DIGITAL REVOLUTION IN BANGLADESH:
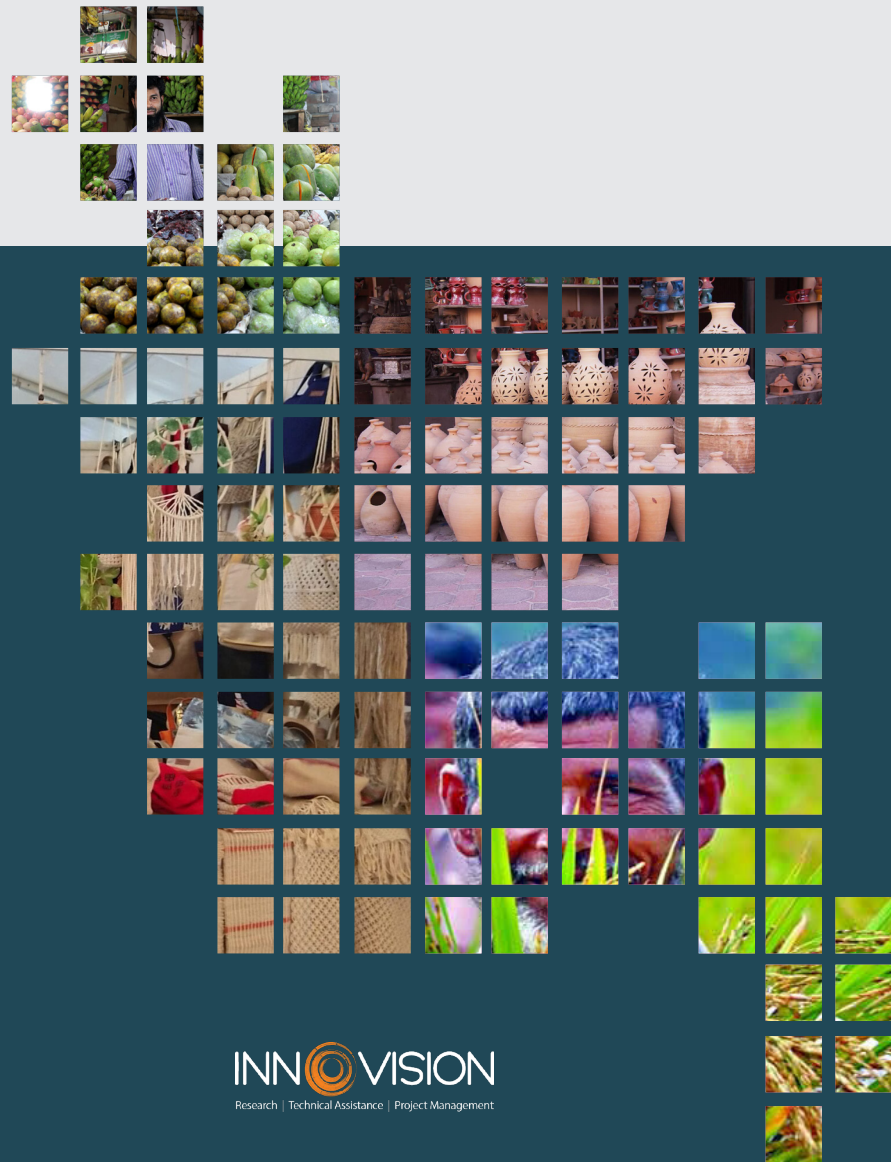
WHERE DO SMALL BUSINESSES STAND?

INN VISION
Research | Technical Assistance | Project Management

Developed by

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Small and Medium Enterprises (SMEs) are a vital part of the economic development of Bangladesh, our economy is as good and robust as the state of our SMEs. According to the Asian Development Bank (ADB) study of 2015, SMEs' share in GDP is approximately 25% (ADB Annual Report, 2015). Despite the thriving economic progress SMEs in Bangladesh have experienced, information and communication technology (ICT) adoption in the sector is slow. Bangladesh's business sector has a digital adoption index of 0.25/1, which indicates that the business sector in Bangladesh is lagging behind in digitization (Worldbank, 2016). On the bright side, Bangladesh is recognized as one of the "break-out" economies that are rapidly digitizing its economy (Digital Evolution Index, Tufts University, The Fletcher School). We need to acknowledge that Bangladesh will not be one of the key economies in the age of the fourth industrial revolution unless its industries adopt technological solutions.

Now technological tool adoption happens in two stages; first, the industries adopt shallow and relatively cheap tech solutions from 3rd industrial revolutions like IT/ICT tools (internet, digital marketing, e-commerce, etc), then they adopt resource-intensive deep technological solutions related to 4th industrial revolution like- artificial intelligence (AI), cybersecurity, robotics, etc. Unless Bangladeshi SMEs or industries adopt simple IT/ICT tools, we cannot be part of the fourth industrial revolution. Let's dive a bit into this whole technological adoption game.


ICT adoption is a prerequisite to embracing the 4IR

Technological progression of industries across ages happened in phases, old and new technologies used in the first industrial revolution (1750-1840) paved the way for the second

industrial revolution (1830-1915). Then, the power of computing technology and nuclear energy paved the path to the third industrial revolution (1969-2010s). In the recent decade, the fusion of advances in artificial intelligence, robotics, the internet of things, quantum computing, and genetic engineering are blurring the boundaries between digital, physical, and biological worlds. Thus, the world is undergoing the process of the fourth industrial revolution.
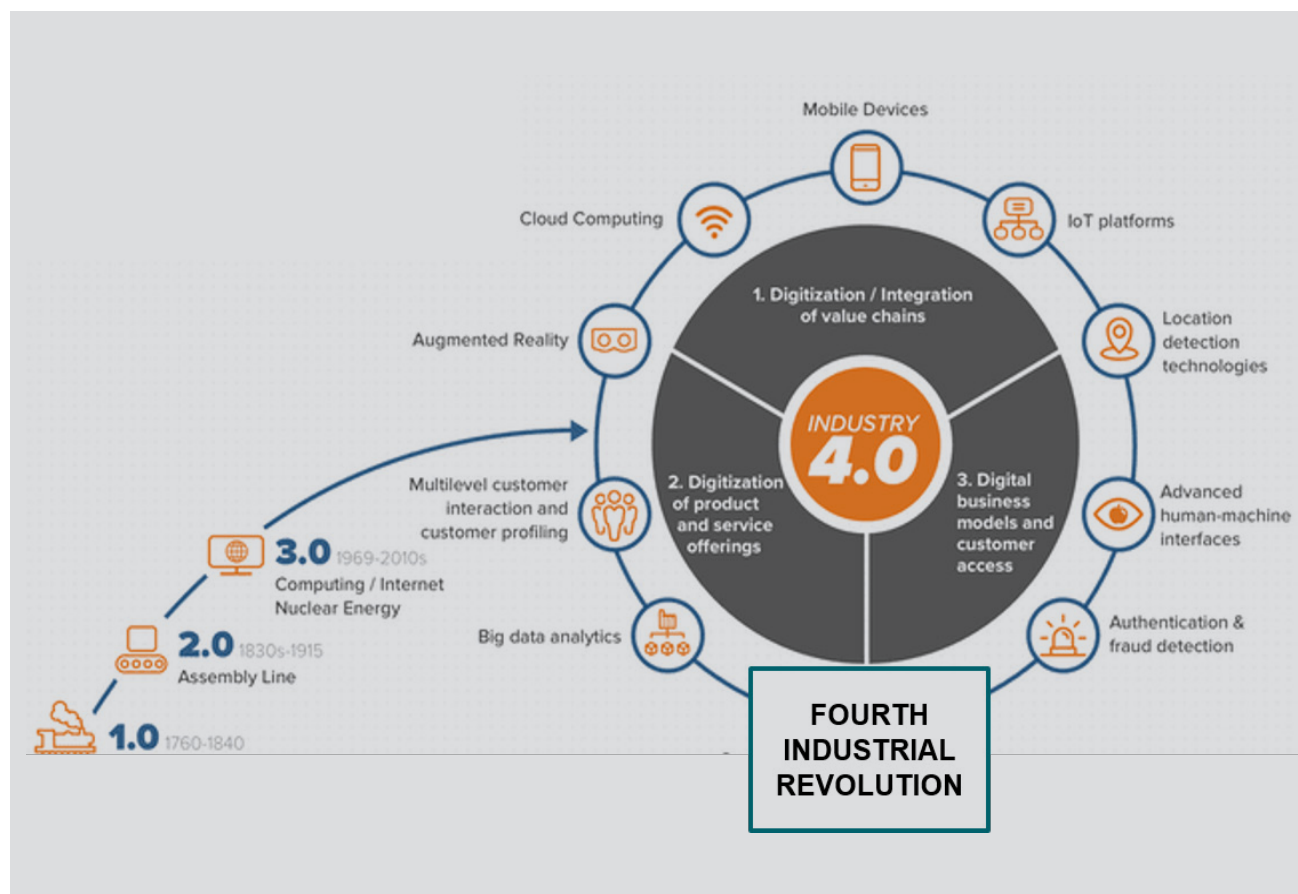
Bangladesh, a fast-developing country, does not have all aspects of the fourth industrial revolution. To fully adopt the components of the fourth industrial revolution, the majority of the Bangladeshi businesses and industries first need to adopt technological components of the third industrial revolution like- ICT tools, internet-based services, etc.

In the last two decades, due to the rapid expansion of ICT and internet infrastructure, Bangladesh has observed a varied degree of digitization in the business processes across all industries. Digitization/integration of value chains, digitization of products and service offerings, digital business models, and customer access through digital platforms are the three main components of this stage in digitization. But this progress is not equally distributed.

Some progressive business entities are using ICT products and solutions such as Enterprise Resource Planning (ERP), Vehicle Tracking System (VTS), Supply Chain Management (SCM), E-commerce system, Advanced accounting tools like Tally, etc in their everyday work. On the other hand, cloud computing, authentication and fraud detection, location detection technologies, augmented reality, big data analytics, IoT-enabled devices, etc. are some of the integral parts of the fourth industrial revolution. From observation, we know most of these advanced technologies are used by some of the leading businesses in Bangladesh, but they are not used by the majority of the mainstream business entities or SMEs.

Businesses and industries adopt ICT in calculated small steps

Commerce	E-commerce	Digital Business

Basic IT Presence	**Access Information- Transact Business**	**Further Integration of skills, process and technologies**	**Capability, leveraging experience and know-how to maximize value**
• Basic Digital Literacy • Mostly Communication related tech tools used	• Re-orientate business higher digital literacy • Basic tech Integrated Approach = Website+ business process	• Re-organize people/ structure • Re-engineer processes • Remodel tech infrastructure • Outsource digital marketing	• Customer relationship and product development focused organization • Teck integrated business process • In house digital marketing capability

Business value →

Anxiety Gap   **Organizational Capabilities Gap**   **Value Transformation Gap**

← 2-3 years →   ← 2-4 years →

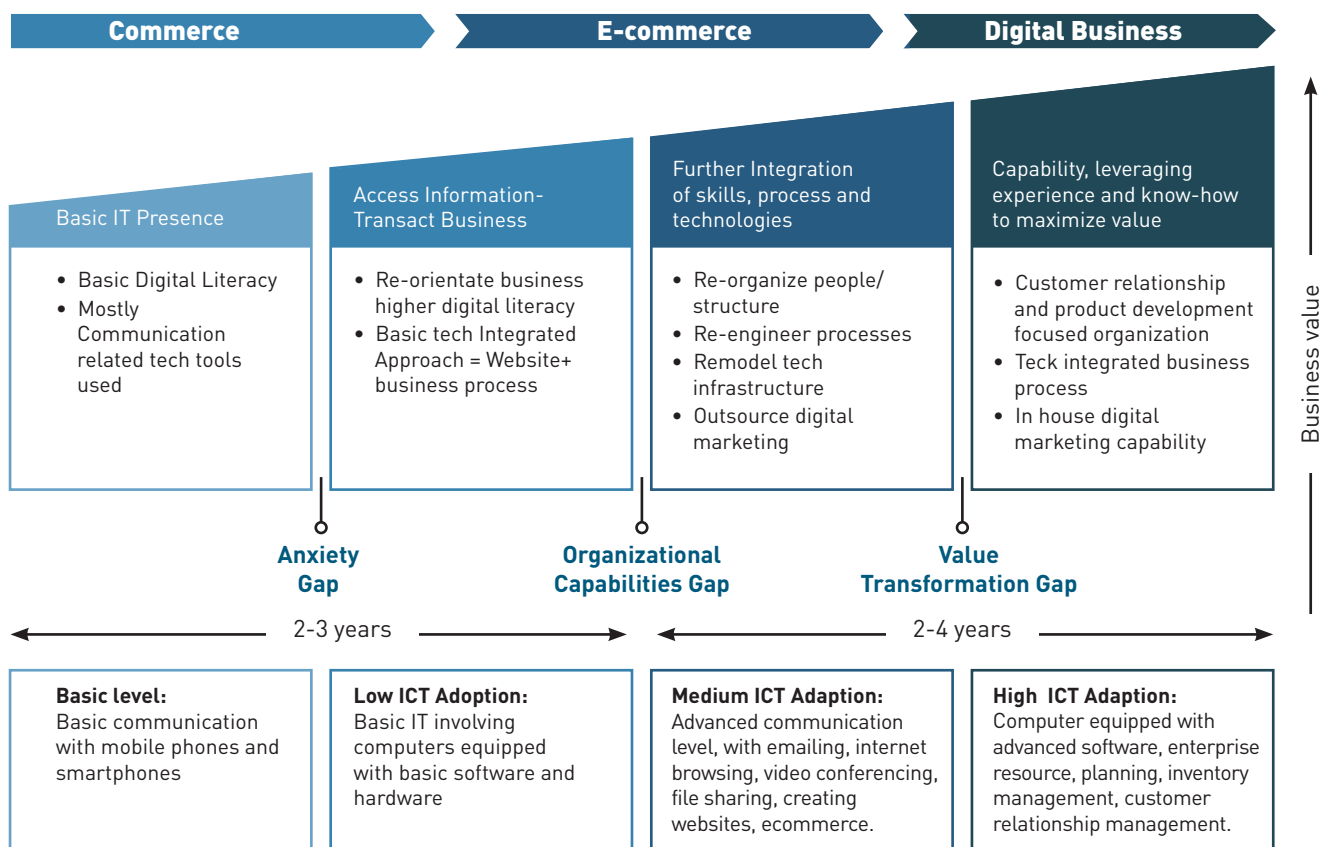| **Basic level:** Basic communication with mobile phones and smartphones	**Low ICT Adoption:** Basic IT involving computers equipped with basic software and hardware	**Medium ICT Adaption:** Advanced communication level, with emailing, internet browsing, video conferencing, file sharing, creating websites, ecommerce.	**High ICT Adaption:** Computer equipped with advanced software, enterprise resource, planning, inventory management, customer relationship management.

Figure: Moving to E-business Framework (Willcocks et al, 2000)

Businesses do not digitize themselves overnight. Most of them go through a process of gradual digital transformation over years. Willcocks et al. (2000) gave us a framework to understand how businesses gradually overcome their failings or gaps and adopt higher levels of ICT tools. First, they get accustomed to basic communication tools (mobile phones, email, website). Once they overcome their anxiety gap and perceive the value of ICT adoption to be higher, then they jump into higher ICT adoption level and start to adopt tools like computers, software, IT-enabled hardware, etc. Then, once they overcome internal organizational incompetency, they adopt tools like- websites, the internet, e-commerce, etc. Finally, after years of capability building, they finally graduate into a high ICT adoption level.

A critical mass of SMEs are yet to adopt ICT tools

Many of the Bangladeshi SMEs in manufacturing and service sectors are expanding their businesses rapidly using innovative technologies. But, several SMEs in Bangladesh are unable to fully utilize the ICT infrastructure for the high cost of internet services, lack of uninterrupted electricity supply, lack of trained human capital pool, lack of broadband internet services, lack of trusted ICT service providers in the rural areas, and other challenges. Many of the agricultural-based businesses are located outside Dhaka, mainly in rural areas. These businesses are facing challenges to use the ICT services available in Bangladesh. Unless significant numbers of SMEs adopt simple ICT tools, the SME sector as a whole will not graduate upwards in terms of ICT adoption.
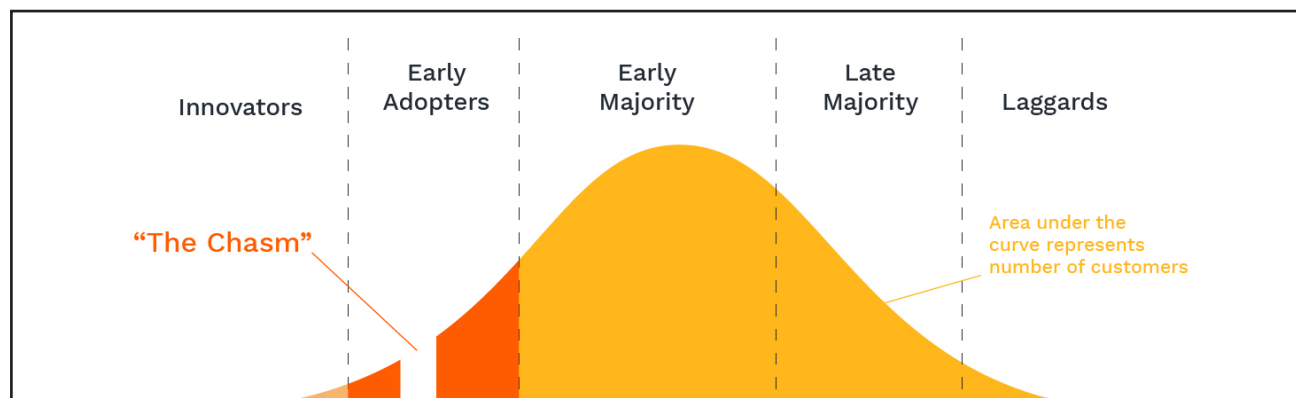
Innovators	Early Adopters	Early Majority	Late Majority	Laggards

"The Chasm"

Area under the curve represents number of customers

Figure: Most Bangladeshi SMEs are stuck somewhere near "The Chasm" of the technology adoption lifecycle. (Diffusion of Innovations by Everett Rogers, 1962)

Policies need to align with the SMEs' incentives to push for ICT adoption

Policy stakeholders and ecosystem-enabling organizations need to understand that ICT adoption among the majority of SMEs will not happen unless these policies help to create a conducive environment of 360-degree development for SMEs. Policies and programs need to be supported not only from a human capital or capacity development perspective but also to ensure cheap and scalable digital infrastructure, SME-friendly Tax/VAT policies, implementation of regulations, etc. ICT adoption is just one of the vital components of this complicated musical orchestra. Unless other components play their role, it will be a challenge for Bangladesh to see a beautiful symphony of SME development in the coming years.