



# **BANGLADESH INNOVATION LANDSCAPE**

SPOTLIGHTING THE LEADING  
TECHNOLOGY TRAILBLAZERS



empasco

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# CONTENTS



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**03**

INTRODUCTION

---

**04**

UNDERSTANDING THE  
LOCAL LANDSCAPE

---

**07**

INVESTORS SHAPING  
THE INNOVATION  
LANDSCAPE

---

**09**

TECHNOLOGY  
TRAILBLAZERS

---

**18**

KEY LEVERS OF  
IMPROVEMENT

---

**20**

THE PATH FORWARD

---

**22**

AUTHORS

---

**23**

REFERENCES

# INTRODUCTION

Bangladesh, along with other emerging markets, is more than just a rising force, it represents a paradigm shift in the global economy that is happening right in front of our eyes. As part of our broader outlook on the region, we identify critical points of change and how technological development fits in this new dimension. The latest research shows E7 set to overtake G7 by 2040 with a further expectation of growth 50% larger than G7 economies by 2050.

These markets are ripe with opportunity and businesses from across the world are looking for ways to engage with the new consumers. We see Bangladesh as a prime candidate for future growth and a fascinating new market ready to absorb technological innovation from abroad as well as offer invention from within.

While the rapid growth trajectory is clear, it is important to recognise that the economic landscape in each of the emerging markets is fundamentally different. As the challenges can often be vastly different across regions, the path to maturity is often unique in each country and context.

Some of our key observations of the broader emerging markets, as well as Bangladesh more specifically, in the context of technology business development outlook include:

- Differences in consumer behaviour across emerging economies compared to developed countries;
- Lack of transparency and accountability in market regulation;
- Vast untapped talent pools;
- Enormous appetite for new technological solutions;
- Often uncertain or stabilising political environments.

Our research shows the speed of progress and digital adoption in Bangladesh increasing and highlights the overall positive trajectory of innovation in the country. This report provides an in-depth view of the local startup and investment scene, as well as analysis of the key progress and hindrance factors on the path to flourishing technology innovation landscape.

# UNDERSTANDING THE LOCAL LANDSCAPE

## Reality Check

Research and innovation are essential components of business and economic growth as well as social transformation, however the performance of Bangladesh in research and innovation is lower than many LDCs (Least Developed Countries) and other comparable countries which is undesirable at a time when the country is boasting a 7.86% GDP growth (FY2017-18) and has graduated from a LDC status.

According to the recent Global Innovation Index 2018, published annually by Cornell University and the World Intellectual Property Organization (WIPO), Bangladesh ranked 116th out of 126 countries, the lowest in South Asia and below the likes of the Former Yugoslav Republic of Macedonia (ranked 84th) and low-income nations such as Rwanda (ranked 99th).

## Distinct role of Information and Communication Technology (ICT) Division

Given the role that the ICT division from the Government of Bangladesh is playing in turbocharging the sector itself, we feel they receive a highlighted mention for the numerous projects they've undertaken. Bangladesh is enjoying an increasing emergence of digitally savvy consumers with the growing internet connectivity and availability of cheaper smartphones.

Having said that the ICT Division is encouraging innovation and digital prosperity through their 'A2I' program.

The Access to Information (A2I) is a unique programme initiated in 2007 by the Prime Minister's Office (PMO) in close collaboration with United Nations Development Programme (UNDP) and United States Agency for International Development (USAID). The goal of the project was to unclog the inefficiencies that hamper the successful delivery of public services to the underserved communities in Bangladesh.

To date the ICT divisions A2I program has achieved the following objectives:



Service Innovation Fund (SIF) introduced to provide financial support up to USD \$28 000 in innovative efforts. 90 projects in 6 phases funded so far of USD \$2.1 million and 12 projects successfully completed.

Test Trial of Agent banking underway in 25 Union Digital Centers to bring commercial banking services at citizens' doorstep.

\$28.15 Million Earnings for Digital Centre Entrepreneurs

8.5 Million students learning from Multimedia Content developed by 100,000+Teachers

105 Digital Talking Text Books for all Visually Disabled Students



Digital Innovation Fair' being organized every year at all divisions and districts with the assistance of a2i.

Social Safety Net program - a pilot program started to provide allowance to 7,000 elderly and disabled people through Postal Cash Card in Nagpur upazila of Tangail district.



4.7 Million purchase orders sent over SMS from the sugarcane industry



Rural e-Commerce activities started through 5275 Digital Centers for various purchases. 300 Digital Centers involved in rural e-Commerce and goods worth sold over USD \$30 000 .

237 Million Services Provided to Citizens from Digital Centers

Launching of 'ejoyeeta.com', an e-commerce platform developed for marketing of goods produced by small-scale women entrepreneurs with the assistance of Service Innovation Fund (SIF). 5,000 women entrepreneurs involved with this virtual shop



Online Registration of 2 Million + Male & Female for Overseas Jobs

Apart from A2I, the ICT Division has also played an important part in ensuring funding for startups. The ICT division has seen a gradual rise in the amount of funds allotted for the innovation/startup sector over the years. It received USD \$34 million (FY2011-12), in FY2014-15 it grew to USD \$957 million and USD \$1.5 billion for the FY2016-17.

Majority of the funding goes behind hi-tech parks for startups, tech professionals, app developments, green architecture, education development and awareness campaigns. A large portion of the ICT division's funds is spent on setting up 'IT villages' in rural areas and the development of an ICT intra-network for the Bangladesh Government.

# INVESTORS SHAPING THE INNOVATION LANDSCAPE

Our scan of Bangladesh has revealed a funding ecosystem with some significant players, though as a whole it remains largely unstructured and lacking quantity of funders. They can be broadly categorised into private accelerators, venture capital firms and public/government funds.

Having said that, some of the noteworthy investors who are galvanising the startup space in Bangladesh include:



The GP Accelerator Program, which aims to provide office space, seed fund, mentorship to startups along with a USD \$15 000 worth of seed investment in exchange of 10% equity. The program is now already on its fourth batch of startups.



ScaleUp Bangladesh which is a 12 month long investment readiness accelerator programme for Small and Growing Businesses(SGBs) which is an initiative of BetterStories Limited, in partnership with IFC and PPCR Bangladesh, and with support from Aavishkar, Grameenphone Accelerator, British Council, PUM.NL and Climate Business Innovation Network.



Fenox Venture which is a Silicon Valley based venture capital firm announced over \$200 million fund to be invested in Bangladesh market over the decade starting in 2015.



GSMA Ecosystem Accelerator Innovation Fund is an accelerator programme that looks for startups working with mobile technology to solve local problems mainly in Asia Pacific and Africa



Bangladesh Angels is an angel investment network that works on connecting startup founders and entrepreneurs with potential angel investors.



Startup Bangladesh, created by the Government of Bangladesh, a fund under the project iDEA provides financial supports to entrepreneurs in the form of equity, convertible debt and grant( investment) along with necessary mentorship and training. After the inception over 37 startups received funding under this project.



BD Venture Ltd is a local venture capital company that has developed a web-based crowd-funding platform to create a perfect match between investors and entrepreneurs.



Startup Dhaka has been at the front lines in bolstering the startup ecosystem in Bangladesh for more than five years now. They are a platform that connects startups and aspiring entrepreneurs with potential investors in the space through their accelerator programs. Startup Dhaka worked with more than 1500 startups and has facilitated 68 investments. They also provide mentorship through their online courses and startup workshops.



# TECHNOLOGY TRAILBLAZERS

## Broad Innovation Landscape



Pathao is aimed at solving the commuting problem in Bangladesh. In a country where traffic congestion costs the economy millions of dollars, Pathao was the first to introduce bike hailing service through an app that connected riders with the users to offer fast and reliable trips.

It currently has 5 Million+ app downloads and over 40million trips and orders served. The company is valued over \$100 million as of April 2018 and has also introduced food and parcel delivery to their product portfolio.

Pathao received around \$1 million in their initial Seed Funding from Battery Road Digital Holdings LLC. on 2015 and 2016. In 2017, Pathao received \$2 million from Go-Jek in a Series A round. It received \$10 million in a Series B round from Go-Jek in 2018. Pathao currently has 5 investors in total along with 3 lead investors.

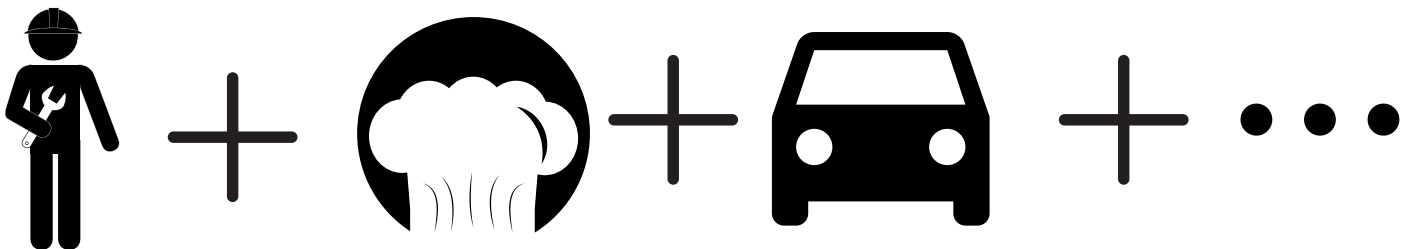




Sheba.xyz is on a mission to digitalize the service industry of Bangladesh bringing all types of previously-decentralised service vendors under one consolidated platform: Sheba.xyz.

They offered around 40 services at the time of the launch of the company. Sheba.xyz currently offers 1,000 to 1,200 services and more than ten thousand service providers are registered with Sheba.xyz as of now, with five thousand active ones. They have been successful in providing quality services to their customers and is currently the largest service platform in Bangladesh. Sheba.xyz is working with production workers and has created over thousands of employment opportunities in the service sector.

Currently, it's valued over \$10 million with investments from Grameenphone, GRUS, SD ASIA, Razor Capital, etc.

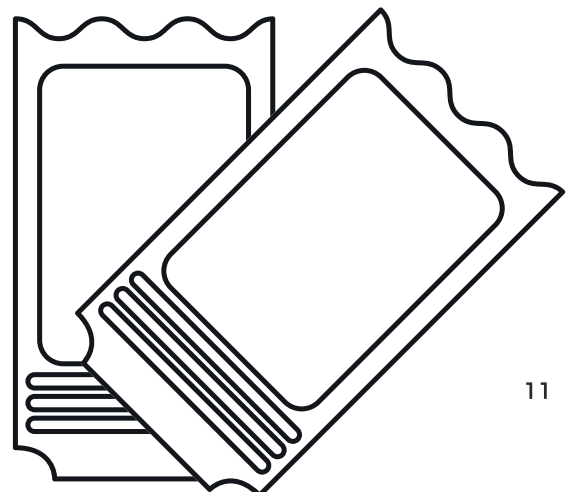




Shohoz has the remit to eliminate hours of waiting in line by introducing a one-stop platform to book tickets online. Started in 2014 with a platform where consumers could buy tickets – bus, events, movie, and launch. Currently, it is the leading online ticket booking service provider in Bangladesh. In 2018 it had entered the ride-hailing market in Dhaka with its service called "Shohoz Rides" which is served through the Shohoz app.

It has over 50,000 drivers on its platform and served over 4 million rides. Shohoz has entered into food delivery, car and aims to add more services in the future. The startup has aspiration to get into the truck and launch fintech products in the coming years.

Shohoz has raised US\$15M in funding from a host of investors including Golden Gate Ventures of Singapore, which is, also an investor in Go-Jek of Indonesia. The largest funding round in any Bangladeshi early stage company so far. It also has investment from FENOX VC, a California based venture capital company and other investors like Vostok New Ventures, Partech Ventures, Heritas Venture Funds, Cypress Capital, and Tekton Ventures





**HandyMama**  
আপনার স-ব কাজ করে দেয়!

With the ambition of reducing people's time spent and inconvenience of grocery shopping, Chaldal is an online grocer that has become very popular in Dhaka because of its unique one-hour delivery model. Founded in 2013, Chaldal is already considered as the biggest online grocery shop in Bangladesh and operates through its website and application.

With over 1.4 million orders placed and 1,058,805 hours saved and an averaging 150 deliveries a day, Chaldal plans to add at least six more warehouses in Dhaka before expanding into other cities.

Backed by Y Combinator and 500 Startups, Chaldal currently stocks over 4,000 products in its two warehouses, and hopes to become the "Amazon Fresh of Dhaka."



HandyMama takes away the chores of finding handyman instantly at a reasonable price to get the important households done. It has come up with a solution providing on-demand household and office maintenance services operating through its website and mobile application.

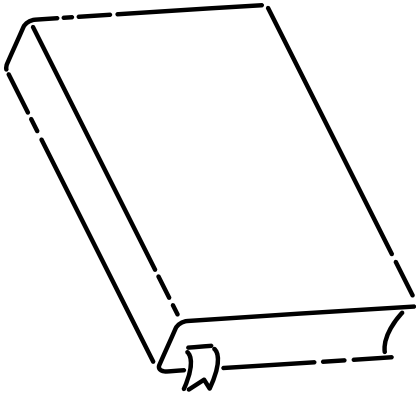
It is considered as the largest branded network for local service professionals with more than 1000 highly experienced, skilled and verified handymen and more than 30 service vendors providing services like cleaning, plumbing, electrical, home appliances, painting, pest control, pack & shift, and more.

HandyMama has received an investment from Fenox Venture Capital.





## Education



# 10 MINUTE SCHOOL

10 minute school has digitalized education in Bangladesh enabling students from all over the country to get access to quality education for free. It is the largest online education platform in Bangladesh which teaches more than 250,000 students every single day

It started creating video tutorials for Mathematics and English on Youtube and eventually started taking live classes on Facebook covering the entire academic syllabus from Class1 through Class12, university admission subjects covering topics from public and private university examinations and extensive software and skills training. Now the organisation has 700 000+ subscribers on Youtube with over 40 million views combined.

10 Minute School has won many global accolades and a few to be mentioned would be The GLOMO Award in World Mobile Congress & The APICTA Award which is also known as the Oscars of ICT, the Youth Award'16, DYDF Youth Icon Award'16, BRAC Manthan Digital Innovation Award'16, the Swiss Embassy Award for Social Impact, Champion's for Future Leaders' League (London). The organisation was also a Country Rep at the Asian & Europe Meet'15.

Ayman Sadiq, CEO and founder, received The Queen's Leader Award 2018 for creating the opportunity of quality education for millions of students in Bangladesh.

## Healthcare



Jeeon's goal is to bring quality primary healthcare to rural, underserved communities in Bangladesh.

The startup trains and gives equipment to local intermediaries so that they can facilitate consultations with remote doctors in order to provide quality healthcare services to rural patients.

Jeeon started its pilot with 4 pharmacies and now has over 500 pharmacies in their network in all the divisions of Bangladesh.



CMED has developed an ecosystem of medical devices powered by a cloud-based health monitoring system.

The company's suite of integrated smart medical devices (Smart Blood Pressure Monitor, Smart Glucometer, Smart Pulse Oximeter, Smart Weight Scale, Temperature Scale, etc.) are connected and controlled via an accompanying mobile app, allowing for better security, data transmission, and security than traditional tele-health monitoring systems.

CMED has over 40 000 users with over 150 000 number of measurements and working with 21 companies. CMED Health has won the Innovation Prize at Seedstars Global in Switzerland. They received a \$50 000 investment from Seedstars.



Doctorola is a popular local healthcare startup that connects users with doctors, enabling them to get a medical appointment online.

It has served over 180 000 patients having more than 9000 verified doctors covering 63 out of 64 districts. In addition to appointment booking, it also helps users to find blood donors and hospitals. It has a 24hours e-sastho offering that makes health care services easier. It has a website, live chat option, mobile apps, and a call center to manage appointments.

Doctorola is one of the few local startups that has raised \$200 000 from BD Venture Ltd.



## Climate and Environment



With its motto that nothing is a waste Garbage Man is turning the waste into revenue generating resources. Garbage Man produces organic fertilizer out of waste and generating revenues that creates sustainable business model.

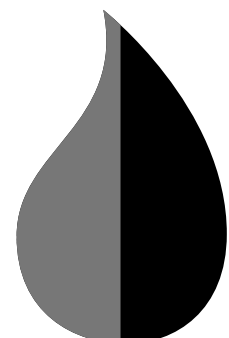
The startup in its first venture, "Regen:vermicompost" focuses on converting "food waste" into organic fertilizer. Their "Zero Waste Consulting" services and "Plastic Recycling" bolsters their aim of improving social-economic, educational and health condition in Bangladesh.

Garbage Man has saved over 2000 tons of waste from landfill and over 1600 fertilizers produced and served. Garbage Man is associated with more than 12 kitchens.



With the vision to transform the global water crisis into an entrepreneurial opportunity, Drink well provides clean drinking water to rural and peri-urban communities in Bangladesh and India by targeting local individuals with entrepreneurial energy residing near the location of its water treatment systems to form their distribution channel.

After over 200 implementations of arsenic removal units in remote villages in India, it is operating in Bangladesh, tackling brilliantly health issues as well as unemployment and low living standards of remote communities. Drinkwell provides water ATM systems that disburse safe, metered drinking water.



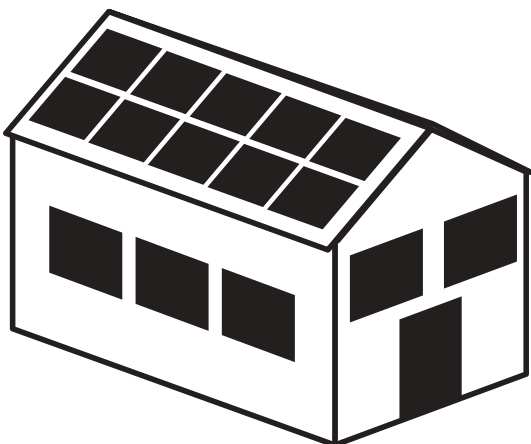




Solshare's peer-to-peer microgrids delivers solar power to households and businesses in low income rural area in Bangladesh enabling them to trade their (excess) electricity for profit.

Around 3 million out of the 17 million homes in Bangladesh that are deprived of electric power system rely on energy from domestic solar panels called Solar Home System (SHS). The startup envisions setting up 10 000 nanogrids by 2030, reaching a total of over one million users.

Solshare has integrated a vast network of partners which includes private companies that work on producing and developing the SHS, research institutions that specialize in energy and organizations or (semi) public institutions. It has received both the Intersolar Award 2016 and the Momentum for Change Award from the United Nations in light of the recent COP 22.



# KEY LEVERS OF IMPROVEMENT

To further bolster the innovation conditions in Bangladesh for startups to thrive, public and private entities in Bangladesh should prioritise these 5 key levers.

1

## **Create an enabling political environment:**

The significant increase of startups and founders joining the space should prod the government into creating a political and social environment that is conducive to research and development and the incubation of such startups.

2

## **Strengthening multi-sectorial action on Innovation:**

The government of Bangladesh should incorporate strategies and incentives into creating a political environment that nurtures innovation. Building strong partnerships with academic, NGOs/social enterprises and private sector that caters to the local needs might lead to rapid progression in order to solve problems through innovation.

3

## **Build capacity for change:**

It is pivotal to build a range of skills among individuals in government, civil society and the media in order to cope up with the innovation/startup ecosystem. It is the job of the government to support entrepreneurs in accessing, understanding and applying new science and technology knowledge to leverage their innovation so that they'd be able to integrate new technologies into the way they deliver and communicate their work. Government should move away from the old, traditional practices and think about ways to create a more competitive environment where the overall market will adapt to become more innovative.

4

**The role of international stakeholders:**

Investments rates in Bangladesh are increasing, and more and more international capital is finding its way to the country. Foreign investors look for more than just the idea, as they tend to scrutinize the quality of team that is going to execute the idea. Therefore it is of utmost importance for entrepreneurs and business owners in the innovation/startup space to present their ideas in a way that will attract more foreign investment along with the expertise and ideas they bring to the scene.

5

**Developing capable future generations:**

The government need to arrange specialized and experienced technical support through which calculative risks can be measured to overcome and hence prepare an ecosystem that is sustainable. In order to do so, appropriate human resource with the drive and knowledge about the innovation/startup space is required. In Bangladesh there still remains a perceived prestige for working for the big names and not many people look up to working for a startup as most of it does not come with an attractive pay packages. Therefore the government should create strong educational reforms focusing on training and creating networking ,mentoring and incubation opportunities for the growth of these people who comes up with innovative ideas and attracting more young people to this space.

# THE PATH FORWARD

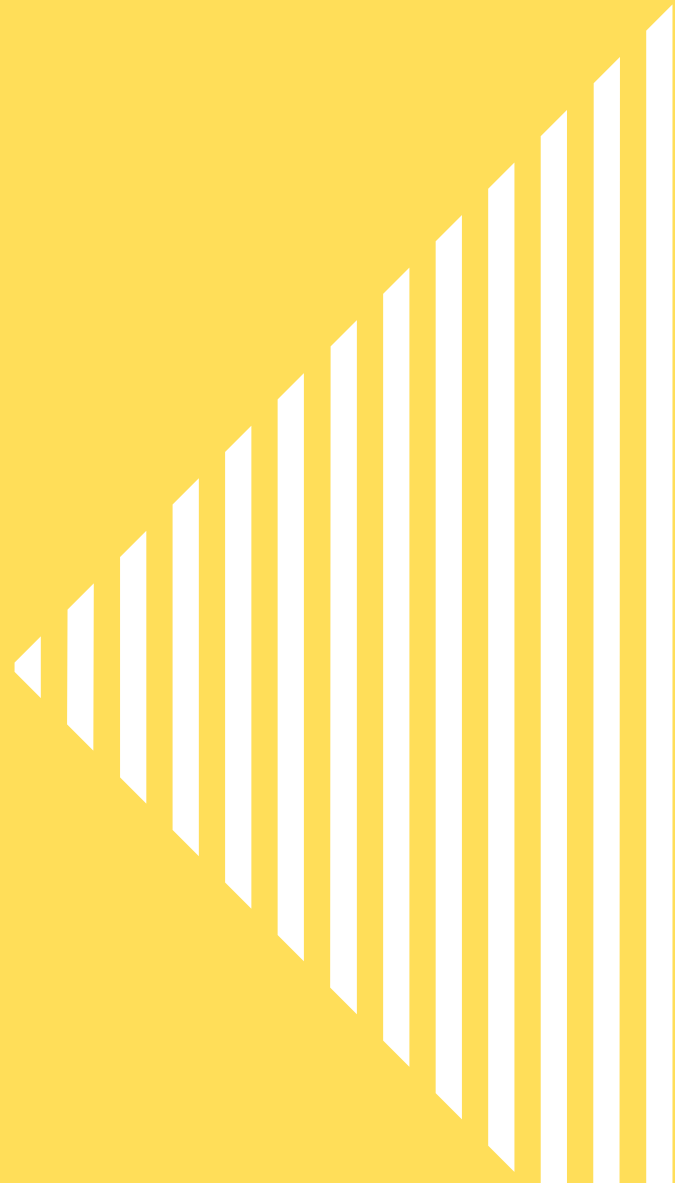
With over 160 million people and the recent success stories (GDP growth, lower poverty/unemployment rates, women empowerment), Bangladesh is indeed a lucrative market. There are around 280 startups in Bangladesh and over 90 percent are in Dhaka and a handful in Chittagong and Sylhet. There's an overwhelming number of software developments (65) and e-commerce (60) companies in the ecosystem. Other emerging sectors include healthtech (16), fintech (15), transportation (14), EdTech (14), and media/content (13). But in unique markets like that of Bangladesh's, traditional approaches might not succeed without meeting the local needs and solving problems at a social level. Thus it becomes important to bridge the gap between an overall understanding of the ecosystem and implementation through innovation-orientated solutions.

The developed economies of the world are evolving around the Fourth Industrial Revolution but the effects of this revolution are yet to be felt in Bangladesh and other LDCs. Like the majority of the developing countries in order to fulfil local demands to global products and services, a key feature of the business models of all or most startups in Bangladesh is that they are local adaptations of their counterparts in foreign countries. Therefore it can be said that there remains tremendous potential in realising context-specific, novel business models that can propel Bangladesh to reap the benefits of the latest industrial revolution.



In addition, the question mark remains in the ease of doing business in Bangladesh which plays a crucial role in dictating the investment sentiment. According to a recent report by the World Bank "Doing Business Report 2019", the country has ranked 176th among 190 countries. From 2018 to 2019 Bangladesh moved only one spot up, ranking at 176th from the 177th position. In Southeast Asia, all other countries performed better than Bangladesh.

While it is clear that the Bangladesh ecosystem possesses talent and grit required to take the country to new heights, the technology landscape needs to be further supported and nurtured to flourish beyond the early signs of immense potential we have observed thus far. Henceforth, there lies an urgency for the government to create a favourable environment for entrepreneurs and businesses to thrive.



# AUTHORS



## Waheedur Rahman Nabeel

**Director Technology & Investments**

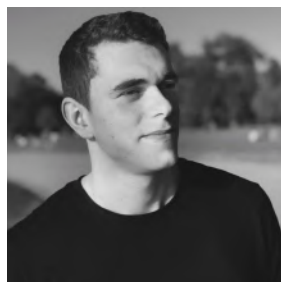
Public sector strategy consulting  
Technology transformation initiatives  
E: waheed@empasco.com



## Kazi Mahir

**Associate**

Startup growth strategy  
Research initiatives  
E: mahir@empasco.com



## Artur Safaryan

**Founder & Partner**

Product development  
Technology transfer and commercialisation  
E: artur@empasco.com



@empascoHQ

For general enquiries please contact us at  
E: info@empasco.com

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