

# India - A Startups Nation

The Theatre of Step-Function  
Transformation

**TV Mohandas Pai | 3one4 Capital**

@TVMohandasPai | @3one4Capital

# India at a glance

Population	1.415 bn	Jan 2023
Population Growth Rate	0.80%	Jan 2023
Life Expectancy: Male	68.71 yrs	Dec 2020
Total Fertility Rate	2.0	Dec 2021
Life Expectancy: Female	71.49 yrs	Dec 2020
Literacy	78%	NFHS-5 (2019-2021)
GDP (at current prices)	US\$ 3,469 bn	ES 2022-2023
Real GDP growth	7%	ES 2022-2023
GDP (in PPP) - 3rd Largest Economy	US\$12,200 bn	2023 Estimates
Per capita Income	US\$ 2,467	2022-23 (SAE)
Exports (goods and services)	US\$ 763 bn	2022-23 (SAE)
Imports (goods and services)	US\$ 916 bn	2022-23 (SAE)
Foreign Exchange Reserves	US\$ 578.8 bn	March 2023
Government External Borrowings	US\$ 129 bn	(Ministry of Finance) March 2023
External Debt (Govt & Non-Govt)	US\$ 613.3 bn	(Ministry of Finance) March 2023
Interest to Gross Revenue	22%	2023 RE (Budget)
Gross Debt / GDP ratio	82%	2022 (Estimate)

Source: CSO, RBI, DEA, Registrar General and Census Commissioner  
 Note: 1 USD taken as INR 80 for conversion purposes.

# 2023 vs 1991

## Key Economic Indicators

### 30 Years' Snapshot Post-Liberalization

	2023	1991	CAGR
Population (Bn)	1.415	0.89	1.49%
Life expectancy (Years)	70.19	58.8	0.55%
Literacy rate	78%	52%	1.28%
GDP Growth Rate	7%	5.3%	0.87%
GDP (at current prices) – Rs. cr	272 lakhs	5.32 lakhs	13.08%
GDP (at current prices) – US\$ Bn	3,469	275	8.24%
Per capita income - US\$	2,467	310	6.70%
Exports (G+S) - US\$ Bn	763	18	12.42%
Imports (G+S) - US\$ Bn	916	24	12.05%
Share in world trade (exports + imports)	3%	1%	3.49%
Foreign Currency Reserves - US\$ Bn	578.8	5.8	15.47%
Exchange Rate (US\$)	82.68	17.9	4.90%
Gross savings (% of GDP)	30.2%	21.9%	
Gross domestic investment (% of GDP)	31.4%	22.5%	

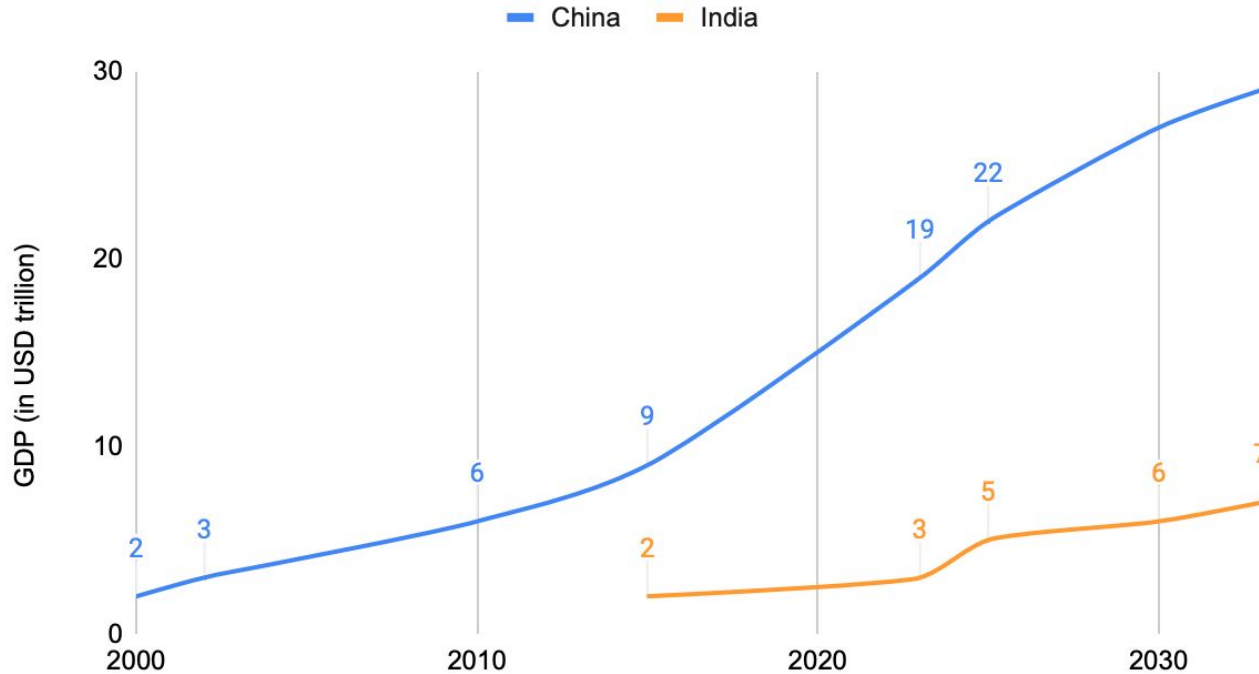
# India & China at a glance

China has grown faster

	Estimates as of	India	China
Population	2023 (E)	1.415 bn	1,454 bn
Population Growth Rate	2023 (E)	0.80%	0.1%
Life Expectancy: Male	2021 (E)	68.71 yrs	75 yrs
Life Expectancy: Female	2021 (E)	71.49 yrs	80.88 yrs
Literacy	2022 (E)	78%	96.8%
GDP (current)	<b>ES 2022-2023</b>	US\$ 3,469 bn	US \$ 17,734 bn
GDP growth (Real)	2022 (E)	7%	5.2%
GDP (in PPP)	2023 (E)	US \$ 12,200 bn	US \$ 30,074 bn
Per capita Income (current)	2022-23 (SAE)	US \$ 2,467	US \$ 12,970
Exports (Goods & Services)	2022-23 (SAE)	US \$ 763 bn	US \$ 3,828 bn
Imports (Goods & Services)	2022-23 (SAE)	US \$ 916 bn	US \$ 2,720 bn
Foreign Currency Reserves	Jan 2023	US \$ 578.8 bn	US \$3,188 bn
External Debt	Dec 2022	US \$ 613.3 bn	US \$ 2,482 bn
Debt / GDP ratio	2022 (E)	82%	273%

# India & China at a glance

## India GDP Projection— India is where China was in 2002

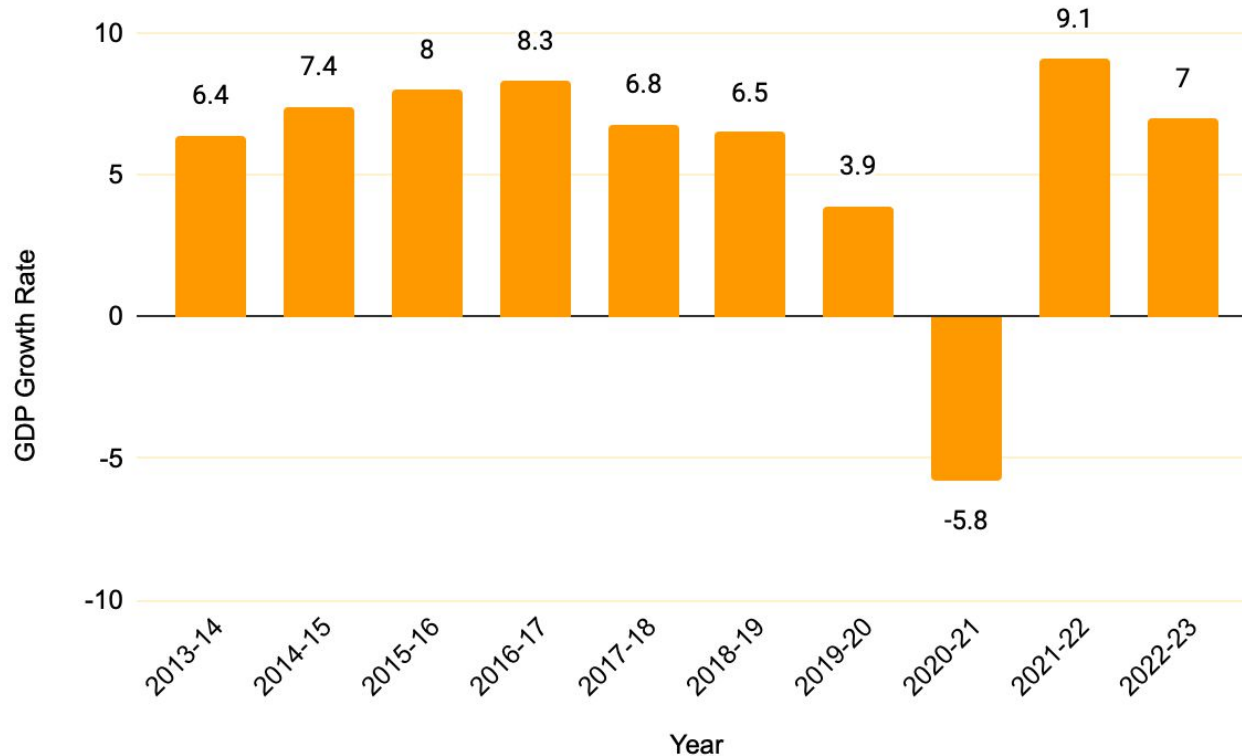


India could achieve a projected GDP of \$ 8T and per capita income of \$5,625 by 2030 on account of India's demographic dividend and a sharp rise in working population. – CBRE

- If India wants to build a \$10T economy by 2030, it needs to grow at **16.7% CAGR** (with US\$ at 75)
- To reach the same by 2033, it needs to grow at **11.4% CAGR**

# GDP Growth (%)

Regaining Growth Momentum



Real GDP & Nominal GDP expected to grow approximately @ **6.5%** & **10.5%** respectively in 2023-24 (ES & Budget)

# The world is changing

Regions	GDP 2023(E) \$ Trillion	GDP 2025(F) \$ Trillion	GDP 2033(F) \$ Trillion	CAGR 2022-2033
US	26.19	28.05	33.53	2.50%
EU22	17.01	18.8	19.74	1.50%
Japan	4.37	4.81	4.83	1.00%
Others	11.98	13.13	16.10	3.00%
<b>Total OECD</b>	<b>59.55</b>	<b>64.79</b>	<b>76.2</b>	<b>2.50%</b>
China	19.24	22.40	28.48	4.00%
India	3.82	4.55	7.51	7.00%
Others	23.57	26.30	34.89	4.00%
<b>Total: RoW</b>	<b>46.63</b>	<b>53.25</b>	<b>70.88</b>	<b>4.28%</b>
<b>Total Global</b>	<b>106.18</b>	<b>118.04</b>	<b>147.08</b>	<b>3.31%</b>

Source: IMF, analyst estimates. Currency appreciations considered

# The world is changing

India is a positive outlier in a world with suppressed growth rates

	Growth Projections (per cent)		Change from WEO Update (July 2022) (per cent)	
	2022	2023	2022	2023
World	3.2	2.7	0	-0.2
Advanced Economies	2.4	1.1	-0.1	-0.3
United States	1.6	1	-0.7	0
Euro Area	3.1	0.5	0.5	-0.7
UK	3.6	0.3	0.4	-0.2
Japan	1.7	1.6	0	-0.1
Emerging Market Economies	3.7	3.7	0.1	-0.2
China	3.2	4.4	-0.1	-0.2
India*	6.8	6.1	-0.6	0



# Strong Industrial & Infrastructure Base



	Steel Production in Mn tonnes	Cement Capacity in Mn tonnes	Two Wheeler Production in Mn Units	Four Wheeler Production in Mn Units	Construction Bn Sq. ft.	ITeS Revenue in Bn\$	Electricity Production Bn Units	Wireless Phone Subscribers in Mn
INDIA	125 (2nd largest)	545 (2 <sup>nd</sup> largest)	17.7 (Largest)	4.25 (4th largest)	1.4 (2 <sup>nd</sup> largest)	260	1,459 (3rd largest)	1,200 (2 <sup>nd</sup> largest)
JAPAN	89.2	54	0.63	7.54	-	-	1,005	195
USA	85.8	166.5	-	9.2	-	1,800	4,116	342.5

# Strong Industrial & Infrastructural Base



**INDIA**

Coal	Iron Ore	Aviation	Railway	Roadway	Ports	Electricity	Textile
Production (Mn MT)	Production (Mn tonnes)	Passenger Traffic (Mn)	Network ('000 Kms)	Network (Mn Kms)	Cargo Traffic (Mn MT)	Production (Bn Units)	Production (Bn Sq. Mt.)
<b>780</b> (2 <sup>nd</sup> largest)	<b>254</b> (4 <sup>th</sup> largest)	<b>341</b> (3 <sup>rd</sup> largest)	<b>67.9</b> (4 <sup>th</sup> largest)	<b>6.37</b> (2 <sup>nd</sup> largest)	<b>720.3</b>	<b>1459</b> (3 <sup>rd</sup> largest)	<b>71.05</b> (2 <sup>nd</sup> largest)

- Exports stood at USD 418 billion in 2021-22
- Ranked 44<sup>th</sup> in Logistics Performance Index (LPI) (last updated in 2018)
- Air passenger traffic is growing at 16.5%, to become 3<sup>rd</sup> largest by 2024
- Produces 95 minerals - 4 fuel-related, 10 metallic, 23 non-metallic, 3 atomic, and 55 others

# Strong Agricultural Base



**INDIA**

Food Grains Production (Mn tonnes)	Milk Production (Mn tonnes)	Cotton Production (Mn bales)	Horticulture Production (Mn tonnes)	Sugar Production (Mn tonnes)	Spices Exports (in USD Bn)	Cropland (Mn hectares)	Livestock Population (Mn)
<b>328</b> (2nd largest)	<b>210</b> (Largest)	<b>34.2</b> (Largest)	<b>342.3</b> (2nd largest)	<b>36.5</b> (2nd largest)	<b>4.2</b> (Largest)	<b>180.8</b> (Largest)	<b>537</b> (Largest)

- Major producer of agrochemicals, tea, cashew, jute, oilseeds, etc.
- Largest exporter of cereal products, cotton, bovine meat, sugar, etc.
- All 15 major climates in the world; 46 of the 60 soil types in the world
- Largest manufacturers of farm equipment
- Proximity to food importing nations

# Strong Financial Base

**2055**

Number of listed companies on the National Stock Exchange

**5311**

Number of companies listed on the Bombay Stock Exchange

**110 Mn+**

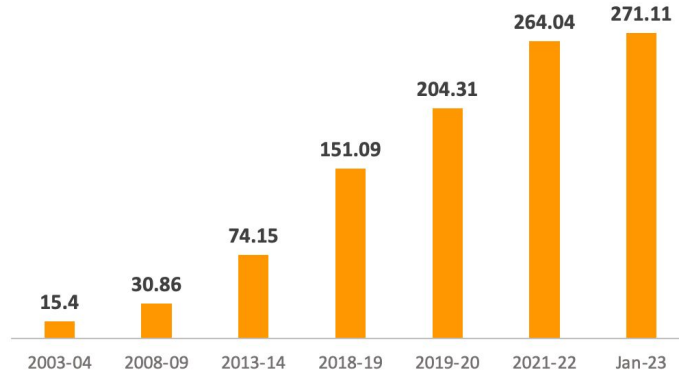
Active demat accounts for trading on the stock market

**8 unicorns**

Listed on the public stock exchange since 2021

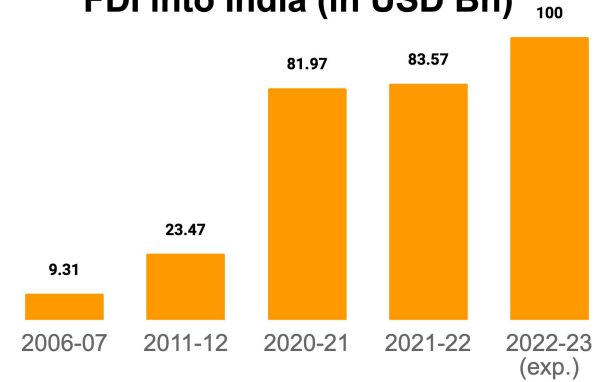
**India Equity Market Capitalisation**

(in INR Lakh Crore)

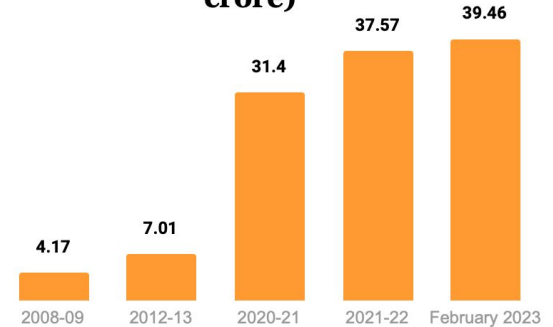


**INR 271.11 Lakh Crore  $\approx$  USD 3.39 Tn**

**FDI into India (in USD Bn)**

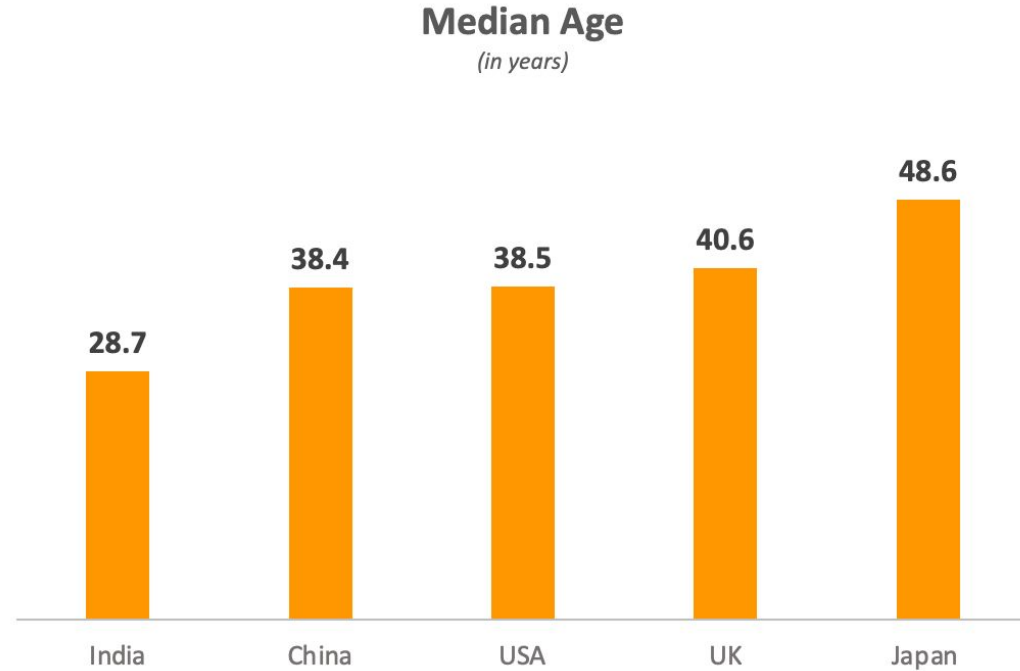


**India Mutual Fund AUM (in INR lakh crore)**



**INR 39.46 Lakh Crore  $\approx$  USD 493 Bn**

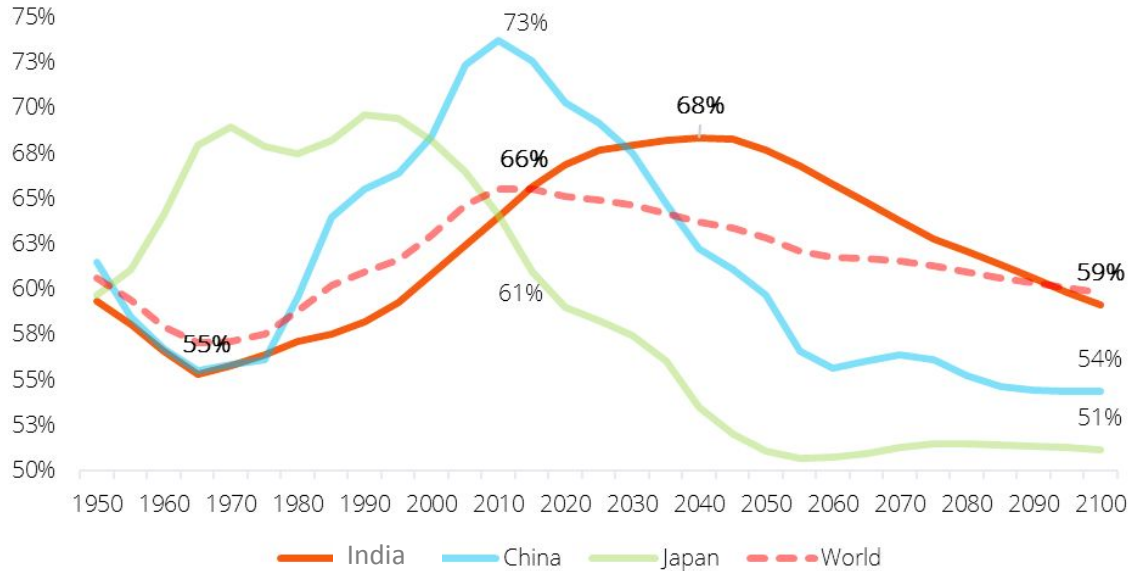
# We have a Young Population



**We are NOT an aging country!**

# We will continue to have a Young Population

## % Working Population (Ages 15-64)



India's working population is expected to total two-thirds of the total population in 2025

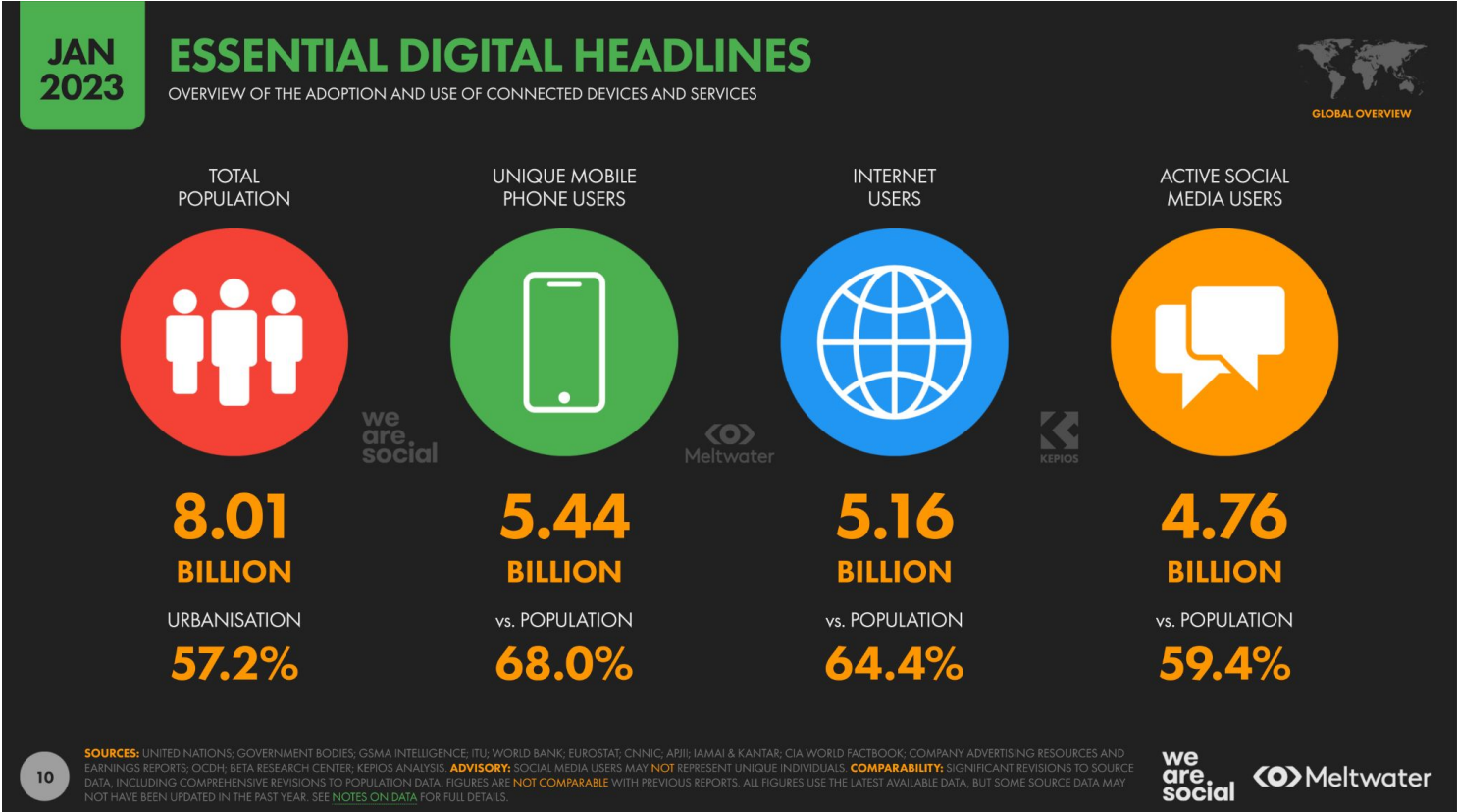
Higher aspirations & increased demand for skilled labor leads to higher education levels

We have a growing middle class (~300Mn) which is increasing its consumption

# Formal jobs are growing

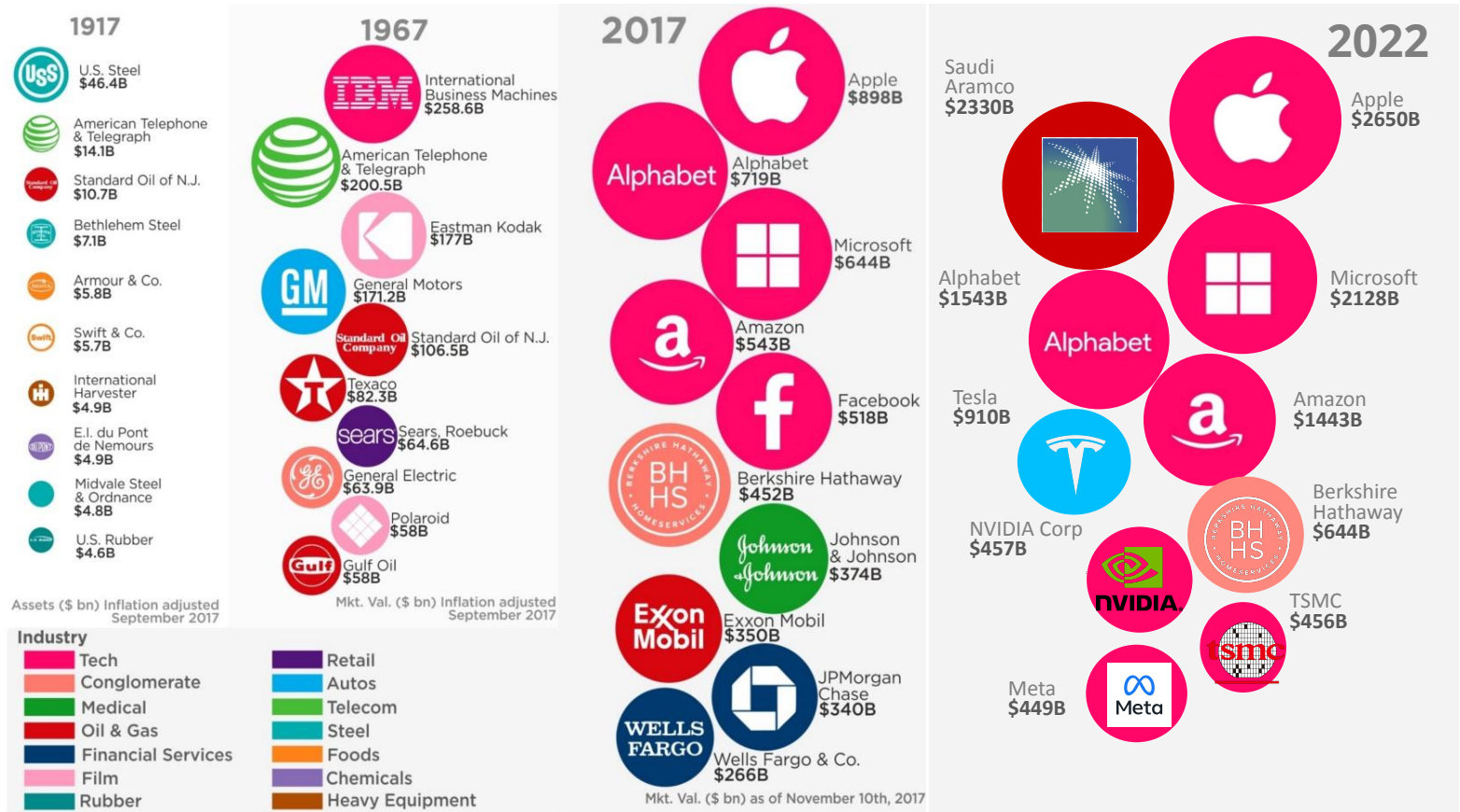
Financial Year	Net new EPF subscribers		Net new ESI subscribers	
	Ages 18-25	Women	Ages 18-25	Women
2018-19	1,12,50,214		1,49,65,972	
	50.10%	21.00%	48.20%	16.60%
2019-20	94,72,468		1,51,45,261	
	53.40%	22.80%	48.60%	17.90%
2020-21	94,54,119		1,15,05,302	
	51.40%	22.80%	48.40%	16.30%
2021-22	1,38,20,141		1,49,12,698	
	52.40%	25.40%	48.20%	18.50%
2022-23 (Apr'22-Nov'22)	1,12,15,403		1,00,97,326 (Oct'22)	
	51.00%	26.50%	47.90%	19.10%

# Digitalisation has transformed the world...





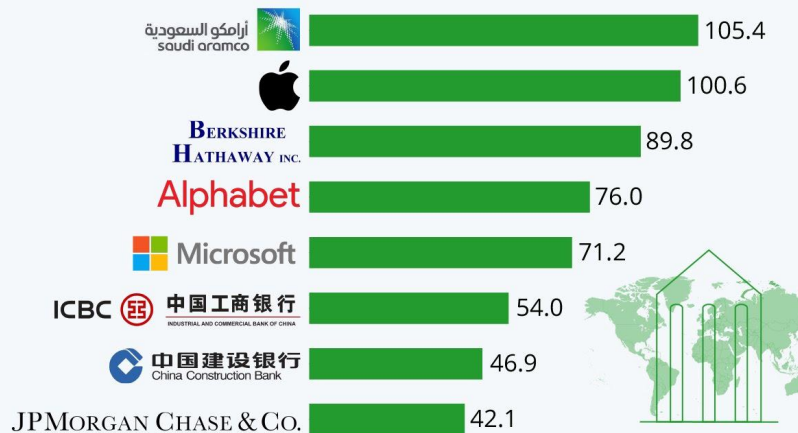
# The early-movers now dominate the market



# Tech Eats The Leaderboards

## The Most Profitable Companies in the World

2021 profits of the world's most profitable publicly listed companies (in billion U.S. dollars)

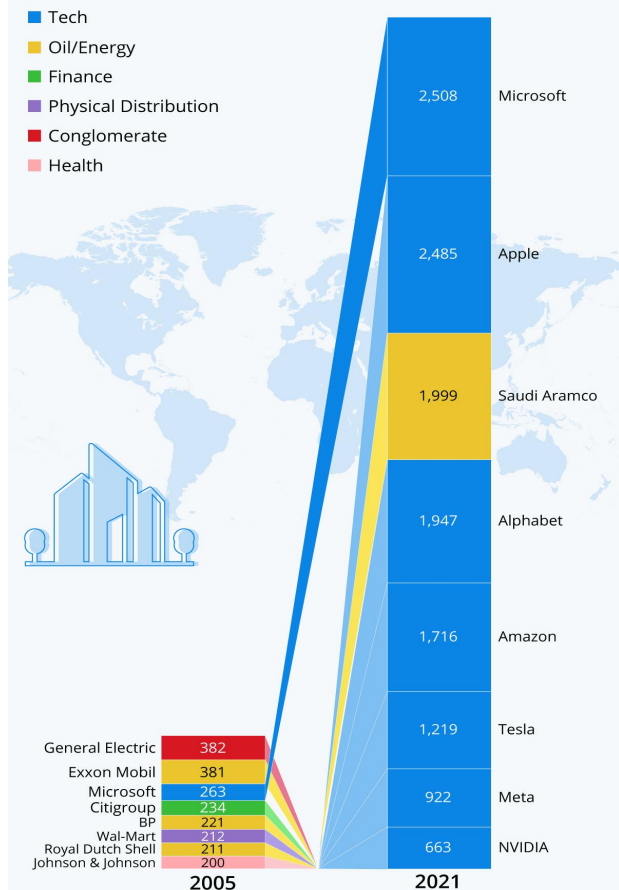


Source: Forbes Global 2000



## The Age of the Tech Giants

Companies with the world's largest market capitalizations in 2005 and 2021 (in billion U.S. dollars)\*

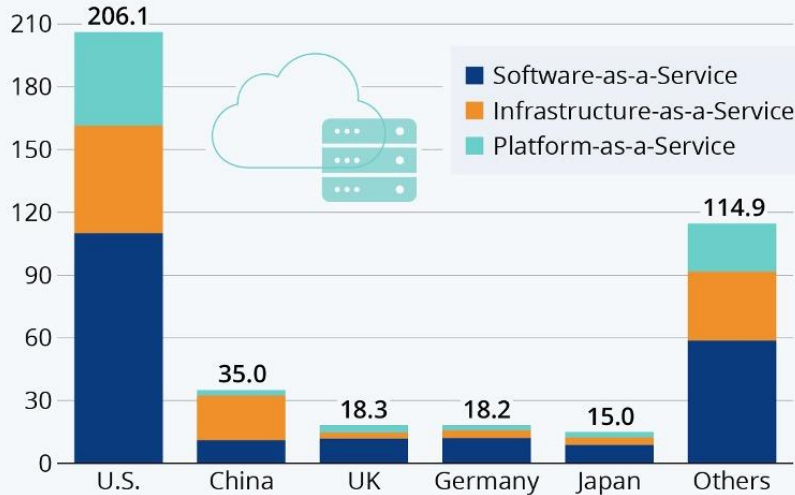


\* As of March 31, 2005 and November 4, 2021.  
Sources: Financial Times, Yahoo! Finance

# The US Runs The World's Cloud

## The U.S. Rules the Cloud

Estimated revenue of public cloud computing services in 2022 (in billion U.S. dollars)



Forecast as of May 2022

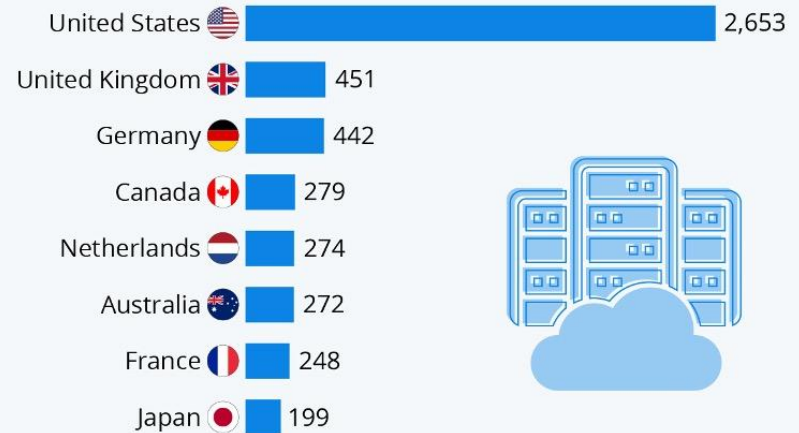
Source: Statista Technology Market Outlook



statista

## Which Countries Have The Most Data Centers?

Number of data centers per country as of February 09, 2021



Source: Cloudscene

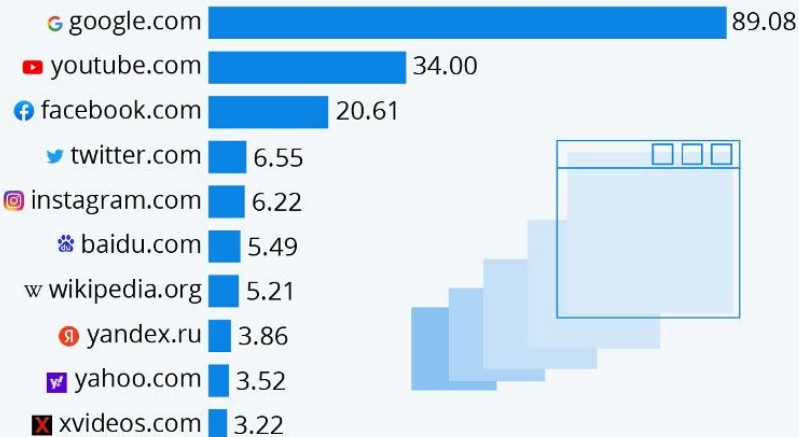


statista

# The EU is an aging Digital Colony

## The World's Most Visited Websites

Websites with the highest number of visits worldwide in November 2021 (in billions)



Source: SimilarWeb



statista

October 22, 2019

## Europe Has Declared War on American Tech Companies



## Corporate Europe is falling behind as tech weakness permeates sectors

02 APR 2019

## Europe's big tech contradiction

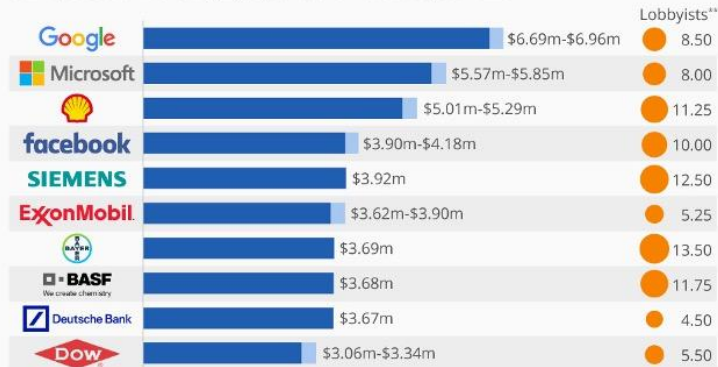
Why are all the tech giants American or Chinese? Should Europe have its own Facebook? Why aren't any of the top digital companies European?

# Big Tech Outspends To Maintain Monopolies

## Big Tech and industry lobby groups accused in EU transparency complaints

### The Companies Spending the Most on EU Lobbying

Self-reported annual lobbying expenditure in the European Union\*



\* most recent available estimate as of April 29, 2019; converted to U.S. dollars  
 \*\* Full-time equivalent  
 © StatistaCharts Sources: EU Transparency Register, LobbyFacts.eu

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## Big Tech's \$95 Million Spending Spree Leaves Antitrust Bill on Brink of Defeat

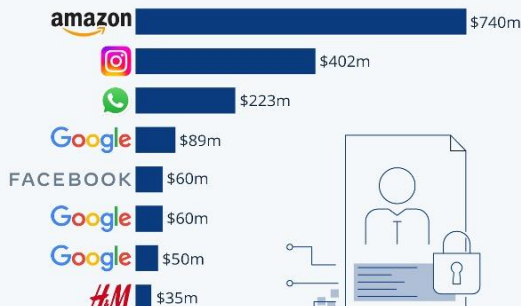
- Google, Apple and others spent nearly \$95 million on lobbying
- Congress's window to act is tight ahead of November elections

## Report reveals Big Tech's last minute lobbying to weaken EU rules

Tech companies spent almost \$70 million lobbying Washington in 2021 as Congress sought to rein in their power

## Big Tech, Big Fines

Highest fines for breaching one or more articles of the General Data Protection Regulation\*



\* Currency converted on Sep 6, 2022  
 Source: CMS GDPR Enforcement Tracker

© StatistaCharts

statista



## The Senate Fought Mark Zuckerberg, and Mark Zuckerberg Won

The Facebook CEO charmed, evaded, and sometimes misled his way through the committee-hearing gauntlet.

# Monopolies are *not encumbered by geographical borders* in a Data+AI-first world



## Meta hit with antitrust breach order in Turkey for combining user data across FB, WhatsApp, Instagram

The New Colonialism, Digitally

<input type="checkbox"/> Symbol	Market Cap (USD)	Monopoly, everyday digital products in 
<input type="checkbox"/> AAPL	1.6 Trillion	
<input type="checkbox"/> MSFT	1.5 Trillion	
<input type="checkbox"/> AMZN	1.5 Trillion	
<input type="checkbox"/> GOOG	1 Trillion	    
<input type="checkbox"/> FB	685 Billion	  
<input type="checkbox"/> SNAP	35 Billion	
<input type="checkbox"/> TWTR	27 Billion	
<input type="checkbox"/> MTCH	24 Billion	

## Why Facebook Stock Soared 56.6% in 2019

The Social Network posted strong performance last year, and its stock recently hit a new all-time high.

BREAKING NEWS | 10,626 views | Jan 13, 2020, 09:22am

## Google Parent Alphabet Passes \$1 Trillion In Market Value

## Apple's Market Cap Could Close in on \$2 Trillion in 2020 -- Here's How

A combination of factors could drive the iPhone maker's stock considerably higher in the coming year.




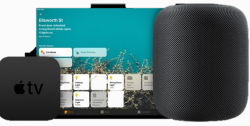





Business

## Amazon becomes the country's second \$1 trillion company

# The New Normal – Global Tech Conglomerates











Tech companies dominate globally and will continue to accrete disproportionate control over new value creation



CREDIT CARDS		AUTONOMOUS CARS		PERSONAL ASSISTANT	 amazon alexa
HOME AUTOMATION		PERSONALIZED HEALTHCARE		GROCERY	 amazon go
MUSIC		TELE-COMMUNICATION	 Google Fi	HOME SECURITY	 blink an amazon company

# Coordinated Capture of the Digital Day

American duopolies rule most digital sectors globally. Emerging duopolies in new areas like Cloud.

Mobile Operating System		71.62%		27.73%
Internet Search		92.42%		Microsoft 3.45%
Social Media		79.18%		8.99%
Cloud		34%		Microsoft 21%
Digital Advertising Revenue		37.2%		22.1%





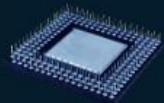





# The Future Arenas of Competition Are Transversal Technologies

From Applied AI and Edge Computing to Nanomaterials and Tissue Engineering, the race is on to own the technologies of tomorrow.

**Technology trends and underlying technologies**

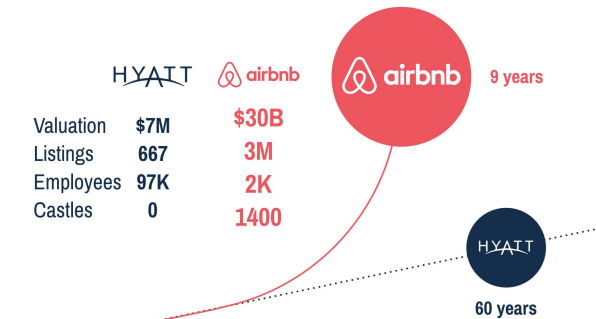
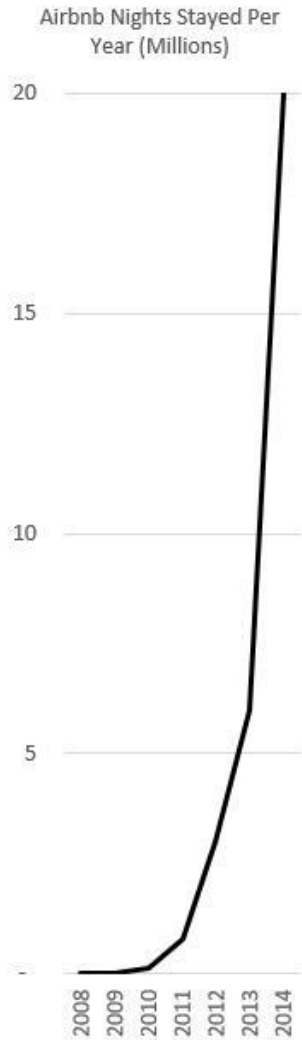
Industry-agnostic trends

 <b>1</b> <b>Next-level process automation...</b> Industrial IoT <sup>1</sup> Robots/cobots <sup>2</sup> /RPA <sup>3</sup>	 ... and process virtualization Digital twins 3-D/4-D printing	 <b>2</b> <b>Future of connectivity</b> 5G and IoT connectivity	 <b>3</b> <b>Distributed infrastructure</b> Cloud and edge computing
 <b>4</b> <b>Next-generation computing</b> Quantum computing Neuromorphic chips (ASICs <sup>4</sup> )	 <b>5</b> <b>Applied AI</b> Computer vision, natural-language processing, and speech technology	 <b>6</b> <b>Future of programming</b> Software 2.0	 <b>7</b> <b>Trust architecture</b> Zero-trust security Blockchain

Industry-specific trends

- 8** **Bio Revolution**  
Biomolecules/"-omics"/ biosystems  
Biomachines/biocomputing/augmentation
- 9** **Next-generation materials**  
Nanomaterials, graphene and 2-D materials, molybdenum disulfide nanoparticles
- 10** **Future of clean technologies**  
Nuclear fusion  
Smart distribution/metering  
Battery/battery storage  
Carbon-neutral energy generation

# Building *Exponential Organisations*



Exponential organisations are getting 10x performance above their traditional peers, just because of how they organise themselves.

The value is generated by *scalability, efficiency, longevity, and relevance.*

# FOXCONN has *completely automated* some of their *factories* using AI-enabled “Foxbots”



Foxconn identified challenges with Manual Labor

- Down-time
- Attrition
- Cost variability – changes in wages
- Quality variability

Foxconn’s fully automated factories benefit from:

- “Lights-off” factories: 24/7 operations
- Cost predictability
- AI-enabled demand-supply sync, energy use, robot monitoring and automated maintenance



Combining athlete data-driven design with a technology-enabled

*'Speedfactory',*

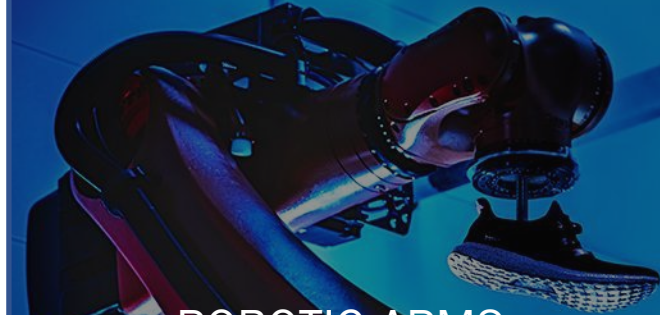


reduced its production to market time from

*2 months to under 2*

*weeks.* The shoes got better too, much better.

3D PRINTING



ROBOTIC ARMS

COMPUTERIZED KNITTING



is galloping ahead in bringing *human-equivalent movement capabilities* in its range of robots



## Atlas

The World's Most Dynamic Humanoid, uses balance and whole-body skills to achieve two-handed mobile manipulation

## Handle

Handle combines agility and the ability to pick boxes to tackle box handling tasks in the warehouse.



## Spot

A nimble robot that handles objects, climbs stairs, and will operate in offices, homes and outdoors.



# 'Designer babies' modified using CRISPR technology are here (whether we like it or not)

Biotechnology / CRISPR

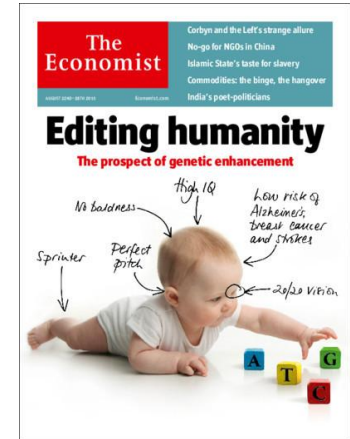
## EXCLUSIVE: Chinese scientists are creating CRISPR babies

A daring effort is under way to create the first children whose DNA has been tailored using gene editing.



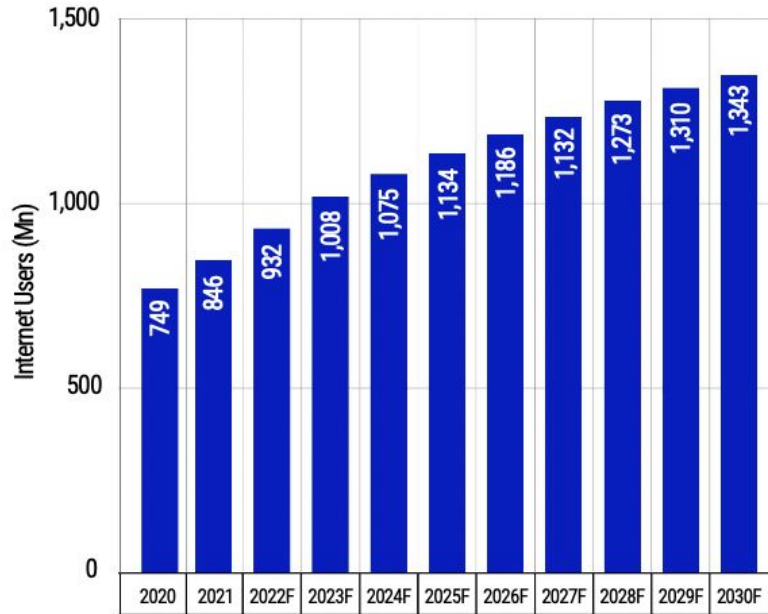
## CRISPR Might Have Made China's "Designer Babies" Smarter

New Research into the gene CCR5 that was allegedly edited out of twin girls in China to protect them from HIV might have made them smarter, raising fears of future "designer babies"



**'We as a species need to come to terms' with CRISPR technology as China awaits birth of third genetically modified baby**

# Digitalisation is transforming India too...



Source: Statista, NPCI, Bain & Company, App Annie  
F stands for forecasted.

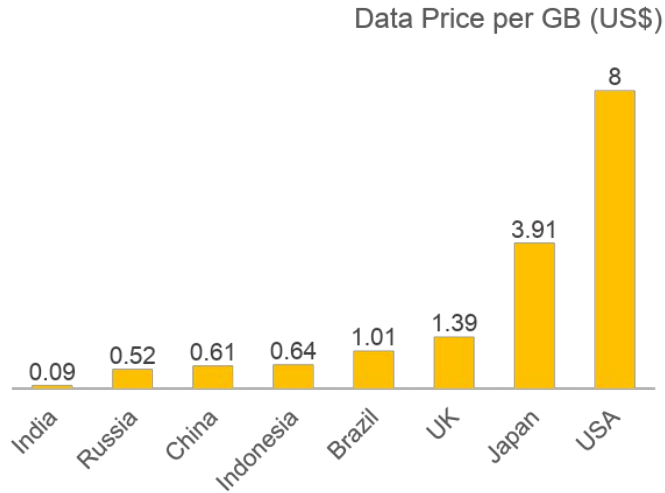
<p><b>1.3 Bn+</b></p> <p>Internet Users By 2030</p>	<p><b>61%</b></p> <p>Internet Penetration In India</p>	<p><b>44%</b></p> <p>Increase In Internet Users From 2022 To 2030</p>
<p><b>\$0.68</b></p> <p>Per GB Internet Cost In India</p>	<p><b>4.7 Hours</b></p> <p>Average Hours Spent On Mobile Per Day Per User</p>	<p><b>305 Mn+</b></p> <p>Users Doing Online Transactions In India</p>
<p><b>\$138 Bn+</b></p> <p>Total Volume Of UPI Transactions As On November 2022</p>	<p><b>\$2.8 Tn</b></p> <p>Total Value Of Upi Transactions As On November 2022</p>	<p><b>373 Mn+</b></p> <p>Estimated Rural Internet Users In 2022</p>

Inc42

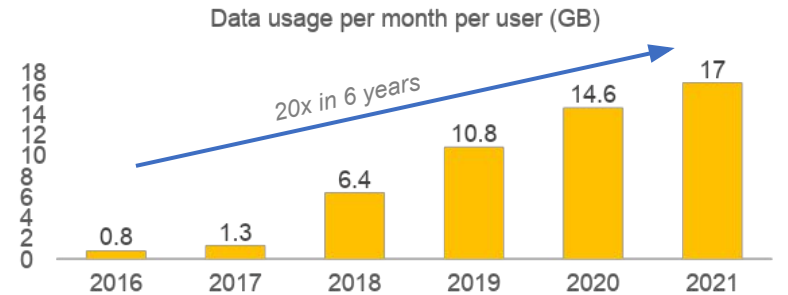
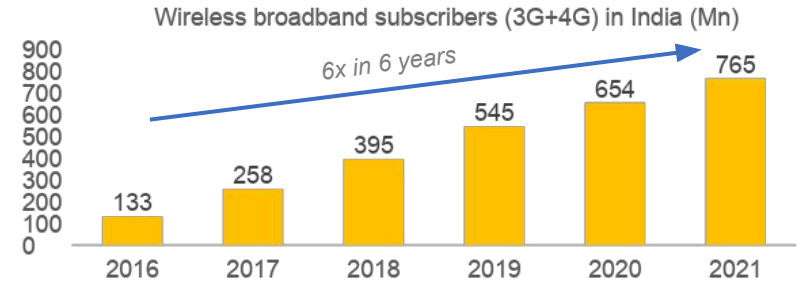
# India Internet on a high growth trajectory

Cost of data – one of the lowest in the world, rapid increase in wireless broadband subscribers and subsequently increased data usage

## Cost of Data in India is one of the lowest in the world



## Every second person in India has Internet












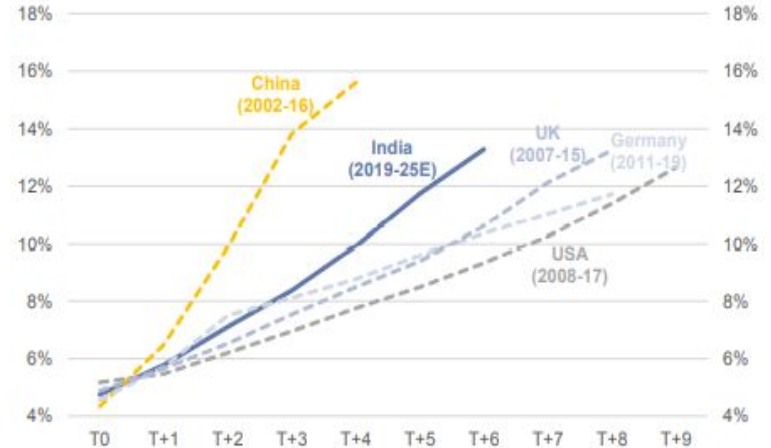
# How does India fare against emerging and developed nations?

'India Internet' on a high growth trajectory

## India shows high appetite for digital consumption across verticals

	China	India	Indonesia	USA
 <b>Internet Users</b>	1.02 Bn	658 Mn	204 Mn	307 Mn
<b>Daily time spent on media</b>				
 Internet	5h 15m	7h 19m	8h 36m	7h 05m
 Social Media	1h 57m	2h 36m	3h 17m	2h 14m
 Audio Streaming	1h 21m	1h 54m	1h 40m	1h 56m
 Games	1h 15m	1h 21m	1h 19m	1h 27m
 <b>Smart home households</b>	68 Mn	20 Mn	7 Mn	52 Mn
 <b>Digital payment users</b>	988 Mn	644 Mn	158 Mn	264 Mn

## Ecommerce penetration in India is expected to be faster than developed nations such as USA



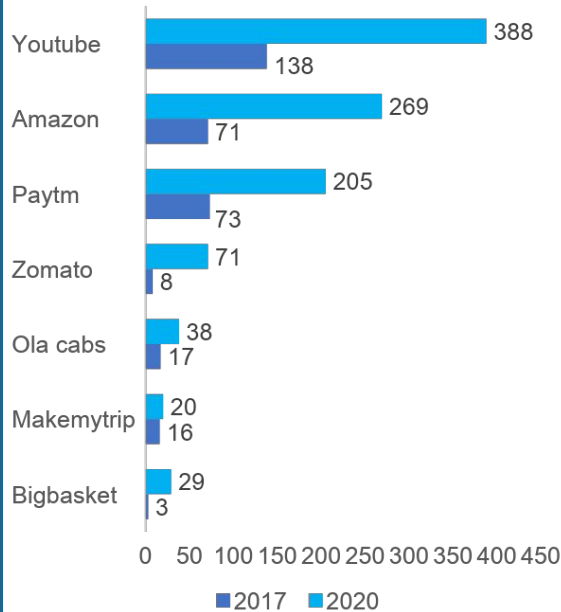
**India now accounts for 11.6% of global app downloads**

# Consumer led digital leap

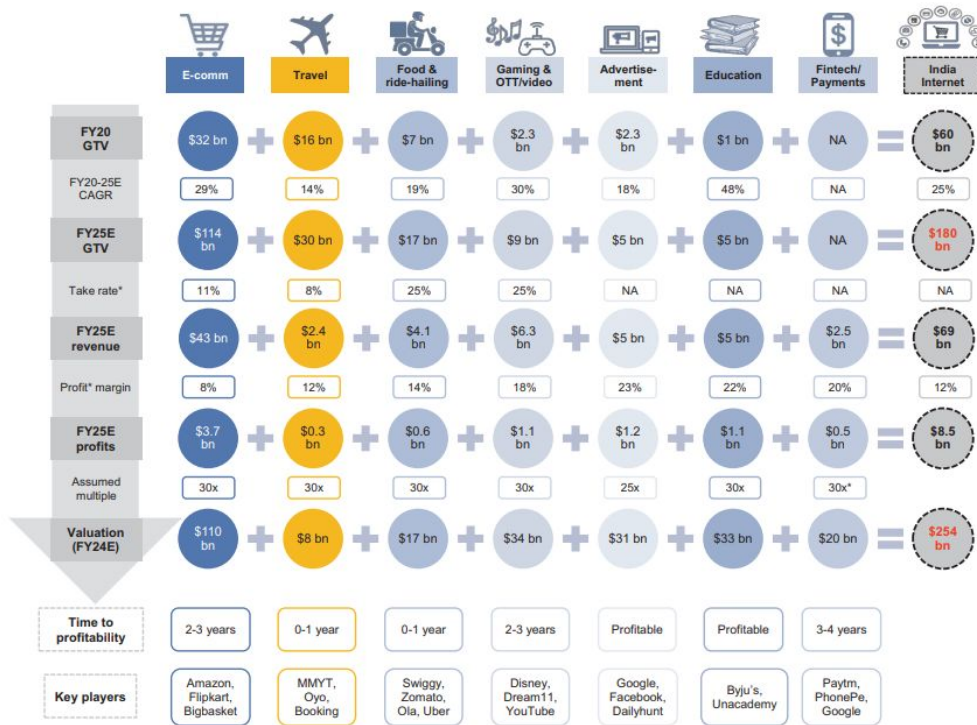
Increased app usage contributing to significant opportunities for internet companies

## Increased app usage...

Unique visitors across verticals (Mn)



## ... India Internet's \$180Bn Opportunity





“ The Startup Ecosystem will help  
create a **USD 10 Trillion**  
economy in India ”

# Indian Startup Ecosystem



**3<sup>rd</sup>**

largest startup ecosystem in the World

**96,000+**

startups

**USD 500 Bn**

Value Created

# New flywheel ramping up

IT Services



FY 2023 (pr)



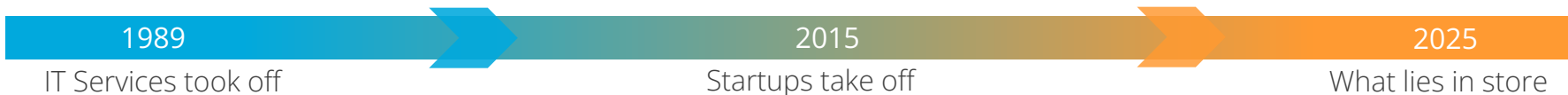
USD 260 Bn revenue



USD 200 Bn exports



5.5 Mn People Employed



Startups

2025

Projections



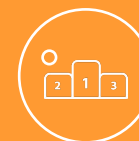
200,000 Startups



Employ 3.25 Mn



USD 150-200Bn to be invested in 2021-25



#2 after US



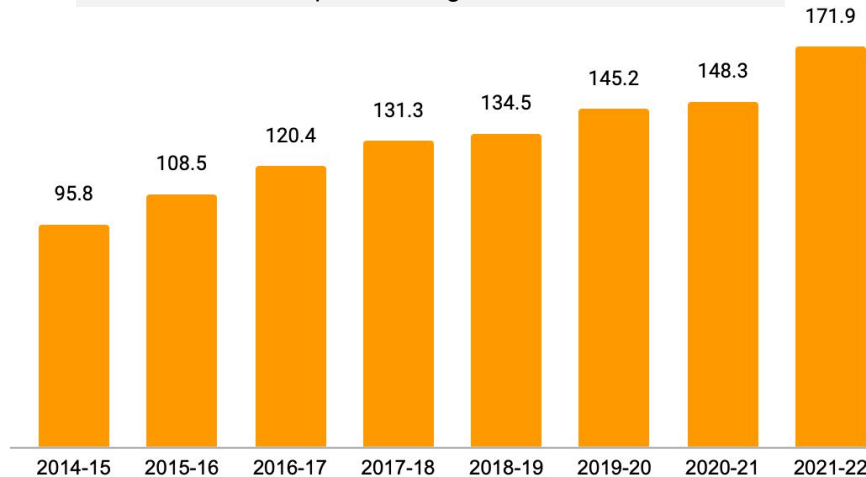
250 Unicorns

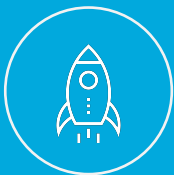
# India is a software export giant

India has the largest engineering population in the world and exported more software (USD 148.3 Bn) than Saudi Arabia exported oil (USD 145.3 Bn) in 2021.

## India's Exports of Software Services (in USD Bn)

India's software exports have grown **1.8x** since 2014-15.





Startups have raised  
**USD 136 Bn** from 2014-22

**520+** Accelerators &  
Incubators

**750+** Institutional Investors

**2,480+** Active Investors

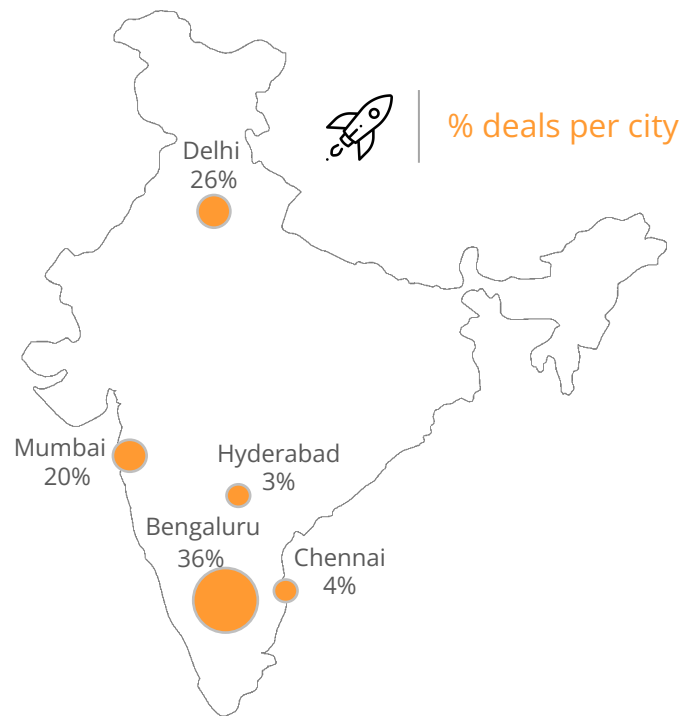
**950+** Acquisitions

# Startups at a glance

## 67%

of all active  
startups  
are concentrated in  
Bengaluru, Mumbai  
and Delhi-NCR

**Bengaluru saw 48%**  
of the total deal value  
between 2021 and 2022



2022 saw startups raise **USD 25 Bn** across **1,519 deals** and **240+ M&As**

India's  
108+ unicorns  
have created  
\$350 Bn in  
value

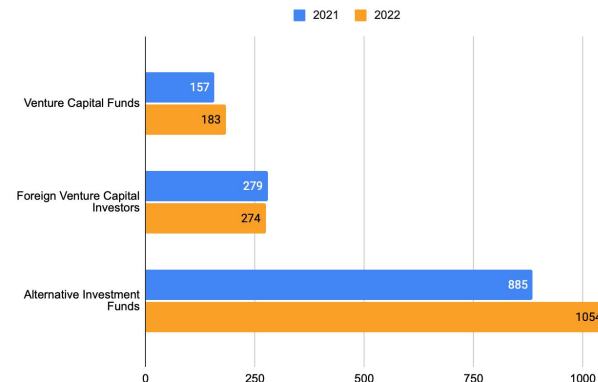
There will be  
250+ unicorns  
in India by 2025



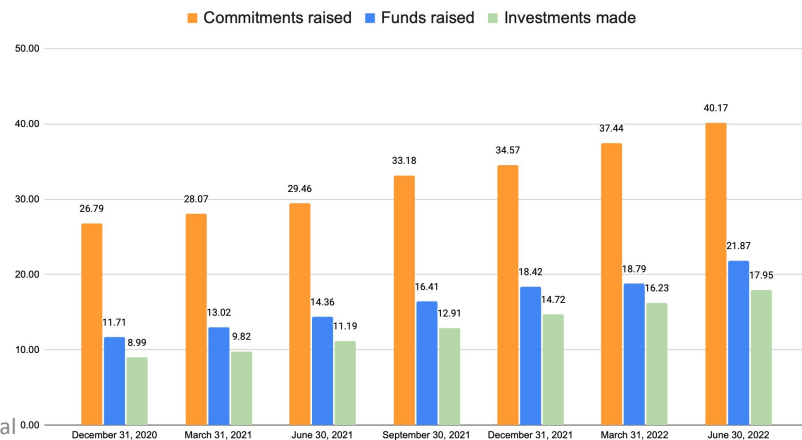


# Indian VC ecosystem has matured

Number of AIFs and VCs in India



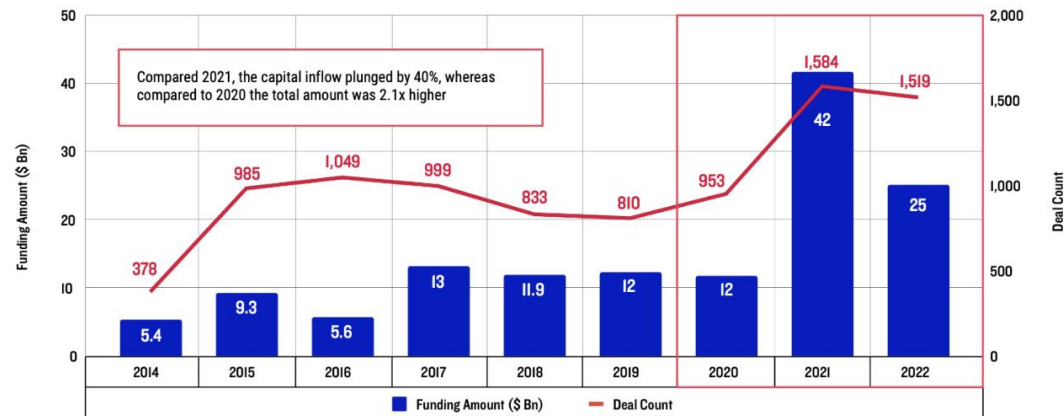
VC deployment numbers in India (in INR thousand crore)



Inc42

## Indian Startups Have Bagged \$136 Bn In Funding To Date

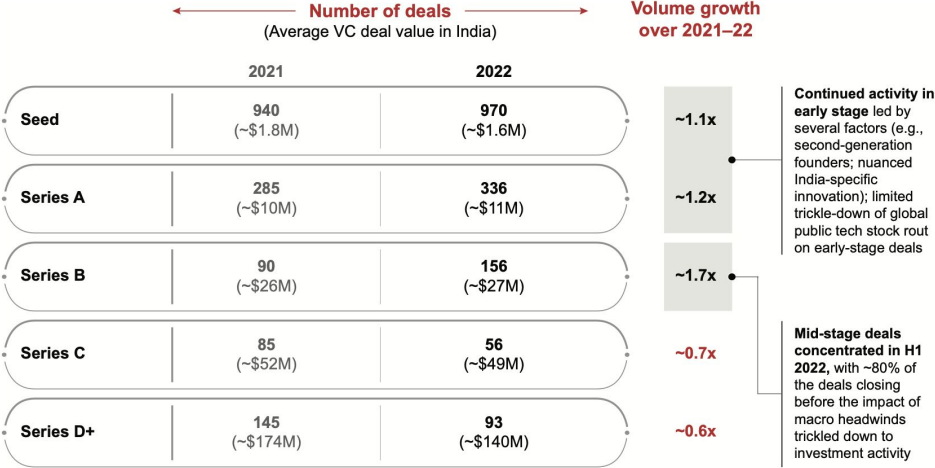
Of this, over \$110 Bn has been raised by Indian unicorns and soonicorns alone



Source: Inc42

Note: 2022 data is as of 25th December

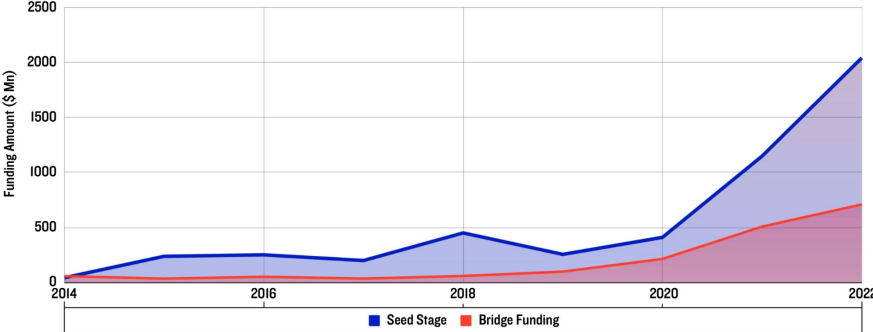
# Early stage investing has shown strong growth despite global headwinds



Note: Series D+ includes series D to series K  
Sources: Bain & Company; Pitchbook

## Seed Stage & Bridge Funding Rise Despite The Bearish Sentiment In 2022

Almost 41% of the total seed funding (\$5 Bn) raised by Indian startup ecosystem since 2014, was secured in 2022



Source: Inc42  
Note: 2022 data is as of 29th December



# VCs have generated above average returns

## CRISIL AIF Benchmark – Cat I (USD)

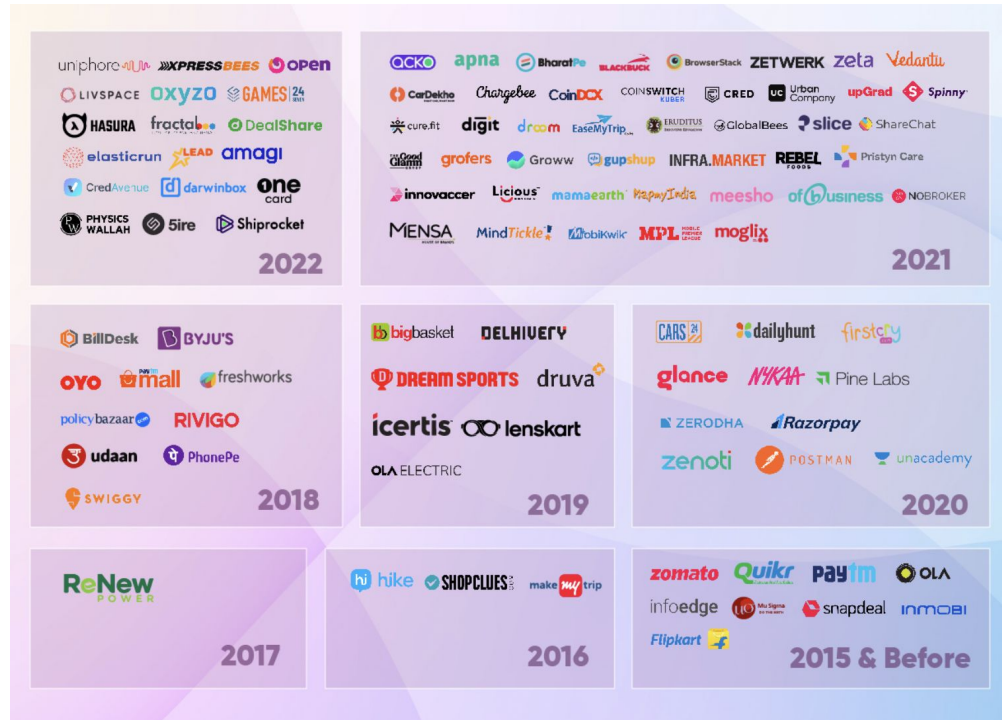
Vintage year	No. of schemes	Pooled IRR (%)	Investment multiples and ratios		
			DPI	RVPI	TVPI
FY14	5	8.89	0.54	0.98	1.51
FY15	9	5.91	0.82	0.52	1.34
FY16	22	31.30	0.29	2.74	3.03
FY17	12	38.65	0.21	2.35	2.57
FY18	11	36.76	0.19	1.85	2.04
FY19	13	41.56	0.02	2.04	2.06
FY20	18	56.51	0.00	1.84	1.85
FY21	5	47.96	0.00	1.36	1.36
<b>Total schemes</b>	<b>95</b>				

## Global Early Stage Investing Performance Benchmarks (Top Quartile)

Vintage	2016	2017	2018	2019	2020
<b>IRR</b>	37.11%	34.75%	55.64%	62.41%	42.75%
<b>TVPI</b>	4.43x	2.68x	2.95x	3.51x	1.50x
<b>DPI</b>	0.94x	0.60x	0.29x	0.41x	0.01x
<b>RVPI</b>	4.16x	2.333x	2.12x	2.62x	1.40x

# Value Creation at unprecedented pace

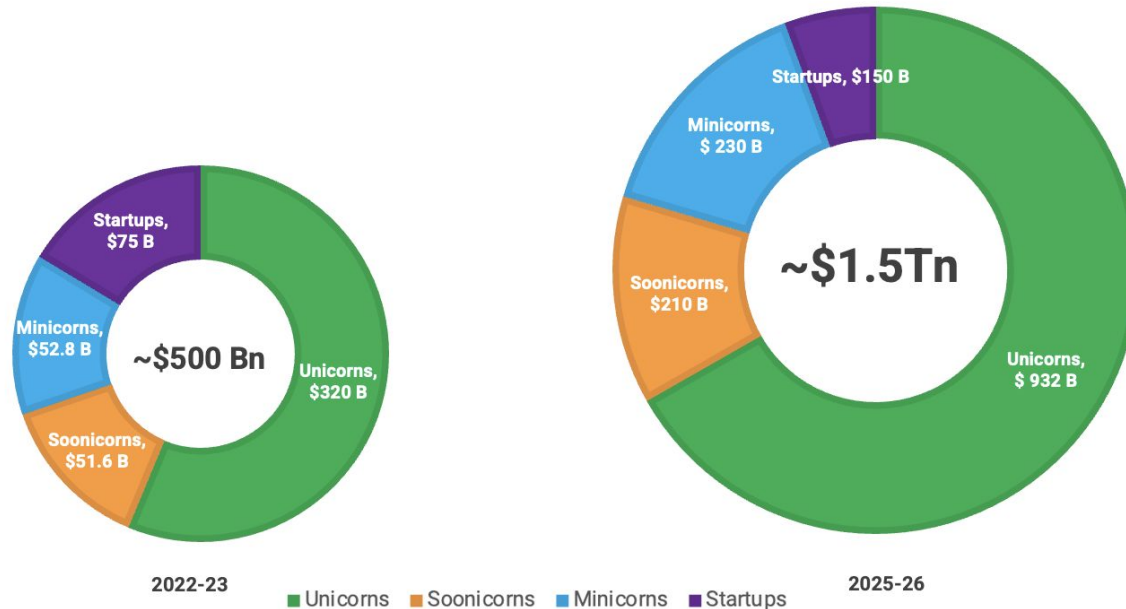
42 startups emerged as Unicorns over 2021, more than the figure for the last six years combined. In 2022, 22 new companies have emerged as Unicorns.



# Value Creation at unprecedented pace

## 3x valuation growth by 2026

Value created by Indian Startups



# India growing as a deep-tech hub



**3830+** AI startups

**glance**

Personalises content on smartphone lock screens

**kaleidofin**

Personalised financial solutions company



**1170+** IOT startups

**PINOTY**  
Connected Care

IoT based wearable healthcare monitoring device

**dozee**

Contactless health tracker and at-home step-down ICU



**190+** AR/VR startups

**shifu**

AR based ed-tech player for kids

**JADOOZ**

VR powered entertainment



**40+** Robotics startups

**UNBOX**  
ROBOTS

Robot enabled logistics solutions

**Invento**  
ROBOTICS

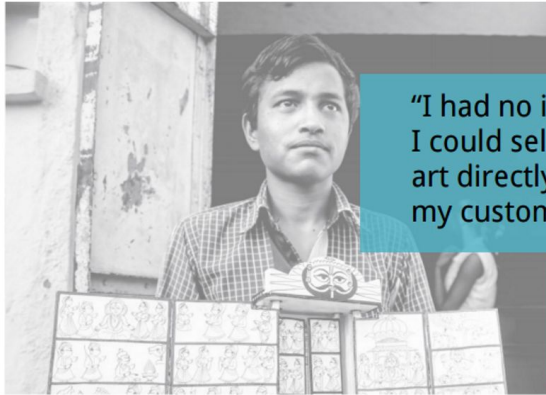
Service robots for banks, malls, events

Source: Tracxn

# Use of Digital Platforms



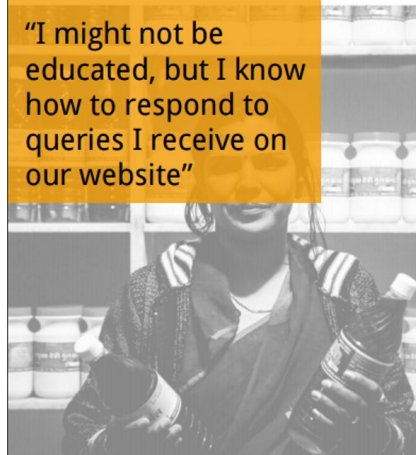
Uses Google Maps to head to a crime scene. Bought a TV on OLX.



"I had no idea I could sell my art directly to my customers"



"3G nahi hotspot sahi"



"I might not be educated, but I know how to respond to queries I receive on our website"



"The internet has helped us cut the middleman and changed our lives forever"



"I don't need a passbook any more because of the SBI netbanking app"

# Access to the basic necessities of living



## HEALTHCARE

Health assurance to **362M beneficiaries** under Ayushman Bharat Scheme



## ELECTRIFICATION

**100%** village electrification achieved in 988 days covering 18,452 villages



## MOBILE

**1.2Bn** Mobile phone users in India in 2022, 600 Mn smartphone users, **162Mn** smartphones sold p.a.



## EDUCATION

Drop off rate to be curbed - enrollment in **class 10 at 77% vs. class 11 at 52%**



## ROADS

**99%** of the country's habitations connected with all-weather roads under PMGSY



## INTERNET

**Total 800 Mn users another 400Mn** first-time internet users are expected to come online



## HOUSING

**27.4 million** houses completed under PM Awas Yojana



## SANITATION

**99%** individual household latrines (IHHL) achieved under Swachh Bharat Mission



## BANKING

**More than 85%** Indians owned a bank account owing to PM Jan Dhan Yojana



## WATER

**99%** of population has access to clean water close to home, 110M rural HHs provided tap water connections.



## FOOD SECURITY

**All 36 states/UTs** now covered under NFSA vs. 11 in 2014



## GAS CONNECTIONS

**95.65M rural women** provided free LPG gas connections



# Digital Media is Mainstream

## Rise of Jio



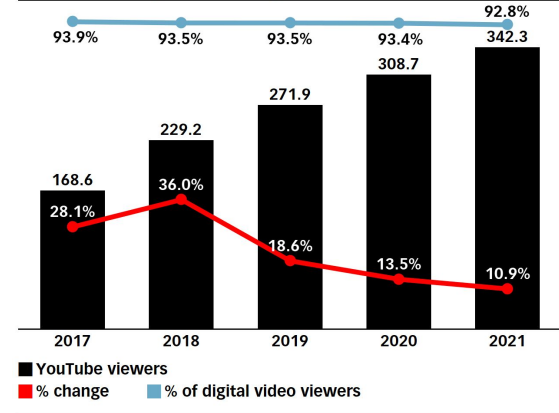
Per capita Data Consumption and voice usage in 2023 is **22GB** per month with **422.8 Mn** subscribers.

2022 Data Consumption per Subscriber was 20 GB per month with 366 Mn subscribers



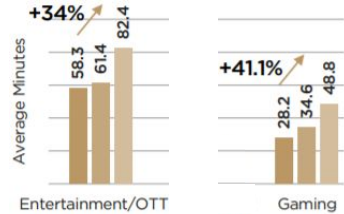
## Consumption proliferation

YouTube Viewers in India, 2017-2021  
millions, % change and % of digital video viewers



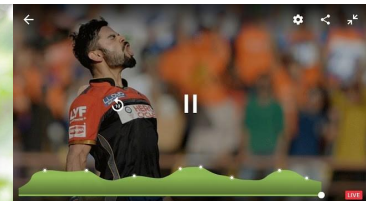
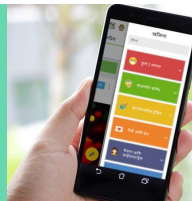
### Increased time spent on devices

1 Mar - 7 Mar | 8 Mar - 14 Mar | 15 Mar - 21 Mar



T-Series  
100,000,000

PewDiePie  
96,184,656

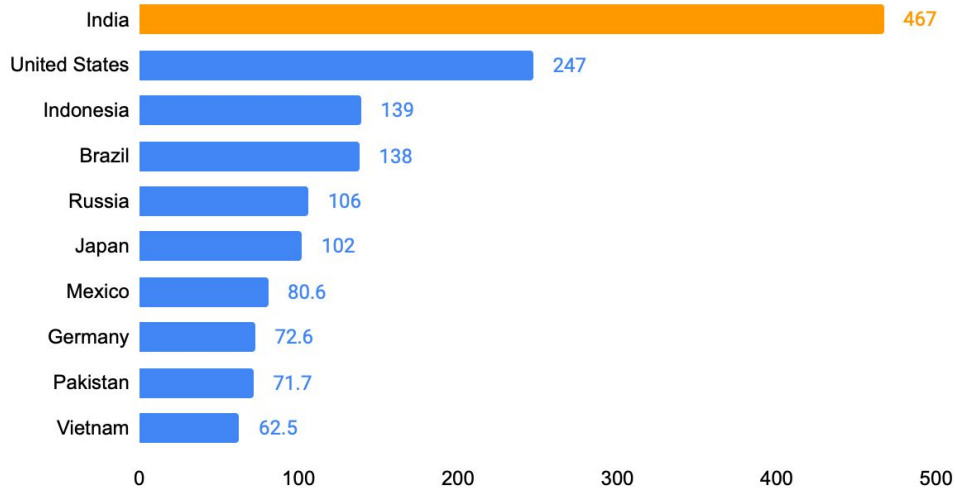


# India constitutes YouTube's biggest user base

India has the highest number of YouTube users in the world

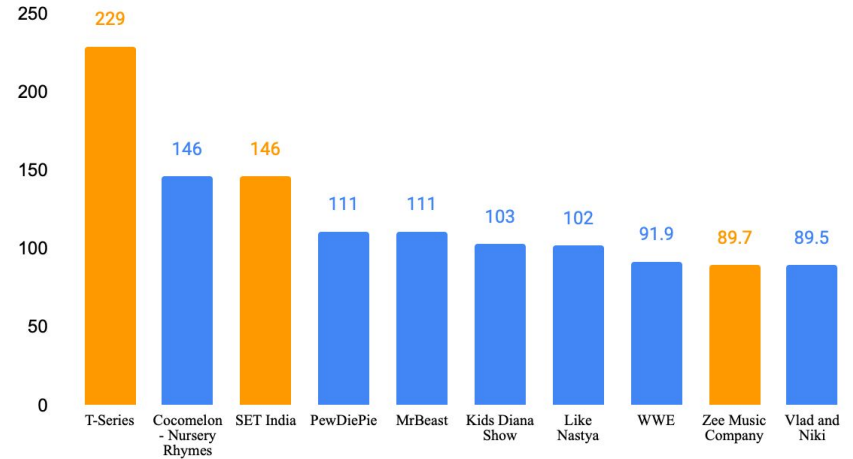
3 out of the top 10 most subscribed YouTube channels are Indian

## Leading countries based on YouTube audience size



All figures in millions.

## Top 10 most subscribed YouTube channels



All figures in millions.

# Online Gaming: Social distancing and lockdowns transitioning sporting to the digital realm



Market size (FY20)  
~US\$ 1.6B



Growth rate (FY20-24)  
30-35%



Funding (2020)  
~US\$ 400M

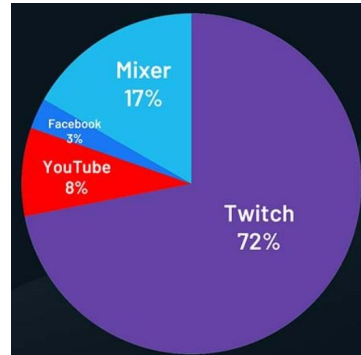
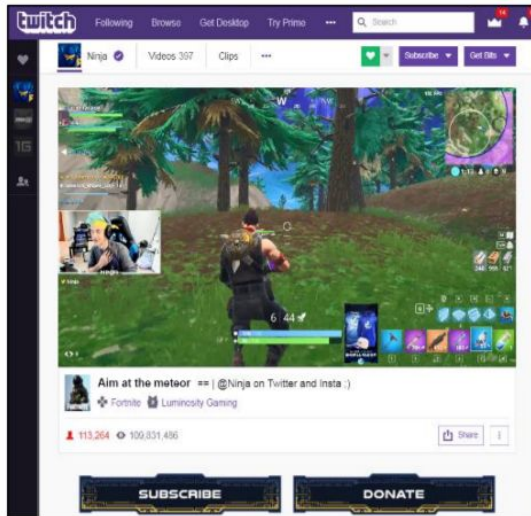
	Real money games - Fantasy sports	Real money games - Others	Casual games	E-sports & Streaming
Players				
COVID-19 impact	<ul style="list-style-type: none"> <li>• <b>Getting back on track</b> □ Sporting activities were cancelled during COVID, but traction is building fast as sporting events (cricket) resume under bubbles</li> <li>• <b>Pivotal role in fan engagement</b> when stadiums remain in full/partial lockdown</li> </ul>	<ul style="list-style-type: none"> <li>• More time available □ higher participation □ <b>more organic downloads</b></li> <li>• Focus on <b>user engagement and retention</b> □ a wider product offering for varying consumer tastes</li> </ul>	<ul style="list-style-type: none"> <li>• Social distancing □ <b>adoption of social games</b></li> <li>• User growth was slightly softened by <b>lower ad revenues</b></li> <li>• Introduction of <b>new games</b> to cater to increased demand</li> </ul>	<ul style="list-style-type: none"> <li>• Disruption of outdoor sports □ <b>increase in e-sports viewership</b></li> <li>• Social distancing □ <b>shift from physical to virtual events</b> and competitions</li> <li>• Time spent by each user <b>increased by 21%</b> to 191 minutes</li> </ul>

# More hours streamed watching esports than Youtube & Facebook combined

Global

## Fortnite Battle Royale

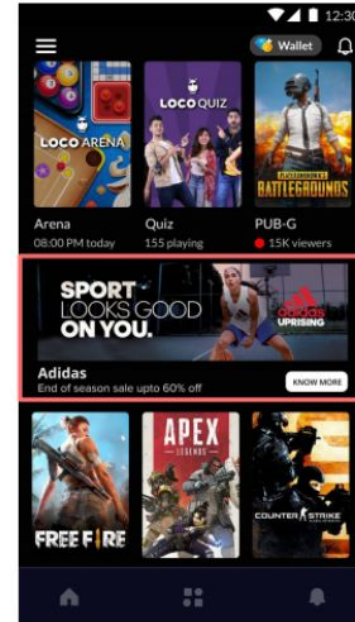
*Most Watched Game on Twitch*



## Total Hours Streamed in Q1 2020

Twitch - 121.4 M  
YouTube - 14.2 M  
Facebook - 4.9 M  
Mixer - 28.3 M

India



India's leading home-grown gaming streaming app



# Edtech: Indian edtechs fundamentally altered education delivery in India



Market size (FY20)  
~US\$ 80B



Growth rate (FY20-24)  
50-55%



Funding (2020)  
~US\$ 2.2B

	Supplementary education & tutoring	Test preparation	Out of school / extra-curricular	Certification & training platforms	Digital education tools and enablers
Players					
COVID-19 impact	<ul style="list-style-type: none"> <li>• School closures <input type="checkbox"/> <b>increase in user adoption</b></li> <li>• <b>Partnerships with schools</b> <input type="checkbox"/> higher B2B growth</li> <li>• Market leaders to benefit the most <input type="checkbox"/> <b>trust + content variety</b></li> <li>• <b>Limited online schooling hours</b> <input type="checkbox"/> increased user engagement time</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Physical to digital shift with more preparation times due to exam delays</b> <input type="checkbox"/> increased customer acquisition</li> <li>• High stakes <input type="checkbox"/> <b>content quality key USP</b></li> <li>• Focus on <b>vernacular modules</b></li> </ul>	<ul style="list-style-type: none"> <li>• Nascent stage</li> <li>• Increased emphasis on STEM in <b>National Education Policy to enable growth</b></li> <li>• Competition for student's time <input type="checkbox"/> <b>Surge in adoption to continue</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Job uncertainty + time availability</b> <input type="checkbox"/> increased demand for <b>upskilling</b></li> <li>• More <b>organic reach, referrals, repeat usage</b> <input type="checkbox"/> lower CAC</li> <li>• <b>Increase in # customers over a long period</b></li> </ul>	<ul style="list-style-type: none"> <li>• Acute need for online enablers to tackle digital learning due to <b>shutting down of physical facilities</b></li> <li>• Online enablers to remain important post Covid due to <b>behavioral changes in users</b></li> </ul>

# Health-tech: Growing need for deeper healthcare infrastructure



Market size (FY20)  
~US\$ 1.6B



Growth rate (FY20-24)  
30-40%



Funding (2020)  
~US\$ 410M

	E-pharmacy	Telemedicine & scheduling	Diagnostics and care	Health and fitness
Players				
COVID-19 impact	<ul style="list-style-type: none"> <li>• <b>Continued operations</b> amidst lockdowns</li> <li>• <b>Fear</b> ☐ panic buying + PPE demand</li> <li>• <b>Strengthening supply chain</b> ☐ increased hiring</li> <li>• <b>8.8M</b> were using e-pharmacy services during lockdown, <b>2.5x</b> growth from pre-COVID levels</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Fear of getting infected in hospitals</b> ☐ People started using telemedicine apps to avoid hospital trips</li> <li>• <b>500%</b> increase in online doctor consultations in May 2020 from March 2020, with <b>80%</b> users experiencing it for the first time</li> </ul>	<ul style="list-style-type: none"> <li>• Increased demand for <b>at-home</b> service both for <b>mandatory Covid testing for travel</b> and other outpatient diagnostics</li> <li>• New offerings ☐ faster <b>testing &amp; approvals</b> for essential services</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Fear of illness</b> ☐ better health management</li> <li>• <b>Change in business models</b> ☐ Curefit shifted focus from outdoor to indoor fitness, started monetizing free content</li> <li>• <b>Customer interest</b> ☐ Consumers started taking their health more seriously</li> </ul>

# India Stack

India has pioneered the use of Digital Public Goods (DPGs) as technology enabled force multipliers for growth

COMMERCE  
(GSTn)

CREDIT  
(RBI)

INVESTMENTS  
(SEBI)

SKILLS

OTHERS



CONSENT  
LAYER

Provides a modern privacy data sharing framework

Open Personal Data Store



CASHLESS  
LAYER

Game changing electronic payment systems and transition to cashless economy

IMPS, AEPS, APB, and UPI



PAPERLESS  
LAYER

Rapidly growing base of paperless systems with billions of artefacts

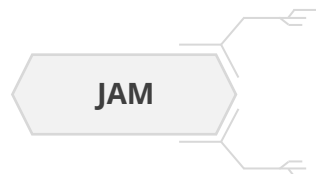
Aadhaar e-KYC, E-sign, Digital Locker



PRESENCE-LESS  
LAYER

Unique digital biometric identity with open access of nearly a Billion users

Aadhaar Authentication



Jan Dhan

+



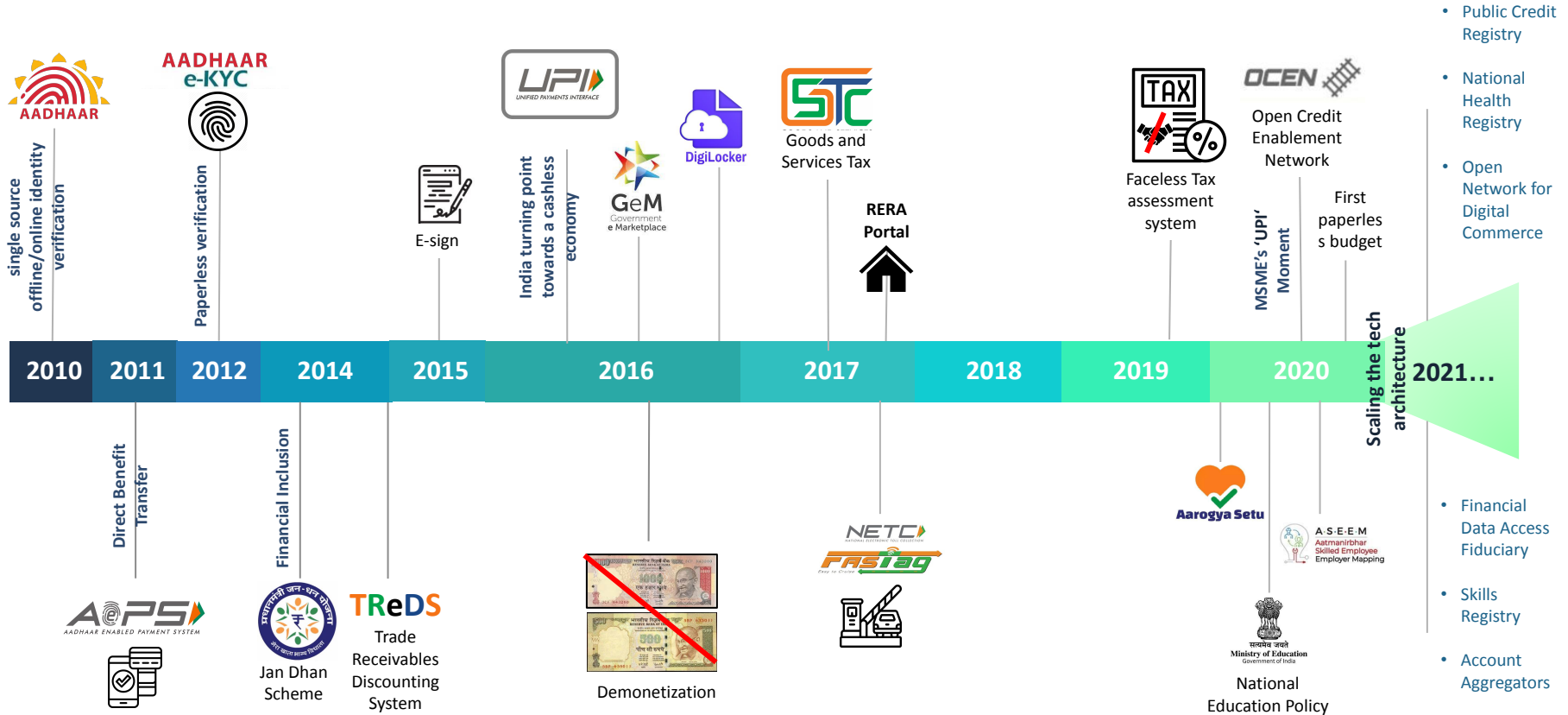
Aadhaar

+



Mobile

# The evolution of India Stack



Source: BCG

- Public Credit Registry

- National Health Registry

- Open Network for Digital Commerce

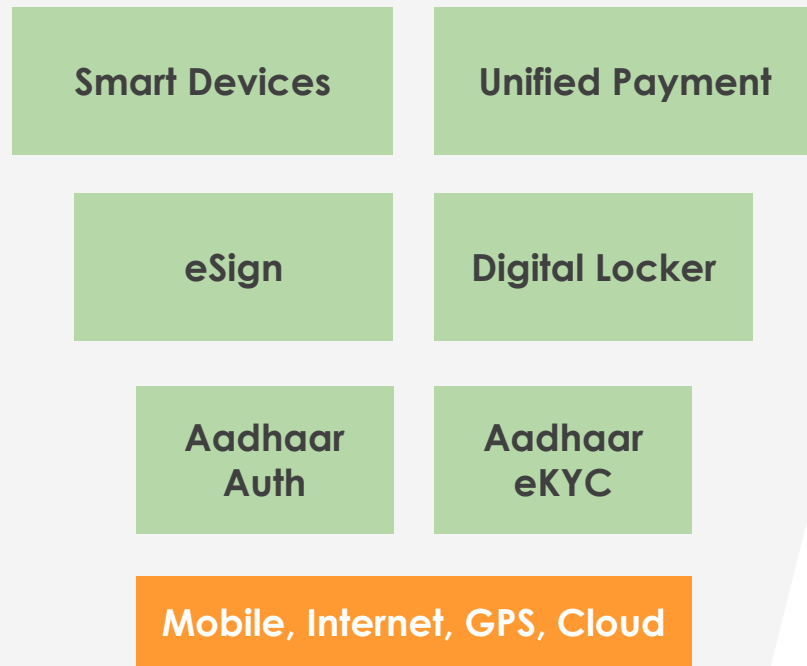
- Financial Data Access Fiduciary

- Skills Registry

- Account Aggregators








World-Class Products  
are being built  
on INDIA STACK,  
a set of **open API**  
**based PUBLIC**  
**PLATFORMS**








# Impact of the India Stack






## Retail Customer Onboarding Reimagining the User journey with Aadhaar, eKYC, e-Sign and Digital Locker

-  Turnaround Time down from 6 days to 1 hour
-  Reduced Drop Offs
-  Branch Capacity Freed upto 10%
-  >99% First Time Right
-  Back Office No Longer Required

## Reimagining Channel Management - Digital Transformation with Aadhaar eKYC

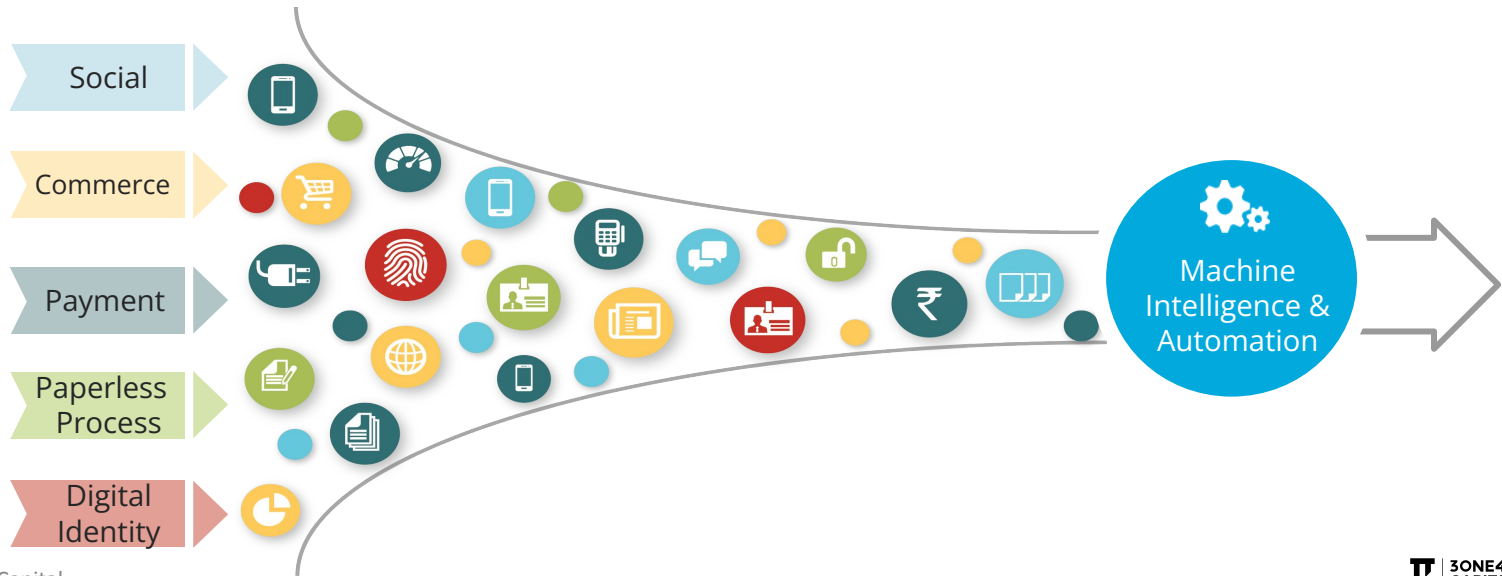
-  Transaction Time down from 4 hours to 2 minutes
-  Statement Processing Time down from 1 hour to 1 minute
-  Reduced Operational Cost
-  Capacity Freed-up for Lead Generation
-  Improved Customer Retention

## Customer Onboarding - Digital Transformation with Aadhaar eKYC

-  Onboarding Time down from 1 day to 4 minutes
-  Onboarding Rate 50M < 2 months
-  Saved INR 15 / Sim Issued
-  Customer Experience “Walk Out Working”
-  Saved 15000 Trees

# We will go from data poor to data rich nation in 5 years!

## Cashless, Paperless & Presence-less Service Delivery



# India's Banking fundamentals are strong



**122,102**  
bank branches of  
scheduled  
banks in India



**209,507**  
ATMs of  
scheduled banks  
in India



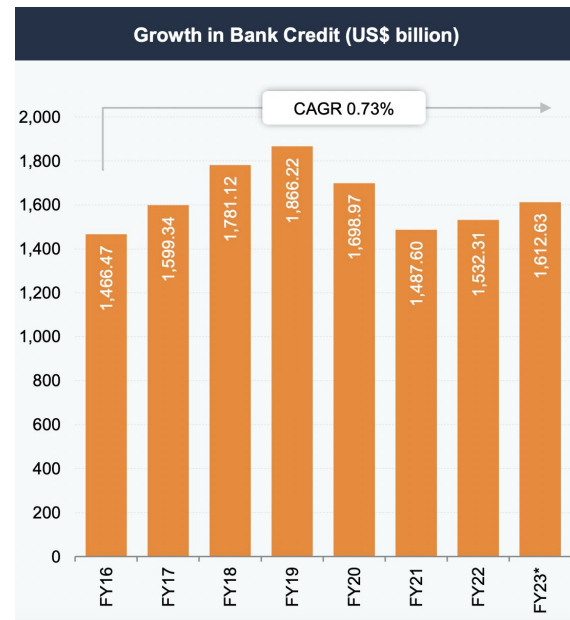
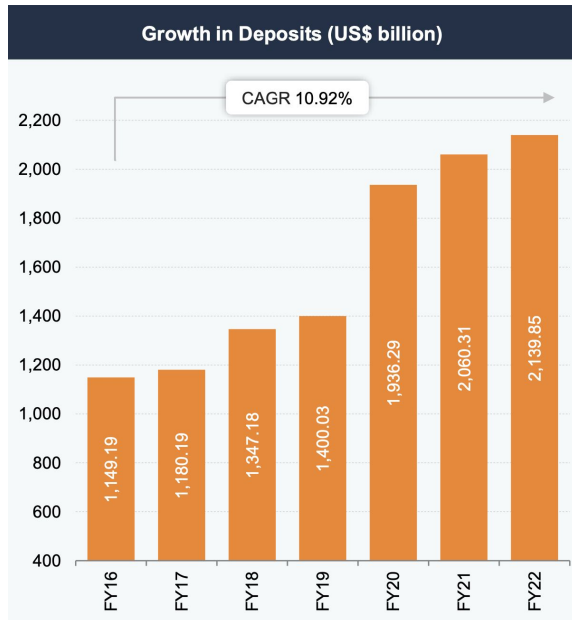
**485 Mn**  
Bank accounts opened  
by the Government  
since 2014































**USD 1.6 Tn**  
Aggregate credit for  
scheduled commercia  
banks in India



**USD 2.1 Tn**  
In total scheduled  
commercial bank deposits  
in India

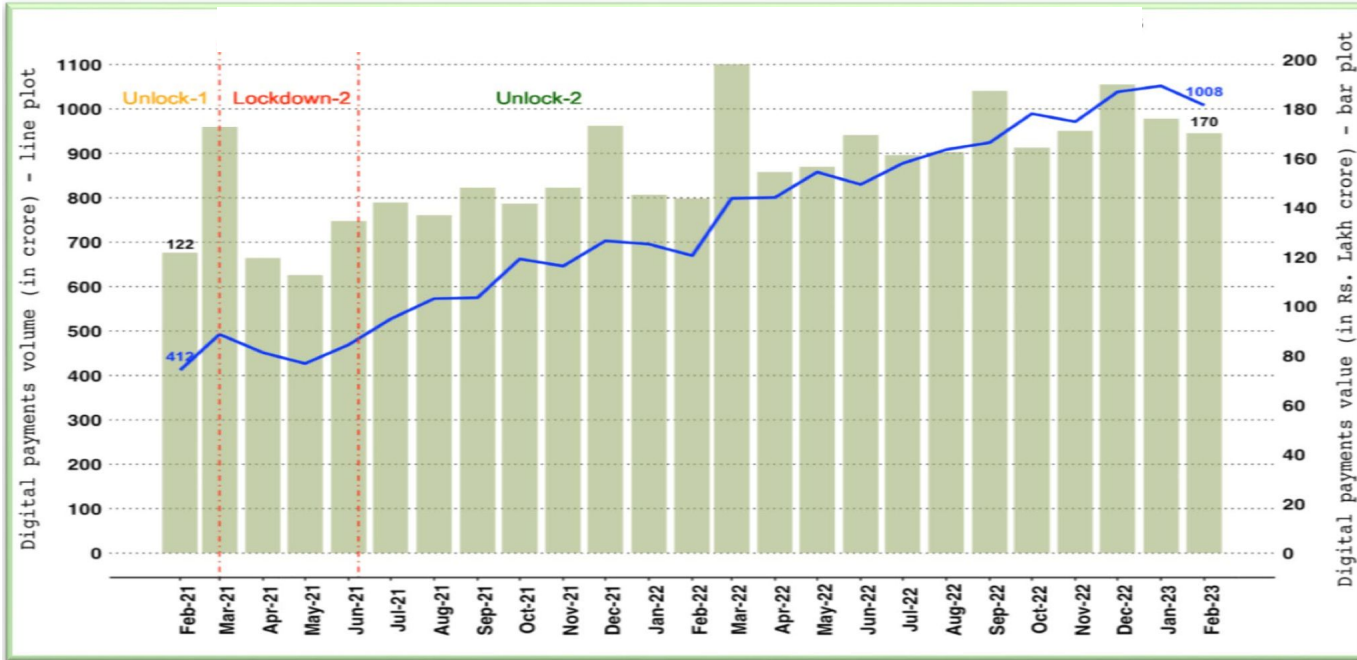


# Full Stack Digital Banking Services by Neo Banks is the Future

Top Players	Traditional Banks	NBFCs	Neo Banks
2010	   	<p>Diversified</p>  <p>Gold Loan</p>  <p>Housing Finance</p>  <p>Consumer – SME &amp; Vehicle</p>  	
2022	     	<p>Diversified</p>   <p>Gold Loan</p>   <p>Housing Finance</p>  <p>Consumer – SME &amp; Vehicle</p>  	<p>For SME</p>    <p>For Consumer</p>   

# Digital Payments in India

Trends in Digital Payment Transactions



Digital Payments Volume grew from

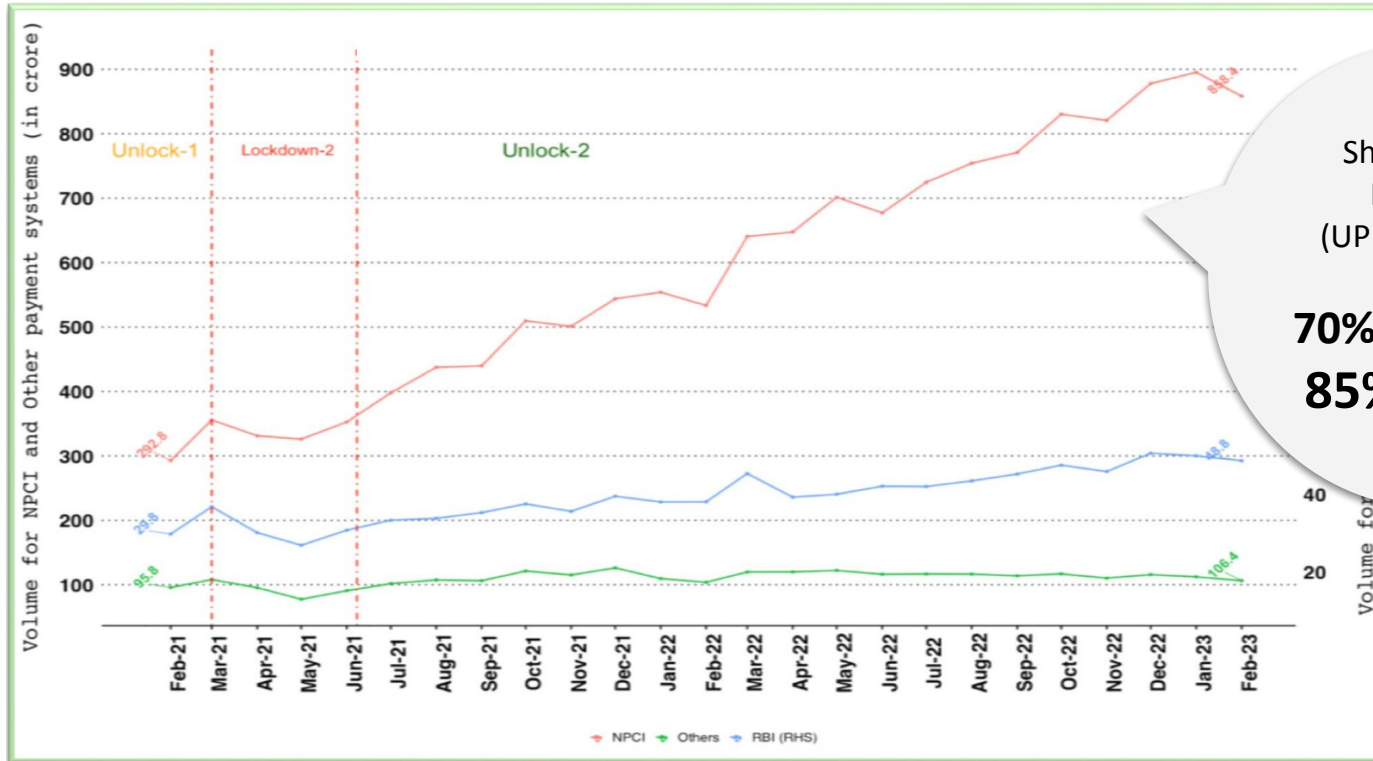
**4.12 billion**

in February 2021 to

**10.08 billion**

In February 2023.

# Share of Digital Payment Methods



Share of NPCI Payments (UPI+IMPS) grew from **70%** in Feb 2021 to **85%** in Feb 2023

**RBI payment systems:** RTGS (customer and inter-bank transactions) and NEFT

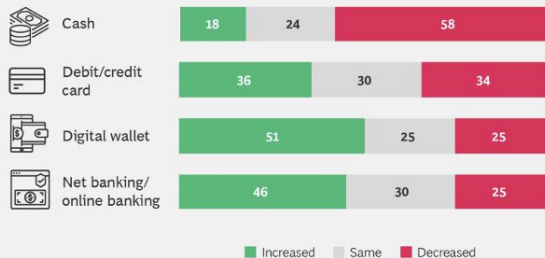
**NPCI payment systems:** IMPS, NACH, UPI (including BHIM & USSD), BHIM Aadhaar Pay, AePS fund transfer and NETC (linked to bank account).

**Other payment systems:** debit and credit card payment transactions (excl. cash withdrawal), wallet and PPI card payment transactions (excl. cash withdrawal)

# Steady Transition to a No-Cash future

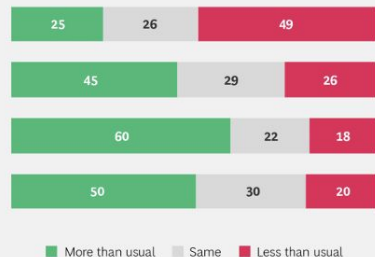
Noncash payments have increased during the past month...

Consumers' use of payment methods (%)



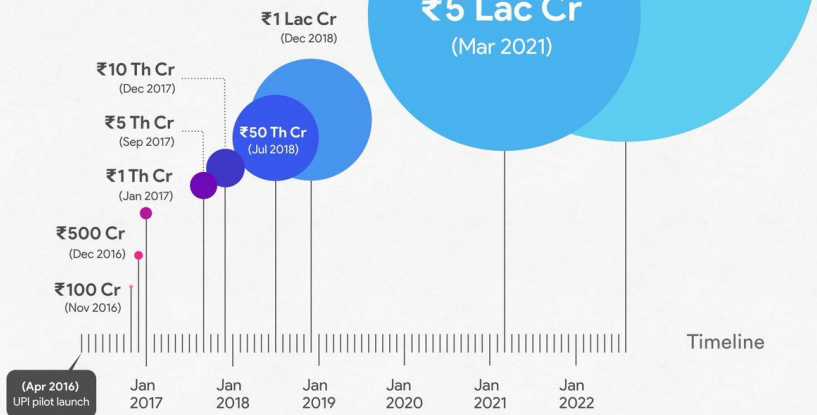
...and are likely to continue to grow over the next six months

Consumers' use of payment methods (%)



## The Meteoric Rise of UPI

How the UPI transactions have increased in value\* over the years



finshots.in  
joinditto.in

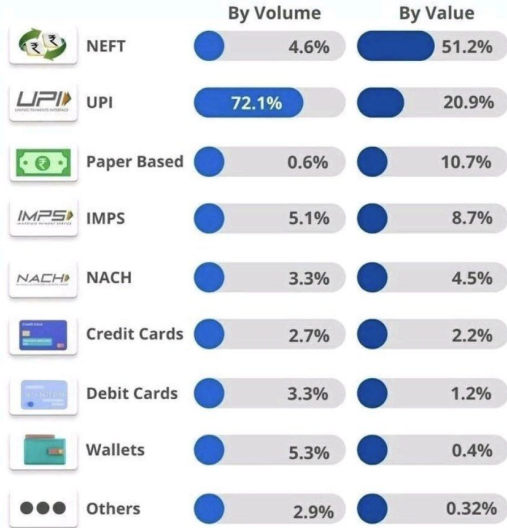
**8.68 Bn**  
Monthly UPI transactions volume in March 2023

**USD 176.31 Bn**  
Monthly UPI transaction value for March 2023



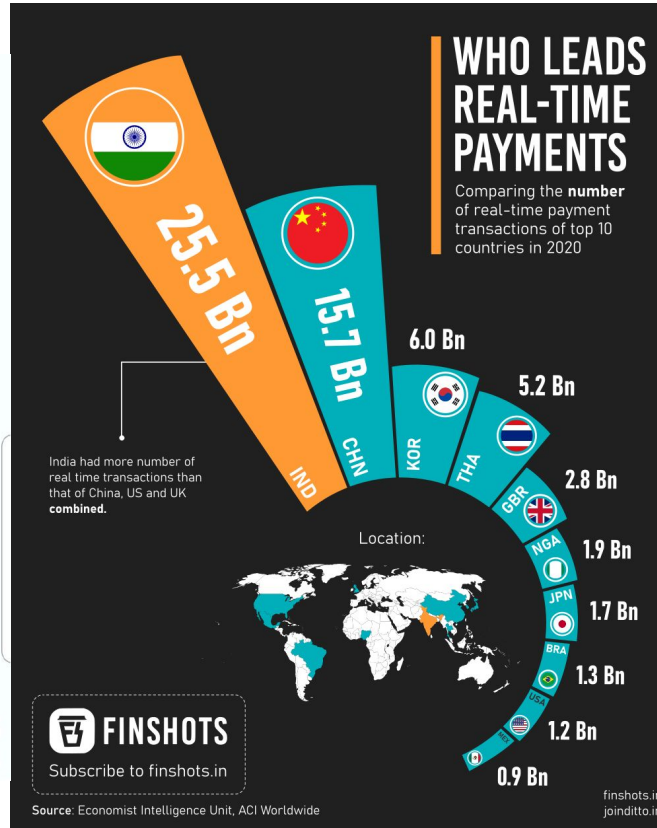
# India is a leader in real-time payments

## HOW INDIA PAYS



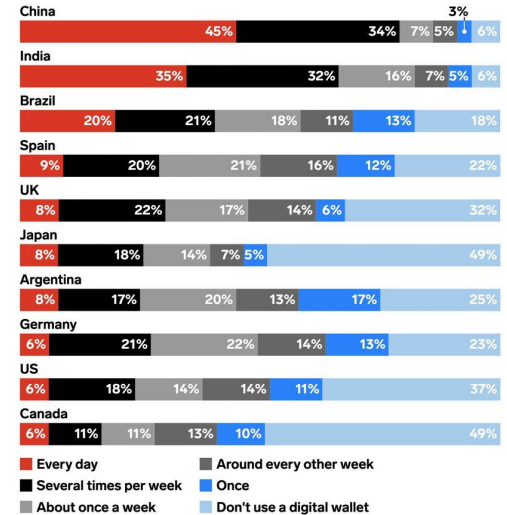
INW InvestyWise  
@investywise

(%) Retail Payments Share for Aug 2022  
Source: rbi.org.in



### Digital Wallet Usage Among Adults in Select Countries, May 2022

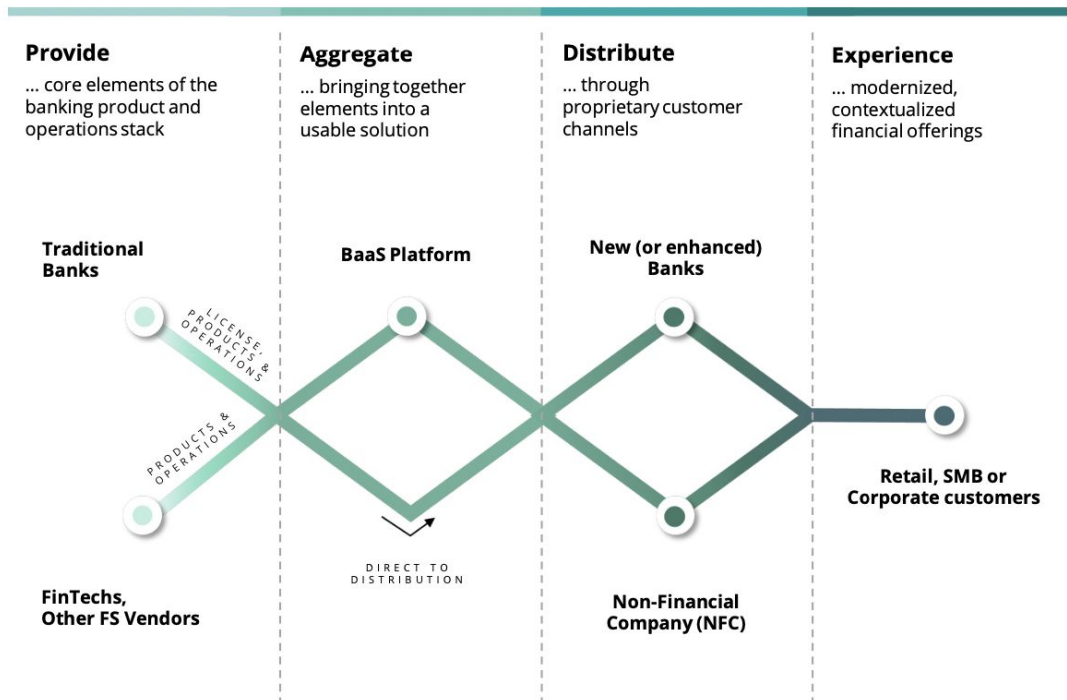
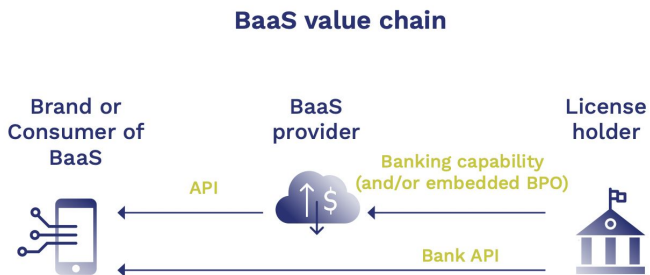
% of respondents



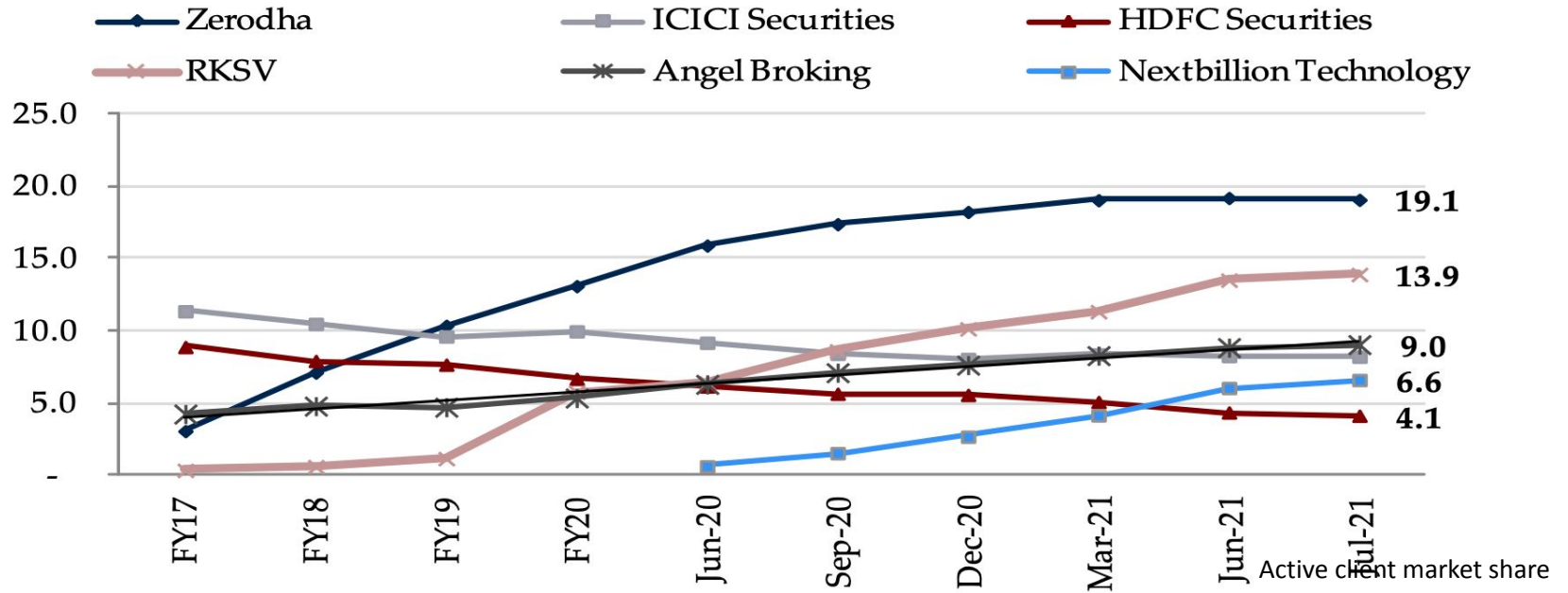
Source: Morning Consult, "The State of Consumer Banking & Payments H2 2022," Aug 16, 2022  
277518  
insiderintelligence.com

# Banking-as-a-Service is disrupting banking value chains

BaaS is reconfiguring the banking value chain by enabling third-party distributors to offer banking products and services.



# Zerodha and the Rise of Digital Broking



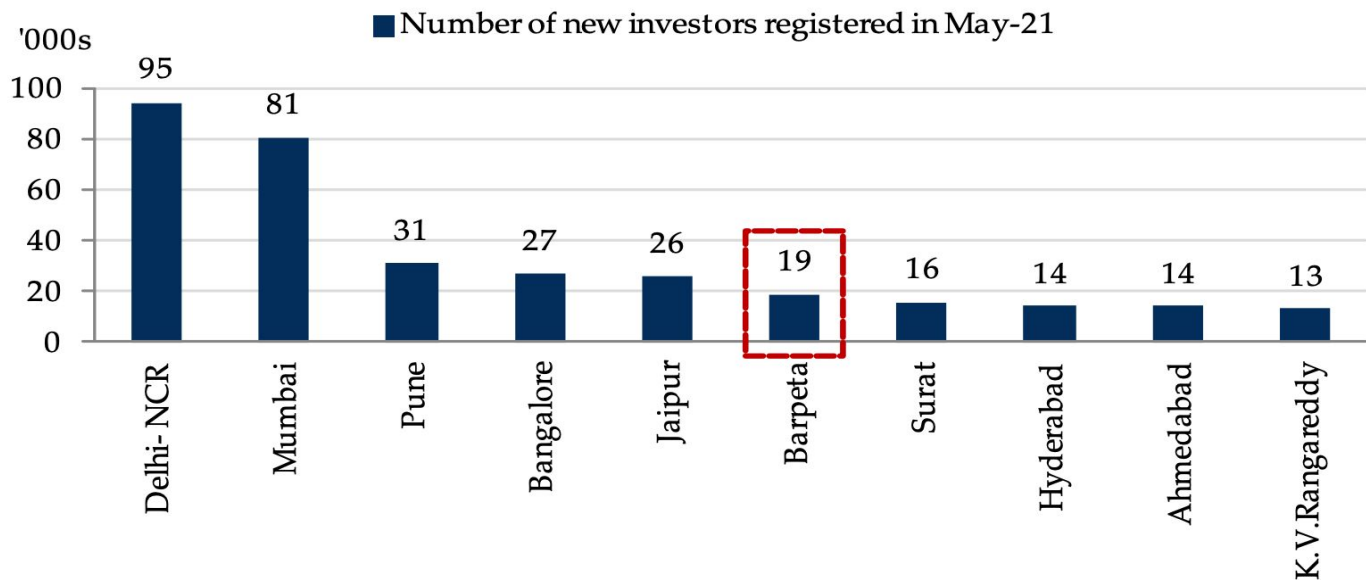
Note: HSIE Research operates under the HDFC securities legal entity

Source: NSE, HSIE Research

# Digital Broking - Not a Tier-1 Phenomenon

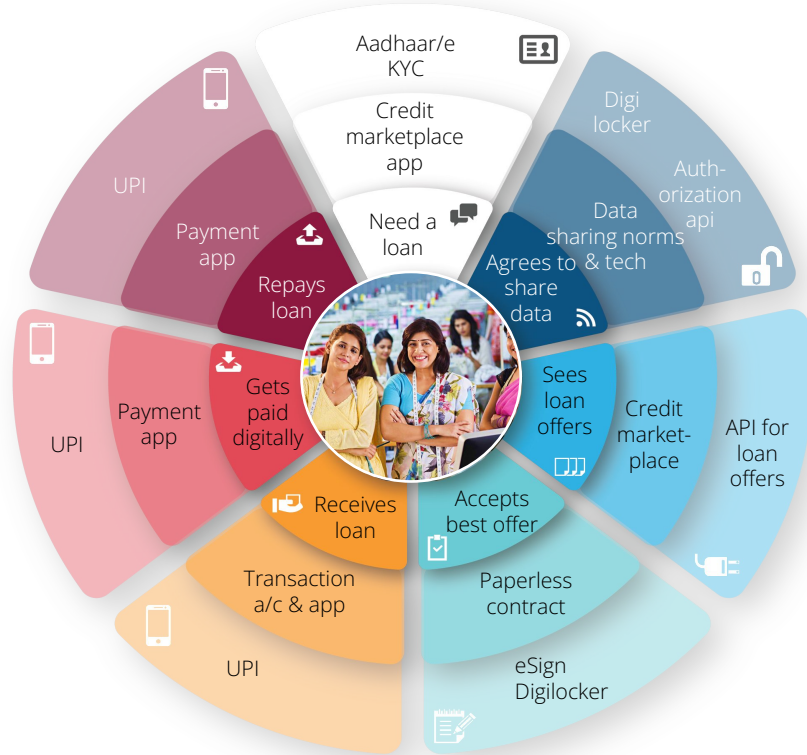
**Barpeta**, a city in Assam with a population of just 1.9mn (1/4th of Hyderabad, 1/5th of Ahmedabad and 1/3rd of Surat) beat Surat, Hyderabad and Ahmedabad in terms of new investor additions.

## Top 10 districts in terms of new investors




Source: NSE, HSIE Research

# Credit without friction



**Paperless instant credit markets based on digital tools**

**Bringing millions into the formal economy**



“ New Digital Public Goods  
(DPGs) will serve as India’s  
startup flywheel for this decade ”

# Consented Data Exchange

## Account Aggregator

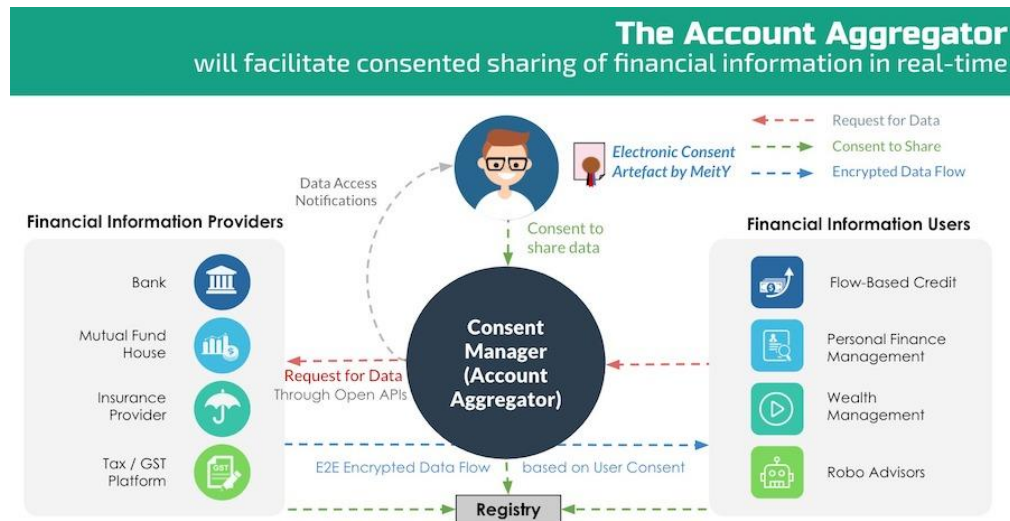
### Problem(s)

- Individual data siloed between financial institutions and service providers.
- Collation & centralization is hard, expensive, time consuming, still a largely physical process.

### Solution(s)

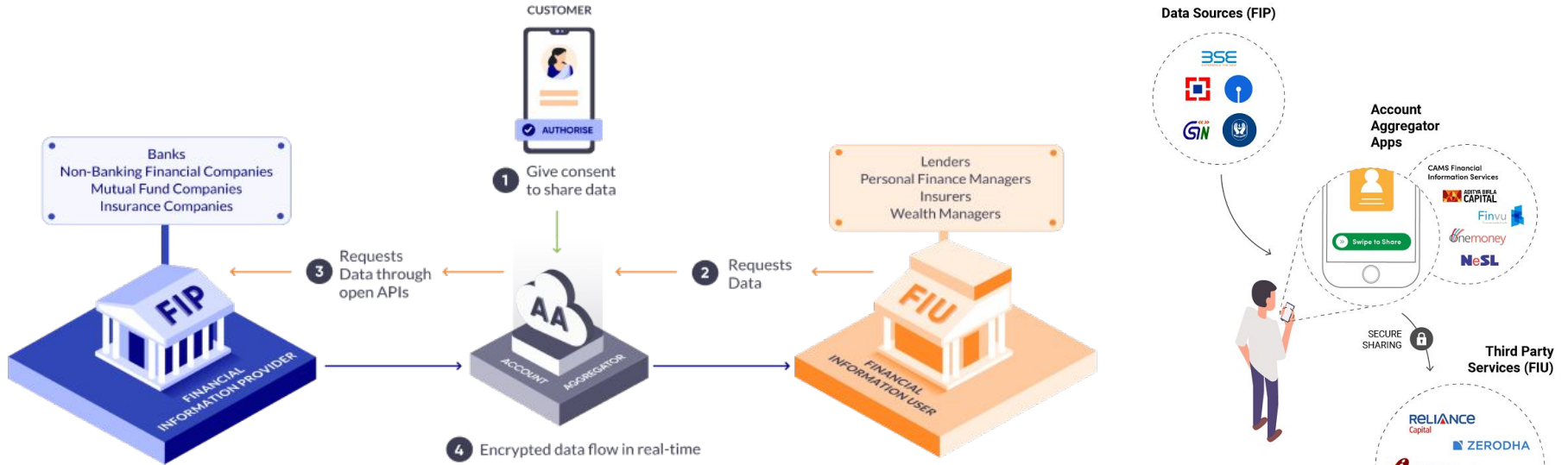
- An AA acts as the digital intermediary to manage data flows based on consent from an individual.
- AA is data-blind. Data that flows through AA is encrypted.
- Electronic Consent Artefact is architected and approved by MeitY.
- RBI approves AA through licenses and has oversight on the ecosystem including FIPs, and FIUs.

AA is supported by RBI, SEBI, PFRDA, IRDA.



# Account Aggregator framework at work

India's AA framework is pioneering consented, real-time sharing of financial information.



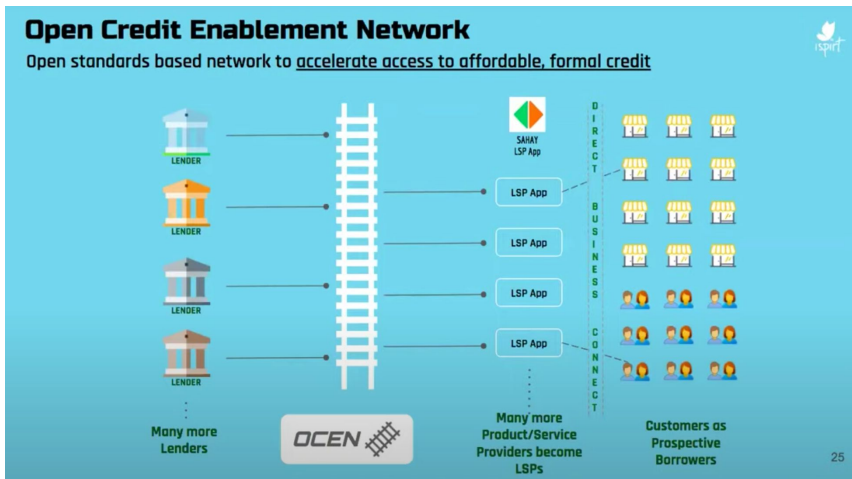
Accounts Linked  
**3.9 Million**

Consent Requests  
**3.9 Million**

Participants  
**270+**



# Consented Data Exchange



**The Next Massive Fintech Opportunity with OCEN**

Lenders are in a state of readiness

More than 30 customer-facing entities are engaged to become Loan Service Providers (LSPs)!

(Deep dive into various product types in upcoming sessions)

28

## Problems

- Cost of lending is so high that small loans become unfeasible.
- MSME credit gap of over \$330Bn.

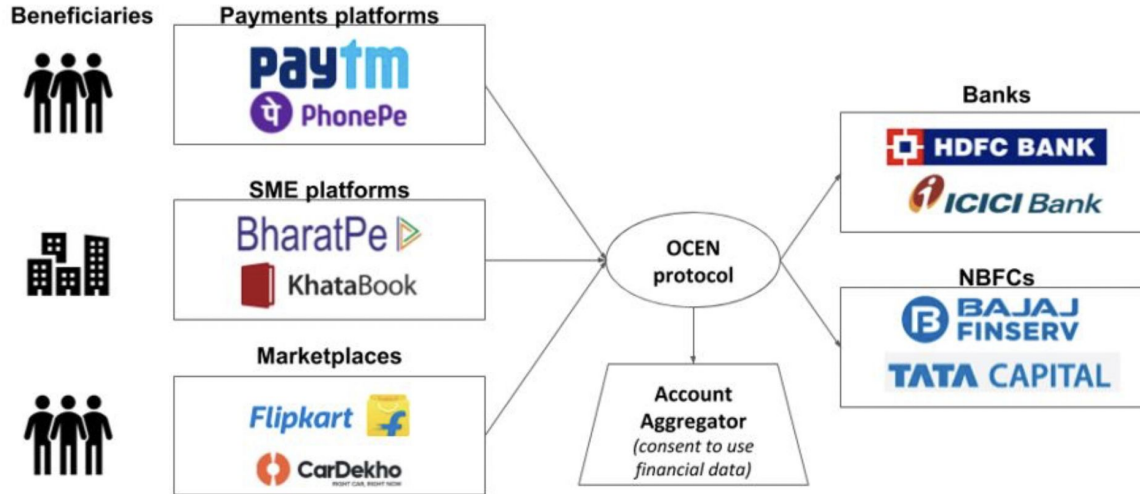
## Solutions

- Switch focus from balance sheet lending to cashflow-based lending.
- Common language for lenders and marketplaces to build innovative, financial credit products at scale.

- Connecting Lenders, LSPs, and Borrowers in a secure marketplace framework.
- Open APIs for credit products.

# OCEN will holistically disrupt Digital Lending

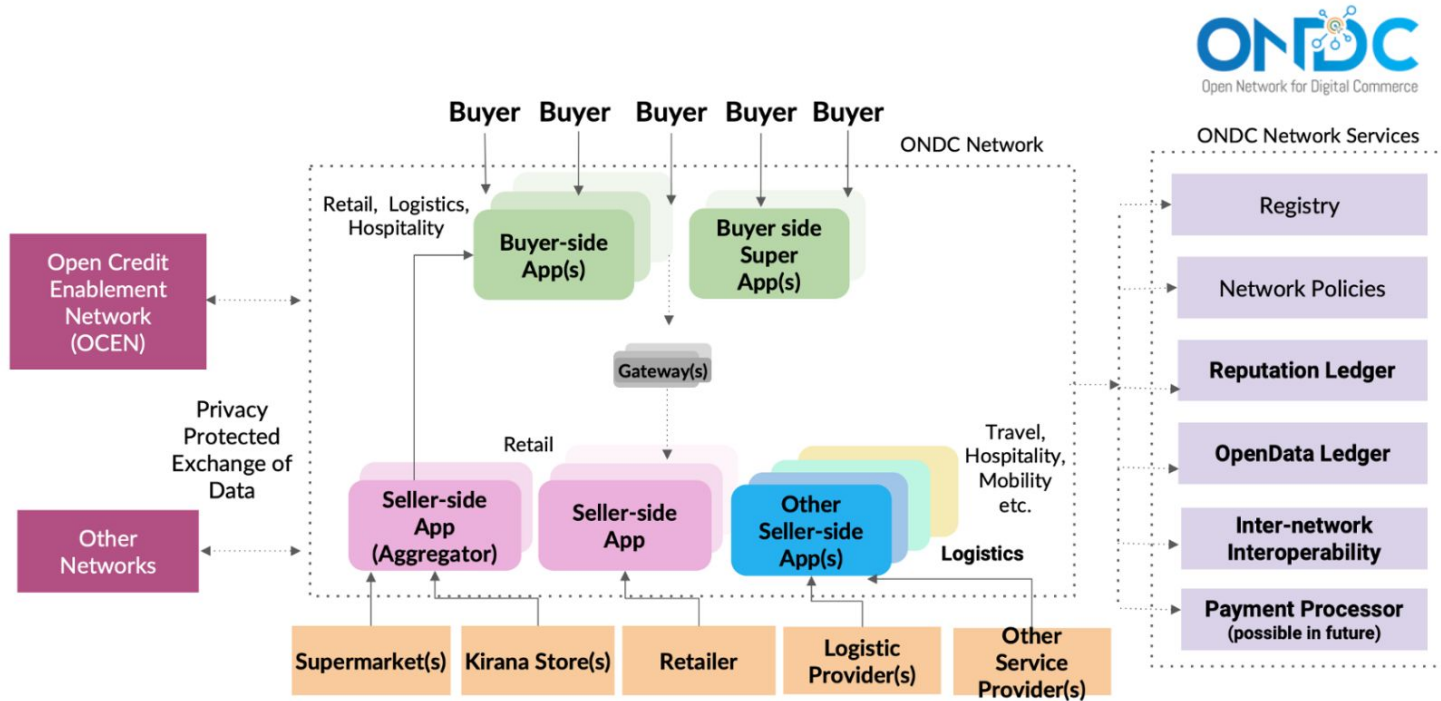
Using the AA framework, the Open Credit Enablement Network (OCEN) will revolutionise digital lending



Traditional Lending System	OCEN-based Lending System
Based on lend and forget ideology	Based on lend, monitor, and collect ideology
Legacy system with less emphasis on data collection	Contemporary system with more emphasis on data collection
Credit assessments based on balance sheet	Understanding variable cash flow
Importance given to high ticket-size loans	Importance given to all types and sizes of loan requirements
High lead time with physical document collection and verification process	End-to-end digital process with least turnaround time

# ONDC is set to unbundle digital commerce

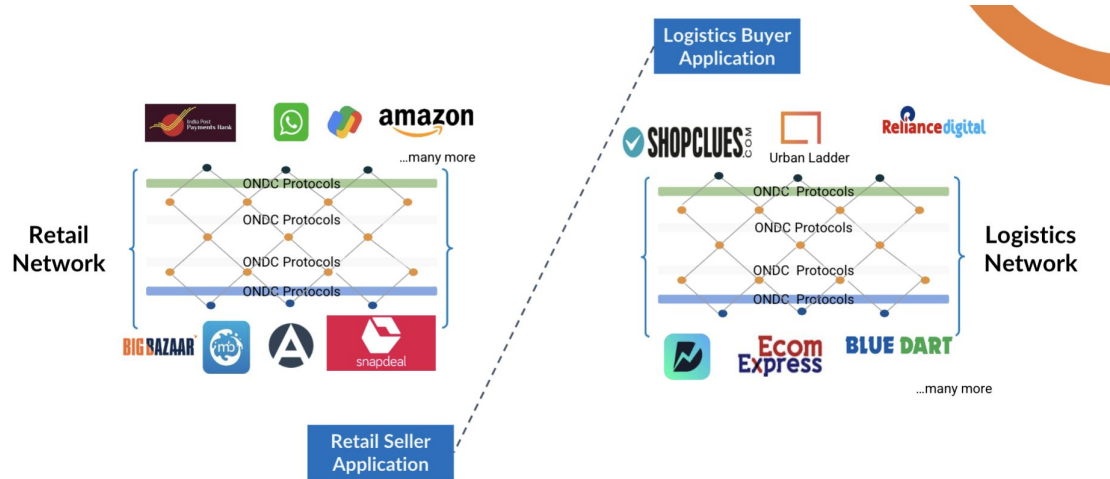
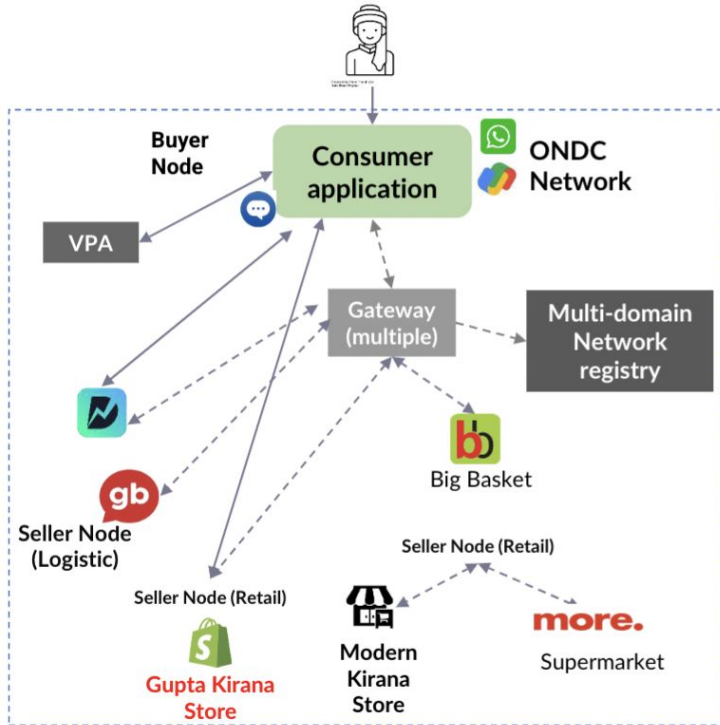
Open Network for Digital Commerce (ONDC) is a network based on open protocols and will enable local commerce across segments, such as mobility, grocery, among others, to be discovered and engaged by any network-enabled application.



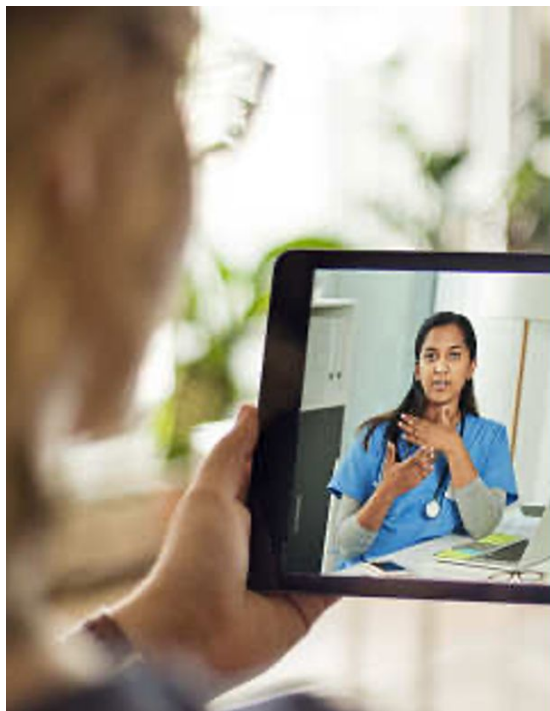
The ONDC platform has received investments of Rs. 157.5 crore (US\$ 20.30 million) for the first stage of the project from 17 banks and financial institutions.

A single multi-domain registry will be maintained by ONDC, while gateways (multiple) will be private participants.

# Taking a peek into the future: a sample buying journey on ONDC



# India's emerging National Health Stack



## National Health Stack

### GOVT & PRIVATE APPS & PLATFORMS

Diverse user experiences & innovative solutions



### Augmentation Layer

Enhancing capabilities of all actors



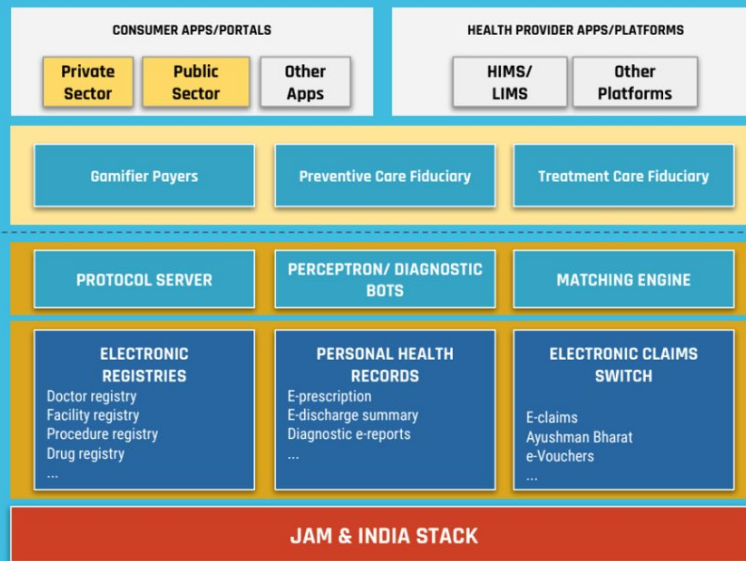
### Plumbing Layer

Streamlining flow of patients, health information and money



### JAM & INDIA STACK

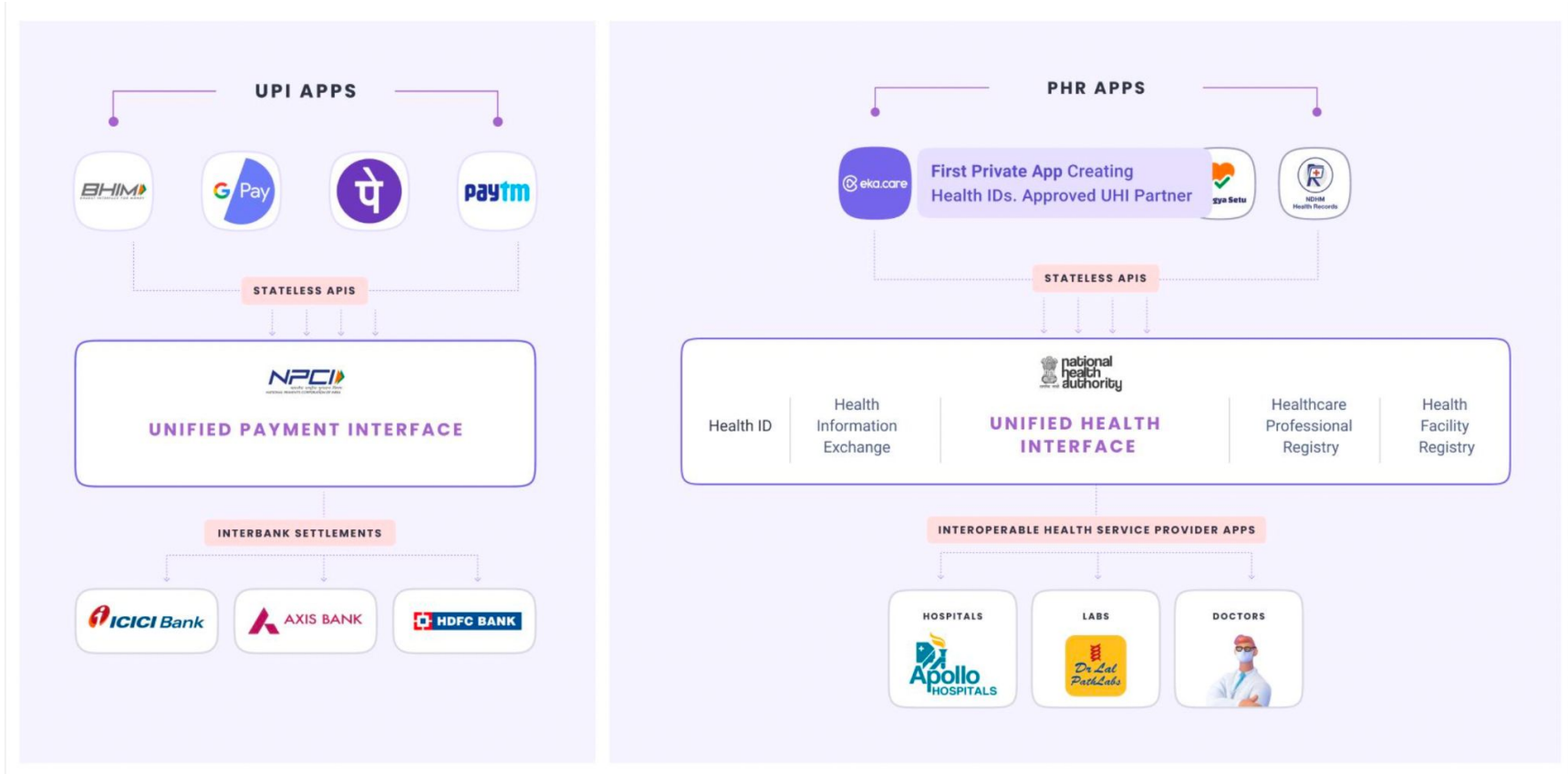
Cross domain generic building blocks



Private Innovation

Digital Public Infrastructure

# UPI moment in Indian Healthcare



# Open protocols are reimagining entire industries and ecosystems

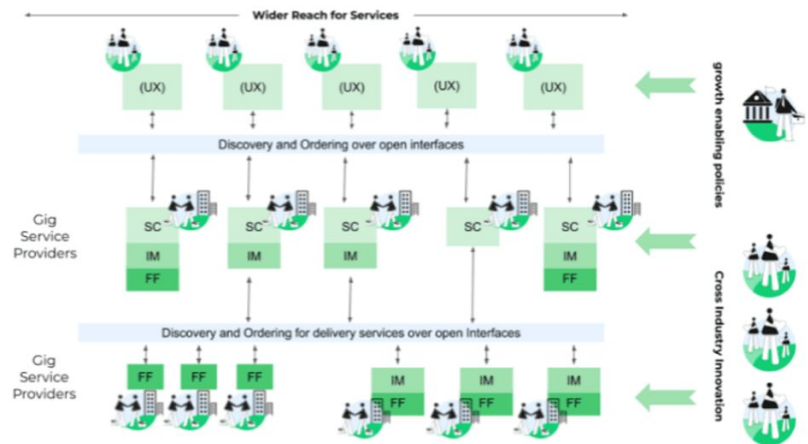
The Beckn Protocol, for instance, is revolutionising urban mobility.

## Monolithic Platforms

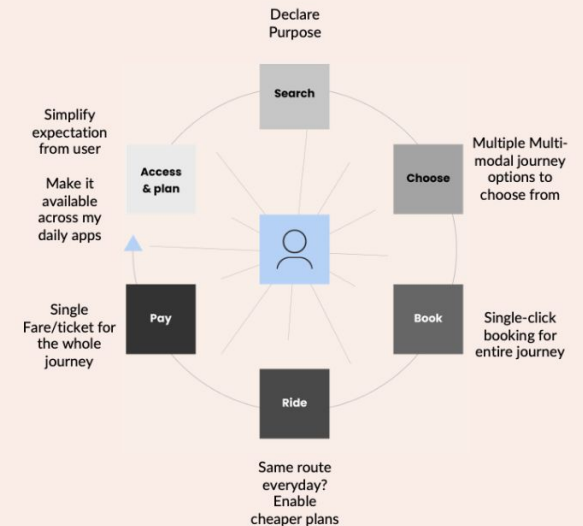


Decoupled Network

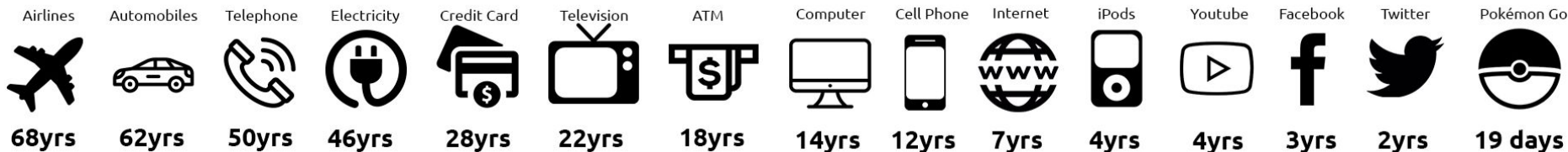
## Open Playground



## Ex: Integrated Mobility



# Number of years to 50Mn users



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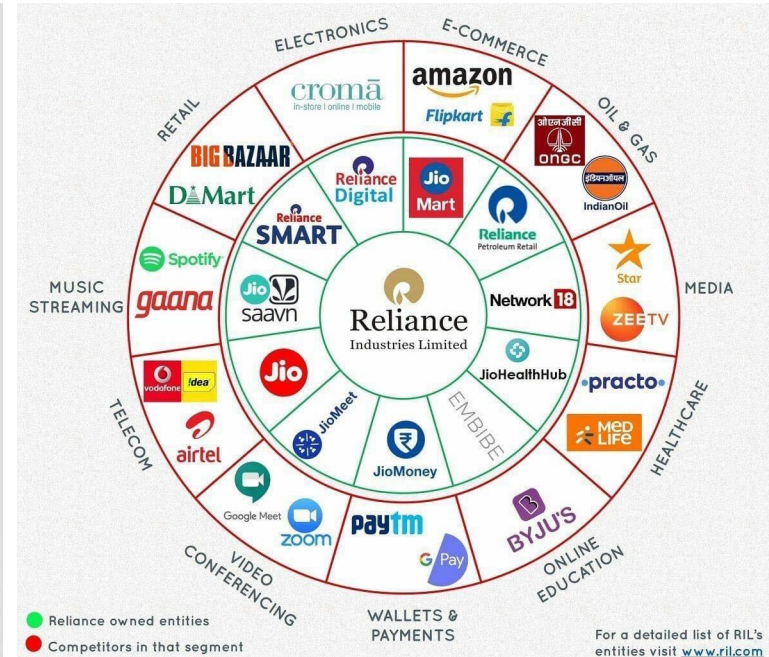
13 days



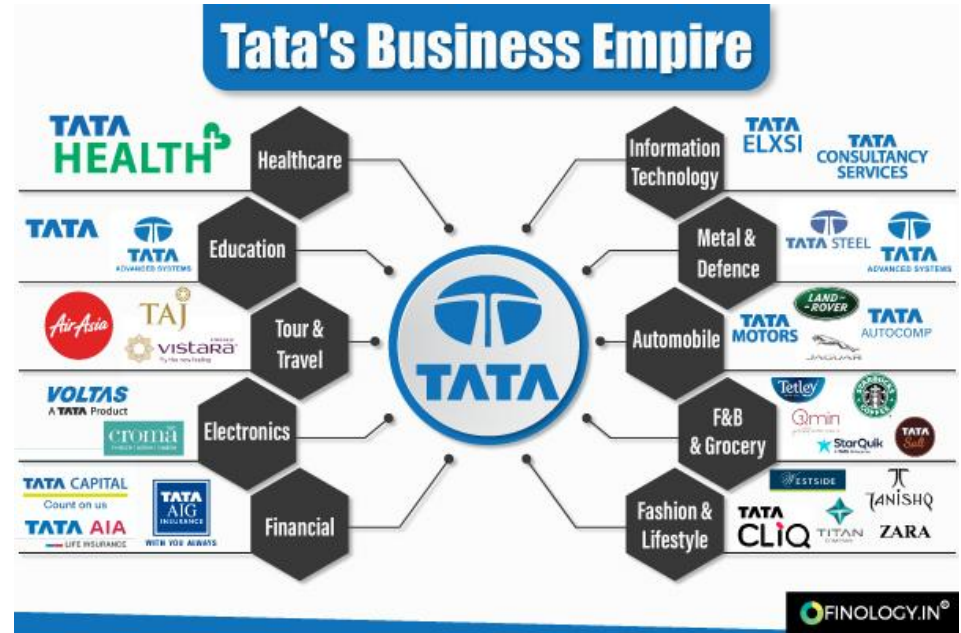
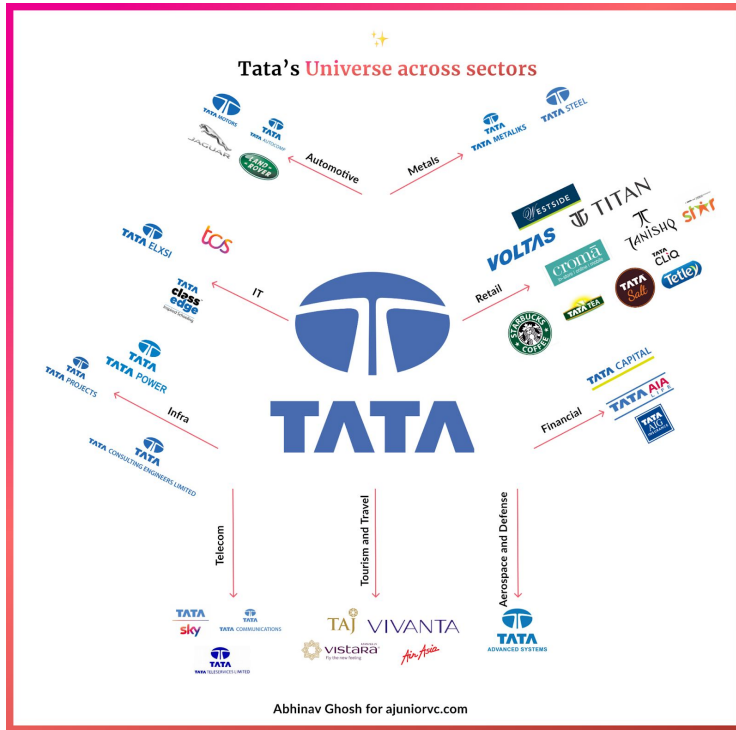
# Rise of Indian Tech Conglomerates

## FANTASTIC FOURTEEN

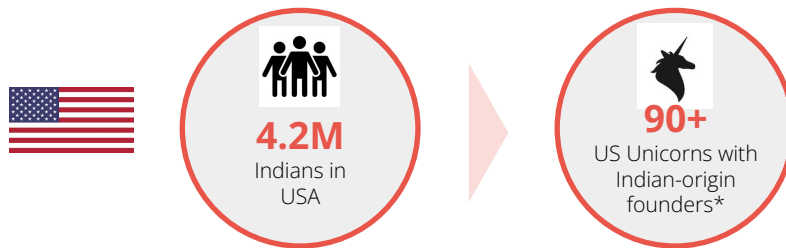
	INVESTOR	DEAL VALUE (₹ crore)	STAKE
15 JULY	Google	33,737	7.7%
12 JULY	Qualcomm	730	0.15%
3 JULY	Intel	1,894.5	0.39%
18 JUNE	PIF	11,367	2.32%
13 JUNE	L Catterton	1,894.5	0.39%
13 JUNE	TPG	4,546.8	0.93%
7 JUNE	ADIA	5,683.5	1.16%
5 JUNE	Silver Lake	4,547	0.93%
5 JUNE	Mubadala	9,093	1.85%
22 MAY	KKR	11,367	2.32%
17 MAY	General Atlantic	6,598	1.34%
8 MAY	Vista	11,367	2.32%
3 MAY	Silver Lake	5,656	1.15%
22 APRIL	Facebook	43,574	9.99%



# Rise of Indian Tech Conglomerates



# Indians are creating Unicorns Globally

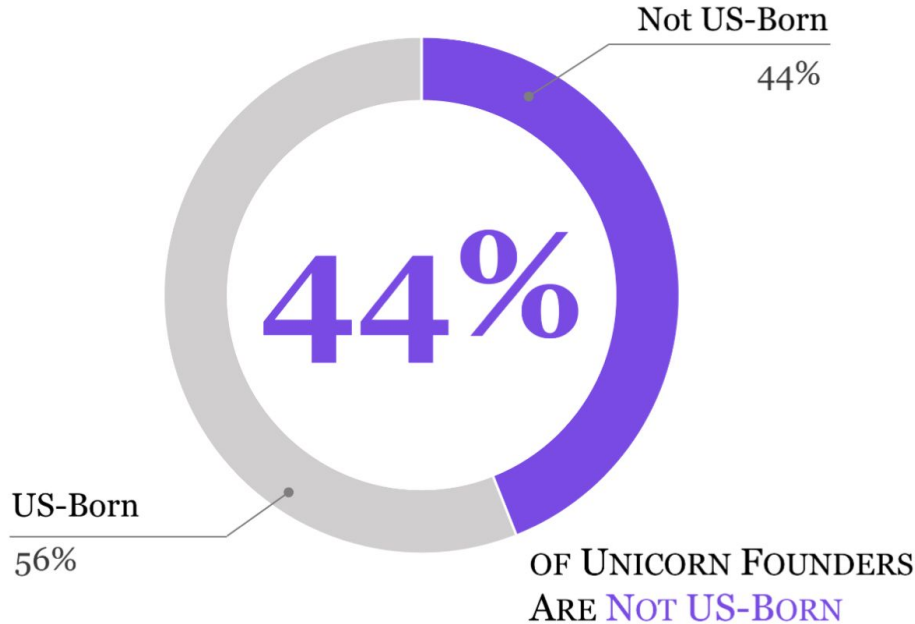


## Notable US startups with Indian origin founders



# Indians are creating Unicorns Globally

Indians dominate the list of non-US born unicorn founders in the United States



## Top 10 Countries for Not US-Born

- **India** – 90 founders
- **Israel** – 52 founders
- **Canada** – 42 founders
- **UK** – 31 founders
- **China** – 27 founders
- **Germany** – 18 founders
- **France** – 17 founders
- **Russia** – 14 founders
- **Taiwan** – 12 founders
- **Ukraine** – 12 founders

Data covers 531 US companies that became unicorns between 1997 – 2019.

Source: ILYA STREBULAEV, VENTURE CAPITAL INITIATIVE, STANFORD GRADUATE SCHOOL OF BUSINESS (01/2022)

  IlyaStrebulaev



# India – Now Top 3 for Value Creation

After US and China, India remains the top startup ecosystem for value creation

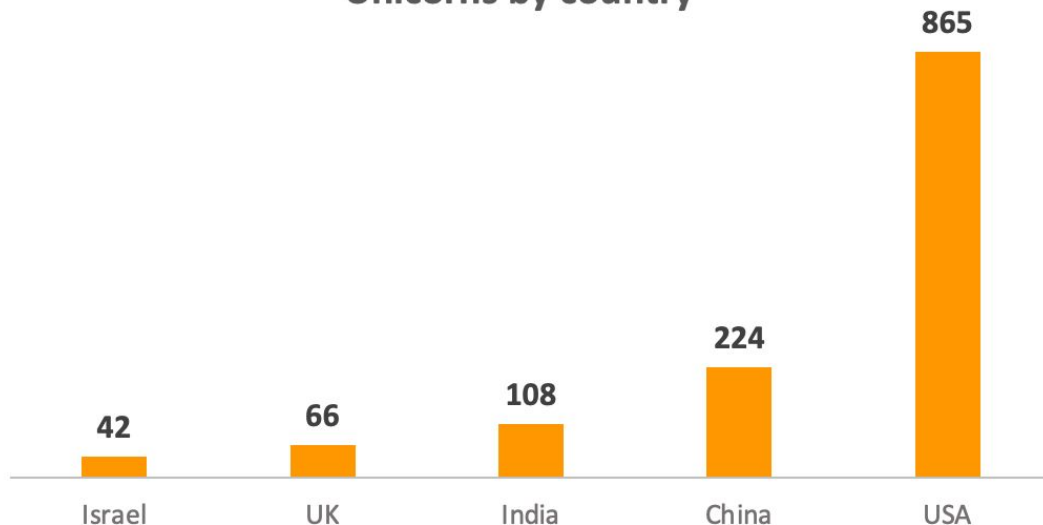
+1312

Unicorns  
Globally

USD 4.2T

Cumulative  
Valuation

## Unicorns by country



A robust  
foundation to  
enable  
innovative  
solutions to  
India's hard  
problems



## Innovative Solutions to India's Hard Problems

- Commercially Viable
- Far reaching consumer impact
- Reinforces experimentation

## 100s of Experiments

- Low barriers to entry
- Level playing field
- Aligned to national issues
- Rapid success/failure cycle



“ India is optimizing to empower problem solvers. Startups will be the force multiplier to catapult the country into a **USD 10 Trillion** economy ”

Join the conversation on Twitter with @TVMohandasPai and @3one4Capital



Thank You

**TV Mohandas Pai | 3one4 Capital**

@TVMohandasPai | @3one4Capital