

INFO4444 Computing 4 Innovation

Week 10: Commercialisation III

Capital and Fundraising for IT Innovation

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Introduction – Capital Raising for IT Innovation

Canva raises \$200 million at a \$40 billion valuation

Jordan Crook @jordanrcrook / 5:00 AM GMT+10 • September 15, 2021

Canva is now valued at \$40 billion following a fresh capital injection of \$200 million (USD) in a round led by T. Rowe Price. New and existing investors participated in the round, including Franklin Templeton, Sequoia Capital Global Equities, Bessemer Venture Partners, Greenoaks Capital, Dragoneer Investments, Blackbird, Felicis and AirTree Ventures.

This round solidifies **Canva** as one of the most valuable private software companies out there, and it also propels the Australian tech scene forward.

<https://techcrunch.com/2021/09/14/canva-raises-200-million-at-a-40-billion-valuation/>

Indian education startup Byju's is fundraising at a \$10B valuation



Manish Singh @refsrcl 7:56 am AEST • May 2, 2020

Comment

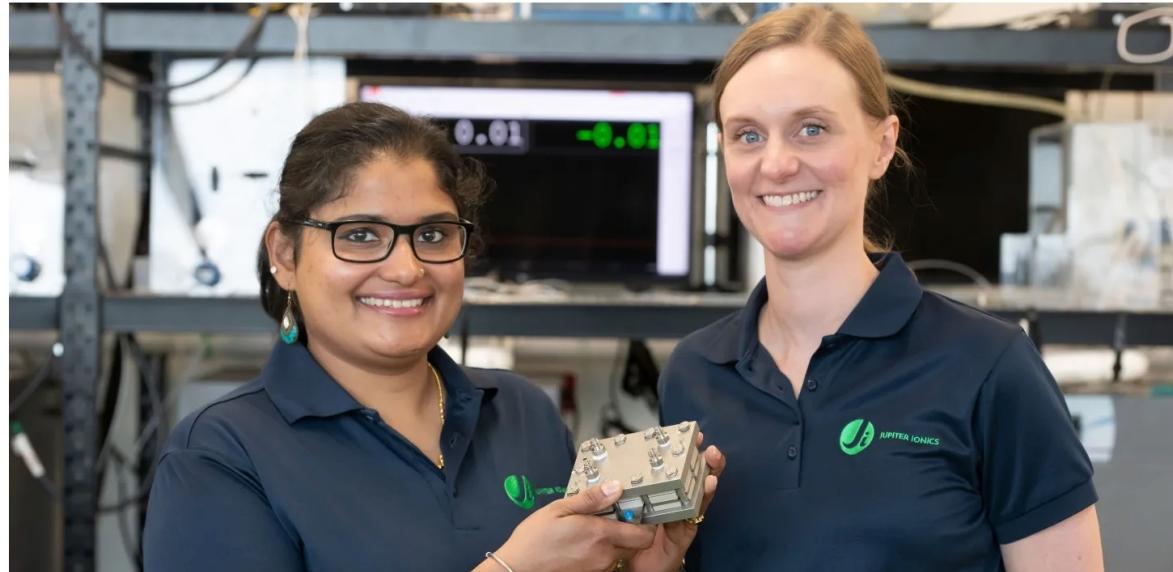


Byju

\$400 million at \$10 billion valuation

Fifteen Aussie startups that have raised millions in 2024 to look after our planet

ELOISE KEATING APRIL 22, 2024



L-R: DR AMRUTHA VIJAYAKUMAR, ELECTROCHEMICAL SCIENTIST AND DR JACINTA BAKKER, SENIOR RESEARCH CO-ORDINATOR. SOURCE: SUPPLIED.

<https://www.smartcompany.com.au/startupsmart/news/fifteen-aussie-startups-raised-millions-2024-planet/>

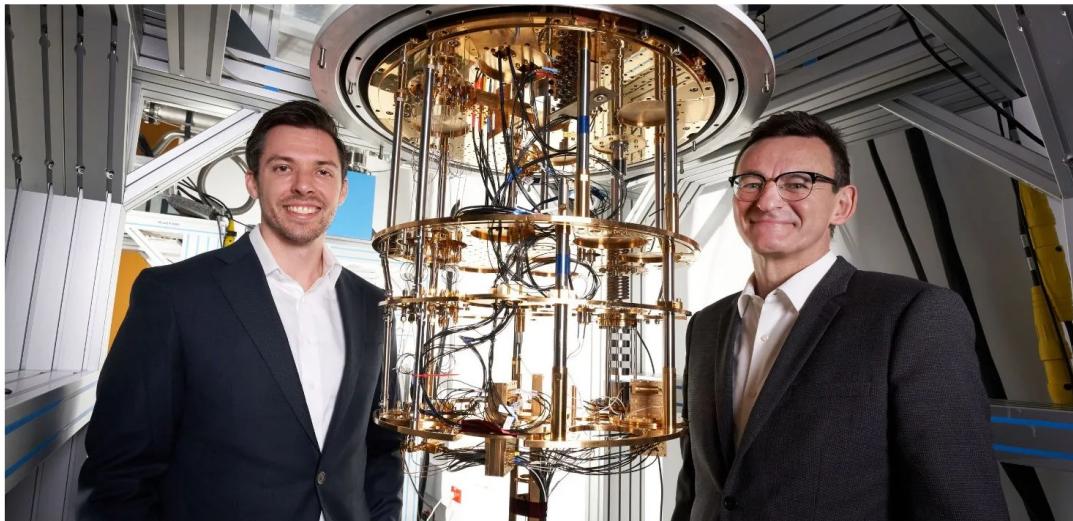
Bugcrowd: \$156 million



BUGCROWD CEO DAVE GERRY. SOURCE: SUPPLIED

Australian crowdsourced security startup Bugcrowd leads the pack this week with a mammoth capital raise, having secured \$156.2 million (US\$102 million) in strategic growth financing at an undisclosed valuation.

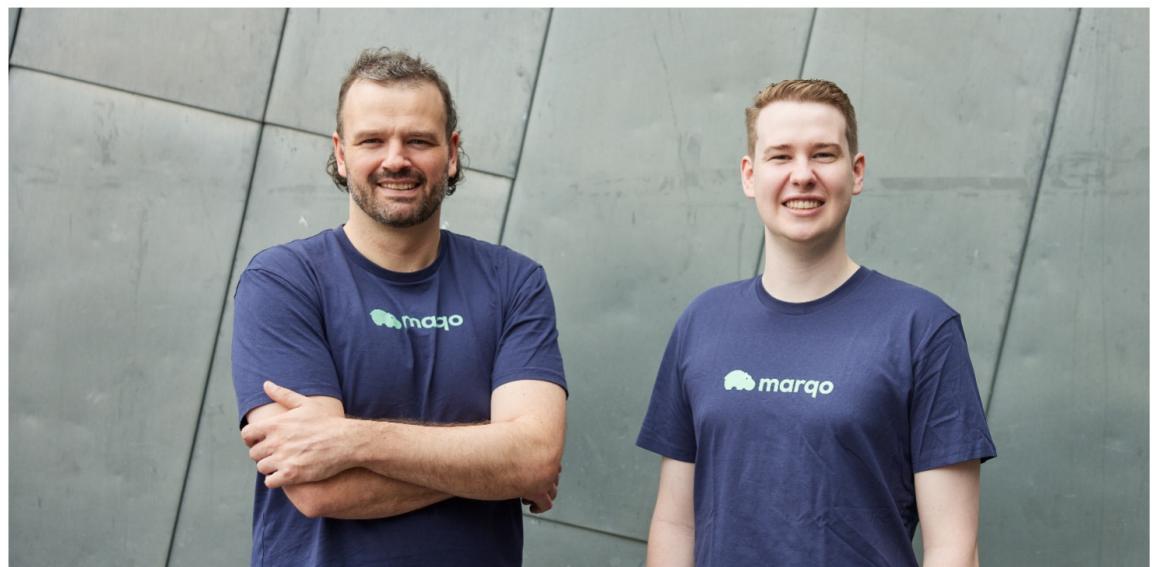
Diraq: \$23 million



L-R: WILL ZENG (QUANTONATION PARTNER) AND ANDREW DZURAK, (DIRAQ CEO AND FOUNDER). SOURCE: SUPPLIED

Also securing fresh funding this week was quantum computing startup Diraq, which raised \$23 million in an extended Series A funding round.

Marqo: \$19.4 million



L-R: MARQO FOUNDERS JESSE CLARK AND TOM HAMER. SOURCE: SUPPLIED

Australian startup Marqo has secured US\$12.5 million (\$19.4 million) in Series A funding less than six months after closing its seed funding round, as it prepares to shift its headquarters to California.

In August 2023, the previously Melbourne-based startup raised \$8.1 million in seed funding, led by Blackbird, to develop its vector search engine powered by artificial intelligence (AI).

Why do you need to raise capital for IT innovation?

Funding needs for IT innovation: An example



- Travelling
- Phone
- Basic website
- Coffee/ food

- Cloud and/or hardware components
- Additional developers + research

- Engineering Team
- R&D
- Data

- Hire Business Development Manager
- Overhead costs

- Hire sales & marketing team
- Ad campaigns

- Product & Technology
- Team
- Operations

The Valley of Death – “The J Curve”

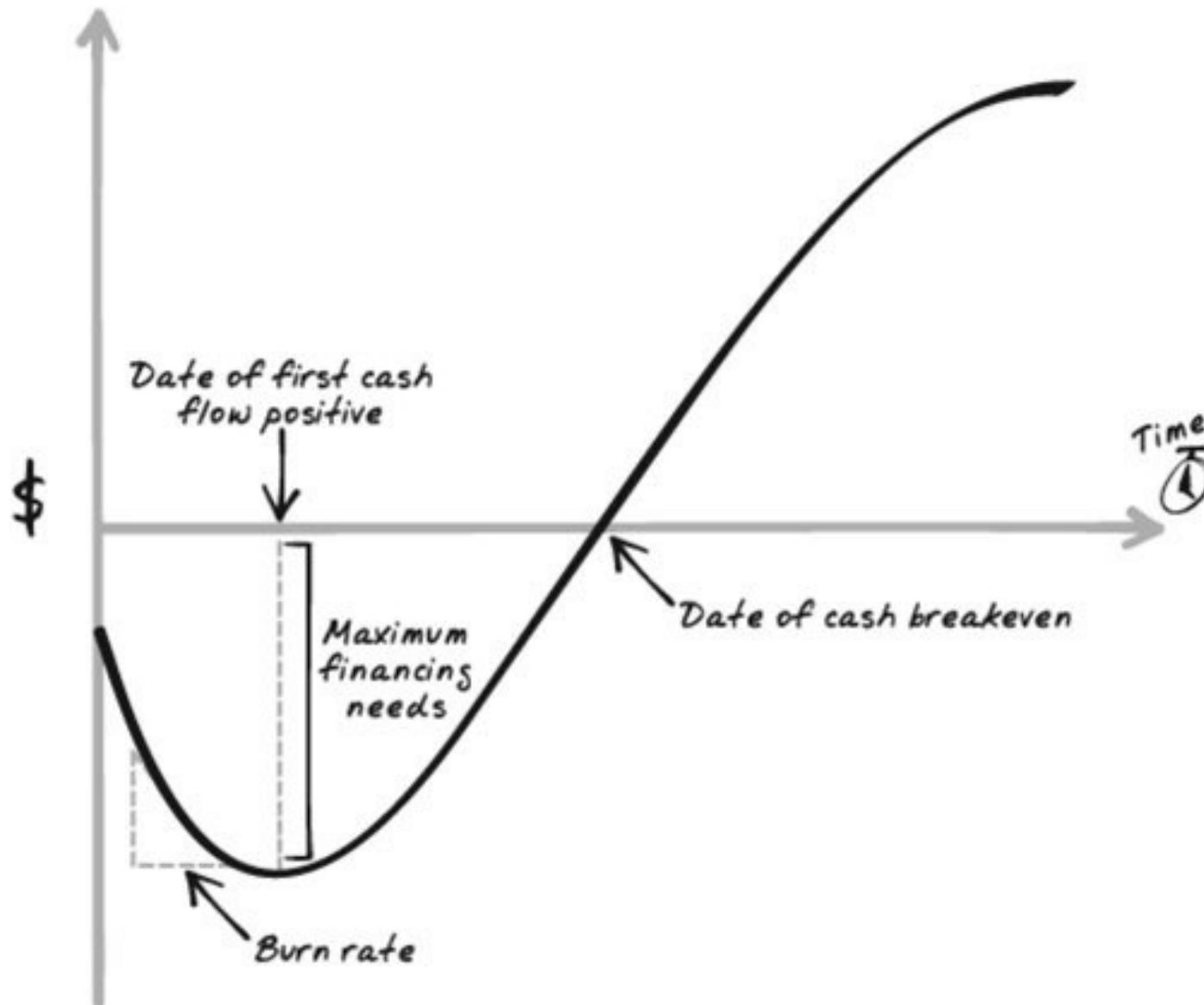
Massive losses for start-ups with IT innovation:

- Invention
- Commercialisation

What does it mean to have a loss?

$$\begin{array}{r} \text{Revenue} \\ - \\ \text{Expenses} \\ \hline = \text{Profit OR Loss} \end{array}$$

The Valley of Death – “The J Curve”



Rethink Robotics: Warehouse Automation Startup in Boston

Rethink Robotics closes after acquisition plans fall through

Brian Heater @bheater 8:35 am AEST • October 5, 2018

Comment



I've said it right here on these very pages: If hardware is hard, robotics are next to impossible. That truism is not better exemplified by this week's [closure of Rethink Robotics](#). A well-respected name in automation, the Boston-based company produced a pair of robotics that have become mainstays in research facilities and warehouse

Crashing and failing in the Valley of Death: High costs of running hardware and robotics startups

"If hardware is hard, robotics are next to impossible"

"... raised nearly \$150 million, but that ultimately wasn't enough for it to continue its path".

Uber ends the year in the black for the first time ever

/ The once perennially unprofitable company has finally found its financial footing.

By [Andrew J. Hawkins](#), transportation editor with 10+ years of experience who covers EVs, public transportation, and aviation. His work has appeared in The New York Daily News and City & State.

Feb 9, 2024, 2:50 AM GMT+11



Well, it only took 15 years, but better late than never.

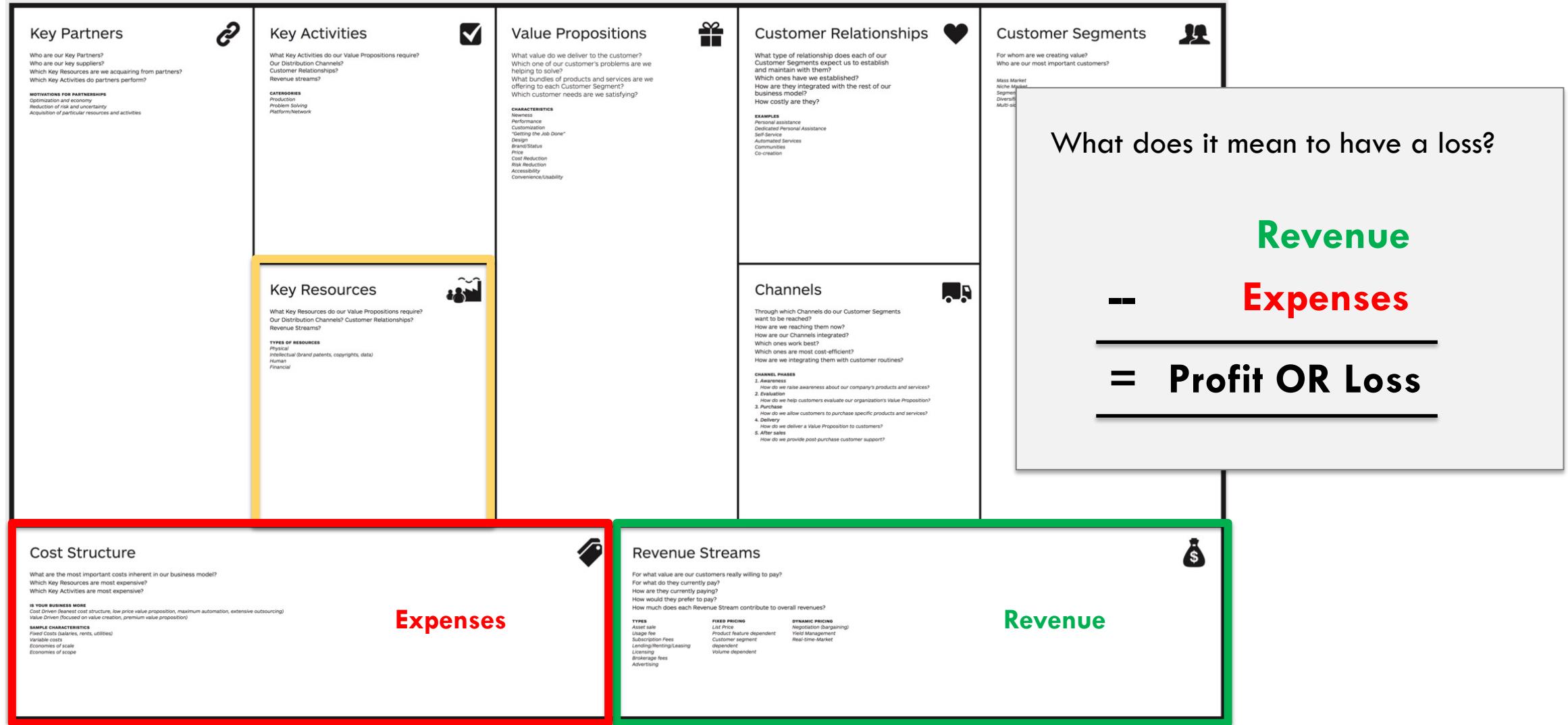
For the first time in its history, Uber ended the year having made more money than it spent on its ridehailing and delivery operations. As noted by *Business Insider*, the company reported an operating profit of \$1.1 billion in 2023, compared to a \$1.8 billion loss in 2022. Moreover, Uber said it made a net income of \$1.9 billion after losing a whopping \$9.1 billion in 2022.

“Looking back, 2023 was an inflection point for Uber,” CEO Dara Khosrowshahi said in an earnings call this week, “proving that we can continue to generate strong profitable growth at scale.”

Case Studies – Failure / Losses

- Very high costs (expected and unexpected)
 - Various types of costs
- Failure to make, or sustain, projected revenue
- Growing competition
- Uncertain customer and market factors
- Unable to scale business model
- Many other ...

Financial capital is part of 'Key Resources' in the Business Model Canvas



Block 5: Revenue Streams

The cash a company generates from each Customer Segment

- How to quantify the financial value of the Value Proposition that delivers to Customer Segment?
- How much of that financial value can be captured?
- What methods can it capture that financial value?
- Example:
 - \$1 million per year saving for a customer segment
 - Capture \$200,000 through yearly subscription

Types of Revenue Streams

Asset Sale	Selling ownership rights to a physical product. Amazon.com sells books, music, consumer electronics, and more online.
Usage Fee	Use of a particular service, the more a service is used, the more the customer pays. Cloud computing services (VM usage per hour)
Subscription Fee	Selling continuous access to a service. A SaaS platform like Asana sells its members monthly or yearly subscriptions in exchange for access and usage of its project management tool
Lending, Renting or Leasing	Temporarily granting customer the exclusive right to use a particular asset for a fixed period in return for a fee. For the lender, this provides the advantage of recurring revenues. Renters or lessees, on the other hand, enjoy the benefits of incurring expenses for only a limited time rather than bearing the full costs of ownership. Zipcar.com allows customers to rent cars by the hour
Licensing	Giving customers permission to use protected IP (patent) in exchange for licensing fees. Generate revenues from their IP commercialising an invention.
Transaction or Brokerage Fees	Derives from intermediation services performed between or on behalf of two or more parties. Example, Stripe get percentage of the value of the transaction executed between the merchant and the buyer
Advertising	Fees for advertising a particular product. Example, Google Adwords has a “pay-per-click” model.

Block 7: Key Resources

Describes the most important assets required to make the business model work

- Resources allow an enterprise to create and offer a Value Proposition, reach markets, maintain relationships with Customer Segments, and earn revenues
- Different Key Resources are needed depending on the type of business model
- An self-driving car start-up requires large volumes of training data to develop their computer vision model, whereas Wikipedia requires the underlying open-source software (Media Wiki).

Types of Key Resources

Technology	proprietary or open-sourced software used in the development of products and services.
Data	open data or proprietary data. Example, training data for building AI models
Human	Every enterprise requires human resources, but people are particularly prominent in certain business models. For example, human resources are crucial in knowledge-intensive and creative industries.
Intellectual	Intellectual resources such as proprietary knowledge, patents and copyrights, insights of technical and business problems. Huawei's several patents on 5G, enabled it to achieve its dominant position in 5G globally.
Physical	This category includes physical assets such as manufacturing facilities, buildings, vehicles, machines, systems, point-of-sales systems and distribution networks. eCommerce platforms like Amazon rely heavily on physical resources for its logistics and fulfillment functions.
Financial	financial resources, such as cash, debt or stock options for hiring key employees.

Block 9: Cost Structure

Describes all costs incurred to operate a business model

- Costs incurred by creating and delivering value, maintaining Customer Relationships, and generating revenue all incur costs
- Can be calculated after defining Key Resources, Key Activities, and Key Partnerships
- Business models enabled by technology are more cost efficient than others

Fixed Costs	Costs that remain the same despite the volume of goods or services produced. Examples include salaries, rent, and physical manufacturing facilities
Variable Costs	Costs that vary proportionally with the volume of goods or services produced. Examples SaaS companies

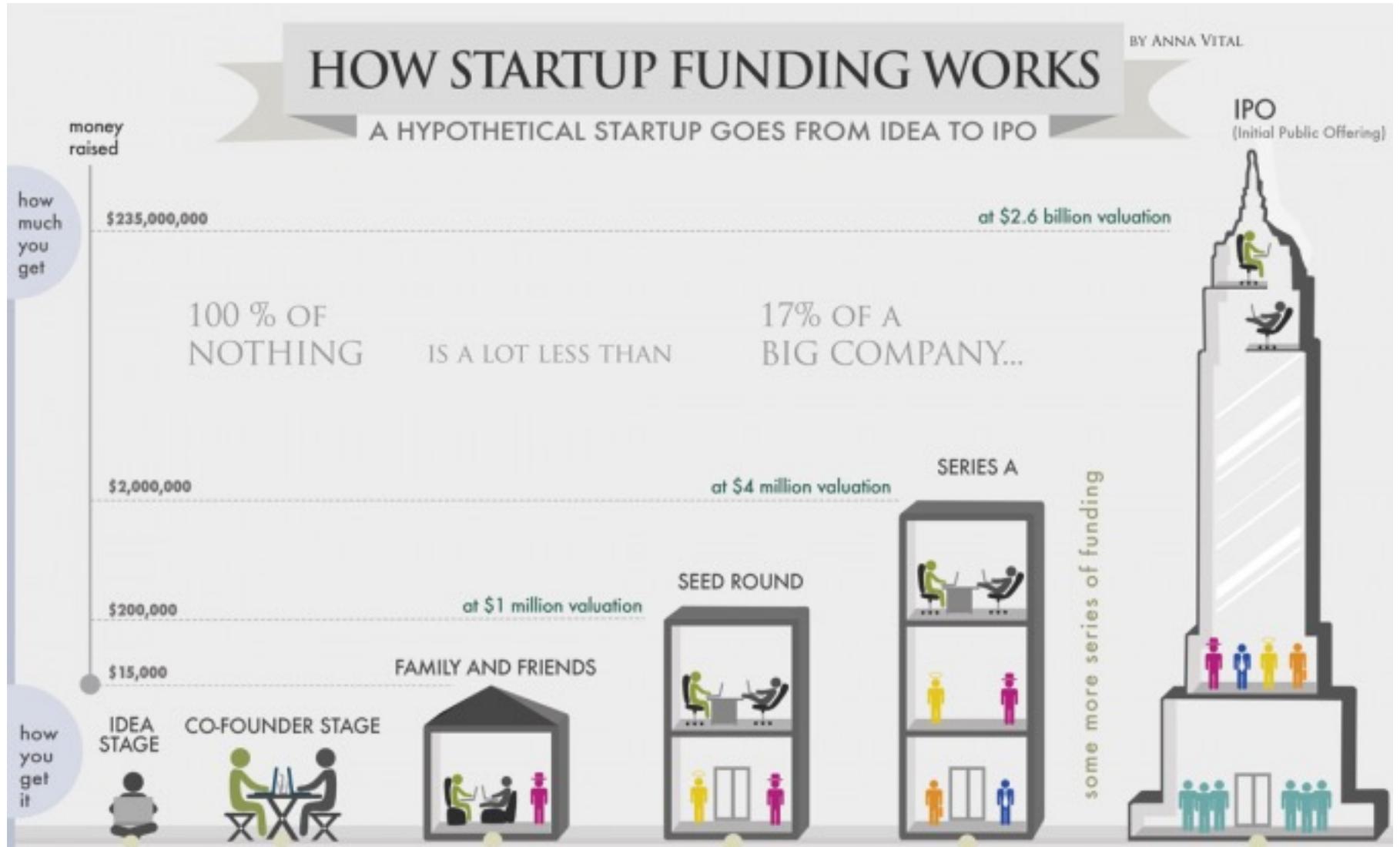
Venture Capital

Start-up Funding

- Inventors/founders to raise capital to grow their start-up
- Investors to invest in potentially high-growth new ventures (also passionate entrepreneurs)
 - Invest cash in exchange of equity (money or partial ownership of the company)
- Understanding investor's profiles and expectations is crucial
- Investors assess and evaluate the potential of the start-up
- Raising capital through rounds of external funding
- Company valuation prior to funding rounds

Start-up Funding

- Funding rounds:
- From Zero to IPO
(Initial public offering)



Start-up Funding – Canva

Series D Round

\$ Funding Rounds

Number of Funding Rounds 11 Total Funding Amount \$241.6M

Canva has raised a total of \$241.6M in funding over 11 rounds. Their latest funding was raised on Oct 16, 2019 from a Series D round.

Which funding types raised the most money? Show

How much funding has this organization raised over time? Show

Announced Date	Transaction Name	Number of Investors	Money Raised	Lead Investors
Oct 16, 2019	Series D - Canva	5	\$85M	–
May 20, 2019	Series D - Canva	4	\$70M	Bond, General Catalyst
Jan 9, 2018	Series C - Canva	3	\$40M	Sequoia Capital
Sep 14, 2016	Series B - Canva	2	\$15M	Blackbird Ventures
Oct 6, 2015	Series A - Canva	6	\$15M	Felicis Ventures
Apr 3, 2015	Series A - Canva	5	\$6M	–
Jul 22, 2014	Venture Round - Canva	5	\$3.6M	–
Jun 20, 2014	Debt Financing - Canva	–	\$250K	–
Jun 11, 2013	Convertible Note - Canva	1	–	–
Mar 19, 2013	Seed Round - Canva	17	\$6.6M	–

Start-up Funding – Tokopedia

\$ Funding Rounds



Number of Funding Rounds

9

Total Funding Amount

\$2.4B

Tokopedia has raised a total of \$2.4B in funding over 9 rounds. Their latest funding was raised on Nov 21, 2018 from a Series G round.

Which funding types raised the most money?

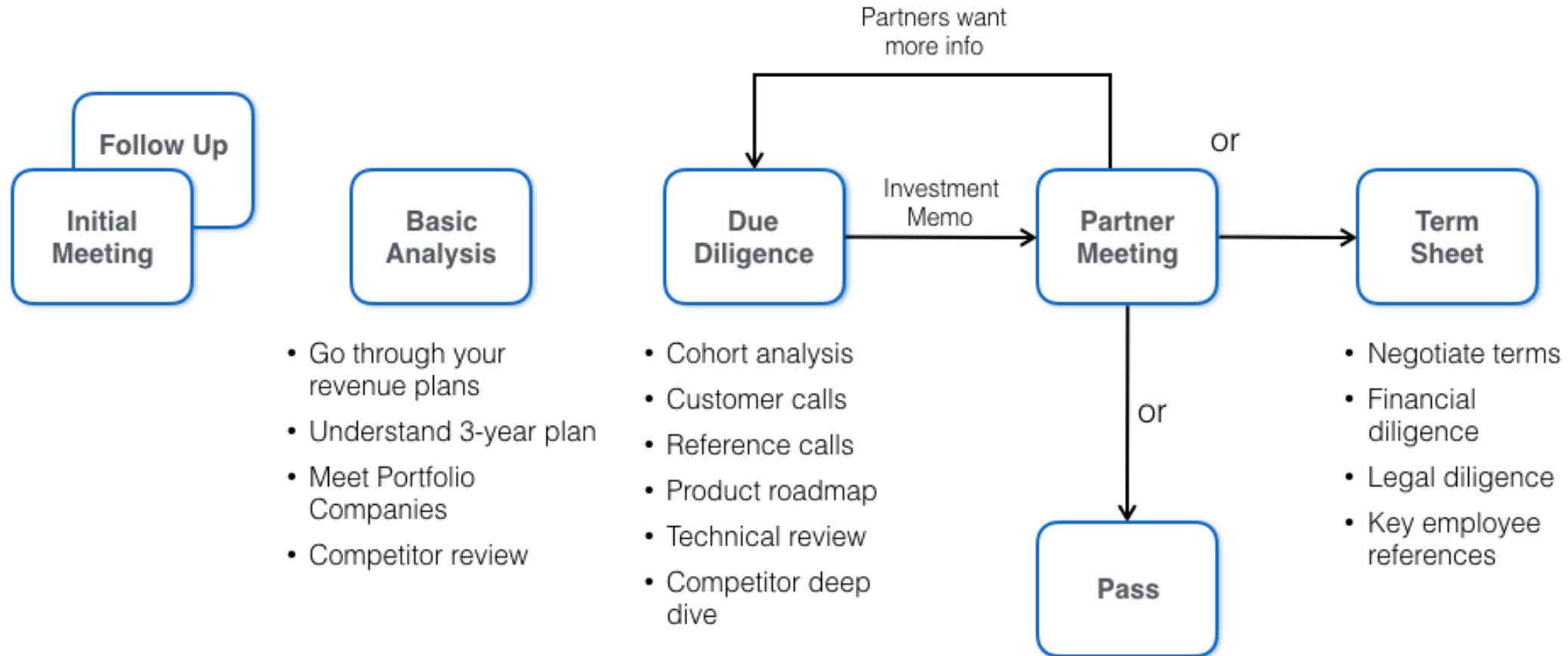
pro Show

How much funding has this organization raised over time?

pro Show

Announced Date	Transaction Name	Number of Investors	Money Raised	Lead Investors
Nov 21, 2018	Series G - Tokopedia	3	\$1.1B	Alibaba Group, SoftBank Vision Fund
Aug 17, 2017	Series F - Tokopedia	1	\$1.1B	Alibaba Group
Apr 11, 2016	Series E - Tokopedia	–	\$147M	–
Oct 21, 2014	Series E - Tokopedia	3	\$100M	SoftBank Telecom Corp
Jun 12, 2013	Series D - Tokopedia	3	–	Softbank Ventures Asia
Apr 4, 2012	Series C - Tokopedia	1	–	Beenos Partners
Apr 19, 2011	Series B - Tokopedia	1	\$700K	CyberAgent Capital
Mar 15, 2010	Series A - Tokopedia	1	–	East Ventures
Feb 6, 2009	Seed Round - Tokopedia	1	–	Indonusa Dwitama

Raising capital from investors



Key Players in Venture Capital (Technology)

Investor Types

Angel Investors



Venture Capital



Strategic Investors



Start-up Funding – Investor Types

- **Angel investor**
 - Successful business individual (\$1 million wealth) seeking high return
 - Smaller investment with passive role
 - High return for longer return
- **Venture Capitalist (VC)**
 - Individual investor or firm with pool of investors
 - Capital, business/entrepreneurial experience/advice, and networks
 - Large investments for active leadership and decision-making (more control)
- **Strategic Investor**
 - Larger company with larger investment
 - Seek equity and strategic goal (license, collaborative agreements, buy option)
 - Less aggressive in valuation and active leadership

Top Unicorn Hunters: Investors with the most \$1B+ Portfolio Companies

Rank	Investor	Companies												
1	Tiger Global Management	UBER	JUUL		stripe		Palantir	coinbase				+32 unicorns		
2	Tencent Holdings					满帮集团						+30		
3	SoftBank Group	ByteDance	UBER		wework							+28		
4	Sequoia Capital China	ByteDance		BITMAIN			满帮集团		ziroom自如			+25		
5	Sequoia Capital	UBER		stripe								+23		
6	Kleiner Perkins	UBER		stripe								+20		
7	DST Global		stripe									+19		
8	Fidelity Investments	UBER	wework		SPACEX					COMPASS		+18		
8	Andreessen Horowitz		stripe	coinbase								+18		
10	Wellington Management	UBER	wework		coupaning	coinbase					COMPASS	+16		

Alternative Pathways

Incubators & Accelerators



INCUBATE
Sydney Knowledge Hub

Minimum Viable Product Grant

MVP Ventures 2023-2024



Key information

- **Status:** Closed
- **Grant amount:** From \$25,000 to \$50,000
- **Application opened:** 4 December 2023
- **Application closed:** 5 April 2024, 5:00 pm

The Program supports startups and innovative SMEs in the product lifecycle between early-stage research and mature investment opportunities to drive the commercialisation of highly innovative products and processes.

<https://www.nsw.gov.au/grants-and-funding/mvp-ventures-2023-2024>

NSW Physical Sciences Fund

NSW Physical Sciences Fund



Key information

- **Status:** Open
- **Grant amount:** From \$200,000 to \$2,000,000
- **Application opened:** 5 March 2024
- **Application closes:** 29 April 2024, 12:00 pm

The Physical Sciences Fund (PSF) is a \$3.5 million, competitive technology development and commercialisation program funded by the NSW Government.

<https://www.nsw.gov.au/grants-and-funding/nsw-physical-sciences-fund>

Other Grants

Community Building Partnership

The partnership program awards grants for community infrastructure projects that deliver positive social, environmental and recreational outcomes.

Overview

The NSW Government is investing in infrastructure projects that deliver positive social, environmental and recreational outcomes, while also promoting community participation, engagement and inclusion.

Since 2009, the Community Building Partnership (CBP) program has awarded grants over 19,700 projects.

In 2023, there is a maximum of \$300,000 to allocate in each electorate. Infrastructure projects, community organisations and local councils are eligible to apply for grants up to \$150,000. The average grant awarded is around \$20,000.



National Reconstruction Fund (NRF) →

The Australian Government established the National Reconstruction Fund Corporation (NRFC) to support priority areas of the Australian economy. It will provide finance in the form of debt, equity and guarantees to su...

Industry Growth Program →

This program provides advice and grant funding for innovative small to medium enterprises and startups to commercialise their ideas and grow their businesses. Projects must align with NRF priority areas.

Boosting Female Founders (BFF) Initiative →

We help women entrepreneurs grow their startups in national and international markets through the BFF Initiative.

Business Research and Innovation Initiative (BRII) →

BRII grants encourage businesses to develop innovative solutions to government challenges.

Cooperative Research Centres (CRC) Grants →

CRC Grants support medium to long-term collaborative research for up to 10 years.

Cooperative Research Centres (CRC) Projects grants →

CRC Project grants support short-term collaborative research for up to 3 years.

Industry Growth Centres →

Industry growth centres are driving innovation, productivity and competitiveness in 6 key growth industry sectors.

Research and Development (R&D) Tax Incentive →

The R&D Tax Incentive stimulates business investment in R&D through tax offsets.

Venture capital program →

We provide venture capital tax benefits to encourage investment in innovative early-stage businesses.

Capital and Fundraising for IT Innovation

Tutorial: Continue to explore business model