

Post-COVID-19 ICT Roadmap: Emerging Technologies, ICT sector

How the Roadmap came to be

With the growing certainty that COVID-19 is here to stay, the ICT Division of the Government of Bangladesh is developing a roadmap to fight the pandemic and ensuing crisis and to find innovative ways to flourish in the 'new normal'. Emerging technologies is one of the 18 priority sectors selected based on the impact of COVID-19 on the sector and its potential for transformation of the economy and society.

Why the Emerging tech-sector

The digital interference in current years has resulted in technology to be viewed as more than just a means of automating the production process. Evidence suggests that the latest technologies, such as artificial intelligence, robotics, AI, big data analysis, and blockchain are driving the fourth industrial revolution and are opening new business opportunities in both domestic and global markets. In Bangladesh, Companies are incorporating emerging technologies to fulfil the new demand. These businesses are at different stages in adopting emerging technologies like robotic process automation, artificial intelligence, blockchain, big data analytics, virtual reality, and the Internet of Things (IoT). Their capacity of following digital progress will be an important element for the future success of the country's ICT industry. The government has also taken initiatives to introduce policies and strategies to create the ecosystem and promote emerging technology in Bangladesh.

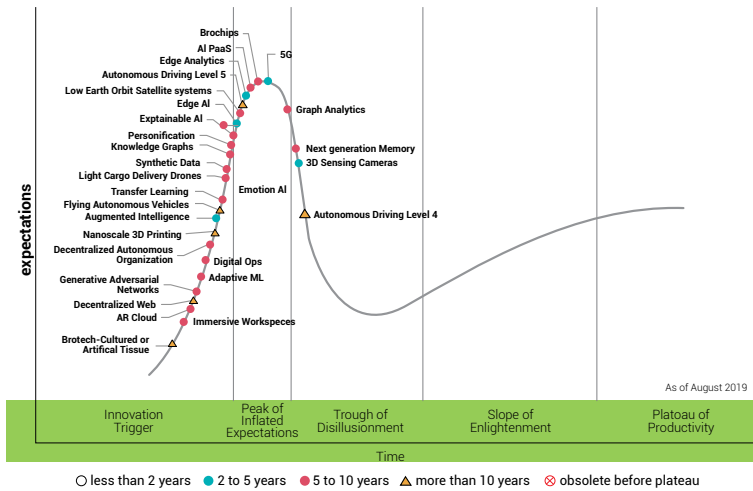


Figure 1: Emerging technology trends with transformational impact- Source: Gartner-2019

Impact of COVID-19

In response to the Covid-19 pandemic, the Bangladesh Government and private sector jointly collaborated to accelerate the adoption of emerging technologies such as artificial intelligence, big data, cloud computing, blockchain to face the pandemic for monitoring, resource allocation and decision making. ICT Division, together with several other Government organizations, technology and telecom companies, followed suit. There's no question at this point that the COVID-19 pandemic has had a major economic impact on the world. The temptation is to think that everyone will suffer due to supply chain disruptions, lockdowns, and other issues. But for some of the emerging technologies led businesses, this pandemic has become more of a growth opportunity than a setback.¹

| Product and Technology | Impact in Q1, 2020 | Impact in 2020 |
|------------------------|--------------------|----------------|
| Smart Phone | ***** | ** |
| PC | ***** | ** |
| Tablet | ***** | ** |
| Storage | **** | * |
| Network | **** | * |
| Server | **** | * |
| IoT | *** | * |
| Big Data | ** | * |
| Security | ** | * |
| IT service | ** | * |
| Smart home | ** | * |
| UC & C | ** | ** |
| Software | ** | * |
| AI | ** | * |
| Wearable device | * | * |
| VR/AR | * | * |
| Cloud service | * | ** |
| Overall ICT | *** | * |

| Product and Technology | Impact in Q1, 2020 | Impact in 2020 |
|------------------------|--------------------|----------------|
| Retail | ***** | *** |
| Transportation | ***** | ** |
| Customer | *** | ** |
| Manufacture | *** | * |
| Energy | ** | ** |
| Agriculture | ** | * |
| Service | ** | * |
| Architecture | ** | * |
| Finance | * | * |
| Telecommunications | * | * |
| Education | * | ** |
| Utilities | * | ** |
| Media | ** | ** |
| Government | ** | ** |
| Health care | ** | *** |
| Overall ICT | *** | * |

Legend: * Small negative impact ***** Large negative impact * Small Positive impact ***** Large Positive impact

Figure 2: How will the COVID 19 outbreak impact the overall ICT market growth Source: IDC, 2020

Constraints

Absence of an ecosystem to encourage emerging technology R&D, inadequate skill and capacity development programs for IT-ITES Companies in emerging technologies, promotion and funding of emerging technology solutions, inadequate knowledge on emerging technology in education sector, lack of policies and strategies supporting emerging / frontier technology solutions have halted any immediate pivoting that the players in the sector could have undertaken to minimize the intensity of the initial blow following the pandemic.