# INNOVATION LAB ASIA

A GUIDE TO
THE INNOVATION ECOSYSTEM OF

# INDIA

INDUSTRIENS FOND
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# PREFACE

This guide gives you a quick introduction to the Indian innovation ecosystem, with special focus on Bangalore, where most of the startups and stakeholders are located, and Hyderabad, one of the fastest growing ecosystems in India

The guide presents the main business opportunities, the most important leads, and most interesting stakeholders, as seen from a Danish perspective. We give you a realistic understanding of the local startup scene based on first-hand experience and on-the-spot dialogues.

This publication has been developed by Asia House and TechBBQ as part of a series of guides to innovation ecosystems in the China Bay Area and Taiwan, India, Japan, Korea, and Singapore.

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# WHY INDIA?

India is the world's largest emerging market, and there is a huge demand for smart and cost-efficient solutions within most areas, be it water, waste, energy, health, food, agriculture, or finance.

Add to this cheap living, a large and skilled English-speaking population, several vibrant innovation ecosystems with relatively easy access to key decision-makers compared to many other locations, and strong historical ties with Europe. What's not to like?

Yet the fact is that very few Danish startups go to India. Why?

Firstly, there are hardly any role models in terms other Nordic startups going to India. Without success stories, there is little motivation to step into unknown territory.

Secondly, Danish products are rarely plug-and-play in an Indian context. They need to be adapted to the Indian reality, and this usually takes time and costs money. India can be a high risk market for startups, irrespective of their size. Common pitfalls include a lack of financing and resources required to address an emerging market.
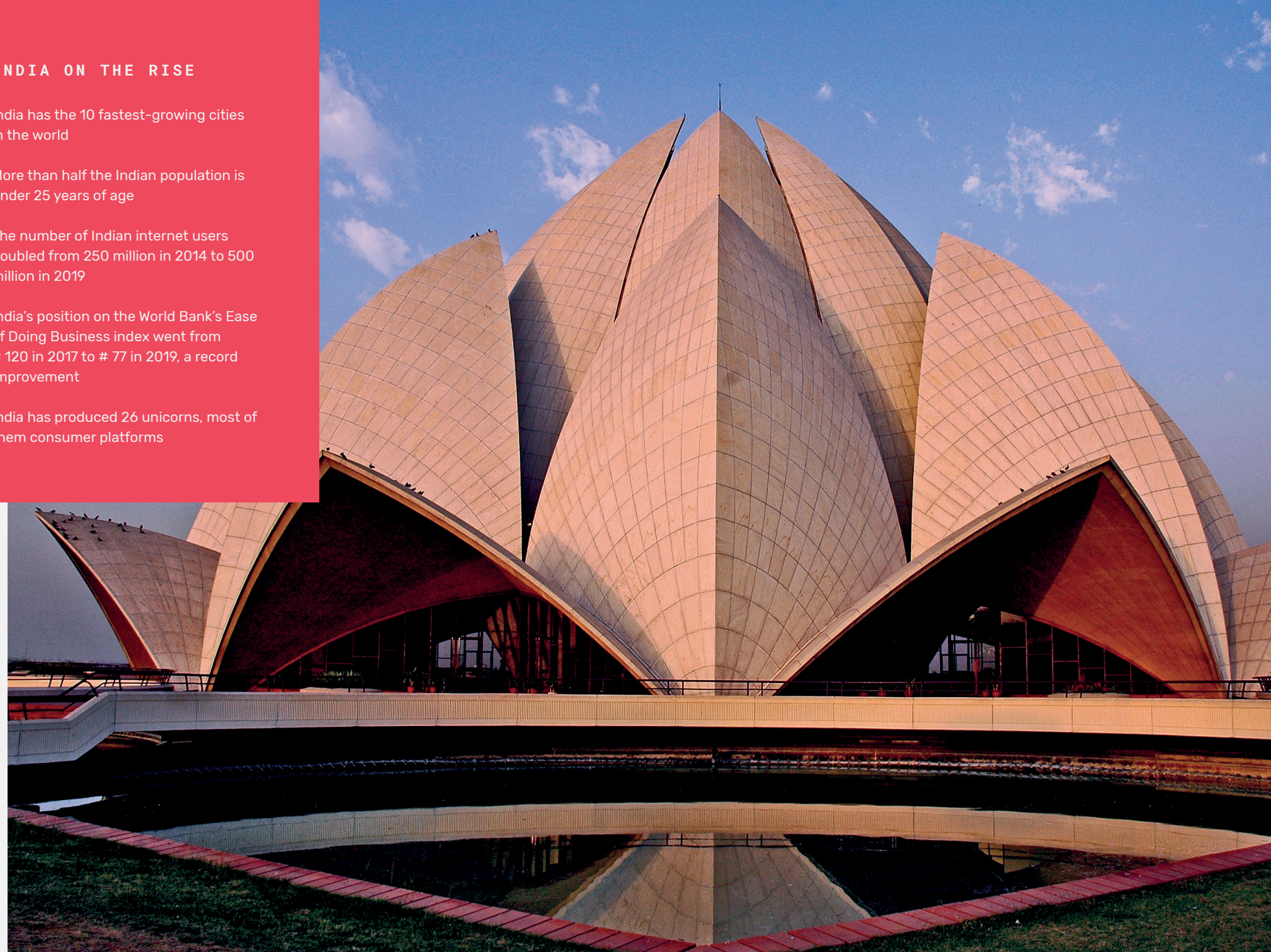
Finally, Danish startups may have difficulty accessing funding in India. Indian investors tend to fund within the Indian and South Asian region. However, there is a large venture capital flow. If Danish companies need to access this capital, they will need to establish a local entity, ideally with a strong local partner, at which point they are more likely to attract local VCs.

Nonetheless, India shouldn't be ignored by the Danish startup community. The global importance and connectivity of India are only going to grow, and Danish startups may find benefits on many levels from increased collaboration with Indian counterparts.

**Not only are the direct market opportunities immense, especially within B2B, but India is also a suitable testbed for co-creation and product adaptation toward emerging markets.** India is a highly competitive and price conscious market, and relatively free of foreign aid and government subsidies. Thus, solutions created here will be competitive in other emerging markets.

## INDIA ON THE RISE

- India has the 10 fastest-growing cities in the world

- More than half the Indian population is under 25 years of age

- The number of Indian internet users doubled from 250 million in 2014 to 500 million in 2019

- India's position on the World Bank's Ease of Doing Business index went from # 120 in 2017 to # 77 in 2019, a record improvement

- India has produced 26 unicorns, most of them consumer platforms

# MAIN ECOSYSTEM OVERVIEW

### HYDERABAD

- Hyderabad has a small but rapidly growing startup scene, especially within Health-tech and Biotech. The ecosystem is more centralized than other Indian hubs, with the T-Hub accelerator in Gachibowli as the main driver. Hyderabad has one of India's most efficient and enterprise-friendly state governments.

### DELHI

- Delhi NCR (National Capital Region) is great for e-Commerce and consumer services. The main tech areas are in Noida and Gurugram. Delhi is the political center of India and home to some of its best universities and medical institutions. Delhi is marred by heavy air pollution, especially during the winter.

### BANGALORE

- Bangalore is the Silicon Valley of India, with the highest number of startups, VCs, and accelerators in India. Bangalore was the cradle of India's IT-revolution in the early 1990s and has a strong tradition for entre-preneurship. It also has a high number of corporates and some of India's best tech-nical universities. The traffic is notoriously bad.

### MUMBAI

- Mumbai is the financial capital of India and has a vibrant Fintech sector. Much of the startup scene is centered in Powai. The investors are mainly focused on stocks and bonds though the VC scene is growing. Mumbai is considered India's most cos-mopolitan city and has a strong corporate presence. It's also India's most expensive city.

### CHENNAI

- Chennai is one of India's main industrial centers, strong on manufacturing and a global center for SaaS-development. The cost of living is considerably lower than in Mumbai and Delhi, and the state govern-ment is known to be quite efficient.

# BANGALORE

# THE ECOSYSTEM AT A GLANCE

Bangalore is the cradle of the Indian tech revolution. Starting in the 1980s as the preferred destination for business process outsourcing, the city is now moving up the value chain, and becoming a center for R&D. More than 400 R&D centers are spread across the city, especially within information and biotechnology.

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Today, Bangalore is one of the strongest tech centers of the world and a favorite destination for foreign multinationals in India. Danish corporates like Danske Bank, Novo Nordisk, Novozymes, and Maersk are all tapping into the Bangalore ecosystem, establishing facilities for both service and support, as well as R&D.

The heavy presence of foreign corporates has transformed Bangalore into a highly globalized city. English is the main professional language, and Indian co-workers are often familiar with western cultural codes.

Being the cradle of home-grown giants like Infosys and Wipro, Bangalore is also a magnet for entrepreneurs with a technical flair. The development is driven by a strong talent pool. Bangalore is home to some of India's best technical universities, skilled talent can be sourced at competitive wages: salaries are about 13 times lower than Silicon Valley and 4 times lower than the average salary across Asia-Pacific. Bangalore has the highest number of tech startups in India, and 94% of the Bangalore-based founders have a technical background, the highest rate in the world.

The Bangalore innovation ecosystem is driven from the bottom-up, and stakeholders often know each other well. The ecosystem also enjoys the greatest level of maturity in India, with a higher number of incubators and accelerators and other ecosystem players. However, the success rates of many of these accelerators remain low, due to lack of mentoring and follow up.

Nonetheless, the innovation ecosystem is improving. The social stigma of entrepreneurship is fading away, and a growing number of young Indians are taking their chances. Funding opportunities are on the rise, with still more VCs and Business Angels investing in Bangalore-based startups. There is a reason why Bangalore is called the "Silicon Valley of India".

## A FEW FACTS ON BANGALORE

- Bangalore is India's fastest growing metropolis, with the population increasing from 4 million to 12 million since 1990

- By 2035 Bangalore's population is expected to hit 18 million, and its GDP USD 283 billion, up from present USD 80 billion

- At 900 meters altitude, the Bangalore climate is more temperate than any other large Indian city

- Once known as the "Garden City" of India, Bangalore now suffers from heavy traffic

- Bangalore is officially known as Bengaluru

- Bangalore is India's # 1 startup city

- Bangalore is home to nearly 40% of India's aerospace technology, software, and biotech exports

- Bangalore is estimated to have more than 11,000 startups and over 250 active investors

- Bangalore is home to 10 of India's 26 unicorns

- The startup scene is mainly centered around the areas of Indiranagar and Koramangala

# MAIN LEADS

In many ways, Bangalore is uncharted territory for Danish companies. A fair number of large Danish corporations have established themselves in the city, but hardly any startups. Market opportunities are immense, but only with a clear and dedicated strategy, long term commitment, and good partners on the ground. Alternatively, Danish startups should look to Bangalore not from a narrow market perspective but from the point of view of co-creation and data acquisition.

- **The NORDIN Accelerator** is a very relevant program for Danish startups looking to scale to India. The accelerator provides an actual tailormade platform for Danish companies, assisting with co-creation and product adaptation, and providing access to Indian mentors and partners.

  The accelerator was launched in 2019 by Asia House in Copenhagen, Greentech Challenge, the Confederation of Danish Industry, and the Danish Innovation Center in Bangalore. In September 2019 the first cohort of 11 Danish Foodtech and Greentech companies venture to India. In 2020, the second cohort of 26 companies are scheduled for Bangalore, now also including Fintech and Healthtech. Any Danish startup and SME with relevant solutions and a willingness to invest in India can benefit from this novel platform.

- **The Innovation Centre Denmark in Bangalore will assist AI/ML companies** looking for quality datasets to train machine learning models. India has several organizations in sectors like healthcare, e-commerce, and education that are capitalizing on data to create AI solutions and often provide data to startups for development purposes.

  Indian firms also provide data annotation services, testing grounds for AI solutions, and help AI startups identify and solve complexities that would otherwise not be easily recognized in more structured environments.

The Danish Innovation Center in Bangalore is developing a four-pronged AI service to help Danish companies find annotation, co-development, data, and testing partners.

# OTHER LEADS

Innovation Lab Asia has established contacts with several interesting organizations in Bangalore that might prove relevant for Danish startups. We can facilitate further contact if needed.

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- **Maersk OceanPro** is a corporate accelerator that provides specific use cases within the logistics and maritime sectors, for Indian and international startups. Launched in 2018, OceanPro provides a soft-landing spot for startups and covers the costs of Proof of Concept-implementation. Depending on the use case, startups do not need to be physically located in Bangalore.

- **Shell E4** is a corporate accelerator established in 2017 and has seen two cohorts of Indian startups. Now, Shell E4 is launching an International Track and looking to partner with foreign B2B startups within energy-related sectors. The program provides soft-landing, use cases, and access to advanced laboratory facilities.

- **C-Camp** is perhaps India's most renowned bio-incubator. Located on the lush compound of the National Centre for Biological Sciences (NCBS), C-Camp is an ideal landing spot for early stage biotech startups and is already engaged in several international collaborations, including Copenhagen University, Novozymes, and the HelloScience-platform.

# OTHER GATEWAYS & ACCESS POINTS

- **91 Springboard** is a chain of coworking spaces providing basic startup support, including legal assistance, business registration services, pitch training, and investor access. This popular Indian coworking space is inexpensive, efficient, well-connected, and has offices across India. Presently, they have six locations in Bangalore alone, so you're sure to find a spot close to where you need to be.

- **YourStory** provides news coverage of the Indian ecosystem, be it quick reads on the latest startup success, or in-depth articles on trends. Yourstory.com is India's largest media portal for startups, and investors.

- **Inc42** is another leading Indian media and information platform, known for its in-depth coverage of the Indian startup ecosystem and data-backed news and analysis.

- **Startup India** is the flagship initiative of the Indian government, intended to build a strong ecosystem that is conducive to the growth of startup businesses to drive sustainable economic growth and generate large scale employment opportunities. Their mission is to empower startups to grow through innovation and design.

- **Let's Venture** is an online platform that connects startups and investors. In 2017, Let's Venture raised USD 6.5 million on its platform and facilitated 23 deals and 4900+ connections.

## BEWARE OF B2C

- Expensive Danish consumer brands will only be relevant for a small segment of Indians

- The Indian consumer market may be difficult to navigate for Danish startups

- Danish minimalism generally doesn't have the same appeal in India as - say - Japan, and Danish design has a relatively low brand value

# STRONGHOLDS
# & OPPORTUNITIES

Being one of the largest and richest cities of India, and one of the world's great innovation hubs, Bangalore is naturally most diversified in terms of strongholds and opportunities. All the classic verticals are in play, both in relation to supply and demand.

However, the one basic premise to keep in mind is this: Bangalore – and India as a whole – is a high growth emerging economy, facing rapid population growth, massive urbanization, and serious environmental issues. Solutions need to be extremely cost efficient and highly scalable.

**In this report we will be focusing on Healthtech, Foodtech, and Fintech,** as these all carry a relatively strong Danish value proposition, and all have been subject to previous Danish initiatives in Bangalore.

This is *not* to say that Danish Greentech startups shouldn't consider Bangalore or India. Indeed, there is a huge demand for solutions within waste and water management, and one of our main leads – the NORDIN accelerator – has Greentech as a primary focus area.

# HEALTHTECH & LIFE SCIENCE

- The demand for healthcare solutions in India is expected to hit USD 374 billion by 2022, mainly driven by rising incomes, greater health awareness, better access to health insurance, an increased prevalence of lifestyle diseases, and a booming medical tourism industry. Much of the growth is expected to be privately driven, as India has one of the highest levels of private healthcare spending in the world.

- The Indian Healthtech ecosystem is mainly centered around the cities of Bangalore and Hyderabad, though the cities of Pune and Chennai are also on the rise. In Bangalore, the ecosystem has evolved organically, with a multitude of research organizations and hospitals, corporates, and startups working closely together. In Hyderabad, the ecosystem is fueled by a strong presence of multinational medical companies, and efficient policy measures laid out by the local government.

- Access to smartphones and the internet are fueling the growth of Indian Healthtech startups, especially within the fields of home healthcare, remote healthcare, wellness, and disease prevention.

- There is a high demand for specialized, high-tech medical equipment, though low-cost alternatives from China may pose a challenge for Danish companies.

- **International collaboration is on the rise.** ICDK India has carried out an innovation camp for Healthtech startups from Denmark. SwissNex has a similar program for Swiss startups, and the Netherlands has created an Indo-Dutch living lab for eHealth. Sweden and India have created bilateral innovation challenges in the space of life sciences and biomedical devices and the UK-India Healthcare AI Catalyst (HAIC) has paved the way for AI related organizations from the UK.

- **Danish startups may benefit from opportunities within affordable testing and POC for their solutions,** especially within private sector hospitals and clinics. Also, AI/ML-startups may benefit from the availability of large healthcare datasets at a relatively low cost. Co-creating with Indian partners may provide the basis for developing low cost Healthtech solutions that might have a competitive edge in both Europe and emerging markets.

# FOODTECH & AGRITECH

- Food and Agriculture are the fastest growing sectors in India in terms of revenue and represent some of the greatest opportunities for Danish companies. The Indian food market is expected to grow from USD 350 billion in 2017 to USD 650 billion in 2020, and the patterns of consumption are expected to change drastically owing to rising income levels and rapid urbanization. Finally, the sector is subject to strong political attention; the rural vote is key to reelection, and the government aims to double the average farmers' income by 2022.

- There is an immediate need for new and innovative solutions, offering huge opportunities for Foodtech and Agritech startups. Funding for Agritech startups in India grew from USD 46.1 million in 2017 to USD 66.6 million in 2018. Challenges for agriculture in India include small and fragmented land holdings, decreasing groundwater levels, poor quality of seeds, lack of mechanization, low yield per crop unit, and dependence on middlemen. The entire value chain needs to be improved.

- The increased availability of budget smartphones and cheap access to high-speed internet are helping B2F (Business 2 Farmer) companies with direct access to farmers who see great potential in solutions that improve productivity or bring them closer to their local markets.

- It may prove a challenge to attract the attention of urban-centric investors. Most Indian Agritech startups, particularly the big VC-funded ones, are metropolitan. They have founders with nonrural backgrounds and they cater to urban demand, the bulk of which are copycats of solutions to problems from other, typically western cities.

- **The main opportunities for Danish startups lie in the B2B-field, especially within dairy and food processing.** India may also prove a valid testing ground for solutions and products directed at other emerging markets. For instance, India has 15 major climates and 46 out of 60 soil types in the world. With such large diversity, India makes for a great research base.

# FINTECH

- The Indian Fintech sector is booming. Between 2012 and 2017, almost 20% of all VC investment in Bangalore went into Fintech startups, making it the largest local sub-sector by means of venture investment.

- The two main Fintech centers are Mumbai and Bangalore. Mumbai is home to the Reserve Bank of India (RBI), the main stock exchange, and most commercial banks, and thus has a natural edge within Fintech. Bangalore has managed to get startup founders to relocate to the city with its lure of technology talents, tech-savvy consumers, and culture of encouraging innovation.

- The Indian Fintech boom is driven by a boom in the number of mobile and internet users in India and an increased social acceptance and trust in digital payments. Now, even small family stores, tuk-tuk drivers, and street vendors are accepting digital forms of payment.

- **The rapid development of India's digital infrastructure - especially India Stack - will provide unique opportunities for Indian and foreign startups.** India Stack is a set of APIs' that allow governments, startups, and businesses to build a digital ecosystem around Aadhaar, the world's largest biometric database covering the entire Indian population. The India Stack infrastructure is unique for India and is set to be replicated across Asia and Africa.

- The Danish Fintech sector is particularly strong in mobile banking technology, with peer to peer money transfer being used extensively. This reflects the Indian market, where **mobile adoption rates and increased digital transaction volumes could be interesting for Danish startups.** Much of the Fintech software in India also needs to be designed for ease of use and simplicity. What Denmark could bring to the Indian FinTech market is its extensive experience with digitization, data, and UX/UI design.

- Potential entry barriers include the need for approval from regulatory authorities like the RBI, which may take from 3-6-months (though mainly for companies who work with remittances, insurance, etc.). Also, working with big banks could be a resource heavy undertaking. Finally, most people in India lack a credit history.

# HYDERABAD

## NEW KID ON THE BLOCK

The innovation ecosystem of Hyderabad is growing fast, fueled by good governance, ample funding, and innovation-friendly policies. Hyderabad is the capital of both Andhra Pradesh and Telangana, the two top ranking states (# 1 and # 2 respectively) on the Indian ease of doing business index.

The innovation ecosystem in Hyderabad is naturally much smaller than Bangalore and consolidated around the public-private accelerator T-Hub. However, the smaller size may work as an advantage. Hyderabad may be easier to navigate for foreign startups compared to Bangalore, which has a more diversified ecosystem. Additionally, T-Hub enjoys strong and stable government support – always an advantage in India.

Hyderabad is especially strong on Healthtech and Biotech. It's a global factory for vaccines and the Indian location for many medical multinationals. Thus, **T-Hub may be the place for Indo-Danish Healthtech collaboration and innovation,** be it for Indian companies looking for partners to scale to Europe with cost efficient solutions, or Nordic companies seeking to access emerging markets.

# T-HUB

T-Hub seeks to establish a functional market access platform for foreign startups looking to India. The International Market Access Bridge (IMAP) covers all relevant activities; from initial screening and selection of companies to virtual meetings, preparation and capacity building, and 3-4 months on the ground activity in India with mentors and resident entrepreneurs. The complete program runs over an 8-9-month period.

The IMAB-program builds on real international experience, starting in 2017 with Israeli, Austrian, Dutch, and South Korean startups joining the accelerator. The program has since grown to include an international cohort for each period.

The IMAB program requires external financing, and the participation costs vary based on how comprehensive a program the startup needs. T-Hub only accepts startups they believe can truly scale into the Indian market, and startups are assessed not only on market readiness but on their potential for success in India. Some of these criteria can be found on T-Hub's website.

This report has been
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