

How IT innovations are transforming lives



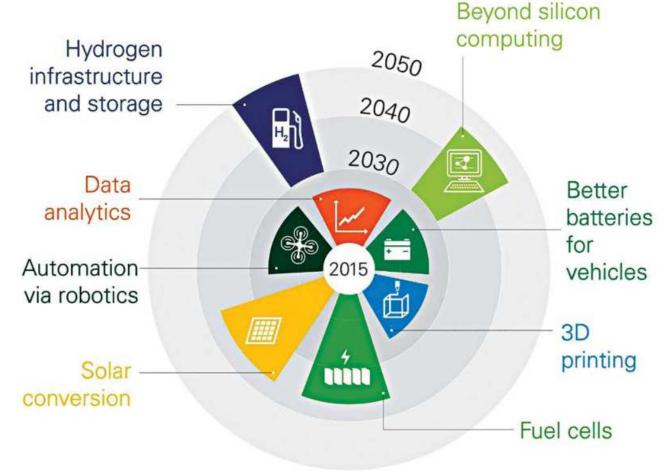
HABIBULLAH N KARIM

The year 2020 marks the beginning of a new decade that is pregnant with a plethora of transformative possibilities with anything from artificial intelligence, bio-engineering, distributed ledger or blockchain and genetics to predictive healthcare, quantum computing, re-usable rockets and virtual reality; the world as we knew in the last couple of decades is destined to transform right before our eyes in leaps and bounds. As an IT industry practitioner for the last three and a half decades, I have had the fortune to experience how IT innovations have touched the lives of everyone from a poor old woman in a remote village receiving seniorcitizen allowance through mobile financial service, to an autistic child in a middle-class family getting free access to augmented teaching aids—quality of life in Bangladesh has certainly improved a great deal in pace with the rise in per capita income that has quadrupled over the last two decades.

GLOBAL TRENDS IN SOME EMERGING TECHNOLOGIES

The Digital Bangladesh thrust of the government of Bangladesh since 2009 has catapulted the nation from a rank of 130 out of 134 by 18 places to 112 in 2016 in the World Economic Forum's network readiness index. The fibre optic backbone has crisscrossed the country to reach almost all Unions—the smallest administrative units and thereby has given internet access to more than 75 percent of the population. At the central government level, many citizen services are already available online such as construction permits by Rajuk, import permits by CCI&E, investment registrations by BIDA, land title mutation by AC Land Offices and many others most of which are localised in Bangla for easy navigation by all. These facts have not escaped the notice of "Ease of Doing Business Index" by the World Bank where Bangladesh has moved up eight notches in the latest ranking.

One important aspect to note is that online services that are successfully operating are all developed and



maintained by Bangladeshi software solution builders. This goes to show that the IT industry has matured over the last three decades to a point where it not only serves as the back-office for global IT outsourcing services but has moved up market to design, develop and market own software products and solutions in its own backyard that was long dominated by overseas players. This certainly speaks volumes for the visionary ICT Policy adopted by the government, the most recent revision of which in 2019 has mandated "Made in Bangladesh Software"—a top priority to advance the onward march of Digital Bangladesh.

Another indication of Bangladesh IT industry's maturity is the increasing number of global investors taking stakes in IT and ITES companies here giving the market a decidedly globalised look. 20-years ago, at

the turn of the century, the nation's software market size including exports was less than Tk 1 billion—a tiny blip compared to the size of the economy. Now this has grown to a substantive Tk 150 billion, more than half of which comes from exports. One of the great transformations sweeping the country is an army of IT freelancers—the second largest in the world—that has empowered enterprising young people even in remote nooks and crannies of the country to be self-employed and make healthy earnings for themselves and their families.

In the olden days, Bangladesh had always been a follower when it came to adopting the latest information technologies for developing new products and services. The vast majority of BASIS members build and market database applications. However, a sizable number these days are making

forays into the emerging technologies such as Blockchain or distributed ledger technology, data analytics, internet-of-things (IOT), machine learning tools, three-D printing, robotic process automation and virtual and augmented reality applications.

Investing in emerging technologies is inherently much riskier as trends in technologies and platforms which developers must learn and build applications on are continuously shifting. The enterprises have to be nimble and resourceful enough to pivot to new tools and platforms on the fly that takes some serious management bandwidth as well as investment of scarce resources. Managing the risks of working with emerging technologies is crucial to building a solid foundation for Digital Bangladesh. It is heartening to see that the government is taking bold and visionary measures to support

such risky endeavours by providing human resource skilling support to mid-size and large enterprises and venture funding support to new startups.

This coming decade will ultimately determine whether Bangladesh as a country remains only the destination of mundane low-cost back-office operations of the world or breaks out as a pioneer in some of the top emerging technologies. To do justice to the dreams and aspirations of the seventh largest nation on earth, we must seize the opportunity and make our mark with emerging technologies. It will be a tough and uphill battle—a battle that the academia, the government and the industry must fight together—for the rewards at the top of the hill are unbounded and breathtaking as a rising sun over the sea.

With the rising sun comes a new day and we must take to the world in a new light. Just as ancient Greek philosopher Heraclitus stipulated that, "The only thing that is constant is change", the world of business has been going through rapid transformations throughout the world in the last three decades and this has touched trade and commerce in Bangladesh in significant ways as well. When I started business in 1986, telex machines were still the rage in large trading houses and fax machines were just trickling in as each one of these new-fangled telecommunication devices required written permission from the president's office! It took me three years to get the permission for our first fax machine in 1989. Today, except for some arcane government offices, no one uses fax machines and to see a telex machine one needs to go to a science museum. Fax machines replaced telex machines and desktop-computer based emails replaced fax machines. In the last five years, mobile messaging apps such as IMO, Viber, and WhatsApp have gradually encroached the communication realms dominated by emails before. It's not too far-fetched to imagine a world moving away from emails to messaging apps in the nottoo-distant a future.

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