STARTUP KARNATAKA
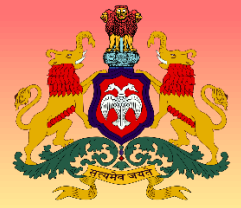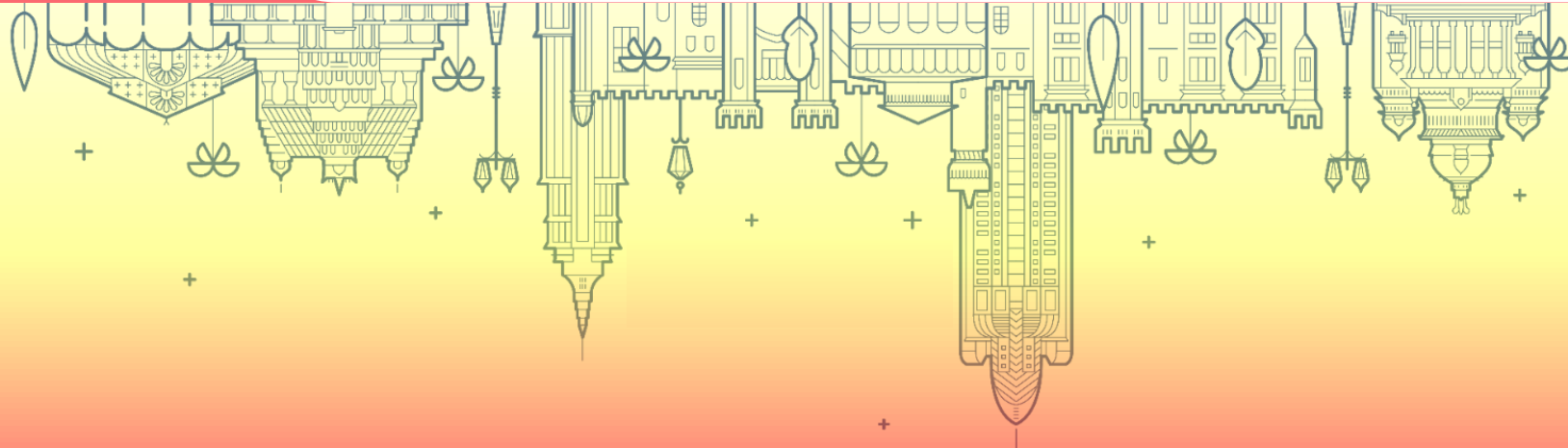
BENGALURU INNOVATION REPORT 2019

MESSAGE FROM THE DEPUTY CM

Dr. Ashwathnarayan C N,
Deputy Chief Minister, Karnataka
Minister for Higher & Medical Education, IT & BT, Science & Technology

Bengaluru's vibrant startup culture has continued to maintain its strong growth momentum, with the city being home to one of the largest startup ecosystems in the world. The growth in scale of Bengaluru's startups, both domestically and globally, as well as the ambition and drive of the city's entrepreneurs continues to be a source of inspiration for the entire ecosystem. We have truly come far in the last 10 years and continue to produce exceptional companies and founders that can become behemoths in their respective industries.

For a city to produce successful entrepreneurs, it needs to provide the right policy support and allied infrastructure that can nurture innovation. With the creation of the Startup Vision Group-Karnataka under the Startup Karnataka programme, we have aimed to bring together the brightest minds in the ecosystem to help set a robust framework for policy generation that can be both flexible in its reaction to disruptive technologies but at the same time fair to all stakeholders that are involved. We are also launching the world's first pan sectoral regulatory sandbox that could truly become a gamechanger for policy led innovation growth. Under the ELEVATE and the NAIN programmes, we have successfully helped provide capital to and incubate young startups into creating world class products and services.

As we enter the next decade, I am excited by what the future holds and I wish all entrepreneurs the very best as they continue to work hard towards building great organizations. The Karnataka government will continue to be a proactive partner and put their best foot forward into making the state home to one of the best startup ecosystems in the world.

Prashanth Prakash
Chairman
Startup Vision Group-Karnataka

As the world wraps up an undeniably tech-first decade and moves into the 2020s, the world continues to be interconnected. Equally important, India and Bengaluru's role in this transformation is now globally recognized and embraced.

"Ecosystem" is frequently used to describe a self-contained and accretive network of people and organisations that drive the creation and delivery of products and services to transform the world around them. If there is a gravitational centre of the burgeoning technology ecosystem in India, you only have to go to Bengaluru to experience its magnetic pull.

India's startup subculture is getting stronger by the year, with India being home to the third-largest startup ecosystem in the world. Indian startups have raised close to USD 50 billion in just the last six years, with more than 40,000 startups launched in the country. Immense value has been constructed in this ecosystem already - with over 30 unicorns, this is also the third-largest unicorn concentration worldwide. Growth has accompanied a remarkable cultural shift in India, with more young and ambitious entrepreneurs finding social and financial support to grow large businesses and aim for outlier results.

India has surpassed all expectations over the last decade and continues to produce exceptional companies and entrepreneurs. The time to question Indian startups is seemingly over – they have arrived; they are here to stay, grow, and take over. And no one city represents the sheer transformative power of this generational shift forward than Namma Bengaluru.

Through this tremendous story of growth and globalization, Bengaluru has served as India's technology capital for over three decades now. With a robust heritage of premier R&D laboratories, academic institutions, and public sector-focused firms, Bengaluru was the pivotal city that led to India's IT leadership in the world. These IT companies helped put India on the global map as the software industry permeated every sphere of business. Today, three of the Top Five and five of the Top Ten global IT companies are Indian. Indeed, Bangalored" has become a verb to describe the impact of the concentration of highly skilled people that serve global markets.

Innovations to deliver the best services to clients globally has enabled these IT companies to scale across borders and create value for millions of employees and hundreds of thousands of shareholders. In doing so, they have set a high bar for startups that innovate for global markets out of Bengaluru. These companies helped lay the immovable foundation of tech talent in this city that is now leading the startup revolution in India. No other city in India encapsulates the natural cooperative, and the competitive interplay between legacy and bleeding-edge like Bengaluru does.

In this report, we cover the core aspects of the startup ecosystem and the ideas that have catapulted Bengaluru to this position. The fabric of competence, opportunity, and a "pay-it-forward" attitude that exists today makes this city the most preferred destination for entrepreneurs, venture capitalists, and other players in the country. Whether it is for ex-pat founders or the country's best research minds, no other ecosystem is better suited to serve as the crucible for the cooperative construction of new companies.

Of course, there are miles to go, especially in domains such as M&A, infrastructure, and interaction between various players to further strengthen the ecosystem. This report also brings together key players in the city's and state's government to help build a clear vision for what Bengaluru must evolve into over the next decade.

The data captured in this report is extensive - both qualitatively and quantitatively. We hope that it encourages the key startup ecosystem players - entrepreneurs, investors, academicians, corporations, and various levels of government - to invest and build more in Bengaluru. Most importantly, we hope it brings everyone together on a common platform to celebrate the progress we have made here so far and to set broader objectives and aspirations for what we must grow into together.

As is commonly said in our industry, software is eating the world. Let's take a moment to celebrate how far we have come and wash it down with some Bengaluru filter coffee!

MESSAGE FROM THE ACS

Dr. E.V. Ramana Reddy, IAS
Additional Chief Secretary to Govt.
Department of IT, BT, and S&T, Govt. of Karnataka

Karnataka has been an important state of India with a strong emphasis in science and technology (S&T) driving the State's economy. The City of Bengaluru has benefitted immensely from the academic institutions focused on science, technology and innovation established here early on after India's independence. Way back in 1915, the Indian Institute of Science (IISc) was established here in pre-independent India. In 1940, the Indian aeronautical industry took roots here with the establishment of what is now Hindustan Aeronautics Limited (HAL). Later, several defense Central Public Sector Units (CPSUs) and DRDO institutions were established here.

Karnataka is known for its information technology (IT) power contributes more than US$50 billion software exports and Bengaluru is the Fourth Largest Technology Cluster in the world. The City has more than 2 million IT professionals– almost 16% of the total population. These strengths have enabled the city to truly transform from a technology hub to a startup capital and now a global innovation hub.

The Government of Karnataka has always focused on being an enabler in this journey and has been at the forefront to provide support to the industry. The Government's innovative ideas such as Vision Groups for IT, BT, and S&T has ensured constant interaction with the stakeholders. The Government provides incubation and funding support to startups (ELEVATE Scheme), incubation centres and mentorship to Tier 2 city colleges (New Age Innovation Network), dedicated engagement with global innovation hubs (Global Innovation Alliances) and regulatory support (Karnataka Innovation Authority). The way various stakeholders have come together to contribute to this report truly reflects the strength of the Bengaluru Innovation Ecosystem. This is just a peek into the rich innovation happening in the city and I am sure this is just the beginning of Bengaluru's journey as a global innovation leader.

CONTRIBUTORS AND ACKNOWLEDGEMENTS

This report was a remarkable product of the deep sense of community that has developed in Bengaluru's startup ecosystem. The joint authors of and contributors to this report include:

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Accel

3one4 CAPITAL

ideaspring CAPITAL

Data Partner

Tracxn

Media Partner

YOURSTORY

Design Partners

SlydS

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TiE Bengaluru

Mohandas Pai
Chairman
Manipal Global Education

Nisha Holla
Technology Fellow
C-CAMP

Pranav Pai
Founding Partner
3one4 Capital

Yash Baid
Head of Research
3one4 Capital

Naganand Doraswamy
MD & Founder
Ideaspring Capital

CHAPTER 1

▶ **STARTUP CAPITAL**

INNOVATION ECOSYSTEM

Bengaluru's GDP is projected to grow at 8.5% till 2035

Amongst the world's 780 major cities, **17 of the 20 fastest-growing cities in the world between 2019 and 2035 will be Indian**, with Bengaluru, Hyderabad, and Chennai among the strongest performers

Predicted GDP growth 2020-2035

City	Growth
Bangalore	8.50%
Dhaka	7.60%
Mumbai	6.60%
Delhi	6.50%
World Average	2.80%
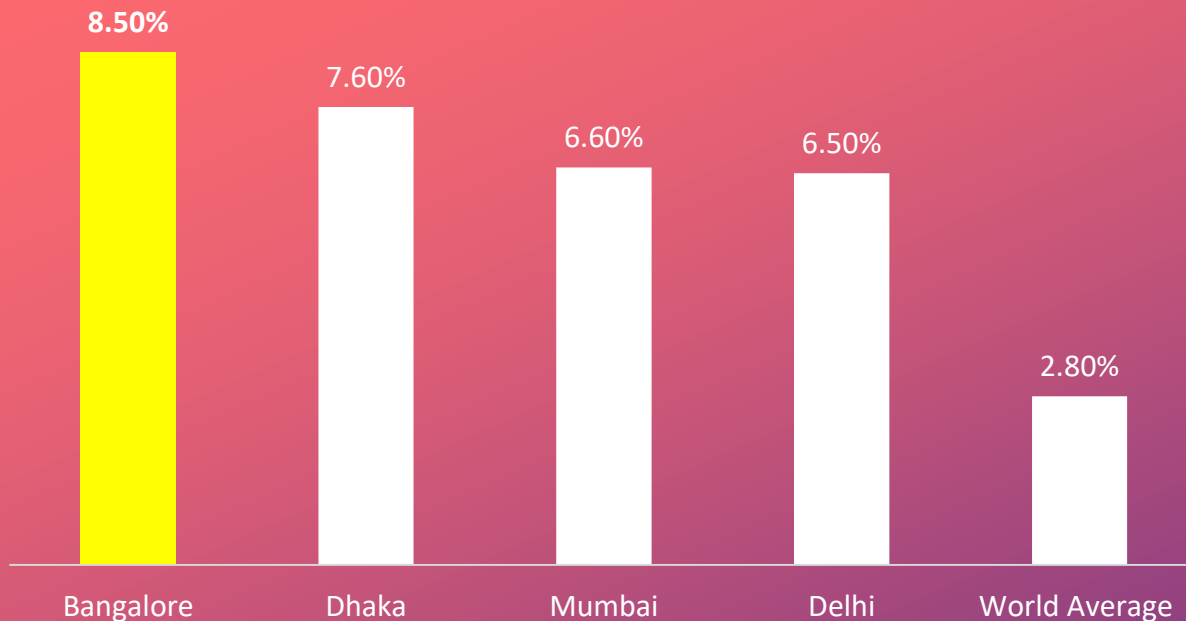
#1

Fastest growing city in the world for the next 15 years

Bengaluru is India's most Millennial-friendly City with excellent employability ratings

City with the highest employability rate in the country

Bengaluru is the first choice for women in employability

1st

Most millennial friendly city in India and 18th in Asia Pacific

37%

population between 15-35 years of age

The ranking considers three factors:
- Employment prospects
- Cost of Living
- Quality of Life

Bengaluru's consumer economy is the most digitally savvy in India (1/2)

38.1% of all UPI transactions in Tier 1 cities, or **24%** of all UPI transactions in India originated from Bengaluru as on Oct 2019

% of UPI transactions

38.10% Bangalore	
12.50% Hyderabad	
10.22% Delhi	
9.50% Pune	
6.78% Mumbai	
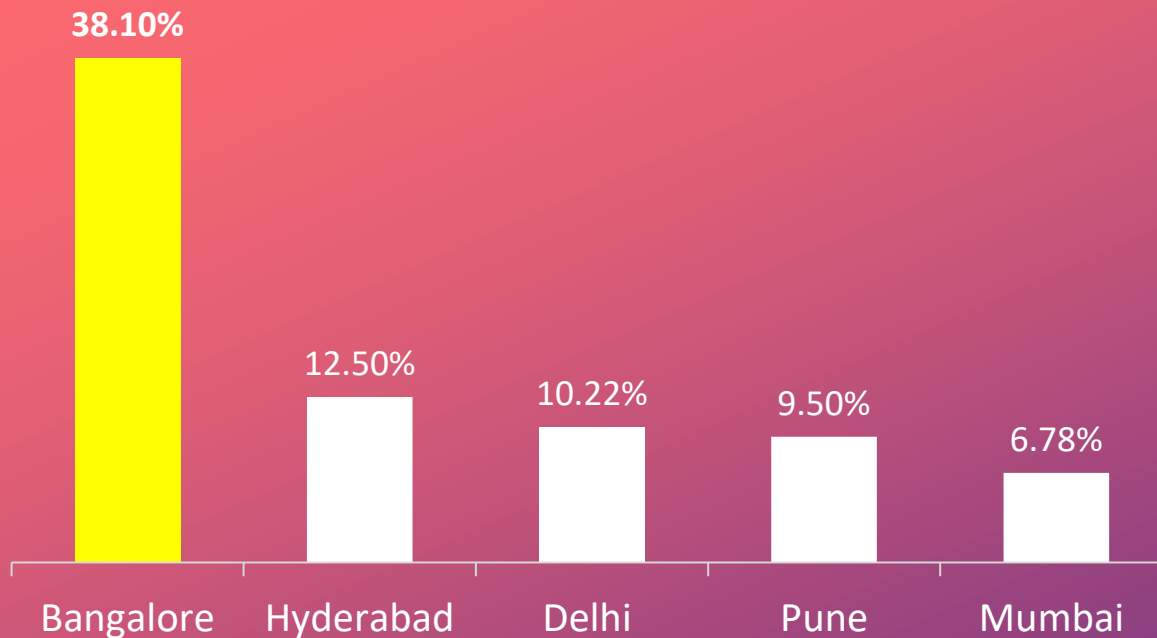
₹8600

digital spend per person per month in Bengaluru

Source: RazorPay, Regalix

Bengaluru's consumer economy is the most digitally savvy in India (2/2)

Bengaluru had the **highest preference for online shopping** followed by Mumbai and Delhi*

69% of people surveyed from Bengaluru were willing to buy daily routine products online

% respondents willing to buy online

- Bangalore: **69%**
- Mumbai: 65%
- Delhi: 61%
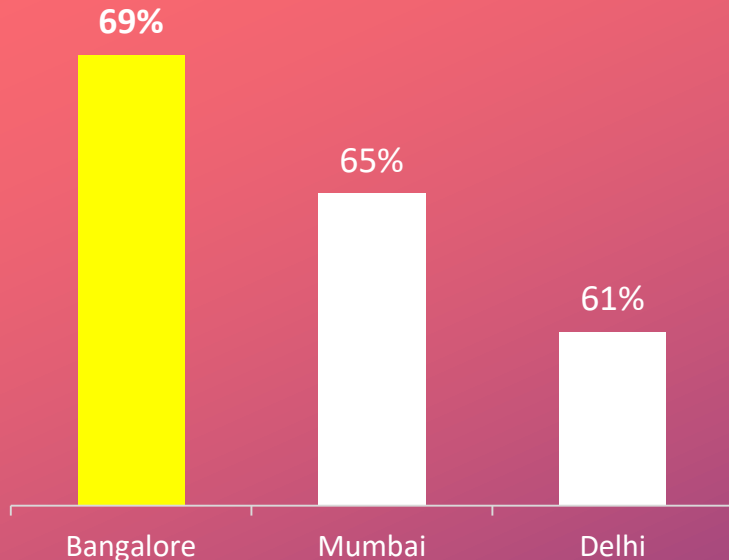
Vivek Sunder
COO
Swiggy

As one of India's best-known consumer tech startups, it was a natural decision for us to be based in Bengaluru because of the tech-savvy and cosmopolitan residents of the city, who are both discerning and "early adopter" customers for any innovative products that are launched.

Source: ASSOCHAM-Resurgent Study, Browntape

The city of Bengaluru is home to 33% of India's tech talent...

Bengaluru's **Engineering Colleges / population ratio** is 5x more than Delhi and 1.7x more than Mumbai

44% of migrants moving to Bengaluru have **tech skills** as opposed to 12% for Delhi and 11% for Mumbai

2Mn+
IT professionals

70%
Engineers <35 Years of Age

$17-20K
Average Annual Salary

% of migrants with tech skills

City	%
Bangalore	44%
Chennai	38%
Delhi	12%
Mumbai	11%

Source: LinkedIn data, Aspiring Minds, Exchange rate of ~70
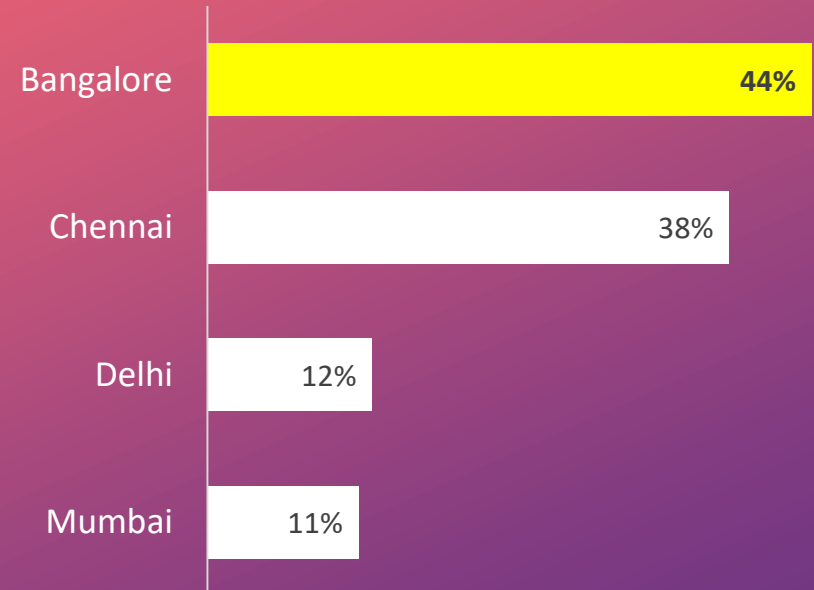
… with the most experienced engineers in India…

% WORKFORCE EXPERIENCE DISTRIBUTION

City	<3	3-5	5-10	10-15	>15
MUMBAI	17%	26%	31%	18%	8%
DELHI	16%	26%	35%	18%	6%
BANGALORE	14%	25%	33%	19%	8%

Legend: ■ <3 ■ 3-5 ■ 5-10 ■ 10-15 ■ >15

Source: LinkedIn data, Census 2011
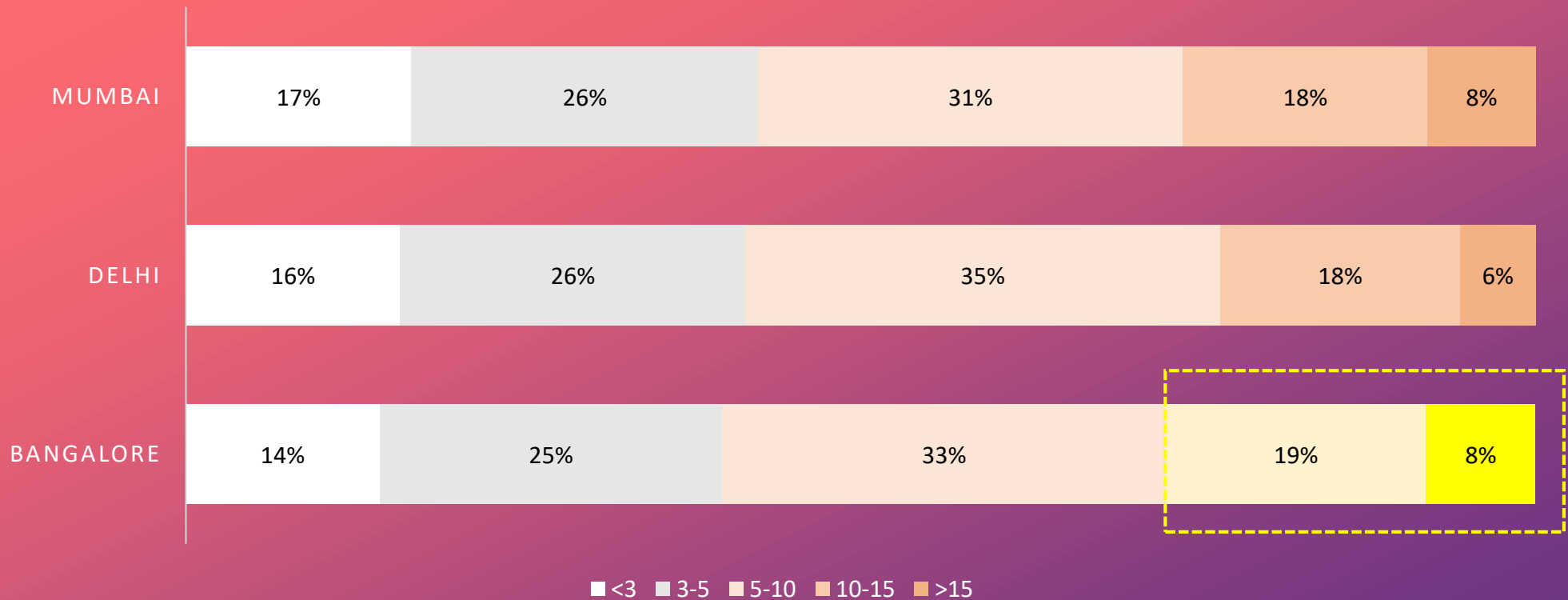
… and is the preferred R&D destination in India for ~50% of India's MNC's

Bengaluru and the rest of Karnataka house **400 R&D centres** and **85 chip designing houses**

60% of biotechnology companies in India have a base in Bengaluru

% of R&D Workforce
- Bangalore: 48%
- Rest of India: 52%

% of R&D Centres
- Bangalore: 39%
- Rest of India: 61%

🟨 **Bangalore**   ⬜ Rest of India
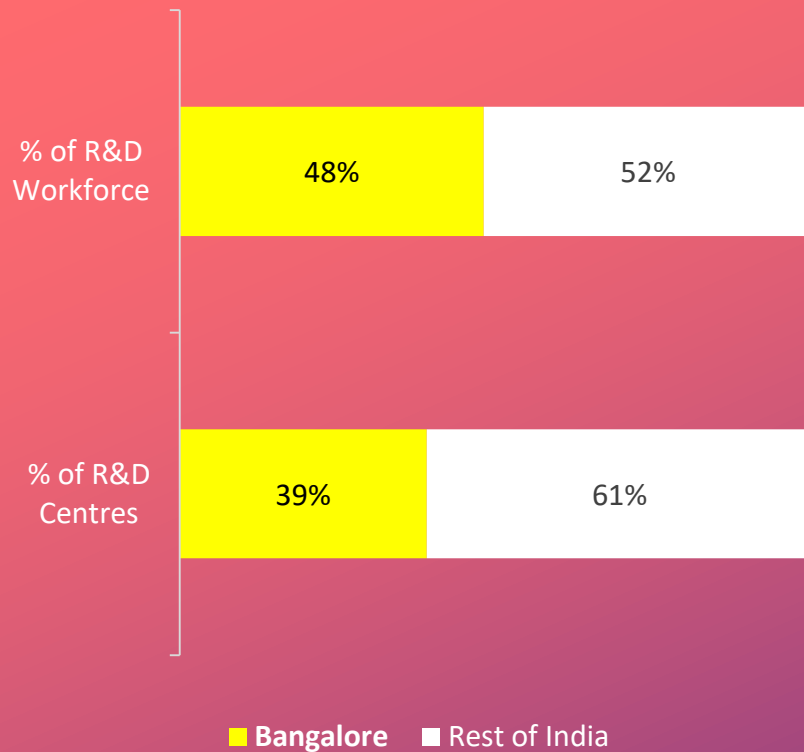
Kris Gopalakrishnan
Chairman
Axilor Ventures

"

The Bengaluru ecosystem is unique - R&D departments of startups, domestic and multinational corporations, academic and industry, defense, product and user organizations - all coexist in one metropolitan city. This means that future innovations are planned and developed in Bengaluru and also first used in Bengaluru. The talent in the city is hence up to date with even the developments that are being contemplated.

"

Bengaluru: An early adopter economy

Pankaj Mishra

Group Editor - New Economy,

Technology, and Startups

Network 18

"

Everytime there's a debate about what makes Bengaluru the hotbed for the startup ecosystem in India, the city's weather and its painfully unpredictable traffic snarls hog all the attention.

But as I have realized over the years, none of the above make Bengaluru really special. Like many great companies and startups, it's the culture that makes Bengaluru so liveable. **You're not judged by the clothes you wear or the brand of car you drive, what language you speak or what views you have.**

The city respects disruptive ideas and those who bring them to the table. **This bias for "the new thing", is something you'll spot everywhere in the city.** Some call it the root cause for a 'startup bubble' or irrational exuberance, but Bengaluru loves it, and thrives in the newness. Over the years, this hunger for seeking new, disruptive ideas has established Bengaluru as the place where some of India's biggest banks, auto companies and retailers come to make sense of the future.

From billionaires to failed startup founders, everyone is accessible and helpful. The emails to Nandan Nilekani or Kiran Mazumdar Shaw or even Dr. Devi Shetty, get answered within minutes or hours, irrespective of who you are. Several successful leaders, spend a lot of time meeting startups and mentoring promising founders. Venture Capitalists, angel investors, entrepreneurs—both failed and those with successful exits, and **some of the most brilliant technology minds of our times form the nerve centre of the startup ecosystem in Bengaluru.** This nerve centre is spread across the neighborhoods of Koramangala, Indiranagar and Whitefield, Sarjapur, and so on.

"

Bengaluru Has Most Founders In The Age Bracket Of 30-40 Years Old With >50% Of Founders Above The Age Of 30

52% of founders in Bengaluru are **30 years** or older, with an average age of **32 years**

Bengaluru

Age group	
>50	5%
40-50	12%
30-40	35% (32)
25-30	30%
<25	18%

Delhi

Age group	
>50	1%
40-50	11%
30-40	38% (32)
25-30	36%
<25	14%

Mumbai

Age group	
>50	1%
40-50	8%
30-40	38% (31)
25-30	31%
<25	21%

→ (xx) Average founder age (in years)

Source: Tracxn data sample
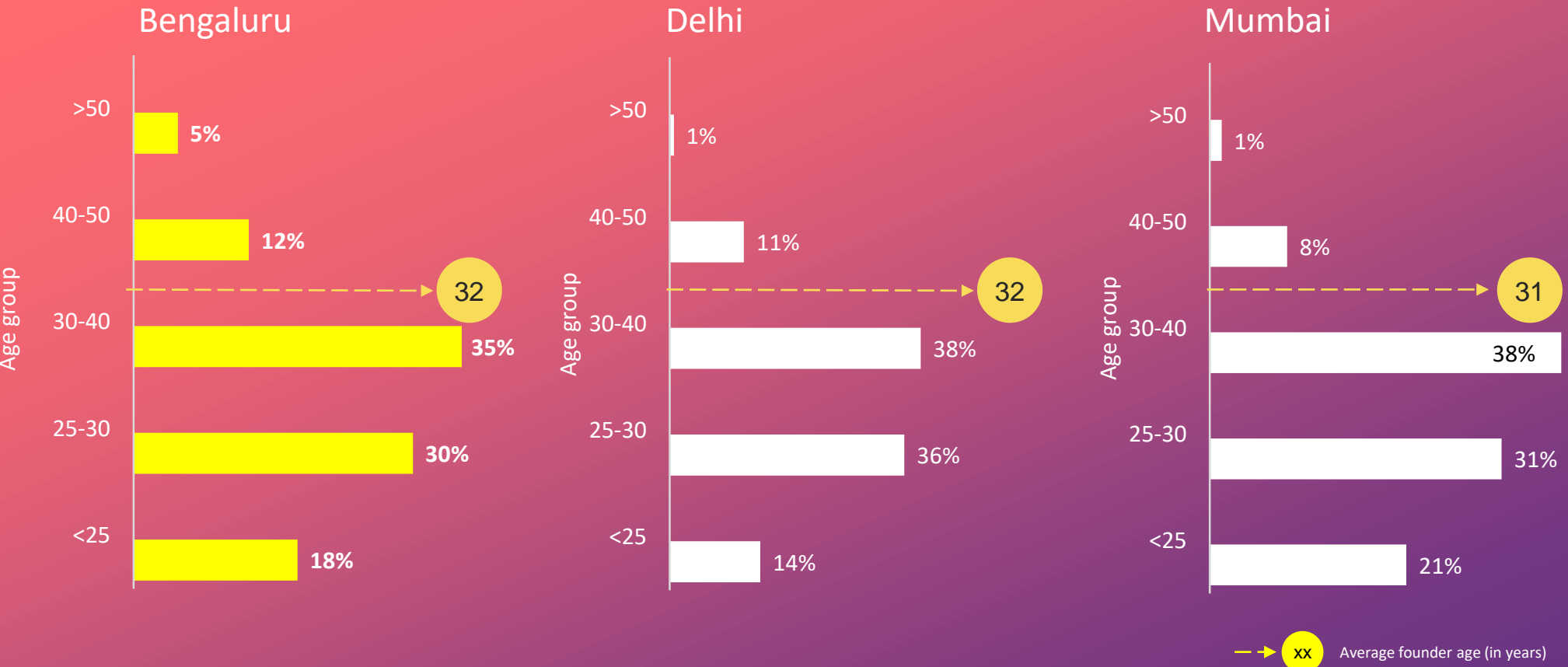
Bengaluru has the most experienced founders with average work experience of ~11 years

52% of founders in Bengaluru have **more than 10 years of experience** while starting up pointing to a trend of increasing participation in the ecosystem of a more experienced workforce

Average founder experience in Bengaluru is **11.4 years**, with **9.3 years** for Delhi and **8.6 years** for Mumbai

Average founder work experience (years)

Legend: Bangalore, Delhi NCR, Mumbai

	<5	5-10	10-15	15-20	>20
Bangalore	17%	30%	23%	15%	14%
Delhi NCR	26%	33%	21%	11%	8%
Mumbai	20%	32%	24%	12%	12%
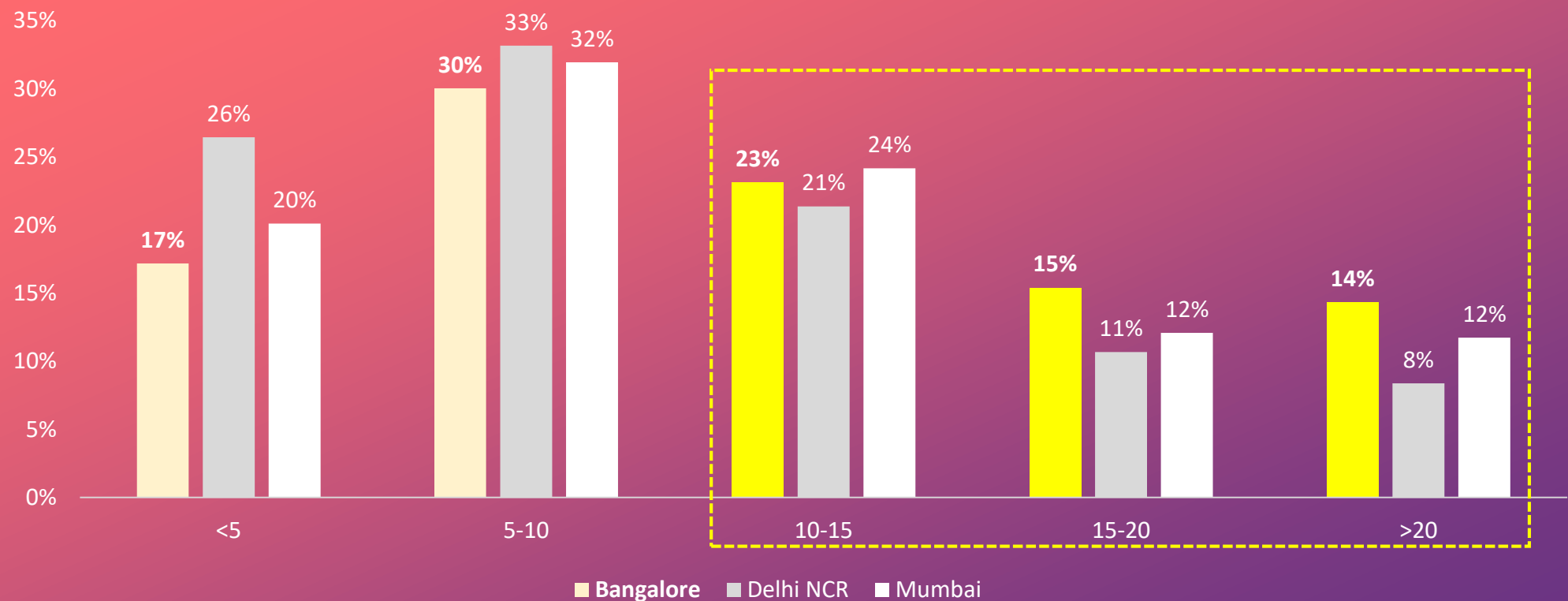
Bengaluru's unicorns have led to the creation of 2K+ new founders with more than 1100+ based out of the city itself
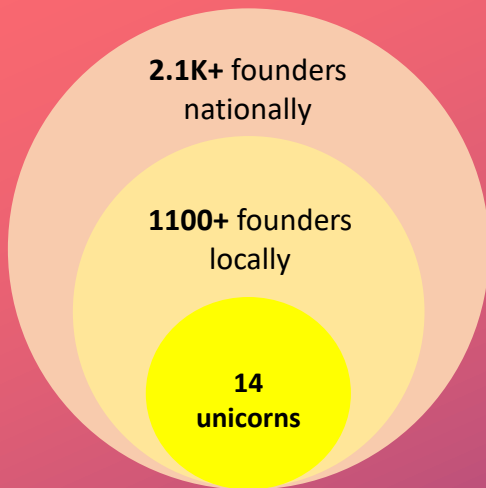
Bengaluru's unicorns have led to the creation of more than **2100 entrepreneurs** across India, of which **1100** started a venture in Bengaluru. This is the largest snowballing effect seen across all startup ecosystems in the country.

Bengaluru

2.1K+ founders nationally

1100+ founders locally

14 unicorns

Delhi

1.8K+ founders nationally

887 founders locally

9 unicorns

Mumbai

115 founders nationally

72 founders locally

5 unicorns

Bengaluru has not been called the startup capital of India without reason. One of the big reasons for the city's success in nurturing technology startups is the strong support from Government bodies and an involved participation through mentorship by experienced entrepreneurs.

Bengaluru has a fairly large number of technology professionals who have either been entrepreneurs or have led technology and engineering divisions in global corporations. **Budding founders get to interact with experienced founders**, helping them develop their ideas and crisply pitching their business propositions. This in turn has helped them raise capital and become successful entrepreneurs and give back to the ecosystem.

Arvind Lakshmikumar

Founder & CEO | Tonbo Imaging

Expat founders and investors have also participated actively in the new start-up economy

Lizzie Chapman
Co-Founder
Zest Money

" As a fintech, we are always straddling the tech world of Bengaluru and financial world of Bombay. **But having our hub in Bengaluru was never up for debate.** We knew we would need to hire hundreds of talented skilled engineers and data scientists and Bengaluru would be the place they would want to be based.

Talent attracts talent and the community of tech talent here is one of the best in the world. It leads to fast idea sharing and constant positive reinforcement "

Greg Moran
ZoomCar
Founder

" As a foreign founder, I've been based in Bengaluru since the beginning of my journey and there is no doubt in my mind that Bengaluru remains the pioneer when it comes to Indian cities that facilitate the success of startups. **Bengaluru provides an amazing network access given the incredibly diverse ecosystem of startup founders, engineers, designers, etc.** The city is also on the front lines of new ideas and creativity. Ultimately, great startups are about amazing people and Bengaluru certainly helps ensure this can become a reality. **There's simply no better place to be in the Indian technology ecosystem.** "

Hemant Mohapatra
Lightspeed Partners

" Returning to India after 15 years in the US, much of it in the silicon valley at companies like Google and Andreessen Horowitz, it was a clear choice for me as a venture investor to settle in Bengaluru.

Bengaluru has the best talent pool, entrepreneurial spirit and **the ecosystem of investors and senior technology leaders needed to guide founders.** "

Bengaluru Has Recorded More Tech-startups Founded Since 2016 Than Mumbai & Delhi Combined
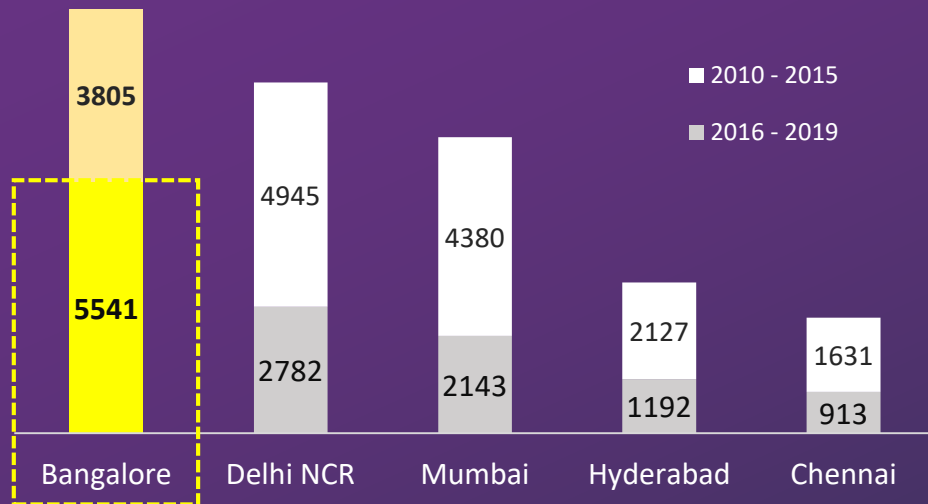
Since 2010, **31K+** tech startups been founded in India

Overall, Bengaluru has helped birth the **most startups in the country**

of Tech-Startup Companies Founded
since 2010

- ■ 2010 - 2015
- ■ 2016 - 2019

City	2010-2015	2016-2019
Bangalore	3805	5541
Delhi NCR	4945	2782
Mumbai	4380	2143
Hyderabad	2127	1192
Chennai	1631	913

Since 2016, Bengaluru has completely outpaced other Indian cities to take the mantle of India's premier startup hub, registering more new tech startups than Delhi & Mumbai combined.

Bengaluru has created a strong culture of technology-driven innovation - **from HAL and BEL in the 1960s, to Infosys and Wipro in the 1990s to the startups and unicorns of today.** Each generation stood upon the shoulders of the giants who came before them and contributed to the ecosystem conducive to the cosmopolitan ethos of this city.

Bengaluru has become synonymous with India's tech story and the city's startups have taken over this mantle. **From masala dosas to machine learning, from filter coffee to fintech - Bengaluru bestrides technology and tradition with consummate ease.**
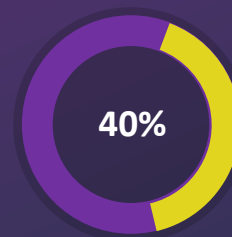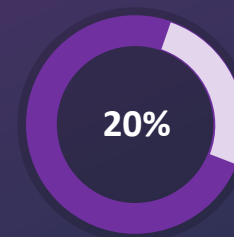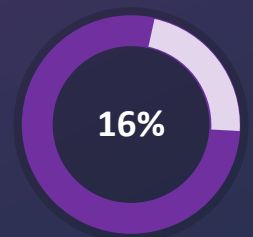
Siddarth Pai

Managing Partner

3one4 Capital

% of Companies Founded since 2016

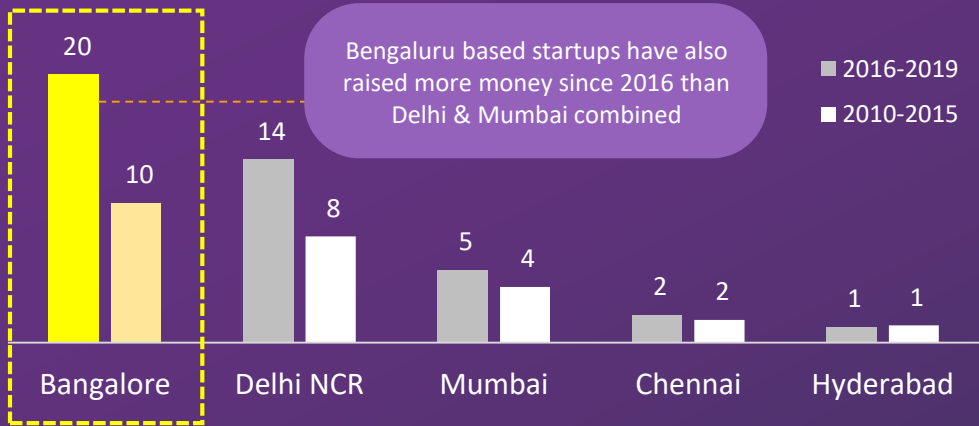**40%** Bengaluru

20% DELHI

16% MUMBAI

Source: Tracxn

Late stage funding has largely been concentrated in Bengaluru & Delhi, with Bengaluru significantly outperforming all other cities in the past 4 years

$30.57Bn raised by Bengaluru based startups since 2010, **$20.1Bn** in just the past 4 years

Total Venture Funding Raised ($B) *since 2010*

Bengaluru based startups have also raised more money since 2016 than Delhi & Mumbai combined

- 2016-2019
- 2010-2015

	Bangalore	Delhi NCR	Mumbai	Chennai	Hyderabad
2016-2019	20	14	5	2	1
2010-2015	10	8	4	2	1

% Of Funding Raised Since 2016

- **47%** Bengaluru
- **32%** DELHI
- **13%** MUMBAI
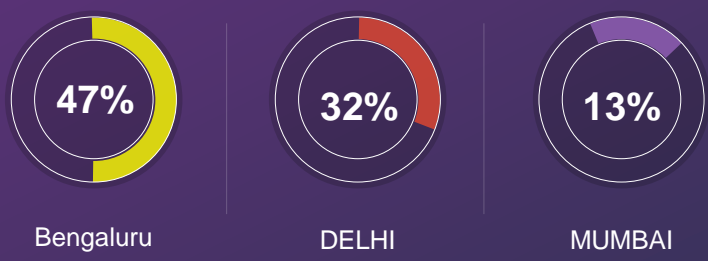
Stage wise venture funding ($B) *since 2010*

Series D+ venture funding in Bengaluru has been 70% more than its nearest peer, Delhi

$14.7Bn — Bangalore

$8.73Bn — Delhi

- Seed
- Series-A
- Series-B
- Series-C
- Series-D
- Series-D onwards

Cities: Bangalore, Delhi, Mumbai, Chennai, Hyderadabad

Source: Tracxn
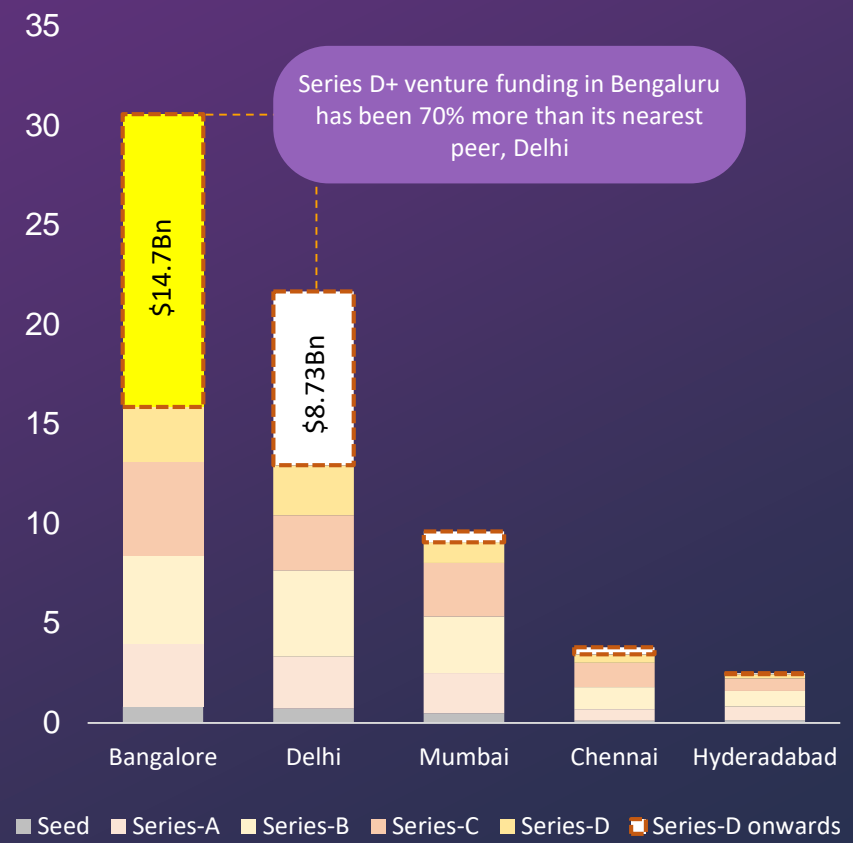
Bengaluru's startups command a premium for their quality

Average funding size across all rounds in Bengaluru ranged **20-40% more than peer cities**

Average funding amount per funding round in 2019 ($M)

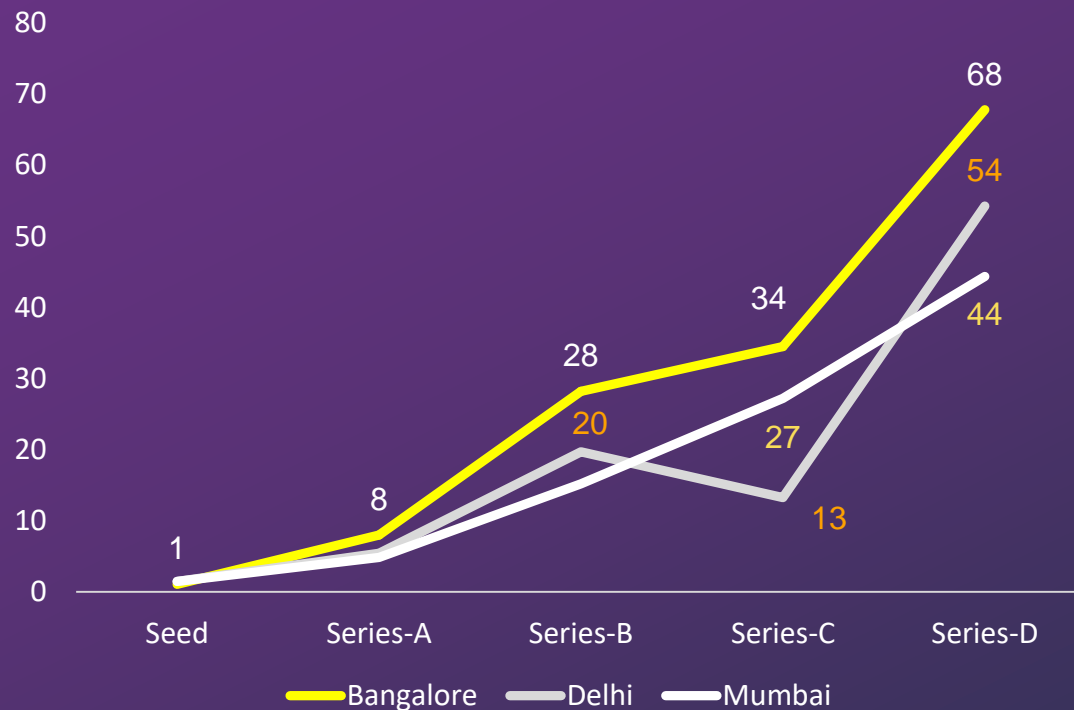|	Seed	Series-A	Series-B	Series-C	Series-D
Bangalore	1	8	28	34	68
Delhi			20	27	54
Mumbai				13	44

— Bangalore — Delhi — Mumbai

Exit valuations of tech startups have a direct correlation with the quality and depth of the technology IP of these startups. It's not surprising therefore that Bengaluru, with an abundance of cutting-edge technology talent, solid entrepreneurs, and the largest early-stage venture capital ecosystem in India, sees premiums in VC funding compared to any other city.

Samir Kumar

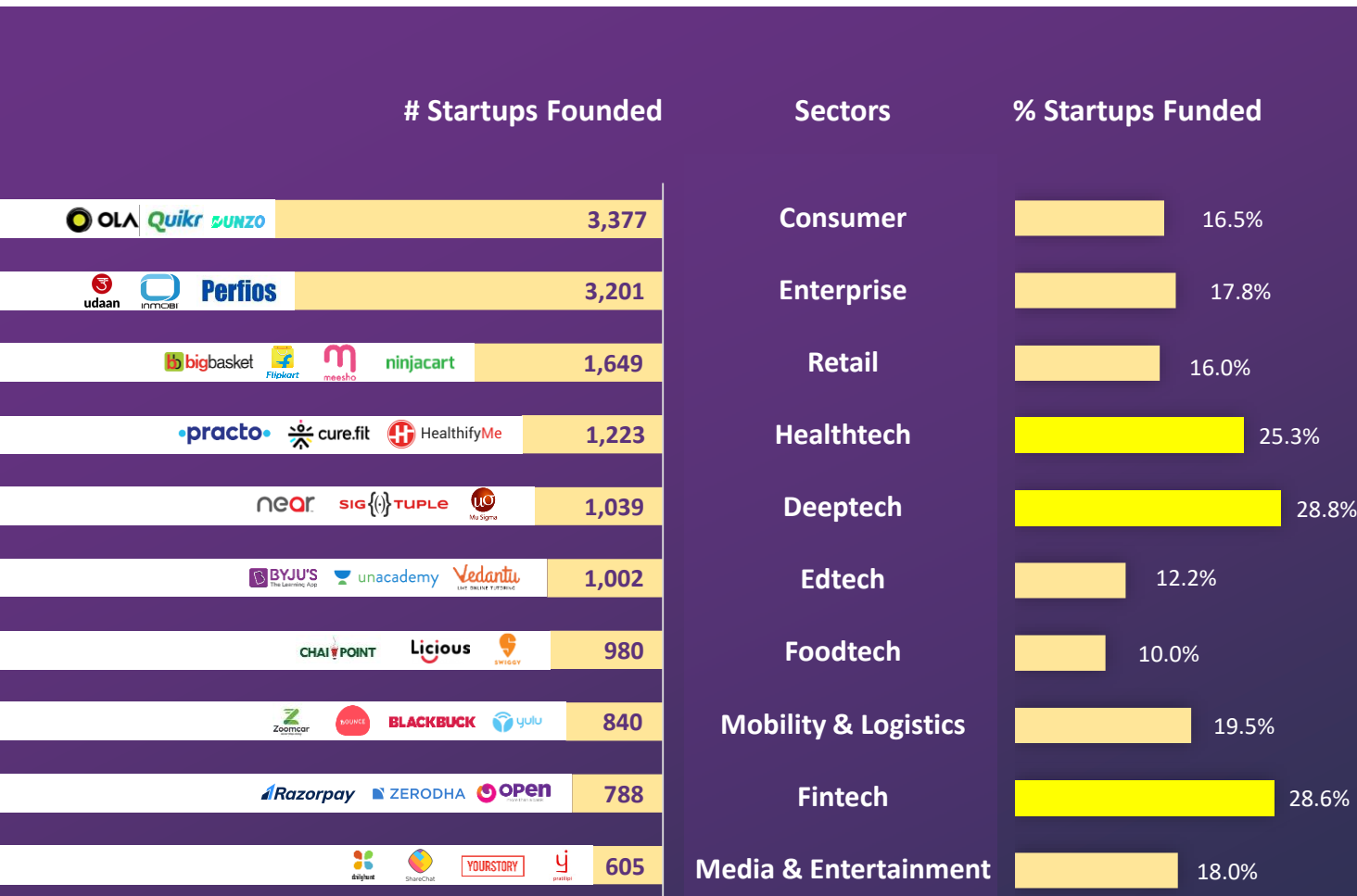General Partner & Managing Director,

Inventus India

Bengaluru is home to a robust dispersion of innovation

1 in every 4 companies in the Deep Tech, Health Tech, and Fintech sectors are able to raise money in Bengaluru

Startups Founded

Companies	# Startups Founded
OLA, Quikr, DUNZO	3,377
udaan, inmobi, Perfios	3,201
bigbasket, Flipkart, meesho, ninjacart	1,649
practo, cure.fit, HealthifyMe	1,223
near, SIG TUPLE, Mu Sigma	1,039
BYJU'S, unacademy, Vedantu	1,002
CHAI POINT, Licious, SWIGGY	980
Zoomcar, BOUNCE, BLACKBUCK, yulu	840
Razorpay, ZERODHA, OPEN	788
dailyhunt, ShareChat, YOURSTORY	605

Sectors — % Startups Funded

Sectors	% Startups Funded
Consumer	16.5%
Enterprise	17.8%
Retail	16.0%
Healthtech	25.3%
Deeptech	28.8%
Edtech	12.2%
Foodtech	10.0%
Mobility & Logistics	19.5%
Fintech	28.6%
Media & Entertainment	18.0%

> " Bengaluru has had a culture of tech innovation for almost five decades now. The ecosystem is quite evolved and robust with a lot of successful entrepreneurs and tech executives who have created investor pools that support a diverse set of tech startups in deep tech, health and fintech among others which then **dovetails the enterprises with a wide array of venture and private equity players** who have been active in the ecosystem for at least a couple of decades now.
>
> **Dr. Vijay Chandru,**
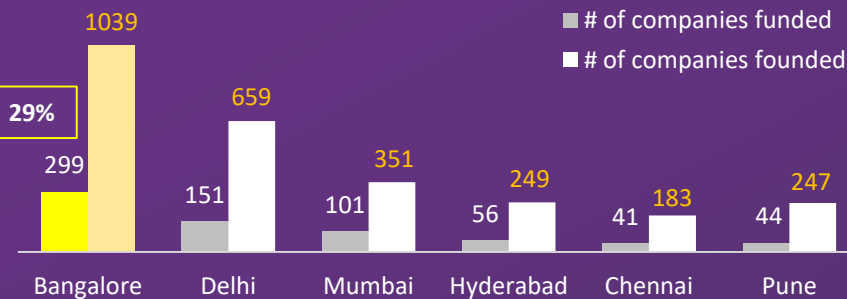> INAE Distinguished Technologist,
> Indian Institute of Science

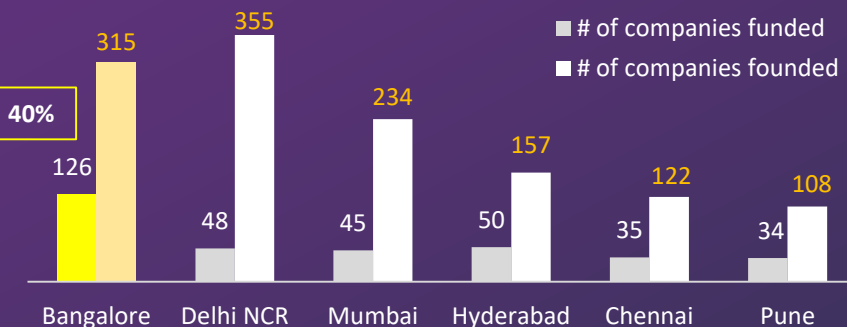# With the highest concentration of specialized talent, Bengaluru is the home of Deep Tech and IP development

Bengaluru's Biotech cluster is uniquely differentiated through its reliance on data science and computational modeling. **Bio-IT is at the fulcrum of ideation and has generated a vibrant ecosystem of medtech, genomic sequencing-based diagnostics, CROs and hardcore drug discovery startups.** The presence of multiple institutes created an invincible academic milieu that both supports and spawns new start-ups through in-house incubators. Bengaluru is undoubtedly the most diverse and most valuable biotech innovation hub in the country.

Kiran Mazumdar Shaw, CMD | **Biocon**

of Deep Tech Companies

- # of companies funded
- # of companies founded

City	Funded	Founded
Bangalore	299 (29%)	1039
Delhi	151	659
Mumbai	101	351
Hyderabad	56	249
Chennai	41	183
Pune	44	247

Bengaluru based deep-tech & life sciences startups have the highest hit rate of attracting investors due to the vast presence of best-in-class academia and talent

of Life Science Companies

- # of companies funded
- # of companies founded

City	Funded	Founded
Bangalore	126 (40%)	315
Delhi NCR	48	355
Mumbai	45	234
Hyderabad	50	157
Chennai	35	122
Pune	34	108

Sectors

- Drug Discovery
- Drones
- Security & Surveillance Technology
- Big Data/ Industrial IOT
- Logistics Tech
- Diagnostics
- Tissue Engineering
- Semiconductor Devices

Companies

bugworks, ZUMUTOR BIOLOGICS, AUS, Asteria Aerospace, TONBO imaging, near, Flutura, netradyne, LOCUS, SIG TUPLE, FARCAST BIOSCIENCES, the Pandorum, αICs

Source: Tracxn
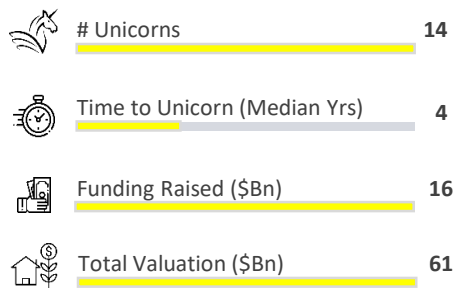
India today has 32 unicorns cumulatively valued at $106B, with Bengaluru leading the way in their growth, value addition, and momentum

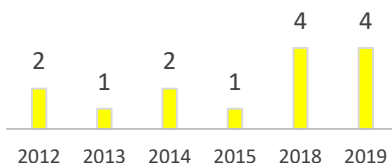**44%** of Unicorns in India today are from Bengaluru
57% of India's cumulative Unicorn Valuation is in Bengaluru

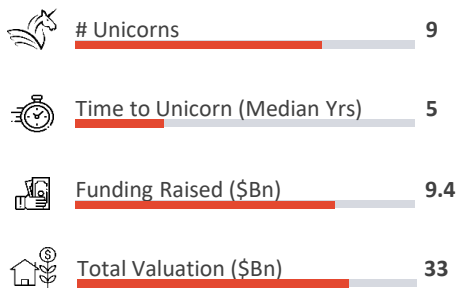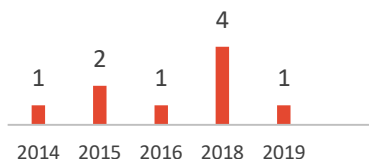## Bengaluru

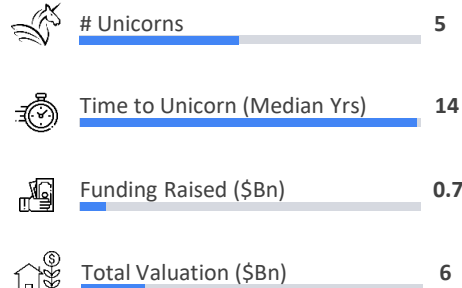|	
# Unicorns	14
Time to Unicorn (Median Yrs)	4
Funding Raised ($Bn)	16
Total Valuation ($Bn)	61

Unicorn Timeline

2012	2013	2014	2015	2018	2019
2	1	2	1	4	4

Flipkart, OLA, BYJU'S The Learning App, SWIGGY, udaan, Mu Sigma, PhonePe, bigbasket, BLACKBUCK *, OLA ELECTRIC, ZILINGO *, INMOBI, Quikr, happiest minds The Mindful IT Company

Delhi

# Unicorns	9
Time to Unicorn (Median Yrs)	5
Funding Raised ($Bn)	9.4
Total Valuation ($Bn)	33

Unicorn Timeline

2014	2015	2016	2018	2019
1	2	1	4	1

Paytm, OYO, zomato, Paytm mall, Delhivery, RIVIGO, policybazaar, hike, snapdeal

Mumbai

# Unicorns	5
Time to Unicorn (Median Yrs)	14
Funding Raised ($Bn)	0.7
Total Valuation ($Bn)	6

Unicorn Timeline

2018	2019
1	4

BillDesk, DREAM11, CitiusTech, bookmyshow, PayMate

Others

# Unicorns	4
Time to Unicorn (Median Yrs)	11
Funding Raised ($Bn)	0.9
Total Valuation ($Bn)	7

Unicorn Timeline

2016	2018	2019
1	1	2

freshworks, ZOHO, druva, icertis

The city continues to support the highest momentum scale-ups within the Unicorn stable

BYJU'S — The Learning App

- 3x YoY revenue growth
- Profitable on a full year basis
- 60% of Byju's students are outside top 10 cities
- Most valuable Unicorn in Edtech globally

Paid Subscribers

| June 2018 | 1.25M+ |
| May 2019 | 2.4M+ |

udaan

- 12x YoY growth in value of transactions processed
- Network of 3Mn Kirana Stores
- Buyers are from 1000+ towns in India
- Became a Unicorn in 2 years of incorporation

Retailers

| 2018 | 150K+ |
| Aug 2019 | 3M+ |

SWIGGY

- 2.5x YoY growth in orders per day
- Expanded to 600 towns in 2019
- YoY pace of onboarding increased from 1 city / 60 days to 4 cities / 1 day

Restaurant Providers

| Dec 2018 | 25K + |
| Nov 2019 | 1.25L + |

PhonePe

- 5x YoY revenue growth in 2019
- 70% of PhonePe's users are from Tier 2 and Tier 3 cities
- Valued at a minimum of $7Bn as per a Morgan Stanley Report

Digital Transactions

| Nov 2018 | 1B+ |
| Apr 2019 | 2B+ |

Source: Tracxn, MCA, News Articles

Bengaluru is the undisputed hub for nurturing high-growth Soonicorns, with more Soonicorns than Delhi & Mumbai combined

#Soonicorns

City	#	
Bengaluru	**64**	*(43%)*
Delhi	34	*(23%)*
Mumbai	28	*(19%)*
India	148	

Companies shown: Razorpay, meesho, near, Licious, digit, ATHER, open, DUNZO, ninjacart, TREEBO Hotels, ShareChat, BOUNCE, practo, cure.fit, Perfios, CRED, SIG TUPLE, BharatPe, dailyhunt, cleartax, Zoomcar, rapido, MEDLIFE

What Constitutes a Soonicorn?

1) $100M valuation OR **$50M+** Funding
2) Founded post **2000**
3) Venture funded
4) Investment raised post 2015

Reasoning for the filters

1) Unicorn potential in the next 2 years
2) Growth has not plateaued
3) Venture capital has a high-growth bias
4) Funding momentum to facilitate growth

YEARLY CUMMULATIVE SOONICORNS PER CITY

Bengaluru has seen an unprecedented growth in companies becoming Soonicorns in the past 2 years

Data points (Bangalore line): 2 (2014), 7 (2015), 13 (2016), 18 (2017), 34 (2018), 64 (2019)

Legend: Bangalore, Delhi NCR, Mumbai, Others
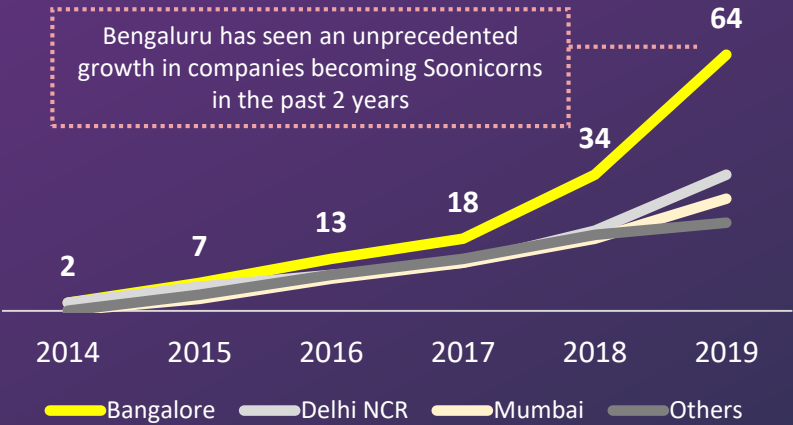
Time to Soonicorn (years)

Bengaluru	Delhi	Mumbai	Others
4	5	7	8

Source: Tracxn

Bengaluru is the destination to build India's next market leaders

Current Stage of Soonicorns

Series	Bangalore
Series A	2
Series B	17
Series C	20
Series D	16
Series E	4
Series F	1
Series G	0

Legend: Others | Mumbai | Delhi NCR | Bangalore

Investor confidence in growth stage startups is highest in Bengaluru. Larger rounds at early stages is a testament to the companies' growing revenues, market leadership potential, high growth opportunities, deep IP-entrenchment, and more

Total funding raised by Soonicorns
(in USD Bn)

40% of cumulative last round raises across all Soonicorns happened in Bengaluru

Legend: Total Funding | Latest Funding

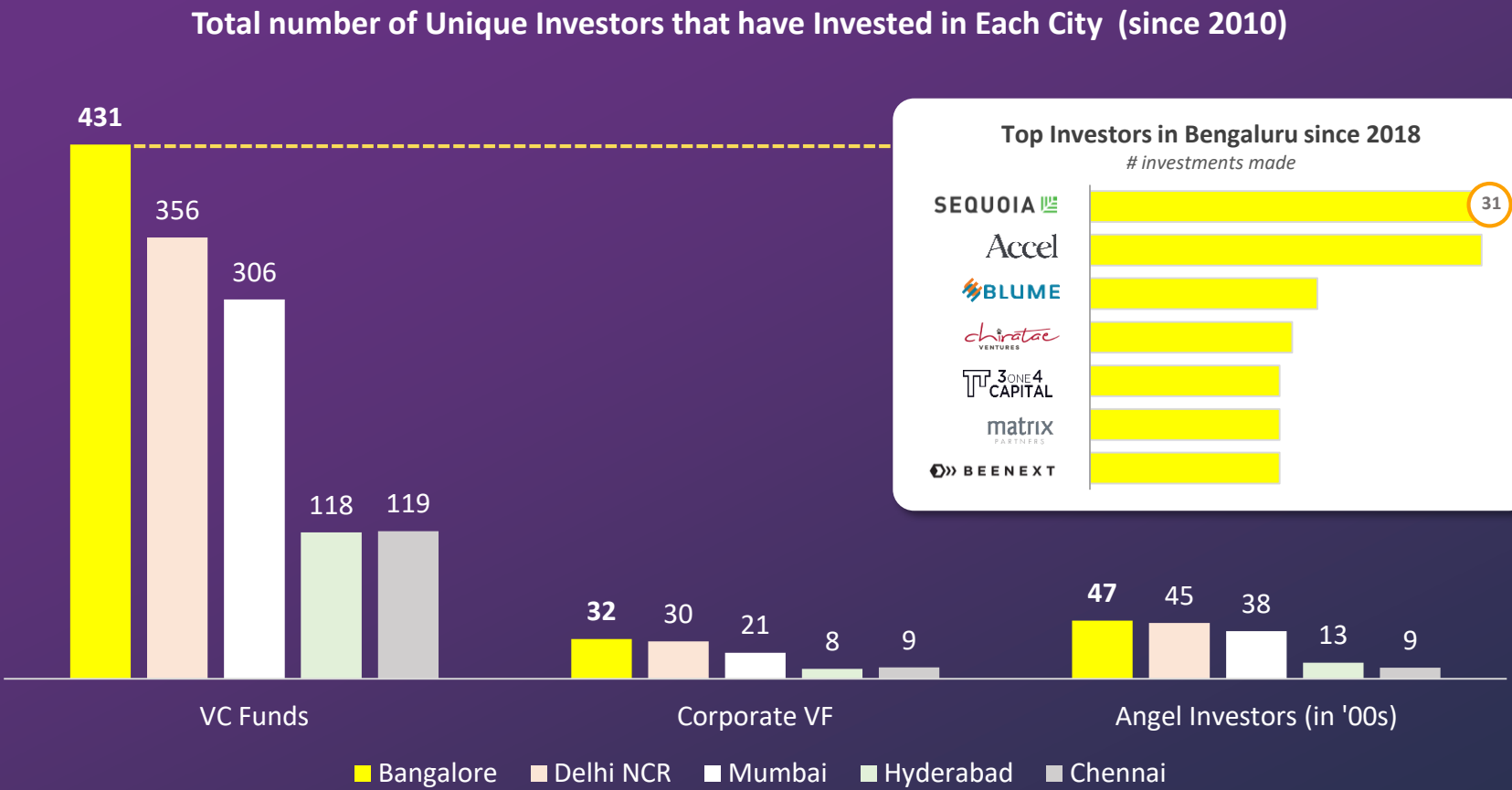|	Bangalore	Delhi NCR	Mumbai	Others
Total Funding	6.92	5.12	2.98	2.82
Latest Funding	2.7	1.5	0.8	1.2

Source: Tracxn
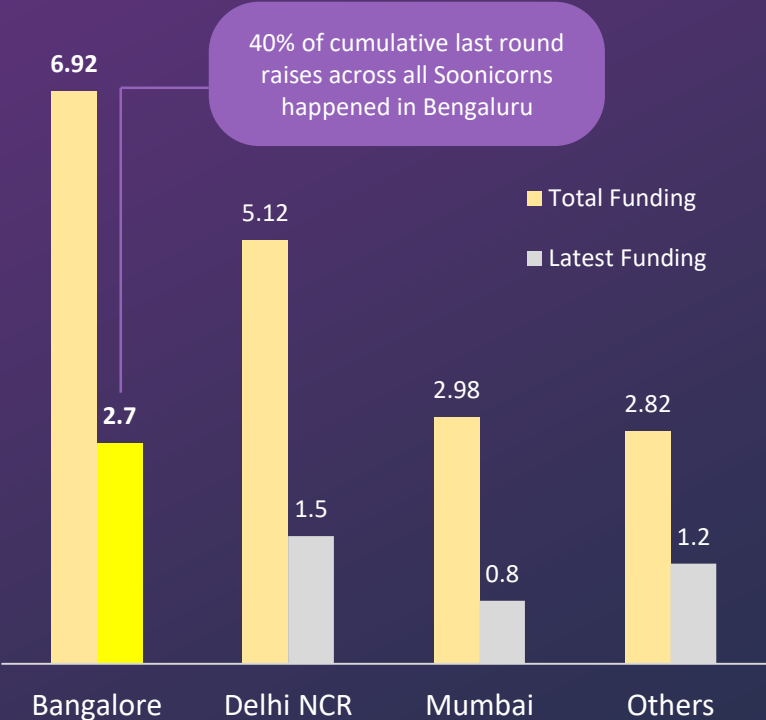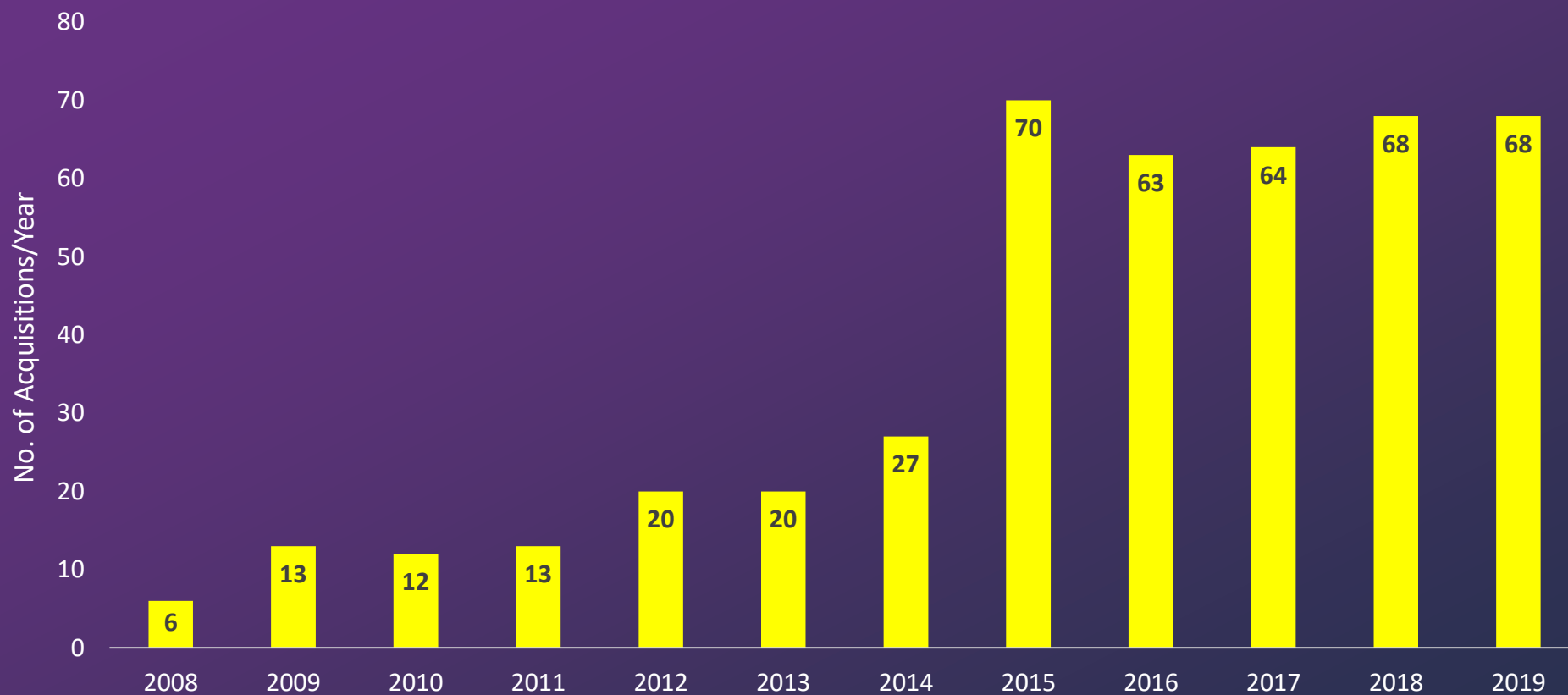
Bengaluru has attracted the most diverse set of Investors in India

Investors in Bengaluru by the numbers:
431 VC Funds, **4,687** Angel Investors, and **32** Corporate Venture Funds

Total number of Unique Investors that have Invested in Each City (since 2010)

Top Investors in Bengaluru since 2018
 # investments made

SEQUOIA — 31
Accel
BLUME
chiratae VENTURES
3ONE4 CAPITAL
matrix PARTNERS
BEENEXT

VC Funds: 431, 356, 306, 118, 119

Corporate VF: 32, 30, 21, 8, 9

Angel Investors (in '00s): 47, 45, 38, 13, 9

■ Bangalore ■ Delhi NCR ■ Mumbai ■ Hyderabad ■ Chennai

Source: Tracxn

Bengaluru has seen steady M&A activity over the past 5 years

Total No. of Acquisitions in Bengaluru (CY 2008-2019): 442

No. of Acquisitions/Year

Year	Value
2008	6
2009	13
2010	12
2011	13
2012	20
2013	20
2014	27
2015	70
2016	63
2017	64
2018	68
2019	68

Source: Tracxn

Bengaluru: India's Startup Capital

This city has been the stage for a generational rise in middle-class India - **hundreds of thousands of citizens have benefited from Bengaluru expanding into a $120Bn GDP economy.** *With over 100 thousand PhDs, top technical talent from across the country, and 2 million people now working in technology, this city has also become amongst the most open and welcoming cultures in India.* **A true ecosystem built by our best people as an example of what India can contribute to the world, Bengaluru will lead India as the epicenter of innovation in the age of disruption,** *and I am truly proud to stand as a Bengalurean to welcome this future.*

Mohandas Pai
Chairman | **Aarin Capital**

Bengaluru is the youngest city and everybody is a techie. The adoption rate is much faster. **So, if one really wants to test their product at scale, there is no better place than Bengaluru.** It's a great test market for any technology.

Bhavish Aggarwal
CEO | OLA

Bengaluru has emerged as the city of choice for tech entrepreneurs over the last 10-15 years and now boasts of several unicorns including Flipkart, Ola, Byjus, Phonepe, and Swiggy. This has created an ecosystem of Top VCs who all have significant presence in Bengaluru. **The flywheel of value creation is now strongly in motion with an ecosystem of founders, talent and VCs all converging in the city.**
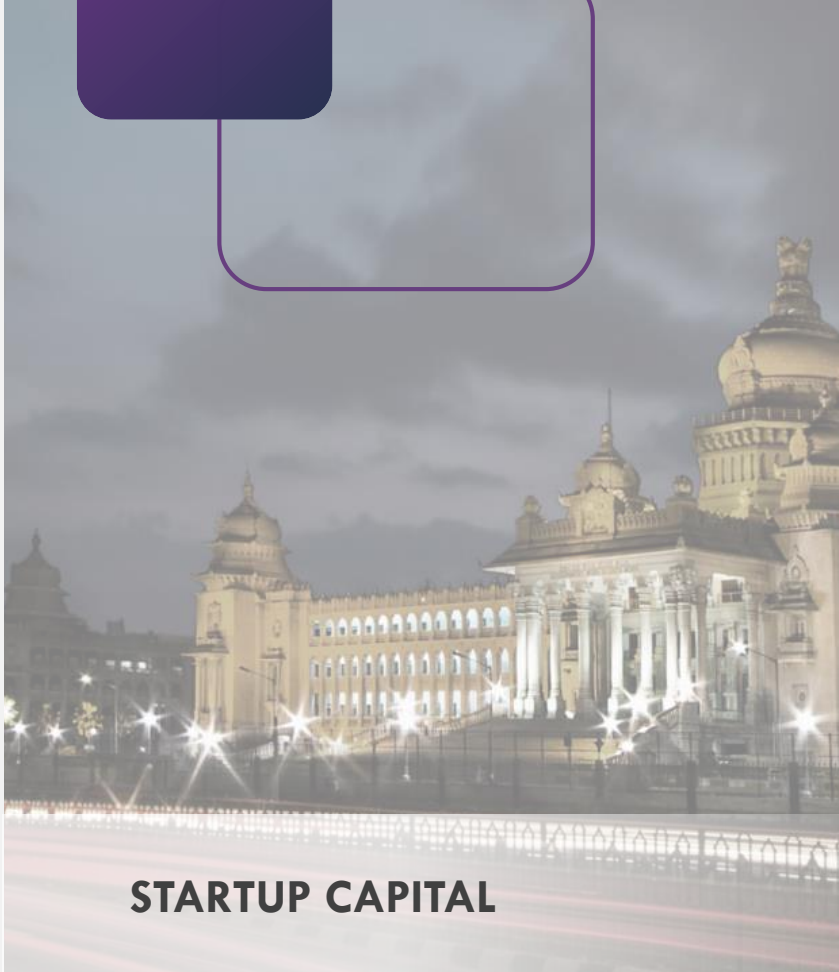
Ravishankar G V
Sequoia Capital

CHAPTER 2

STARTUP CAPITAL

▶ **INNOVATION ECOSYSTEM**

India is a preferred GCC (Global Capability Center) destination with 25-30% of Fortune 500 companies having established GCC's in India

India is a key location for GCC setups, with **~1,250 GCCs** in 2018 and 130-150 Fortune 500 companies having presence here
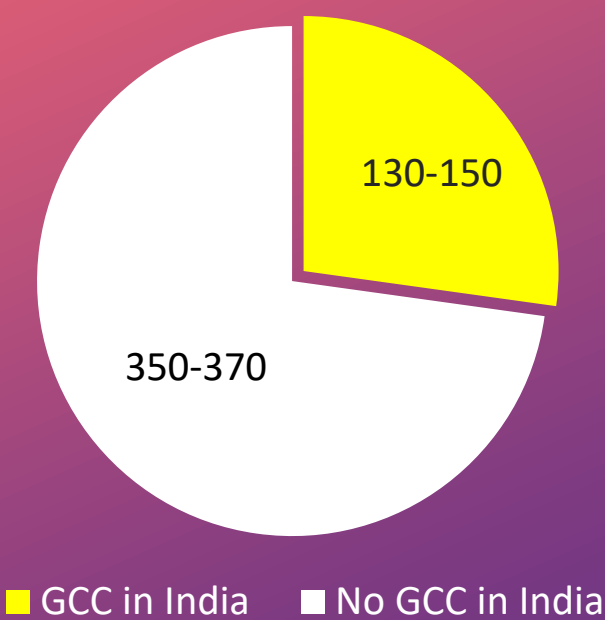
IT remains the primary function to be delivered followed by business processes. However, in the last 2-3 years, multiple ER&D CoEs have been established by leading MNCs

Number of GCC's in India

Year	Number
2013	875
2014	900
2015	975
2016	1,000
2017	1,100
2018	1,250
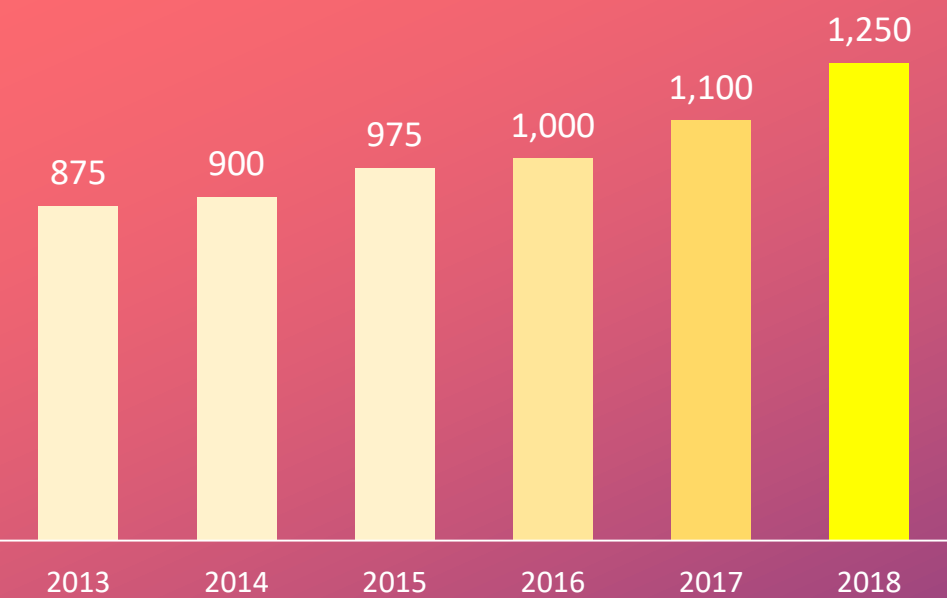
India GCC presence of Fortune Global **500** Companies

- 130-150 — GCC in India
- 350-370 — No GCC in India

Source: NASSCOM, ANSR

# Bengaluru is the most preferred GCC location in India with 34% of GCC's located here

Bengaluru accounts almost **1/3rd of the total GCCs in India**. All major verticals have a strong presence in the city

Several major players have already established presence in Bengaluru with the large IT professional crowd acting as a big draw for companies

Geographic distribution of GCC's in India

- Bangalore — 34%
- NCR — 16%
- Hyderabad — 13%
- Pune — 12%
- Mumbai — 12%
- Chennai — 10%
- Others — 3%
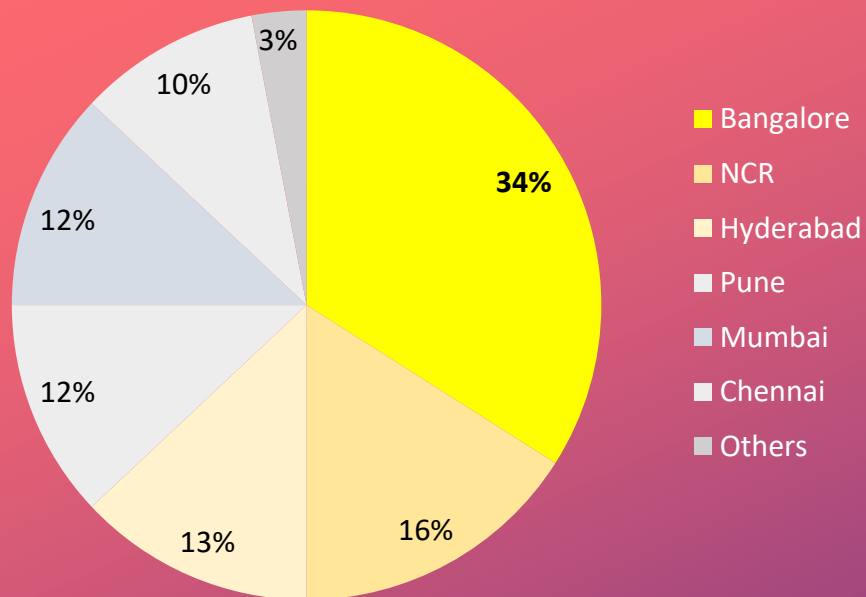
Further 44-48% of the Fortune 500 GCCs are based in Bengaluru

Mercedes-Benz, Boeing, Walmart, Adobe, GE, Shell, ABB, Honeywell

GCC's are key contributors to driving innovation in the startup ecosystem

The GCC – Startup engagement is becoming a **mainstream operating model for global enterprises to advance their innovation agenda**. This is evident in a large number of corporate accelerators being established by GCCs as they look for 'startup' solutions for enterprise problems.

They can bring **subject matter expertise and business contextual knowledge** of global companies which start-ups can benefit from as they gather insights from GCCs on how to be more successful on a global canvass.

GCCs represent the growing universe of global companies that **present opportunities for start-ups to engage with large companies** with relative ease.

They are also creating a **high-quality talent pool for startups to hire from**. Many start-ups are being founded by GCC employees.

Academic Institutions contribute significantly to the start-up ecosystem

Bengaluru is home to 800+ colleges, out of which 100+ are Engineering colleges

Home to key academic institutions - IISc, IIM-B, IIIT-G, PESIT

90K+ Engineering Graduates every year

Key academia numbers from students at IISc, IIM-B, IIITB, PESIT, DERBI, NSRCEL

No. of patents held by startups from these institutions: **56**

No. of startups that have emerged from these institutions: 815+

No. of startups that used institutions' tech/research: 34

No of entrepreneurs inspired/jobs created: 53K+

No. of startups that have exited: 9

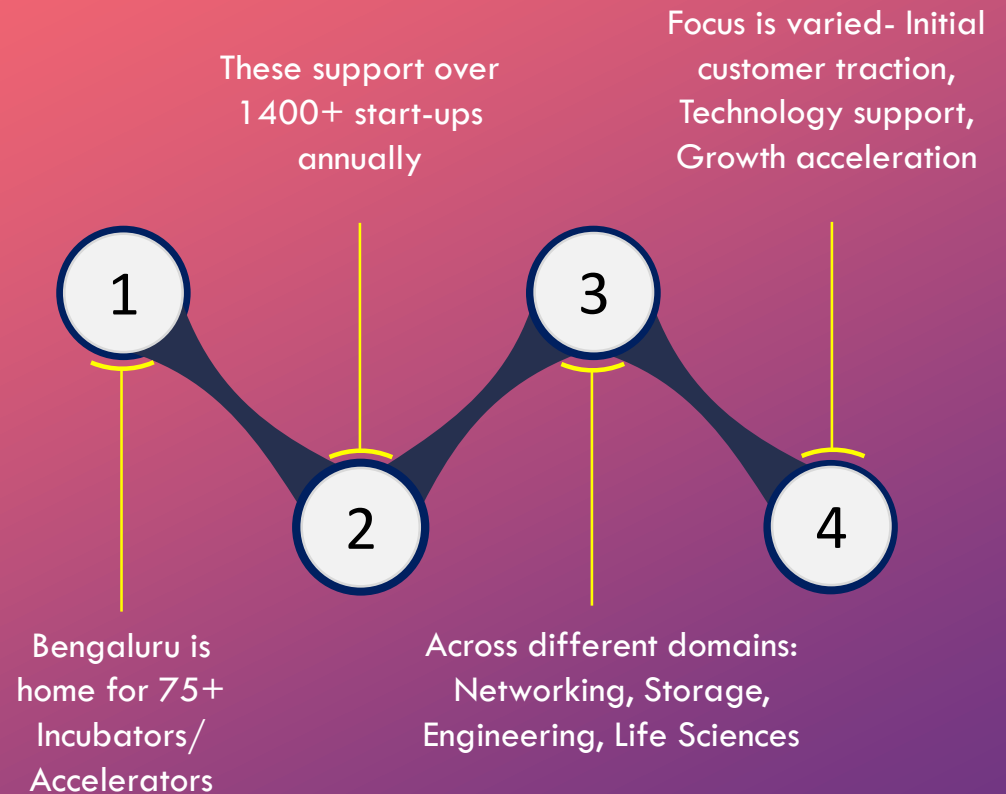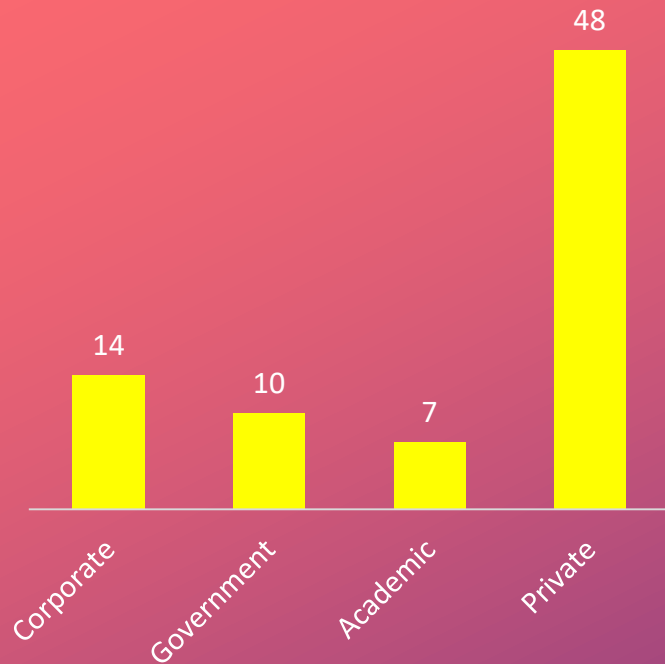**Prof. S Sadagopan**
Director,
IIIT Bengaluru

"

Bengaluru has an ecosystem of globally reputed high-quality academic Institutes - IISc, IIITB, NLSUI, NIMHANS, IIITB. IIITB had seen students pursuing entrepreneurial route from its inception back in 2000. In the very first batch we had students founding startups, of which one is still thriving 19 years later. The trend continues today. There are 64 start-ups that have IIITB alumni as a founder in varied areas including AI, Analytics, Ecommerce, Sustainability and others!

"

Accelerators/Incubators provide great fillip to the Innovation Ecosystem

No. of Accelerators/ Category

Corporate: 14
Government: 10
Academic: 7
Private: 48

1 Bengaluru is home for 75+ Incubators/ Accelerators

2 These support over 1400+ start-ups annually

3 Across different domains: Networking, Storage, Engineering, Life Sciences

4 Focus is varied- Initial customer traction, Technology support, Growth acceleration

The ELEVATE programme has provided early stage developmental capital to startups helping de-risk innovation

The ELEVATE programme provides capital upto **INR 5M** for product development to early stage ventures thereby de-risking R&D spend

Companies apply online and are selected through a simple **4 stage screening process**

358
companies funded so far in 3 years of the programme

₹690M
Disbursed as grants for product development

82%
companies from Bengaluru region

25+
companies have raised follow up capital within just 3 years since launch of the initiative

The Karnataka Innovation Authority (KIA) bill has created the first of its kind pan-sector regulatory sandbox

A regulatory sandbox is a mechanism for **granting certain exemptions and modifications** to existing laws and regulations for **firms employing emerging technologies**, while **retaining oversight and control over the deployment** of such technologies.

In a first of its kind sector agnostic policy in the country, the Karnataka government launched the **Karnataka Innovation Authority bill** under which the KIA can accept applications of new age companies and **grant exemptions/make modifications to existing laws on a pilot basis.** This can then be formalized as a new set of laws if the pilot proves to work in the interest of all stakeholders.

Sectors which could potentially benefit from sandboxes

Mobility

E-commerce

Logistics

Fintech

Spacetech

Biotech

Global examples of sandboxes

UK launched a sandbox aimed at fintech players in 2015, 89 applications expected till date

Singapore launched a fintech sandbox in 2016 with experimentation periods of 6-9 months

US launched a regulatory sandbox to promote fintech development through the CFPB

Apart from these, Bengaluru's ecosystem has also benefited from several other policy interventions aimed at promoting startups

1 **Patent reimbursement incentive** was launched under which a startup can avail up to INR 2 lakh for a domestic patent and INR 10 lakh for an international patent

2 **A dedicated startup cell** was set up and an entrepreneurship scheme was launched under which INR 30,000 per month would be provided to any entrepreneur for a year while they incubate their idea with the startup cell

3 A **INR 10 Cr fund for women entrepreneurs** was set up under which the Karnataka government provided funding upto INR 50 lakhs

4 As part of the Karnataka Startup vision, **47 innovation hubs, 6 centers of excellence and 5 technology business incubators** have been set up

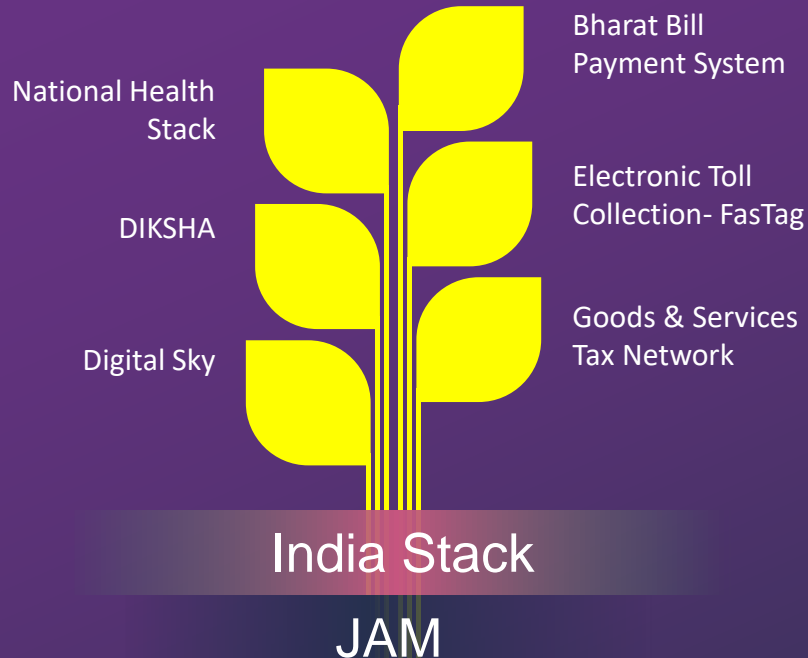# Bengaluru is building public platforms for the world

20+ countries looking to adopt the **Identity Platform (MOSIP) developed at IIIT-B**

Developing Health Stack that will change the way healthcare is provided for a billion people

Driving innovation in **Financial Inclusion**

National Health Stack

DIKSHA

Digital Sky

Bharat Bill Payment System

Electronic Toll Collection- FasTag

Goods & Services Tax Network

India Stack

JAM

Sharad Sharma
Co-Founder iSPIRT

"

Bengaluru has been instrumental in creating a global public good-digital identity. The foundation that was laid in Bengaluru has now enabled over a billion UPI transactions a month. The city is also the center of drone and space revolutions in India. Another big challenge India is facing is healthcare. Bengaluru is again playing a key role in making quality healthcare affordable and accessible

"

Executive Opinion – RK Misra, Carnegie India

RK Misra

Non-Resident Scholar at Carnegie India

Spearheading Carnegie India's Technology and

Society Programme

"

When we at Carnegie India (Carnegie Endowment for Global Peace) decided to have a "Technology Policy Track", the first for Carnegie globally, to bring together Innovators, Policy Makers, Thinkers and Techpreneurs from across the globe on a common platform, the obvious suggestion was to base it out of Delhi, where Carnegie India is Headquartered as are other Global Think Tanks. But our agenda was not to make this initiative a closed room roundtable exercise but embed it as an integral part of the Technology and Innovation ecosystem both physically and intellectually where all stakeholders could exchange their views and articulate their positions in an open and conducive environment.

Bengaluru was an obvious choice not only for its eminent position as a global hub for technology research and innovation but also the proactive leadership, engaged bureaucracy and forward-looking policies which have kept pace with the changing technology landscape. From formulating nation's first IT Policy in early 90s to first start-up policy and first EV Policy, Karnataka had led technology policy space which were then adopted by other states and Central government. Technology & Innovation Ecosystem of Bengaluru supported by volunteering spirit of its industry leaders and entrepreneurs made it an ideal place for Carnegie to make Bengaluru the base for our Technology Policy Track and Global Technology Summit with tremendous support from the Karnataka government as host State.

"

Executive Opinion – Nitin Pai, Takshashila Institution

"

Leading high-tech clusters across the world have vibrant knowledge communities focused on analyzing the impact of technology on society. **Bengaluru, a global tech hub in the areas of aerospace, biotechnology, and information technology, is also home to an intellectual eco-system at the cutting-edge of technology policy thinking.**

Combining technological expertise with non-partisan civic engagement, Bengaluru's public policy ecosystem is different than other startup hubs. Instead of perceiving disruption as a threat, much of the thinking here is concerned with harnessing technology to promote growth, solve developmental challenges and improve governance.

There are three important characteristics about the city's policy ecosystem. One, **Bengaluru-born civil society groups tend to complement the government rather than substitute it.** Two, these new **knowledge institutions have been funded by private philanthropists** with high levels of tech expertise, integrity, and professionalism. And three, it is **sustained by multi-disciplinary and multi-generational talent** that abounds in the city.

"

Nitin Pai

Co-Founder and Director of

Takshashila Institution

An independent centre for research and

education in public policy

Bengaluru lags global startup ecosystems in promoting presence of female entrepreneurs
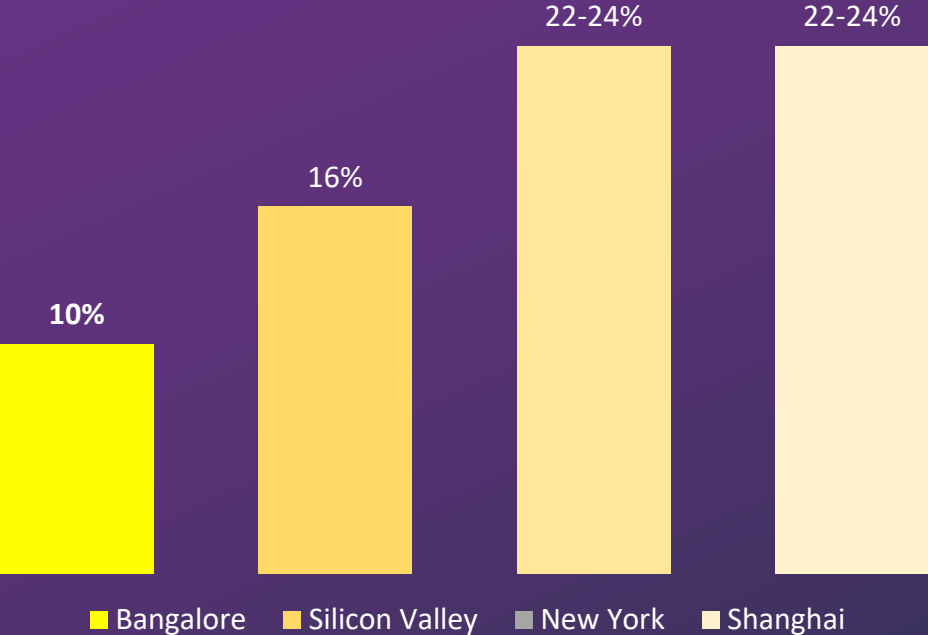
Only around **10%** of startups in Bengaluru have at least one female founder as compared to 20%+ for some global ecosystems

More work on providing opportunities for female founders needs to be done. The VC ecosystem will also need to play an active role in boosting number of women in senior roles in new companies.

% of startups with a female founder

- 10% — Bangalore
- 16% — Silicon Valley
- 22-24% — New York
- 22-24% — Shanghai

■ Bangalore   ■ Silicon Valley   ■ New York   ■ Shanghai

Encouraging more women entrepreneurs in the health tech space is essential, as they will be able to bring in the diversity to represent the patient population in the most appropriate way
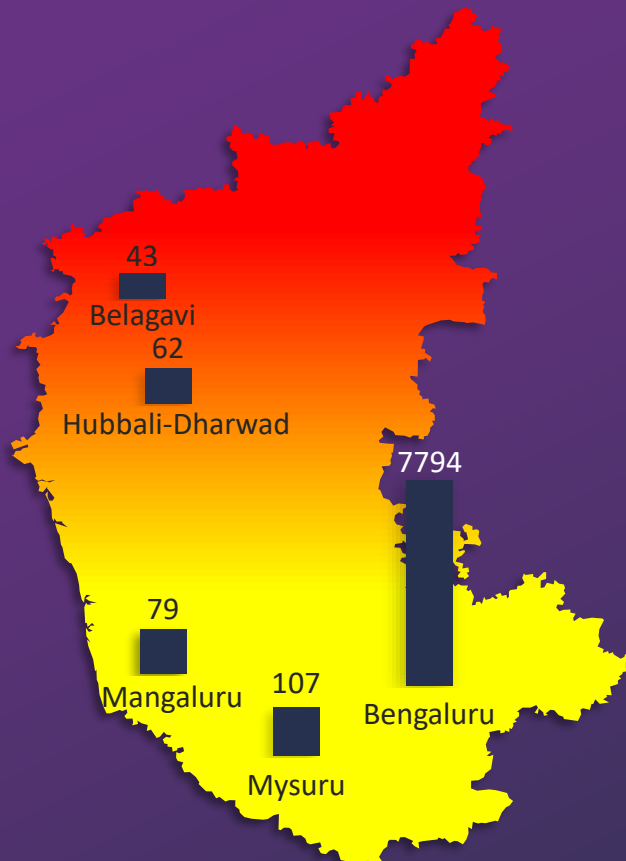
Meena Ganesh
MD& CEO | **Portea**

Source : Traxcn data sample, Startup Genome report

Bengaluru has the potential to help create other startup ecosystems within Karnataka

# of startups established since 2014

43
Belagavi

62
Hubbali-Dharwad

7794

79
Mangaluru

107
Mysuru

Bengaluru

While Bengaluru itself has successfully emerged as the startup capital of India, its success has not resulted in **other cities in the state** developing into homes for tech startups

Regulatory push in creating corporate/university tie-ups and giving platforms for **entrepreneurs from Tier 2 cities** will be critical in ensuring development of new ecosystems.

Source : Traxcn

What would it take to transform Bengaluru into the world's largest Deep Tech hub?

De-risking investments for early stage investors is critical to ensuring flow of capital to deep tech ventures

97% of deep tech startups would like to develop a **long-term relationship with corporates** for access to technological, market and industrial capabilities

Tying up with universities helps deep tech companies get access to quality human capital and helps share risk associated with R&D

Source : KIA bill, Press search

Bengaluru: Looking forward

Shri Prashanth Kumar

Mishra, IAS

Director, Dept. of IT & BT and

Managing Director, KITS

Govt. of Karnataka

Being titled as the IT Capital, Science Capital, Knowledge Capital, and the Innovation Capital of the country, Bengaluru as a city has always been at the forefront of innovation. With the highest number of tech startups in the country, Bengaluru has technology in its DNA which has led to cutting edge innovation and quality tech driven companies emerging from the city.

On most metrics, be it research, validation, valuation, raising funds, or exits; the Bengaluru Ecosystem acts as the best pitstop in the country with world class supporting infrastructure in the form of incubators, accelerators, mentors, R&D Labs, academic Institutions, funds and a visionary government. This had led to the creation of multiple unicorns which in turn have become factories for creation of new entrepreneurs. With more than 30 Billion USD being raised by Bengaluru's startups, the city continues to be the gold standard for startup ecosystems in the country.

For Bengaluru to continue its successful march towards becoming one of the largest ecosystems in the world, the government of Karnataka has strived to put strong policy frameworks in place including launching the country's 1st Multi Sector Startup Policy in 2015, providing **subsidised incubation, mentoring and grants in the form of seed funding, and promoting tie-ups with academic institutions**. As we look forward to the ushering in the next decade, the government will continue to provide the bedrock of institutional infrastructure that can help Bengaluru grow by leaps and bounds in the years to come.

GOVERNMENT WORK IS GOD'S WORK.

सत्यमेव जयते