mid-size firms around 35%.
- **Geographic density**: changing employers did not mean changing homes or schools.
- **Tinkering culture**: groups of employees met after work to build their own ideas — and many became startups.
- **Interchangeable roles**: employers became employees, colleagues became competitors — and then partners again.
- **Flat hierarchies**: from HP onward, divisions got autonomy and engineers had a voice.
- **Fast flows of practical knowledge** turned research into products quickly and made the region resilient.

Constant revolution

- Large pools of venture capital mean ideas become products quickly — and slow incumbents are destroyed.
- In 1980 the industry was "IBM and the BUNCH" (Burroughs, Univac, NCR, Control Data, Honeywell). A decade later the BUNCH was gone and IBM had cut tens of thousands of jobs.
- DEC, the minicomputer giant, was acquired by Compaq in 1998; Sun by Oracle in 2010; SGI went bankrupt.
- In the 2020s the same pressure hits search, software and services as AI changes how products are built.

> For engineers this means two outcomes: wealth through stock options — or unemployment when the employer goes extinct.

Eras of Silicon Valley

Silicon (1956–)

- Shockley, Fairchild, Intel, AMD
- HP's instruments built on early chips

Software & PC (1975–)

- Apple, Oracle, Sun, Adobe
- Minicomputers, then the microprocessor

Internet (1994–)

- Netscape, Cisco, Yahoo, eBay, Google
- Bubble and crash, 2000–2002

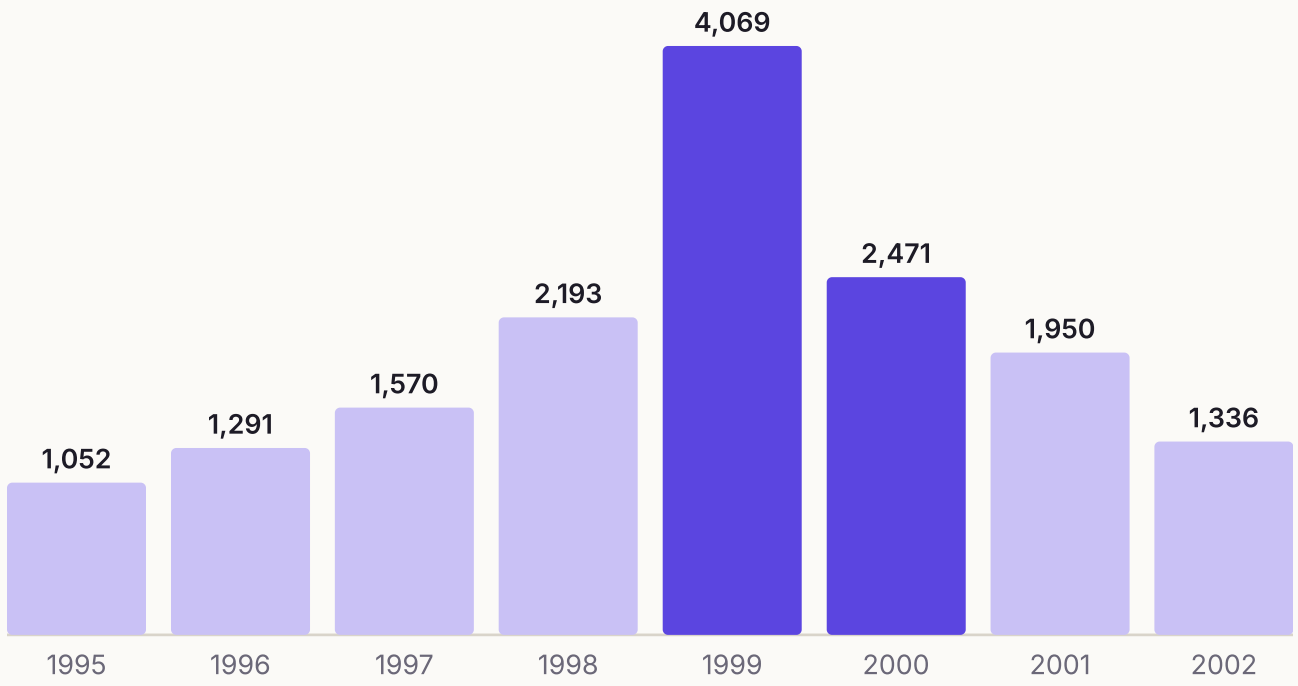
Mobile, social, cloud (2004–)

- Facebook, iPhone, AWS, Uber, Stripe

AI (2017–)

- Nvidia, OpenAI, Anthropic, Google DeepMind; AI-native startups

The dot-com bubble: Nasdaq Composite at year-end



- Nasdaq Composite at year-end. It peaked at 5,048 in March 2000, then fell 78% by October 2002.
- About $5 trillion of market value disappeared; it took until 2015 to regain the peak.
- Survivors — Amazon, eBay, Google — became giants. Infrastructure built in the bubble (fiber, data centers) powered the next wave.
- The AI build-out of 2023–2026 raises the same question: lasting infrastructure, or overinvestment? Probably both.

Source: Nasdaq historical closing values (rounded).

04

Technology waves: internet, wireless, AI

How each new platform — the web, mobile broadband, cloud and now AI — created a new generation of companies.

Knowledge and networks | From ARPANET to Web 1.0 | Web 2.0 and network effects | Mobile and wireless | Cloud | AI

The concept of knowledge

- Each communication technology changed who could access knowledge: writing, the printing press, telegraph, radio, TV, the internet.
- The internet made the **marginal cost of distributing information close to zero**.
- Mobile made it **personal and always on**; cloud made computing a utility.
- AI now makes knowledge **interactive**: you no longer only search for information, you ask a system to reason and act on it.

The web in versions

STAGE	PERIOD	WHAT CHANGED
Web 0.x — ARPANET	1969–1989	Packet switching, TCP/IP (1983), email, research networks
Web 1.0 — read	1991–2003	Tim Berners-Lee's WWW (1991), Mosaic/Netscape browsers, portals, e-commerce
Web 2.0 — read/write	2004–2012	User-generated content, social networks, **network effects**, ads at scale
Mobile & cloud	2007–2020	Smartphones, app stores, AWS, SaaS, streaming, the sharing economy
Web3 & semantic web	2014–	Linked data, blockchain, tokens, stablecoins — partly hype, partly real (stablecoin payments)
AI-native	2022–	Chat interfaces, agents, generated content; answers instead of links

ARPANET and the birth of the internet

- **1969**: first ARPANET message between UCLA and SRI ("LO" — the system crashed before "LOGIN").
- 1970s: packet switching, email (1971), TCP/IP designed by Vint Cerf and Bob Kahn (1974); ARPANET switches to TCP/IP on 1 January 1983.
- 1989–1991: Tim Berners-Lee at CERN invents the **World Wide Web**; 1993 Mosaic browser; 1994 Netscape.
- 1995: commercial traffic opens up; Amazon and eBay launch.
- The internet was built on **open standards** — no single company owned it, which let anyone build on top.

Web 2.0 and network effects

- **Network effect**: each new user makes the product more valuable for all users — phones, marketplaces, social networks, payment systems.
- Strong network effects create **winner-takes-most** markets: Facebook, YouTube, LinkedIn, Airbnb, Uber.
- Types: direct (social), two-sided (marketplaces), data network effects (more usage → better product), ecosystem (developers on a platform).
- Startups attack incumbents by finding a niche where the network can start small and dense — Facebook began at Harvard, Airbnb in event cities.

Connectivity in 2025–2026

6.0B
people using the internet in 2025 — 74% of the world

2.2B
people still offline

3.1B
5G subscriptions (Q1 2026)

1/3
of all mobile subscriptions are now 5G

Sources: ITU, *Facts and Figures 2025* (Nov 2025); Ericsson Mobility Report (Nov 2025; June 2026 update).

The wireless revolution

- 1G analog (1980s) → 2G digital voice and SMS (1991) → 3G mobile data (2001) → **4G LTE broadband (2009)** → 5G (2019) → 6G research for ~2030.
- Each generation took about ten years and created new company categories: SMS services, mobile web, app economy, ride-hailing, mobile payments, short video.
- 4G made the smartphone a computer; **5G** adds low latency, massive IoT, private networks and fixed wireless access.
- Behind every generation is a standards race (3GPP) and an infrastructure industry: chips, base stations, core networks, spectrum.
- Startups win when they ride the platform early — WiChorus built 4G core gateways before LTE networks launched and was acquired by Tellabs in 2009.

The iPhone moment

- January 2007: Apple announces the iPhone; in 2008 the **App Store** opens with 500 apps.
- It moved power from operators to platforms: Apple and Google (Android) became the gatekeepers of distribution.
- New businesses impossible without a GPS-enabled computer in every pocket: Uber (2009), WhatsApp (2009), Instagram (2010), mobile banking.
- Lesson: platform shifts reset markets. The leaders of the old platform (Nokia, BlackBerry) rarely lead the new one.

Cloud and SaaS

What changed

- AWS (2006) turned servers into a pay-as-you-go service
- A startup no longer needs a data center or big upfront capital
- Software sold as a subscription (SaaS): Salesforce, Slack, Zoom, Shopify

Why it matters for founders

- Launch globally on day one
- Predictable recurring revenue → new valuation models (ARR multiples)
- Infrastructure costs scale with usage
- Hyperscalers (AWS, Azure, Google Cloud) are now also the biggest AI investors

The AI platform shift

- **2012** deep learning breakthrough (AlexNet) → **2017** transformer architecture (Google) → **2020** GPT-3 → **Nov 2022 ChatGPT** reaches 100M users in about two months.
- Foundation models are trained once at huge cost and used by millions of applications through APIs.
- New stack: chips (Nvidia, custom accelerators) → cloud and data centers → frontier models (OpenAI, Anthropic, Google, Meta, xAI, DeepSeek, Mistral) → tools → applications and **agents**.
- AI changes the startup itself: small teams use AI for coding, design, sales and support. Revenue per employee rises sharply.
- Open questions: compute and energy cost, data rights, safety and regulation (EU AI Act 2024), and where durable profit sits in the stack.

Where startups build value in AI

Infrastructure

- Chips, networking, data centers, energy
- Capital intensive; few winners

Models

- Frontier labs raise tens of billions
- Open-weight models compress prices

Tools and platforms

- Data, evaluation, security, agent frameworks

Applications

- Vertical AI for law, health, finance, industry
- Agents that complete work, priced per outcome
- Defensibility from workflow, proprietary data and distribution — not the model alone

05

Funding the startup

Sources of capital, from personal savings to IPO — and which one fits which stage.

Three types of capital · Bootstrapping · Friends & family · Angels and accelerators · SAFEs · Venture capital · Debt and alternatives

The "secrets" of raising money

- Choose the **right type of capital** for the stage — not just the largest check.
- Raise enough to reach the **next value-creating milestone**, plus a buffer (18–24 months of runway).
- Funding is a process, not an event: plan 3–6 months, build relationships before you need money.
- Investors invest in **people, market, traction** — in that order at the earliest stages.
- Every euro of equity has a cost: dilution, control, expectations.
- Not every entrepreneur gets funding — and not every business should take venture capital.

Three types of capital

Fixed capital

- Long-term assets: equipment, buildings, servers (now mostly rented as cloud)

Working capital

- Day-to-day operations: salaries, inventory, receivables
- Where most startups run out

Growth capital

- Funds expansion: new markets, products, sales teams
- Usually the job of venture capital

Equity vs debt

Equity

- Investors buy ownership
- No repayment; shares in upside and losses
- Costs control and dilution
- Fits high-risk, high-growth companies

Debt

- Borrowed money with interest
- Must be repaid; needs cash flow or collateral
- Founder keeps ownership
- Fits predictable businesses — or later-stage startups (venture debt)

Sources of startup capital by stage (typical, 2025)

STAGE	TYPICAL SOURCE	TYPICAL AMOUNT	WHAT IT PROVES
Idea	Founders' savings, friends & family	$10K–$250K	Commitment, first prototype
Pre-seed	Angels, accelerators, pre-seed funds	$250K–$1.5M	Team and product direction
Seed	Seed funds, angels, SAFEs	median ~$3.8M (US)	Early users, product-market fit signals
Series A	Venture capital	median ~$15M (US)	Repeatable revenue, a go-to-market engine
Series B–C	VC, growth funds	median $34M–$54M (US)	Scaling efficiently
Growth / pre-IPO	Growth equity, crossover funds, corporates, sovereign funds	$100M+	Market leadership

Medians: PitchBook-NVCA Venture Monitor Q4 2025 (US, 2025). Rounds in Europe and Türkiye are typically 30–60% smaller.

Bootstrapping and personal savings

- Start with your own money and the first customers' money — revenue is the cheapest capital.
- Keeps 100% ownership and forces discipline: build what customers will pay for.
- Many great companies were bootstrapped for years: Mailchimp (sold for $12B in 2021), Atlassian (early years), Zoho.
- Limits: slower growth, personal financial risk, hard in capital-intensive fields (chips, biotech, hardware).
- Investors like founders who have **put their own money and time** at risk — it signals conviction.

Friends and family

- Often the first outside money: small checks from people who trust you.
- Treat it professionally: written terms (a SAFE or convertible note), clear risk disclosure, realistic expectations.
- Tell them: **most startups fail — only invest what you can afford to lose**.
- Avoid giving away large ownership at very low valuations — it can make later rounds hard.
- Keep the cap table clean: few, well-documented investors.

Angels

Who they are

- Wealthy individuals, often former founders and executives
- Invest their own money, usually $10K–$250K per company
- Angel groups and syndicates (AngelList, local networks) pool checks

What they bring

- Speed and flexibility
- Mentoring, introductions, first customers
- Signal for later investors

What to watch

- Too many small angels → a messy cap table
- Choose angels with domain knowledge and time

Accelerators and incubators

Accelerators

- Fixed-term programs (3 months) with cohorts, mentoring and a **demo day**
- Y Combinator (2005): $500K standard deal since 2022; Airbnb, Stripe, Dropbox, Coinbase alumni
- Techstars, 500 Global, Plug and Play; corporate programs

Incubators and tech parks

- Space, services and longer support, often university-linked
- In Türkiye: technoparks (teknoparklar), university incubators, TÜBİTAK BİGG

Is it worth it?

- Best programs: network, credibility, fundraising access
- Weak programs: equity for little value — check alumni results

SAFEs and convertible notes

- **SAFE** (Simple Agreement for Future Equity) — created by Y Combinator in 2013; the **post-money SAFE** (2018) is now the standard for US pre-seed and seed.
- The investor pays now and receives shares at the next priced round, at a **valuation cap** and/or a **discount**.
- Not debt: no interest, no maturity date. Simple, cheap and fast to sign.
- **Convertible note**: similar, but is debt — has interest and a maturity date. More common outside the US.
- Watch the stack: several SAFEs at different caps can dilute founders more than expected. **Model the conversion before you sign.**

How a post-money SAFE converts — example

ITEM	VALUE
SAFE investment	$1M at a $10M post-money cap
SAFE ownership (fixed by post-money cap)	1 / 10 = **10%** before the next round
Series A	$5M at $20M pre-money → $25M post-money
New investors	5 / 25 = 20%
SAFE holder after Series A	10% × (1 − 20%) = **8%**
Founders and option pool	the remaining 72%

Simplified; assumes no other SAFEs and an option pool already in the pre-money. See Y Combinator's post-money SAFE user guide.

Corporate venture capital (CVC)

What it is

- Venture arms of large companies: GV (Google), Intel Capital, Salesforce Ventures, NVentures (Nvidia), M12 (Microsoft)
- In Türkiye: corporate funds of banks, telcos and holdings

For the startup

- Customer access, distribution, technical help, credibility
- Possible acquirer

Risks

- Strategic conflicts with competitors of the parent
- Changing corporate priorities
- Rights of first refusal that scare other buyers

In 2025 corporates participated in about 21% of US VC deals — and in AI, hyperscalers are among the largest investors.

Debt financing for startups

Bank loans and credit lines

- Need collateral or cash flow; personal guarantees are common
- Government-backed loan programs (SBA in the US, KOSGEB in Türkiye)

Venture debt

- Loans to VC-backed companies, usually with warrants
- Extends runway between equity rounds
- Covenants can be dangerous if growth slows

Revenue-based financing

- Repay as a percentage of monthly revenue
- Fits SaaS and e-commerce with predictable sales

Internal sources

- Customer prepayments, supplier terms, grants, tax credits for R&D

Other routes to capital

Equity crowdfunding

- Many small investors through licensed platforms
- In Türkiye: SPK rules since 2019, licensed platforms since 2021 (e.g., Fonbulucu, Fonlabüyüsün)
- Good for consumer brands with community

Grants and public programs

- Non-dilutive: EU Horizon Europe, EIC Accelerator, US SBIR
- Türkiye: TÜBİTAK 1512 BİGG, 1501/1507, KOSGEB

Strategic partners

- Customers or suppliers who invest, prepay or co-develop

Secondary sales

- Later-stage founders and employees sell some shares to new investors

06

How venture capital works

The money behind high-tech startups: who provides it, how funds are structured and how VCs think.

What VC is | Fund structure | LPs and GPs | The power law | How VCs decide | VC as a partner

What is venture capital?

- Equity financing for **young, high-risk companies with the potential for very large growth**.
- VCs buy a minority stake, take a board seat or observer role, and help the company grow until an **exit**.
- It is **risk capital**: most investments lose money; a few must return the whole fund.
- One part nature, two parts nurture: VCs select companies, then help with hiring, strategy, follow-on capital, customers and exits.
- It suits companies whose growth needs capital before profits — software, AI, chips, biotech, climate tech — not every business.

More than money

- **Recruiting**: VCs' networks help hire executives and key engineers.
- **Strategy and governance**: board work, pattern recognition from many companies.
- **Follow-on capital**: reserves for later rounds; introductions to larger funds.
- **Credibility**: a known investor helps with customers, partners and talent.
- **Exits**: relationships with acquirers and bankers.

> The best founders choose a partner, not just a check. Ask the VC's other founders — especially those whose companies struggled.

The structure of a venture fund

Limited partners (LPs)

- Pension funds, endowments, foundations, insurers, sovereign funds, fund-of-funds, family offices, corporates
- Commit capital for ~10 years; passive

General partners (GPs)

- The VC firm's partners; pick and manage investments
- Invest 1–2% of the fund themselves

The fund

- Limited partnership, ~10-year life (+2 extensions)
- Invests over the first 3–5 years; reserves ~40–50% for follow-ons
- Capital is called as needed, returned at exits

How VCs get paid: "2 and 20"

Management fee

- ~2% of committed capital per year (lower after the investment period)
- Pays salaries, offices, due diligence

Carried interest

- ~20% of profits (top firms 25–30%)
- Paid only after LPs get their capital back (and often a hurdle)

Alignment

- GPs earn real money only if the fund produces large gains
- That is why VCs need **outlier outcomes**, not modest successes

The power law

- Venture returns are not normally distributed: **a handful of investments produce most of the returns**.
- In a typical fund, around half of the companies return less than the capital invested; a few return 10×–100×+.
- Each investment must have the potential to **return the entire fund** on its own.
- Consequence for founders: VCs push for big markets and fast growth, and prefer a bold attempt over a safe, small outcome.
- Consequence for ecosystems: you need many shots on goal and a few huge winners to keep LPs investing.

> A $100M fund that owns 10% at exit needs a $1B exit just to return the fund once.

Where the money comes from — and goes

Capital flow

- LPs → VC fund → startups → exits → back to LPs (minus fees and carry)

What LPs look at

- **TVPI** (total value to paid-in) — paper + realized return
- **DPI** (distributions to paid-in) — cash actually returned
- **IRR** — time-weighted return

2025 reality

- US VC funds hold a record **$1.02 trillion** of unrealized value
- Net cash flow to LPs has been **negative by $197B since 2022** — exits matter

Source: PitchBook-NVCA Venture Monitor Q4 2025.

How VCs decide

- **Team**: founder-market fit, ability to recruit, learning speed, integrity.
- **Market**: large, growing, and ready now — "why now?"
- **Product**: a clear 10× improvement for a painful problem; defensibility.
- **Traction**: users, revenue, retention, growth rate — evidence over promises.
- **Deal**: valuation, round size, ownership target, fit with the fund's strategy.
- **Exit potential**: who could buy it, could it go public?
- Process: first meeting → partner meetings → due diligence → term sheet → legal closing. Typically 4–12 weeks.

Traits investors look for in founders

Hard to fake

- Deep knowledge of the customer and the problem
- Speed of execution and learning
- Integrity and transparency

Visible in a meeting

- Clarity: can explain the business simply
- Ambition matched by realism
- Coachability without losing conviction

Visible over time

- Keeps promises, sends updates
- Attracts strong people
- Calm under pressure

VC controls the clock

- Venture funds have a fixed life; they need exits within roughly **7–10 years** of investing.
- Board seats, protective provisions and preferred stock give investors influence over major decisions: new rounds, sale of the company, CEO changes.
- Good boards use this to help; bad ones to block. Alignment before investment is critical.
- Founders keep control longer today than in 2000–2010 (more founder-friendly terms, dual-class shares in some cases), but the basic structure remains.

VC outside the United States

- Europe: the second-largest venture region; strong in fintech, AI, climate, defense (London, Paris, Berlin, Stockholm, Munich).
- China: large state-guided funds; activity fell sharply after 2021 and is focused on deep tech and self-sufficiency.
- India: third-largest startup ecosystem by number of unicorns; strong SaaS and consumer internet.
- Middle East: Gulf sovereign funds (PIF, Mubadala, QIA, ADQ) are now among the largest LPs and direct investors in AI.
- Türkiye: a small but active market, known for gaming, e-commerce, fintech and B2B SaaS (see chapter 17).

07

A brief history of venture capital

Risk capital is as old as trade itself; the modern venture fund is less than 80 years old.

Maritime trade · The steam engine · ARD and Doriot · Arthur Rock · Sand Hill Road · The AI era

Technology, politics and capital

- Every wave of innovation needed three things: **a technology, a political order that protected property and contracts, and a way to pool risk capital**.
- Free flow of information (printing, then telegraph, then internet) lowered the cost of finding opportunities and partners.
- Capital markets — from Venetian partnerships to stock exchanges — let many people share risk.
- Venture capital is one more such tool: a contract to share the risk and reward of building something new.

Maritime trade: the first venture model

- Medieval Venice and Genoa used the **commenda**: a passive investor financed a voyage, the merchant sailed and worked, and profits were split (often ¾ to ¼).
- Losses were limited to what the investor put in — an early form of limited liability.
- **Joint-stock companies** (Dutch East India Company, 1602) let thousands share in risky long-distance trade, and created the first stock exchange in Amsterdam.
- Risk of shipwreck and piracy is like startup risk today: many voyages fail, a few return fortunes.

The steam engine: inventor meets investor

- James Watt improved the steam engine (1769) but needed capital and a manufacturer.
- Matthew Boulton — an industrialist — became his partner and financier: **Boulton & Watt** (1775).
- Patents protected the invention; Boulton provided capital, factories and sales.
- The model — inventor plus business partner plus patient capital — is the ancestor of today's founder and VC relationship.
- In the US, wealthy families (Rockefeller, Whitney, Phipps) later financed new industries privately.

The modern venture fund

- **1946**: Georges Doriot (Harvard Business School) founds **American Research and Development Corporation (ARD)**, the first institutional VC firm.
- ARD's 1957 investment of $70,000 in **Digital Equipment Corporation** grew to over $350M — the first venture "home run".
- **1958**: the US Small Business Investment Act creates SBICs with government-backed leverage.
- **1961**: Arthur Rock and Tommy Davis form one of the first VC limited partnerships — the 2-and-20 model.
- **1972**: Kleiner Perkins and Sequoia Capital open on **Sand Hill Road**, Menlo Park.

From founders to venture partners

- 1979: the US "prudent man rule" change lets pension funds invest in VC — capital flows in.
- 1980s: Apple, Genentech, Microsoft, Sun, Cisco IPOs prove the model.
- 1990s: the internet makes VC mainstream; funds grow from $50M to $1B+.
- 2000s: after the crash, cheaper cloud tools mean smaller seed rounds; **angels and super-angels** appear.
- 2010s: mega-funds, SoftBank Vision Fund, crossover investors (Tiger Global), unicorns everywhere.
- 2020s: zero rates fuel a 2021 peak, a 2022–2023 correction, then the **AI super-cycle** — record rounds for frontier labs.

Then and now: the venture market

	2010	2025
US VC invested per year	~$22B (PwC MoneyTree)	**$339B** (PitchBook-NVCA)
Number of US deals	~3,300	~16,700
Largest private round	~$1B (rare)	$40B (OpenAI, 2025); $100B+ in 2026
Unicorns worldwide	a few dozen	~1,300–1,600 depending on tracker
Seed instrument	convertible notes	post-money SAFE
Hot sectors	social, mobile, clean tech 1.0	AI, defense, energy, robotics, biotech

Methodologies differ between PwC MoneyTree (2010) and PitchBook (2025); the comparison shows scale, not an exact growth rate.

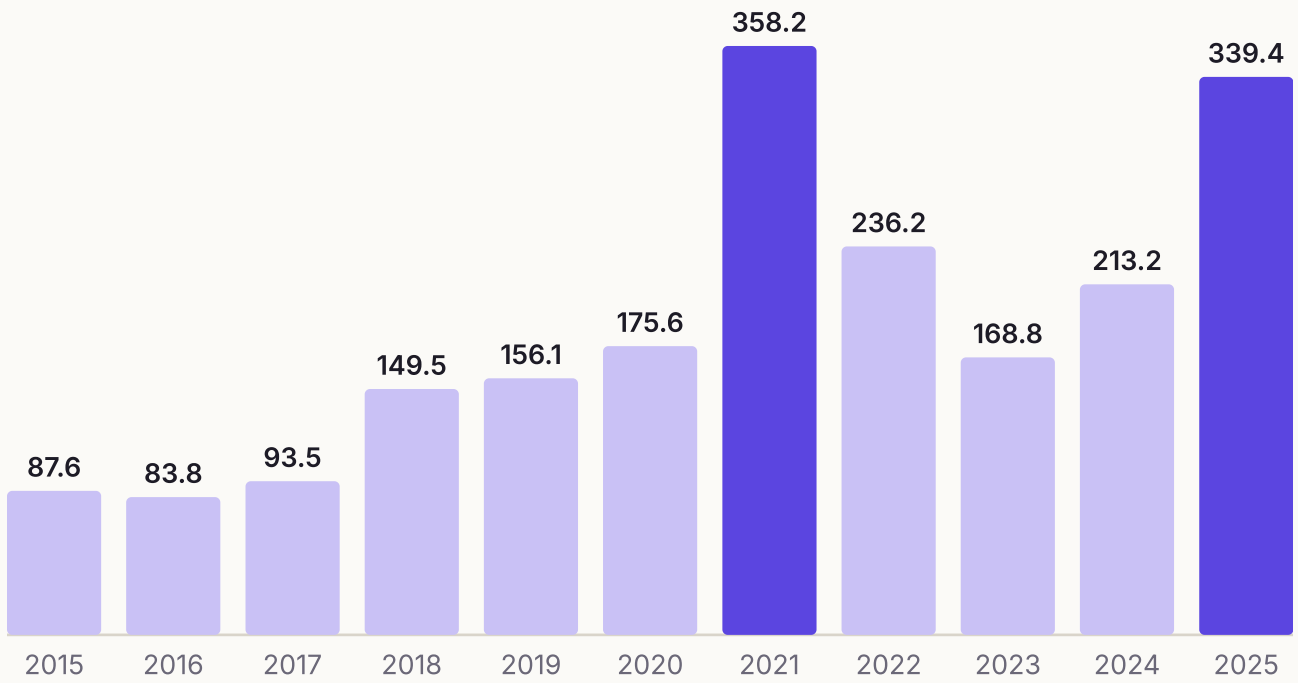
08

The venture market today

Data for 2025 and 2026: record AI rounds, concentration in a few companies, and a slowly reopening exit market.

Deal value | AI share | Megadeals | Exits and IPOs | Fundraising | Unicorns

US venture deal value, 2015–2025 ($B)



- 2025: **$339B** across ~16,700 deals — second only to 2021.
- AI took **65%** of the dollars and 39% of the deals.
- 50% of all 2025 deal value went into just 0.05% of deals.

Source: PitchBook-NVCA Venture Monitor Q4 2025 (as of 31 Dec 2025).

2025 in four numbers (US)

$339B
venture deal value — 8% below the 2021 record

65%
of deal value went to AI companies

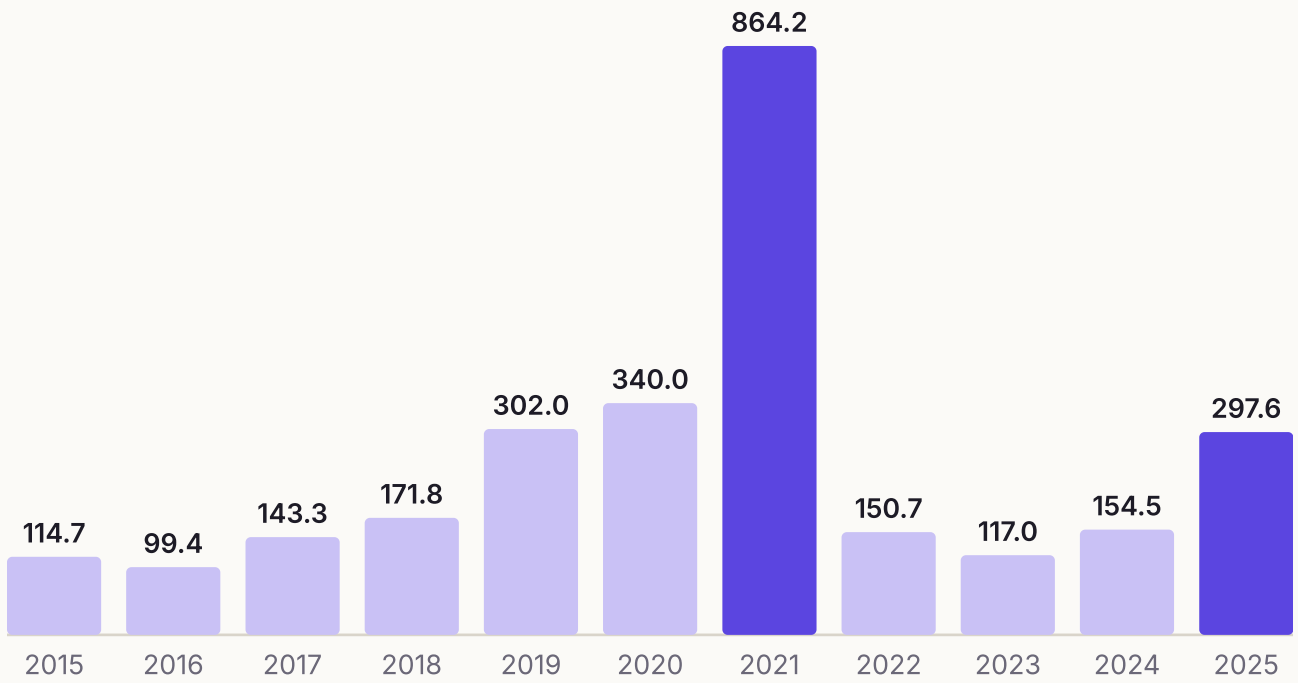
$298B
exit value — 4th highest in a decade

$66B
raised by new VC funds — fewest funds closed in a decade (537)

- Capital is concentrated: large firms with dry powder dominate; emerging managers struggle to raise.
- Corporates participated in ~21% of deals; crossover investors pulled back.

Source: PitchBook-NVCA Venture Monitor Q4 2025.

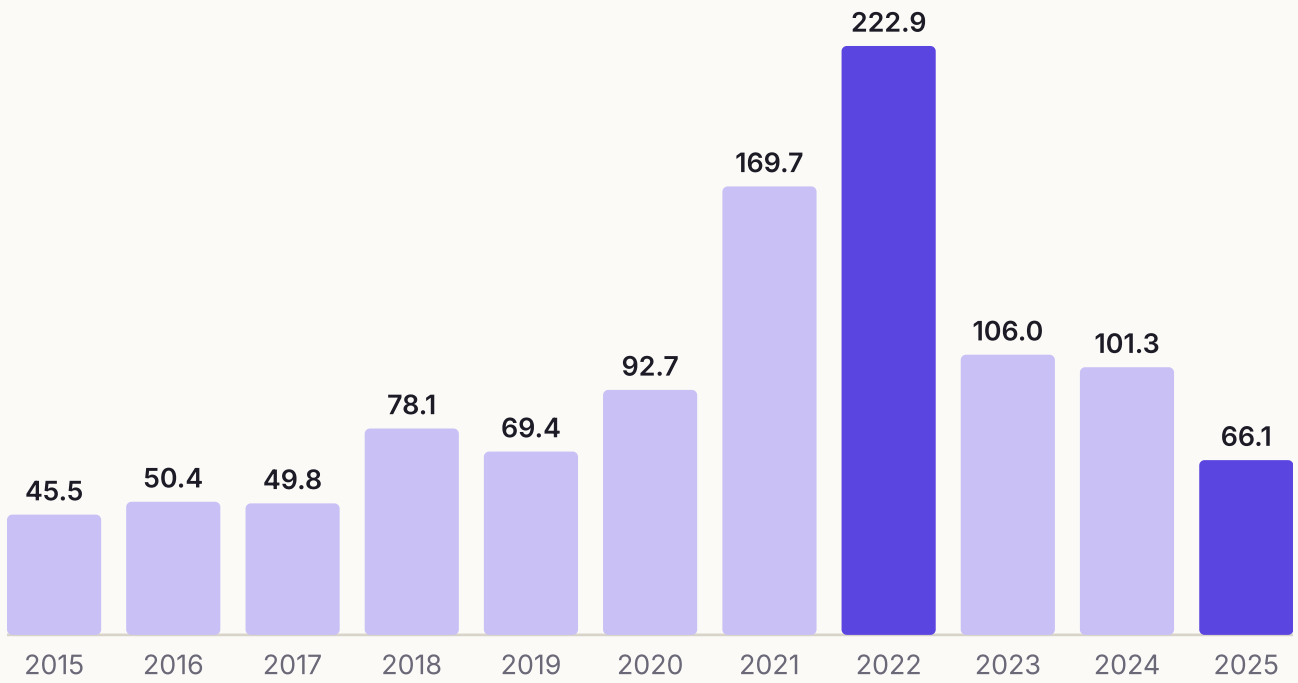
US VC exit value ($B)



- 2021 was an outlier fueled by IPOs and SPACs.
- 2025 IPOs: CoreWeave, Circle, Figma, Klarna, Chime and others — **17 unicorns went public**.
- Many 2025 IPOs later traded below their first-day prices: the window is open but selective.

Source: PitchBook-NVCA Venture Monitor Q4 2025.

US VC fundraising ($B raised by new funds)



- Fundraising lags exits: LPs reinvest when they receive cash back.
- 2025: lowest fund count in a decade; the biggest firms raised most of the money.
- Expect a slow recovery as IPOs and M&A return capital.

Source: PitchBook-NVCA Venture Monitor Q4 2025.

Global venture funding: the AI super-cycle

$425B

global venture funding in 2025, +30% YoY (Crunchbase)

~50%

of 2025 global funding went to AI

$679B

global funding in the first 9 months of 2026 — a record

64%

AI share in Q3 2026; 27 rounds of $1B+ in one quarter

Sources: Crunchbase News year-end 2025 and Q3 2026 reports (as reported, Oct 2026). Trackers differ: CB Insights counts $698B for Jan–Sep 2026.

The largest private rounds in history

COMPANY	ROUND	AMOUNT	POST-MONEY VALUATION
OpenAI	Mar 2025 (SoftBank-led)	$40B	$300B
Anthropic	Feb 2026, Series G	$30B	~$380B
OpenAI	Feb–Mar 2026	~$110–122B (tranches)	~$850B
Anthropic	May 2026, Series H	$65B	~$965B (reported)
xAI	Jan 2026, Series E	$20B	~$230B — merged with SpaceX in Feb 2026
Meta → Scale AI	Jun 2025	$14.3B for 49%	~$29B

Sources: company announcements and press reports; 2026 figures as reported by Crunchbase/Dealroom coverage. Values are approximate and change quickly.

What concentration means for founders

- A few AI labs absorb a large share of all venture dollars — OpenAI and Anthropic alone took ~43% of global funding in H1 2026 (reported).
- Outside the top tier, the market is **selective**: investors want efficient growth, real revenue and a clear AI advantage.
- Median round sizes are still rising at seed and Series A–D, but fewer companies reach the next round.
- AI-native startups reach $10M+ ARR with very small teams — the bar for "good traction" has moved up.
- The opportunity: AI lowers the cost of building, so capital-efficient founders can go further before raising.

Unicorns: private companies worth $1B+

~1,300–1,600
unicorns worldwide in 2026 (depends on tracker)

775
US unicorns (NFAP, April 2026)

8
Turkish-founded companies valued at $1B+ (Dealroom)

- The term was coined by Aileen Lee in 2013, when there were 39 US unicorns.
- Many 2021-vintage unicorns are now worth less than their last valuation — "zombie unicorns" — while AI companies set new records.

Sources: CB Insights, Hurun, Dealroom (2026); NFAP policy brief June 2026.

09

The impact of venture capital

Why a small asset class has an outsized effect on jobs, R&D and entire industries.

Returns | Economic weight | R&D and patents | New industries | Jobs

VC-backed companies dominate the public market

41%

of total US stock market value is VC-backed companies

62%

of US public companies' R&D spending

92%

of R&D and patent value among public firms founded in the last 50 years

- VC funds a tiny share of all US firms (well under 1%), but those firms become Apple, Microsoft, Amazon, Alphabet, Nvidia, Meta, Tesla.

Source: Gornall & Strebulaev, "The Economic Impact of Venture Capital: Evidence from Public Companies" (Stanford GSB, 2021 version).

Outperformance — for the best funds

- Top-quartile VC funds have historically outperformed public markets over 10–20 year periods; the median fund often has not.
- Persistence: firms with strong past funds tend to keep outperforming — access to the best deals matters.
- Returns are lumpy and depend heavily on the vintage year: 1990s funds and 2009–2012 funds did well; 2000–2001 and 2021 vintages struggled.
- For an LP, VC is a long-term, illiquid bet on innovation — sized as a small slice of a diversified portfolio.

Sources: Cambridge Associates US Venture Capital Index; Kaplan & Schoar (2005); Harris, Jenkinson & Kaplan (2014).

VC created entire industries

Semiconductors

- Fairchild, Intel, AMD, Nvidia

Computing & software

- Apple, Microsoft, Oracle, Salesforce

Internet

- Amazon, Google, Meta, Netflix

Biotechnology

- Genentech (1976, Kleiner Perkins) launched the industry; Moderna's mRNA platform was VC-built

Mobility & energy

- Tesla, Uber, Airbnb

AI

- OpenAI, Anthropic, Mistral, DeepMind (acquired by Google, 2014)

Jobs and growth

- Young, fast-growing firms create a disproportionate share of **net new jobs** — most small firms do not grow, a few grow very fast.
- VC-backed companies spend a higher share of revenue on R&D and pay higher wages than average firms.
- Successful exits recycle money and people: employees with equity become angels and founders.
- Cluster effects: each successful company trains managers who start the next generation (the PayPal "mafia" → Tesla, LinkedIn, YouTube, Palantir, Yelp).

> Policy lesson: the goal is not more small firms, but more firms that can grow very large.

10

The pitch

How to tell investors a story they can believe — the slides, the order and the rules.

What a good pitch does | The 14 elements | Rules for slides | A sample deck | Common mistakes

What a good pitch does

- In **2–3 minutes** the investor should know: what you do, for whom, why now, and why you will win.
- A pitch is a story about the future backed by evidence from the present.
- It is not a business plan: one idea per slide, the detail goes in the data room.
- It starts a relationship. The real test is the follow-up: data room, references, customer calls.
- Today most first pitches are a **short deck read alone** (investors spend ~2–3 minutes on it) or a 30-minute video call.

The 14 elements of a venture pitch (1–7)

#	ELEMENT	THE QUESTION IT ANSWERS
1	Mission	What do you do, in one sentence?
2	Market	How big is it, and is it growing? (bottom-up TAM, SAM, SOM)
3	Problem	Whose pain, how painful, how solved today?
4	Solution	Why is your answer 10× better?
5	Team	Why are you the ones to build this?
6	Technology	What is hard to copy? (IP, data, know-how)
7	Customers	Who uses and pays today? Logos, quotes, retention

The 14 elements of a venture pitch (8–14)

#	ELEMENT	THE QUESTION IT ANSWERS
8	Unit economics	Price, CAC, gross margin, LTV, payback
9	Go to market	How do you reach customers at scale?
10	Milestones	What have you done; what will this money achieve?
11	Financials	3-year plan: revenue, burn, headcount
12	Competition	Who else, and why you win
13	Financing	What you raised before; what you raise now and the use of funds
14	Why this investor	What do you want beyond money?

Market, problem, solution

Market

- Size it **bottom-up**: number of customers × price
- Show growth and a "why now" (technology, regulation, behavior change)
- Avoid "1% of a $100B market"

Problem

- A real person with a painful, frequent, expensive problem
- How they solve it today, and what it costs

Solution

- The product in one picture or a demo
- Why it is 10× better, not 10% better
- What it does **not** do (focus)

Team, technology, customers

Team

- Founder-market fit: why you understand this problem
- Complementary skills: product, technology, selling
- Key hires and advisors — only if they matter

Technology

- What is proprietary: models, data, patents, hardware, integrations
- In AI: why a bigger model next year won't erase your advantage

Customers

- Logos, case studies, quotes
- Retention and expansion (net revenue retention)
- Pipeline with stages, not just names

Unit economics, go-to-market, milestones

Per-customer economics

- Average revenue per customer
- Cost to acquire (CAC) and to serve
- Gross margin, payback period, LTV/CAC

Go to market

- Channel: self-serve, inside sales, field sales, partners
- Funnel: visits → trials → paid → expansion
- Sales cycle length and conversion rates

Milestones

- What you have achieved with the money so far
- The 3–5 milestones this round will fund

Financials, competition, financing

Financials

- Three years: revenue, gross margin, operating costs, burn, headcount
- Key assumptions on one slide
- Show the path to break-even

Competition

- A matrix on the 2 axes customers care about
- Include the status quo and in-house solutions
- Respect competitors; explain your advantage

Financing

- Previous rounds and investors
- Amount you are raising, instrument, use of funds
- Runway this gives (18–24 months)

Why this VC

- Expertise, network, portfolio synergy

Rules for slides

- **Show the faces of your team.** Investors back people first.
- **Keep it simple.** Less text is better; one message per slide, readable in five seconds.
- **Tell a story.** Product and team matter, but take the investor on the journey.
- **Never read your slides.** The investor is judging how well *you* sell. Reading kills passion.
- **Slides support; you persuade.** What you say counts most, not what is on the screen.
- **Slides can't look into eyes.** Your eyes carry vision, enthusiasm and conviction.

A sample 12-slide deck

SLIDE	CONTENT
1. Cover	Company name, one-line description, contact
2. Problem	The pain, with a real customer story
3. Solution	Product picture or live demo; key benefit
4. Why now	Technology, market or regulation shift
5. Market	Bottom-up size and growth
6. Product & technology	How it works; what is proprietary
7. Traction	Revenue, users, retention, logos — a chart up and to the right
8. Business model	Pricing and unit economics
9. Go-to-market	Channels, funnel, partnerships
10. Competition	Positioning matrix
11. Team	Founders and key people, with photos
12. The ask	Amount, use of funds, milestones, runway

Pitching an AI startup in 2026

Investors will ask

- What happens when the next frontier model ships?
- Is the gross margin healthy after inference costs?
- Do you own data, workflow or distribution the model providers can't easily take?
- Is revenue real usage or pilots?

Strong answers

- Proprietary or hard-to-collect data
- Deep integration into a customer workflow
- Pricing tied to outcomes, not seats
- Evidence of retention after the novelty period
- A small team reaching meaningful ARR

Common pitch mistakes

- Too long: 30+ slides, dense text, no clear message.
- No "why now" and no "why you".
- Top-down market sizing ("if we get 1% of China...").
- Hiding the competition or claiming there is none.
- Unrealistic financials with no assumptions.
- Not knowing your numbers: CAC, churn, burn, runway.
- Asking for money without explaining the milestones it buys.

> Practice with friendly investors first. Record yourself. Cut every slide that doesn't change the investor's mind.

11

Financials and valuation

Building a financial model, understanding per-customer economics, and how startups are valued.

Expense plan | Revenue plan | Unit economics | SaaS & AI metrics | Burn and runway | Valuation | Cap tables

Building a financial model in four steps

1. Focus on expenses

- Start with the **hiring plan**: roles, timing, salary, benefits, equity
- Add rent, legal, accounting, insurance, travel, tools, cloud

2. Model how the product is built and sold

- Bottom-up revenue: channels → leads → trials → customers
- Pricing, discounts, payment terms, churn

3. Test the assumptions

- Market data, comparables, customer interviews
- Scenarios: base, downside, upside

4. Detailed statements

- P&L, cash flow, balance sheet; monthly for 24 months, then yearly

The revenue plan

- Build it **bottom-up**: how many customers you can reach, convert and keep, through each channel.
- Decide the model: B2B or B2C? Subscription, usage-based, transaction fee, marketplace take rate, freemium, licensing?
- Model the timing: how long to build the product and team, sales cycle length, when customers pay, how long invoices take to collect.
- Include partner commissions, payment fees, hosting and **AI inference costs** that scale with usage.
- Then combine with expenses to produce your first profit-and-loss statement.

Per-customer economics

1. Revenue per customer

- What does one customer pay, per month or year?
- Simple enough to calculate in your head
- If several packages: show the average

2. Cost to acquire (CAC)

- Sales and marketing cost to win one new customer
- Direct (ads, sales salaries) and indirect (content, events)
- How it changes over time — and how you can lower it

3. Cost to serve

- Hosting, inference, support, onboarding, payment fees
- Self-service lowers it; heavy services raise it
- Some customer segments may be unprofitable

Key metrics for software and AI businesses

METRIC	DEFINITION	A HEALTHY BENCHMARK (2025)
ARR / MRR	Annual / monthly recurring revenue	Growth 2–3× per year at early stage
Gross margin	(Revenue − cost of revenue) / revenue	SaaS 75–80%+; AI apps often 50–65% due to inference
CAC payback	Months of gross profit to recover CAC	< 12–18 months
LTV / CAC	Lifetime gross profit / CAC	> 3×
Net revenue retention	Revenue from last year's customers this year	> 110% (enterprise > 120%)
Logo churn	Customers lost per year	SMB < 3% monthly; enterprise < 10% yearly
Burn multiple	Net burn / net new ARR	< 1.5× good, > 3× worrying
Rule of 40	Growth % + profit margin %	≥ 40 for scaled companies
Revenue per employee	Revenue / headcount	AI-native leaders: $1M+

Unit economics — a worked example

$500
revenue per customer per month

70%
gross margin → $350 gross profit

$4,200
CAC → payback in 12 months

4.2×
LTV/CAC with 2% monthly churn (LTV ≈ $350 / 0.02 = $17,500)

- If churn doubles to 4%, LTV halves to $8,750 and LTV/CAC falls to 2.1× — retention matters as much as acquisition.

Burn, runway and default alive

Burn rate

- **Gross burn**: total monthly spending
- **Net burn**: spending minus revenue

Runway

- Cash ÷ net burn = months until zero
- Raise when you still have 9–12 months

Default alive?

- At current growth and burn, do you reach profitability before the money runs out? (Paul Graham)
- If not: cut burn, raise, or change the plan — now, not later

Hints when examining a model

- **Headcount drives cost**: check hires per quarter against revenue growth.
- **Users and revenue**: does growth follow a believable funnel and channel mix?
- **Cost of revenue**: hosting, inference, support, payment fees grow with usage.
- **Sales & marketing** vs **R&D** vs **G&A**: does the split match the stage?
- **Cash**: when does the company need the next round? Is there a buffer?
- **Sensitivity**: which 2–3 assumptions change everything? Show them.

From financials to valuation

- Investors use the plan to estimate the **funding needed** and as one input to valuation during due diligence.
- **Due diligence**: the investigation before signing — team references, customers, technology, legal, financials, cap table.
- At early stages, valuation is mostly a negotiation driven by **round size and target ownership** (VCs often want 15–25% in a priced round).
- Later, valuation follows metrics: revenue multiples, growth, margins, and comparable public companies.

Valuation methods

Early stage

- Market comparables of similar rounds
- Ownership-based: round size ÷ target stake
- Scorecard and Berkus methods (team, product, market, traction)
- **VC method**: expected exit value ÷ target return multiple

Later stage

- Revenue or ARR multiples vs public peers
- EBITDA multiples for profitable companies
- Discounted cash flow (DCF)

Fund reporting

- Portfolio marks follow IPEV guidelines; can take years to prove a winner

The VC method — an example

- Expected exit in 7 years: company with $100M revenue × 5× revenue multiple = **$500M exit value**.
- The VC targets **10× return** at this stage → post-money today = $500M ÷ 10 = **$50M**.
- Expected dilution from future rounds: 40% → adjusted post-money = $50M × 0.6 = **$30M**.
- Investing $6M → pre-money **$24M**, investor owns 20%.

> The answer depends on assumptions — which is why valuation is a negotiation, not a calculation.

Pre-money, post-money and the cap table

	FOUNDERS	OPTION POOL	SEED INVESTORS	SERIES A	TOTAL
Before seed	10.0M (100%)	—	—	—	10.0M
Seed: $2M at $8M pre; 1.25M-share pool created in the pre-money	10.0M (71.1%)	1.25M (8.9%)	2.81M (20.0%)	—	14.06M
Series A: $10M at $40M pre; pool topped up to 10% post	10.0M (54.6%)	1.83M (10.0%)	2.81M (15.4%)	3.66M (20.0%)	18.30M

Illustrative. Price per share = pre-money valuation ÷ fully diluted shares before the round (fully diluted includes the option pool). Investors usually require the pool top-up to come out of the pre-money — so it dilutes founders, not them.

Valuation then and now

- **Then (dot-com)**: eyeballs and page views; many companies with no revenue went public.
- **2010s**: SaaS made recurring revenue the standard; ARR multiples; "growth at all costs" in 2020–2021, when public SaaS traded at 15–20× revenue.
- **2022–2023 correction**: multiples fell to 5–7×; down rounds and flat rounds became common.
- **2024–2026**: AI companies command very high multiples on fast-growing revenue; the rest of software is valued on efficient growth and profitability.
- Lesson: raise on a valuation you can grow into. A high price today can mean a painful down round later.

12

Building the team

Leadership, organization, hiring, equity and culture — the company is its people.

Leadership | Co-founders | Organization | Hiring | Equity and options | Culture and teams | Family businesses

How to build the team

- The first 10 hires define the company's culture and speed more than any later decision.
- Hire for **slope over intercept**: people who learn fast beat people with more experience but less drive.
- Founders hire for gaps: technical founders need commercial strength, and vice versa.
- With AI tools, early teams are smaller — each person must own a larger area.
- Use your investors' and advisors' networks; the best people are rarely looking for a job.

Leadership

Effective leaders

- Create a clear vision and keep repeating it
- Set high standards and hold people to them
- Earn trust through honesty and consistency
- Listen, then decide

Four vital tasks

- Hire and develop great people
- Set direction and priorities
- Make sure there is enough cash
- Build the culture by example

In early stages

- Plan, but stay flexible
- Lead from the front: sell, recruit, build

Co-founders

Choosing

- Complementary skills, shared values, history of working together
- Decide on roles early: who is CEO?

Equity split

- Discuss early; equal splits are fine if contributions are equal
- **Vesting**: 4 years with a 1-year cliff for everyone, founders included

Founder conflict

- One of the top reasons startups die
- Write a founders' agreement: roles, decision rights, what happens if someone leaves

Organization: hierarchical vs flat

Standard org chart

- CEO → functional heads (engineering, product, sales, marketing, finance, operations)
- Clear accountability; slower decisions

Flat organization

- Small teams owning outcomes end-to-end
- Fast; needs strong communication and senior people

In practice

- Startups start flat and add structure as they grow (~50+ people)
- Remote and hybrid teams need written processes and clear ownership

Board, advisors, CEO

Board of directors

- Founders, investors, independent members
- Governance, hiring/firing the CEO, approving budgets and financings

Advisory board

- Domain experts, customers, technical gurus
- No legal duties; paid with small equity (0.1–0.5%, vesting)

CEO and president

- CEO: vision, strategy, capital, team, culture
- President/COO: execution, operations, scaling

Hiring the right people

- **Write a job analysis**: tasks, responsibilities, skills, knowledge and abilities needed.
- **Write a clear job description**: mission of the role, outcomes expected in 6–12 months, location/remote, compensation range.
- **Source widely**: referrals (best), LinkedIn, GitHub, local communities, university labs, startup job boards (Wellfound, YC Work at a Startup); in Türkiye also Kariyer.net and Techcareer.
- **Avoid hiring mistakes**: don't hire in a hurry, don't hire only people like you, don't skip references.
- Use **work samples** (paid take-home or trial days) — they predict performance better than interviews.

Interviews and references

Plan the interview

- Decide what you're testing before the meeting
- Same core questions for every candidate
- Mix: skills test, past behavior ("tell me about a time..."), culture

Conduct it well

- Sell the mission — top people have options
- Listen 80%, talk 20%
- Score independently before discussing

Check references

- Always, including back-channel references
- Ask: "Would you hire this person again?"
- Look for patterns, not one opinion

Equity: stock options and RSUs

Option pool

- Typically 10–15% of the company before Series A, refreshed later

Vesting

- 4 years, 1-year cliff, monthly after that
- Acceleration on change of control (single/double trigger)

Instruments

- Stock options (ISOs/NSOs in the US) — right to buy at a strike price
- RSUs at later stages
- In Türkiye: options are still hard to use; many startups use foreign holding structures — a policy gap to close

> Equity turns employees into owners. Explain it clearly: number of shares, strike price, total shares, what happens at exit.

Company culture

What it is

- How decisions are really made, what gets rewarded, what is tolerated

Characteristics of strong cultures

- A clear mission people believe in
- Respect, openness, fast feedback
- High standards with psychological safety
- Fun — work people enjoy

How to build it

- Write the values, then live them — especially in hiring and firing
- Leaders' behavior is the culture

Teams that work

Advantages of teams

- Better decisions, more ideas, shared ownership

Common errors

- Unclear goals and roles
- Too large (keep under ~8)
- No authority to decide
- Rewards only for individuals

What makes teams work

- Clear, measurable goals
- Trust and constructive conflict
- Leaders who remove obstacles
- Regular feedback loops

Empowerment, job design and rewards

Empowerment

- Give people authority and resources with responsibility
- Works best with trained, informed, trusted people

Job design

- Job enlargement and rotation
- Job enrichment: more autonomy, feedback, ownership
- Flexible and remote work

Rewards

- Salary, bonus, **equity**
- Recognition — often more powerful than money
- Growth: learning and promotion paths

Family businesses and succession

Family businesses

- A large share of companies in Türkiye and Europe
- Strength: long-term view, trust
- Weakness: hiring by loyalty, not skill; reluctance to share equity

Succession plan

- Choose and train the successor early
- Separate ownership from management
- Bring in professional managers and independent board members

Serial founders

- Many founders start again after an exit — with more capital, a network and fewer mistakes

13

The term sheet

The key economic and control terms of a venture investment — what they mean and what is market standard today.

Rounds and process | Valuation and shares | Liquidation preference | Anti-dilution | Vesting | Investor rights | Control terms

What is a term sheet?

- A short (3–10 page) document setting out the main terms of an investment before lawyers write the full agreements.
- Mostly **non-binding**, except confidentiality, exclusivity ("no-shop", usually 30–60 days) and costs.
- Two kinds of terms: **economics** (valuation, liquidation preference, anti-dilution, option pool) and **control** (board, protective provisions, voting, drag-along).
- In the US the **NVCA model documents** (updated October 2025) are the starting point; in Europe, BVCA/Invest Europe models; in Türkiye, agreements are often adapted from these.

The investment process

STEP	WHAT HAPPENS	TYPICAL TIME
First meetings	Pitch, partner meetings	2–4 weeks
Term sheet	Negotiation of key terms; signed, exclusivity starts	1–2 weeks
Due diligence	Legal, financial, technical, commercial, references	2–6 weeks
Definitive agreements	Charter (articles), stock purchase, investors' rights, voting, ROFR/co-sale	2–4 weeks
Closing	Signatures, funds wired, shares issued	1 day
Post-closing	Board set-up, reporting, cap table update	ongoing

Rounds, shares and capital

Investment round

- Seed, Series A, B, C… each with its own class of **preferred stock**

Share capital

- Pre-money valuation ÷ fully diluted shares = **price per share**
- Fully diluted: all shares + options + warrants + convertibles

Type of share

- Common: founders, employees
- Preferred: investors — with liquidation preference, conversion, anti-dilution and voting rights

Tranches

- Money in steps tied to milestones; NVCA's 2025 update added standard tranche mechanics

Valuation and milestones

The headline number

- Pre-money: value before new money
- Post-money = pre-money + new investment

What really matters

- The option pool inside the pre-money ("option pool shuffle")
- Liquidation preference and participation
- Ratchets or milestone conditions

Ratchet

- If performance or the next round's price falls below a target, investors get extra shares
- Rare and founder-unfriendly; avoid if possible

Liquidation preference

What it is

- In a sale or liquidation, preferred holders get their money back **before** common holders

Variants

- **1× non-participating** (market standard): get 1× back *or* convert to common — whichever is more
- **Participating**: get 1× back *and* share in the rest ("double dip")
- Multiples (2×, 3×): seen in bad markets or very late stages

Why it matters

- In a modest exit, preferences decide who gets paid

In 2025 the large majority of US VC deals used 1× non-participating preferences.

Liquidation preference — example ($10M invested for 25%)

EXIT VALUE	1× NON-PARTICIPATING	1× PARTICIPATING	FOUNDERS/COMMON GET (NON-PART. / PART.)
$8M	Investor takes $8M (all)	$8M	$0 / $0
$20M	$10M (preference > 25% × $20M)	$10M + 25% × $10M = $12.5M	$10M / $7.5M
$40M	$10M (preference = 25% × $40M)	$10M + 25% × $30M = $17.5M	$30M / $22.5M
$100M	Converts: 25% × $100M = $25M	$10M + 25% × $90M = $32.5M	$75M / $67.5M

Dividends, redemption, conversion

Dividend rights

- Usually non-cumulative and only "when declared" — startups rarely pay dividends
- Cumulative dividends are a red flag

Redemption

- Investors can force the company to buy back shares after X years
- Rare in the US today; still seen in some markets

Conversion

- Preferred converts to common at any time (1:1, adjusted for splits and anti-dilution)
- **Automatic conversion** at a qualified IPO or majority vote

Anti-dilution protection

What it does

- If a later round is priced **lower** (a down round), earlier investors' conversion price is adjusted

Types

- **Broad-based weighted average** — market standard; adjustment depends on how much is raised at the lower price
- **Narrow-based weighted average** — stronger for investors
- **Full ratchet** — conversion price drops to the new price, regardless of amount; very harsh for founders

Carve-outs

- Option grants, conversions, strategic deals don't trigger it

Founder shares and vesting

Founder vesting

- Founders' shares vest over 4 years (1-year cliff); credit for time already worked is negotiable
- Protects everyone if a founder leaves early

Acceleration

- Single trigger: vesting accelerates on sale
- **Double trigger** (common): on sale *and* termination without cause

Leaver provisions

- "Good leaver" vs "bad leaver": price at which the company buys back unvested or vested shares
- Common in Europe and Türkiye

Investor rights

Pre-emption / pro-rata

- Right to invest in future rounds to keep ownership percentage

ROFR and co-sale

- **Right of first refusal**: company/investors can buy shares a founder wants to sell
- **Co-sale (tag-along)**: investors can sell alongside founders on the same terms

Information rights

- Monthly or quarterly financials, annual budget, audit

Registration rights

- Right to have shares registered in an IPO (demand, piggyback, S-3)

Drag-along and exit

Drag-along

- If the board and a majority of preferred (and often common) approve a sale, all shareholders must sell on the same terms
- Prevents small holders from blocking an exit

Bring-along / tag-along

- Minority holders can join a sale on the same terms

Exit provisions

- Investors may require the company to pursue an exit after a number of years
- Negotiate: who decides, minimum price, founders' protection

Control terms

Board of directors

- Typical Series A board: 2 founders, 1 investor, (1 independent) — or 2–1–2 later
- Board observers: no vote, attend meetings

Voting rights

- Preferred votes with common on an as-converted basis

Protective provisions

- Preferred holders' veto over: new senior shares, changing the charter, sale of the company, debt above a limit, dividends, changing board size

Representations and warranties

- The company and founders confirm facts: capitalization, IP ownership, no litigation, financial statements

Other clauses

Confidentiality and IP

- Every employee and founder assigns IP to the company and signs confidentiality agreements

Employee option plan

- Size of the pool; vesting standards

Fees and expenses

- Company usually pays investors' legal fees (capped)

Exclusivity (no-shop)

- 30–60 days not to negotiate with others

Conditions precedent

- Due diligence, legal opinions, approvals, key hires, IP transfers before closing

Enforceability

- Mostly non-binding; governing law and jurisdiction

Negotiating a term sheet

- Focus on the terms that matter: **valuation, option pool, liquidation preference, board, protective provisions**. Don't fight every comma.
- Know the market standard — use NVCA, BVCA or YC documents and ask other founders.
- Have more than one term sheet if you can; competition is the best negotiating tool.
- Hire a lawyer who does venture deals often — it saves money.
- Remember: you will work with this investor for 7–10 years. Terms that look like a win today can damage the relationship.

14

The board and governance

How a venture-backed board works, the legal duties of directors and how to make the board useful.

Composition | Duties | Alignment | Audit and controls | Effective boards | Evaluation

The board of a venture-backed company

- Typically small (3–7 members): founders/CEO, investor directors, independent directors.
- **Unique features**: directors appointed by investors with their own fund interests; fast-changing strategy; frequent financings.
- Its job: hire, support and if needed replace the CEO; approve strategy, budgets, financings and exits; oversee risk and compliance.
- Meets every 6–8 weeks early on, quarterly later. Good boards spend most time on strategy, not reporting.

Directors' legal duties

Duty of care

- Be informed; read the materials; ask questions; take time to decide

Duty of loyalty

- Act in the interest of the company and **all** shareholders — not just your fund
- Disclose conflicts; abstain when conflicted

Business judgment rule

- Courts don't second-guess decisions made in good faith, informed, without conflict

Hard cases

- Sales where preferred and common get very different outcomes; down rounds; insider financings

Based on Delaware law (where most US VC-backed companies are incorporated). Turkish Commercial Code (TTK 6102) gives board members similar duties of care and loyalty.

How to achieve an aligned board

Align expectations early

- Before investing: agree on vision, milestones, exit expectations and timeline

Four main areas

- Strategy and goals
- Team and CEO performance
- Capital and financing plan
- Exit options

Behavior

- No surprises: bad news early
- Board pre-reads 48 hours before
- One-on-ones between meetings
- Separate session without management (executive session)

Audit committee and internal controls

Audit committee

- Oversees financial reporting, auditors, internal controls
- Needed once the company is larger or preparing for an IPO

Early internal controls

- Two signatures for payments above a threshold
- Monthly bank reconciliations
- Expense policy, separation of duties
- Cap table maintained carefully (Carta, Pulley, or a law firm)

Later-stage controls

- Annual audit, revenue recognition (ASC 606 / IFRS 15)
- SOX-readiness before an IPO; security and data-protection compliance (GDPR, KVKK)

Board composition and roles

Investor directors

- Bring pattern recognition and networks; may face fund conflicts

Independent directors

- Industry operators; balance founders and investors

Board observers

- No vote; attend meetings; keep confidentiality

Company counsel

- Advises the company, not individual directors; records minutes
- Ensures approvals are properly documented

Effective vs ineffective boards

Ineffective boards

- Meetings are long status reports
- Directors unprepared or distracted by their own fund
- Founders hide bad news
- No independent voices
- Avoid hard CEO conversations

Effective boards

- Short reporting, long strategy discussion
- Clear agenda and decisions
- Trust and candor
- Help between meetings: hiring, customers, financing
- Regular self-evaluation

At minimum, every director should…

All directors

- Read materials before meetings
- Understand cash position and runway
- Keep information confidential

Independent directors

- Represent the company's long-term interests
- Mediate between founders and investors

VC directors

- Disclose conflicts between their fund and the company
- Remember their duty is to all shareholders

Founder directors

- Report honestly; separate the CEO role from the shareholder role

Evaluation and logistics

- **Annual CEO review**: board agrees goals at the start of the year and reviews performance, compensation and development at the end.
- **Board self-evaluation**: a short anonymous survey each year — meeting quality, mix of skills, relationship with management.
- **Peer review**: directors give each other feedback, led by the chair or lead independent director.
- **Logistics**: fixed calendar, standard board pack (KPIs, cash, hiring, product, risks), written minutes, consents for decisions between meetings.

Adapted from the NVCA's guidance on the basic responsibilities of VC-backed company directors.

15

The founder mindset

The personal attributes that separate founders who keep going from those who stop — and how to build them.

Risk taking | Self-starter | Discipline | Lifelong learning | Accepting failure | Global entrepreneur | Reputation

Risk taking

- Entrepreneurs don't love risk — they **manage** it. They take moderate, calculated risks and reduce them step by step.
- Each stage removes one kind of risk: team risk, technology risk, market risk, financing risk, scaling risk.
- Ask: what is the cheapest experiment that tells me whether this works?
- Personal risk is real: savings, career, family. Discuss it openly with the people it affects.

Individual attitudes

Self-starter

- Doesn't wait for permission or perfect information
- Creates momentum: first customers, first prototype, first hire

Positive thinker

- Sees problems as puzzles to solve
- Optimism grounded in facts

Discipline

- Does the boring work: follow-ups, accounts, details
- Keeps promises to customers, investors and team

Objectivity

- Looks at data even when it hurts
- Separates ego from decisions

Learning and selling

Lifelong learner

- Reads, asks, experiments; learns from customers and competitors
- In the AI era: re-learns tools every few months

Marketing ability

- Every founder is a salesperson — to customers, investors, recruits and the press
- Tell a clear story; listen more than you talk

Investing in yourself

- Health, sleep, relationships — a long game needs stamina
- Mentors and peer founder groups

Accept failure — and learn fast

- Most startups fail; many successful founders failed before (Rovio made 51 games before Angry Birds; Slack began as a failed game company).
- In Silicon Valley a failed startup is often seen as **experience**; in many places it is still a stigma — that culture must change.
- Fail cheaply and early: test assumptions before building everything.
- After failure: be honest with investors and employees, close properly, reflect, try again.

> "Ever tried. Ever failed. No matter. Try again. Fail again. Fail better." — Samuel Beckett

The global entrepreneur

Think global from day one

- Software and AI travel; local markets may be too small
- Design for international customers, currencies, regulation

Risk and reward

- Bigger markets, more competition, more complexity

Reputation and relationships

- Trust is the currency: deliver what you promise
- Relationships with diaspora founders and investors open doors

How to develop a global mindset

- Live or work abroad; learn languages
- Build a diverse team
- Attend global events; sell abroad early

The founder's mindset in practice

- Mark Zuckerberg started Facebook at Harvard in 2004, focused on one campus, then expanded school by school — **dominate a small market first**.
- He refused early acquisition offers (Yahoo offered ~$1B in 2006), betting on a bigger future.
- He kept product focus: "move fast" — then changed the motto when scale demanded stability.
- Many lessons are universal: obsession with users, speed, keeping control of the vision, hiring strong operators (Sheryl Sandberg in 2008).
- Some are cautionary: growth at any cost created privacy and trust problems that cost far more later.

The film *The Social Network* (2010) dramatized the story; the details are contested — read the real history.

Habits of resilient founders

- Write down weekly priorities and review them every Friday.
- Talk to at least five customers every week.
- Know your cash and runway at all times.
- Build a small personal board: a mentor, a peer founder, a coach or friend outside the company.
- Protect sleep, exercise and family time — burnout destroys more startups than competitors.
- Celebrate small wins with the team.

16

Venture trends for the next decade

Where capital and talent are moving: AI, deep tech, energy, life sciences, defense — and new regions.

AI everywhere | Deep tech and chips | Climate and energy | Life sciences | Defense and space | New regions | Governments

Six big shifts

1. AI as infrastructure

- Every software product becomes AI-native; agents automate knowledge work

2. Compute and energy

- Data centers need chips, power and cooling; energy becomes a tech sector again

3. Deep tech

- Semiconductors, robotics, quantum, new materials

4. Life sciences + AI

- AI drug discovery, GLP-1 and obesity, gene editing

5. Defense, security, space

- Defense tech, cybersecurity, satellites, drones

6. Geography

- Capital follows talent: Gulf, India, Europe's AI hubs

AI: from models to agents

- 2023–2024: chat assistants and copilots. 2025–2026: **agents** that use tools, write and run code, and complete multi-step tasks.
- Enterprise AI spending grew from **$1.7B (2023) to $37B (2025)** according to Menlo Ventures.
- Pricing shifts from seats to usage and outcomes — "service as software".
- Risks to watch: margin pressure from inference costs, dependence on model providers, regulation (EU AI Act phases in through 2026–2027), data rights.
- Opportunities for startups: vertical AI (law, health, finance, industry), AI security and trust, data infrastructure, devices at the edge.

Source: Menlo Ventures, cited in PitchBook-NVCA Venture Monitor Q4 2025.

Semiconductors and compute

Why it matters

- AI demand made chips the most strategic industry in the world
- Nvidia became the first $4T company in 2025

Where startups play

- Specialized AI accelerators and inference chips
- Photonics and networking, memory, advanced packaging
- Chip design tools with AI

Policy

- US CHIPS Act ($52B), EU Chips Act, Japan, Korea, India subsidies
- Export controls shape who can buy what

Climate and energy tech

$40.5B

global climate tech venture and growth investment in 2025, +8% YoY

~$14B

went to energy startups — strongest in three years

44%

of energy funding went to fusion and fission

- The driver changed: **power demand from AI data centers** now pulls capital into generation, storage, grid software and nuclear.
- Solar and batteries keep getting cheaper; the bottleneck is grid connections, permitting and storage.

Source: Sightline Climate, 2025 Climate Tech Investment Trends (Jan 2026). Other trackers report $38–49B.

Energy: what changed since 2010

Clean tech 1.0 (2006–2011)

- Big bets on solar panels, biofuels, electric cars
- Many failures (Solyndra); VCs lost money and left

Today

- Solar module prices fell ~90% since 2010; batteries ~90% since 2010
- Software and data: smart grids, demand response, virtual power plants
- Storage, heat pumps, EV charging, grid-scale batteries
- Advanced nuclear and fusion attract billions

Lessons

- Hardware needs patient capital and project finance, not only VC
- Policy (US IRA, EU Green Deal) shapes demand — and can change

Life sciences

The opportunity

- Aging populations, chronic disease, obesity (GLP-1 drugs reshaped pharma)
- AI for protein design, drug discovery, trial design (Isomorphic Labs raised $600M in 2025)

The challenge

- Developing a new drug costs **$2B+** and takes 10–15 years
- High regulatory risk; long time to revenue

Venture model

- Specialist funds and company-creation studios (Flagship → Moderna)
- Pharma partnerships and licensing deals provide non-dilutive capital
- Medtech and digital health: shorter cycles, different regulation (FDA/CE)

Defense, security and space

Defense tech

- Europe and the US are re-arming; startups like Anduril, Helsing, Shield AI attract large rounds
- Drones, autonomy, sensors, electronic warfare

Cybersecurity

- AI raises both attacks and defenses; identity, cloud and AI-model security

Space

- Reusable rockets cut launch costs dramatically; satellite internet (Starlink, Kuiper)
- Earth observation, in-orbit services

> Türkiye has strengths here: defense industry, drones, satellite programs — and an engineering talent base.

New regions and global trends

Concentration

- The Bay Area and New York took ~64% of US deal value in 2025

Rising hubs

- India (Bengaluru), the Gulf (Riyadh, Abu Dhabi, Doha), Europe's AI centers (London, Paris, Munich)
- Southeast Asia, Latin America, Africa — smaller, growing

Capital flows

- Gulf sovereign funds and Asian investors fund global AI

Remote work

- Teams are distributed; founders can hire anywhere, but capital still clusters

Source for US concentration: PitchBook-NVCA Venture Monitor Q4 2025.

What governments can do

Capital

- Fund-of-funds that invest through private VCs (EIF in Europe, Yozma in Israel, 1993)
- Co-investment with angels; tax relief for early-stage investors

Talent

- Startup and talent visas; easy hiring of foreign engineers
- Strong universities and research funding

Rules

- Workable stock-option taxation
- Fast company formation and closing; modern bankruptcy law
- Limit non-competes; protect trade secrets

Demand

- Public procurement from startups; regulatory sandboxes

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The Turkish startup ecosystem

Strengths, numbers and gaps — and what it would take to build a larger venture economy in Türkiye.

Market data | Turcorns | Gaming | Policy and programs | What is missing

Türkiye in numbers

~$590M

invested in Turkish startups in 2025 across ~306 rounds (startups.watch)

~$1.1B

in 2024 — 2025 was a lower year without mega-deals

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companies founded in Türkiye valued at $1B+ (Dealroom)

- Methods differ: KPMG counts $1.4B of total startup deal volume in 2025 (incl. M&A), down from $2.6B in 2024.
- Gaming remains the largest source of large rounds and exits.

Sources: startups.watch via Serkan Ünsal, Sabah, Jan 2026; KPMG Türkiye Startup Investments 2025 (Mar 2026); Dealroom (2026).

Turkish companies that passed $1B

COMPANY	SECTOR	MILESTONE
Peak Games	Mobile games	Acquired by Zynga for $1.8B (2020) — Türkiye's first unicorn exit
Getir	Quick commerce	Valued at ~$12B in 2022; heavy restructuring and exit from most markets in 2023–2024
Dream Games	Mobile games	Royal Match; CVC-led deal valuing it at ~$5B (2024)
Trendyol	E-commerce	Majority owned by Alibaba; decacorn valuation
Insider	Marketing AI / SaaS	Unicorn in 2022
Hepsiburada	E-commerce	Nasdaq IPO (2021); Kaspi.kz acquired control (2024)
Others	Gaming, marketplaces	Letgo, Loom Games and a new generation of gaming studios

Valuations as reported; they change over time. Sources: company announcements, Dealroom, press reports.

Why gaming worked

Talent

- Strong engineers, designers, data scientists
- Experienced teams from Peak, Gram Games, Rollic spawned new studios

Model

- Global market from day one via app stores
- Data-driven live operations; fast iteration

Capital

- Exits recycled money and people: Zynga's purchases (Peak, Gram, Rollic) funded angels and new funds

Lesson

- One successful exit can create a whole sector — exactly the "Fairchildren" pattern

Programs and institutions

Public

- TÜBİTAK (BİGG 1512, 1501, 1507), KOSGEB, development agencies
- Technoparks (teknoparklar) with tax incentives for R&D staff
- Public fund-of-funds such as Türkiye Büyüme Fonu

Private

- VC funds, corporate VCs of banks, telcos and holdings
- Angel networks (licensed by the Treasury), accelerators, university incubators

Market infrastructure

- Venture capital investment funds (GSYF) and trusts (GSYO) regulated by SPK
- Equity crowdfunding platforms since 2021

What is still missing

Capital

- Few experienced VC partners; small funds; little growth-stage money in lira or dollars

Rules

- Employee stock options are hard and taxed unfavorably → many startups use foreign holdings (UK, Delaware, Netherlands)
- Slow company formation, share transfers and liquidation

Culture

- Fear of failure; family structures; reluctance to share equity

Macro

- Inflation and currency volatility make planning and valuation hard

> Capital is there; venture capitalists are not. Don't wait for mass — create mass.

An agenda for founders and policymakers

- **Founders**: build for global markets from day one; use AI to stay small and capital-efficient; set up clean legal structures early.
- **Angels and successful founders**: reinvest, mentor, and share know-how — every exit should seed ten new companies.
- **Corporates**: buy from startups, run real pilots, acquire teams.
- **Universities**: tech transfer that serves founders, not bureaucracy; entrepreneurship in engineering curricula.
- **Government**: workable option taxation, fund-of-funds through private managers, talent visas, predictable rules.
- **Diaspora**: Turkish engineers and founders abroad are a bridge to Silicon Valley capital and customers.

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Appendix: glossary and resources

A venture-capital glossary, frequently asked questions, model documents and further reading.

Glossary A–Z | FAQ | Model legal documents | Data sources | Reading list

Venture capital glossary (1/4)

A–C

- **Accredited investor** — an investor who meets wealth/income tests to join private offerings
- **Angel** — an individual investing personal money in early-stage companies
- **ARR** — annual recurring revenue
- **Burn rate** — monthly cash spent (gross) or lost (net)
- **Cap table** — list of all shareholders, options and convertibles
- **Carried interest (carry)** — the GPs' share of fund profits, usually 20%

C–D

- **Cliff** — period before any vesting (usually 1 year)
- **Convertible note** — debt that converts into equity in a later round
- **Down round** — a round priced below the previous one
- **Drag-along** — forces minority holders to join an approved sale
- **Dry powder** — committed but uninvested capital
- **Due diligence** — investigation before investing

Venture capital glossary (2/4)

E–L

- **Exit** — sale, merger or IPO that turns shares into cash
- **Fully diluted** — all shares including options, warrants and convertibles
- **General partner (GP)** — manager of a venture fund
- **IPO** — initial public offering
- **IRR** — internal rate of return
- **Limited partner (LP)** — investor in a venture fund

L–P

- **Liquidation preference** — preferred holders' right to be paid first
- **Lock-up** — period after an IPO when insiders cannot sell (often 180 days)
- **Management fee** — annual fee paid to the GP (~2%)
- **Option pool** — shares reserved for employee equity
- **Pari passu** — ranking equally
- **Post-money / pre-money** — company value after / before new investment

Venture capital glossary (3/4)

P–R

- **Preferred stock** — shares with rights common stock lacks
- **Pro-rata right** — right to invest to keep your ownership share
- **Product-market fit** — strong evidence the market wants the product
- **Protective provisions** — investor veto rights on key decisions
- **Ratchet** — anti-dilution or performance adjustment giving investors more shares
- **Recapitalization** — restructuring of a company's capital, often after a crisis

R–S

- **Right of first refusal (ROFR)** — right to buy shares before outsiders
- **SAFE** — simple agreement for future equity
- **Secondary** — sale of existing shares (not new money for the company)
- **Seed** — first institutional round
- **Series A, B, C** — successive priced rounds of preferred stock
- **SPAC** — special purpose acquisition company

Venture capital glossary (4/4)

T–U

- **TAM / SAM / SOM** — total, serviceable and obtainable market
- **Tender offer** — company or investor offers to buy shares from employees
- **Term sheet** — summary of investment terms
- **Tranche** — a portion of an investment released on a milestone
- **TVPI / DPI** — total value / distributions to paid-in capital
- **Unicorn** — private company valued at $1B+ (decacorn: $10B+)

V–Z

- **Valuation cap** — maximum valuation at which a SAFE or note converts
- **Venture debt** — loans to VC-backed companies
- **Vesting** — earning shares over time
- **Vintage year** — the year a fund starts investing
- **Warrant** — right to buy shares at a set price
- **Zombie** — company that survives but can't grow or raise

Frequently asked questions

When should I raise money?

- When capital will clearly speed up a proven plan — not to find out whether there is a business

How much should I raise?

- Enough for 18–24 months and the next set of milestones; expect 15–25% dilution per round

How do I find investors?

- Warm introductions from founders they backed; target investors who do your stage and sector

What if no one invests?

- Treat it as data: improve traction, change the plan, or grow from revenue

Should I sign an NDA with a VC?

- VCs rarely sign NDAs for a pitch; share the story, keep the secret sauce for diligence

Do I need to incorporate abroad?

- Many Turkish startups use a US/UK holding for global investors; get tax and legal advice early

Model legal documents (current versions)

DOCUMENT	PUBLISHER	WHERE
Term sheet, certificate of incorporation, stock purchase, investors' rights, voting, ROFR & co-sale, indemnification, management rights letter	NVCA — updated Oct 2025 (voting agreement June 2026)	nvca.org/model-legal-documents
Post-money SAFE (valuation cap / discount / MFN) and pro-rata side letter	Y Combinator	ycombinator.com/documents
Model documents for UK/European venture rounds	BVCA	bvca.co.uk
Seed documents (open source)	Series Seed	seriesseed.com

These replace the 2011 sample agreements that were attached to earlier editions of these notes. Always adapt documents with a qualified lawyer.

Data sources used in these notes

TOPIC	SOURCE
US venture deals, exits, fundraising	PitchBook-NVCA Venture Monitor (quarterly) — nvca.org
Global funding	Crunchbase News, CB Insights State of Venture, Dealroom
Climate tech	Sightline Climate (formerly CTVC)
Connectivity	ITU Facts and Figures; Ericsson Mobility Report
Immigrant founders	National Foundation for American Policy (NFAP)
Economic impact	Gornall & Strebulaev, Stanford GSB
Türkiye	startups.watch, KPMG Türkiye, Dealroom

Further reading

Classics

- AnnaLee Saxenian — *Regional Advantage*
- Clayton Christensen — *The Innovator's Dilemma*
- Peter Drucker — *Innovation and Entrepreneurship*
- Geoffrey Moore — *Crossing the Chasm*

Building companies

- Eric Ries — *The Lean Startup*
- Ben Horowitz — *The Hard Thing About Hard Things*
- Peter Thiel — *Zero to One*
- Mustafa Ergen — *Girişimci Kapital* (2022 edition)

Venture capital

- Brad Feld & Jason Mendelson — *Venture Deals*
- Sebastian Mallaby — *The Power Law*
- Scott Kupor — *Secrets of Sand Hill Road*

“

Don't wait for critical mass. Create it.

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