

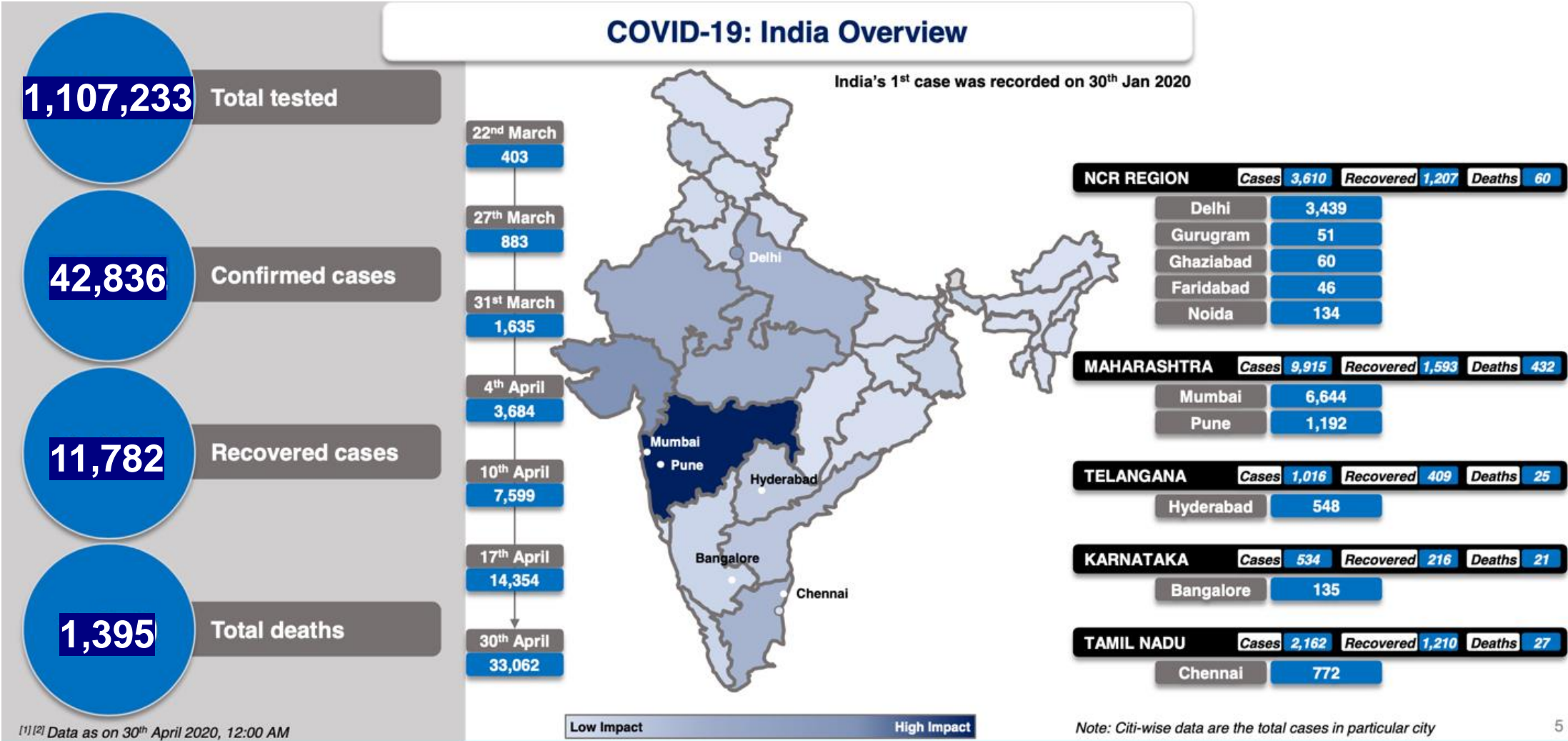
COVID19

The Billion-People Question

Rajesh Nambiar
Chairman & President, CIENA India



COVID-19 has been a global disruption and India is no exception - grappling with concerns about balancing “life” and “livelihood”



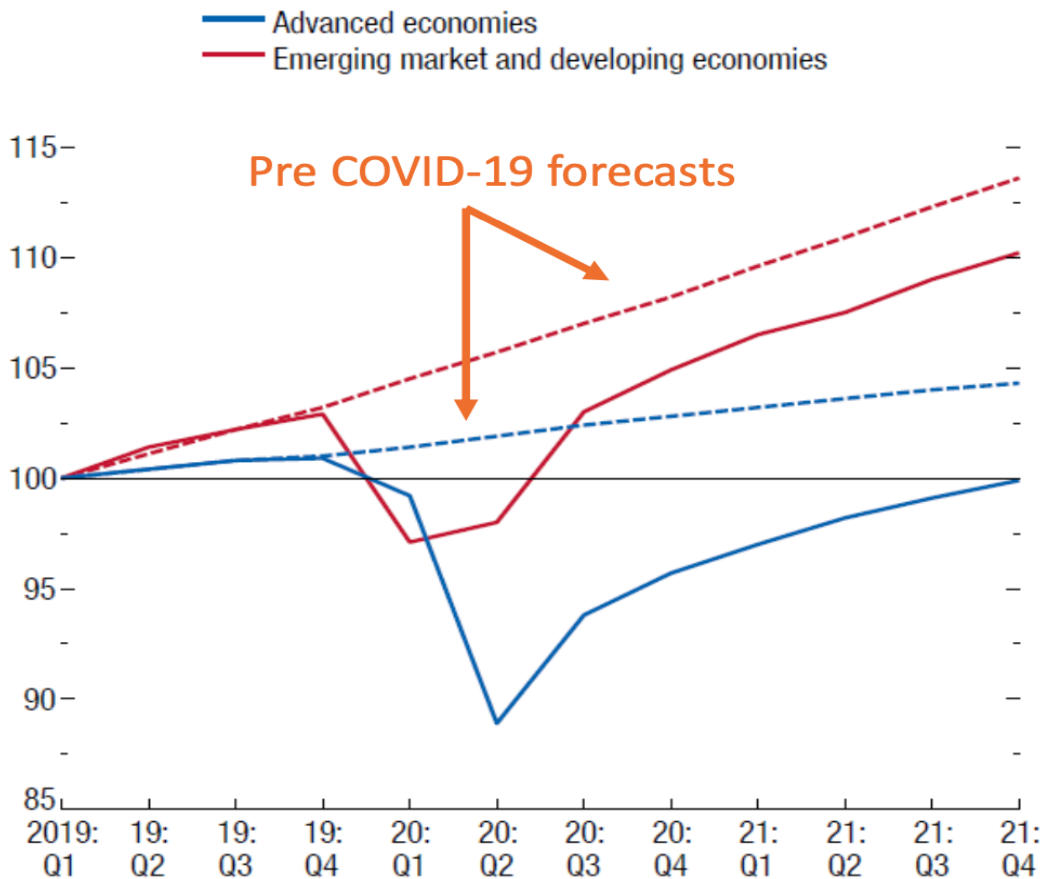
Data on the circles is as of 4th May 2020 9PM

Source: Zinnov

The IMF's World Economic Outlook as of 14th April...

Figure 1.6. Quarterly World GDP

(2019:Q1 = 100; dashed lines indicate estimates from January 2020
World Economic Outlook Update)

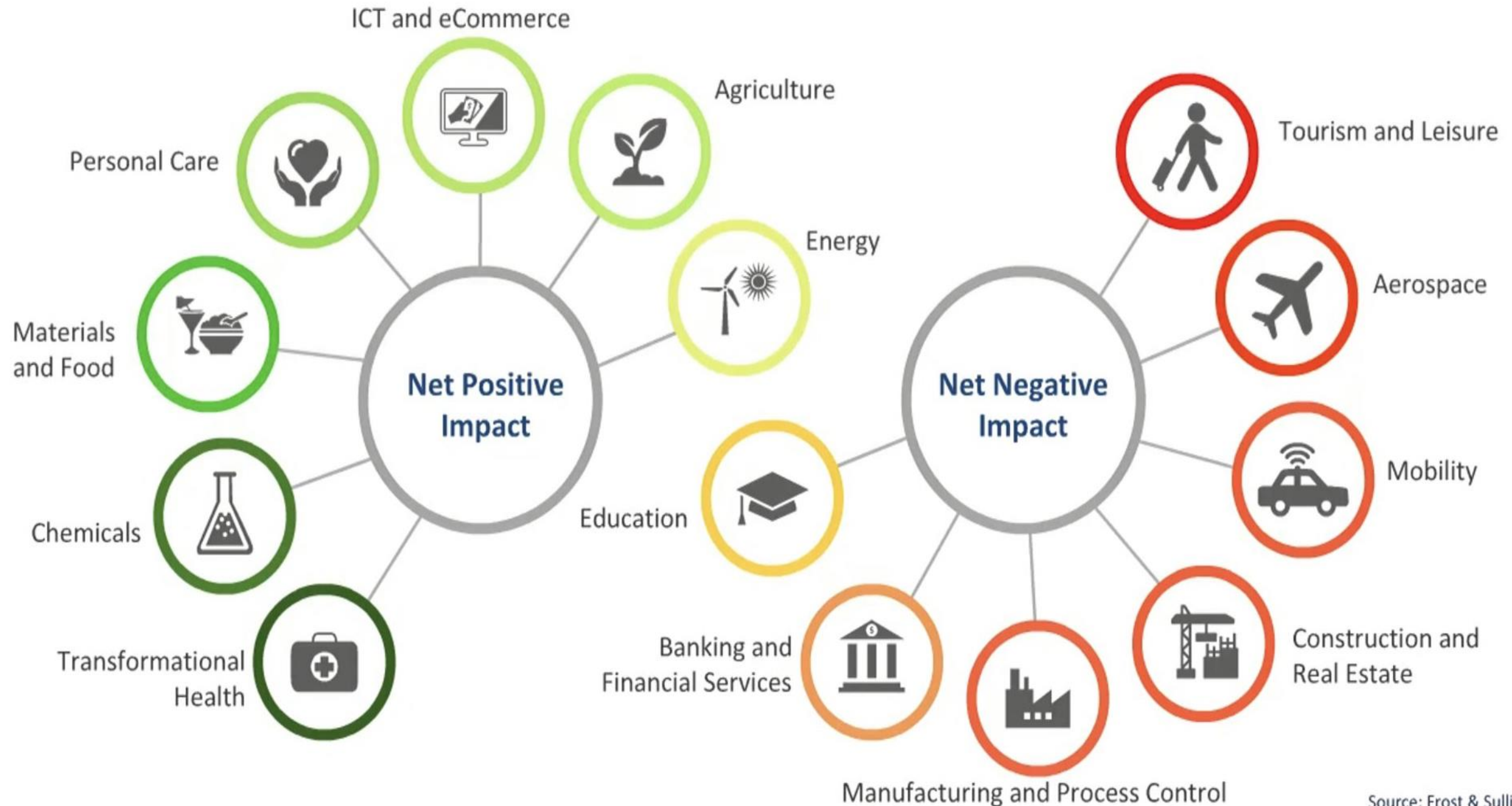


Source: IMF staff estimates.

	2000-19 20yr avg	2020	2021	Avg 2020-21
World	3.8	-3.0	5.8	1.4
US	2.1	-5.9	4.7	-0.6
Euro area	1.4	-7.5	4.7	-1.4
Japan	0.9	-5.2	3.0	-1.1
China	9.0	1.2	9.2	5.2
HK	3.6	-4.8	3.9	-0.5
Taiwan	3.7	-4.0	3.5	-0.2
Korea	4.1	-1.2	3.4	1.1
Indonesia	5.3	0.5	8.2	4.4
Malaysia	5.0	-1.7	9.0	3.7
Philippines	5.4	0.6	7.6	4.1
Singapore	5.1	-3.5	3.0	-0.3
Thailand	4.0	-6.7	6.1	-0.3
Vietnam	6.7	2.7	7.0	4.9
India	7.0	1.9	7.4	4.6
Australia	2.9	-6.7	6.1	-0.3
NZ	2.9	-7.2	5.9	-0.6

Sri Lanka -0.5 4.2 1.9

Impact on Key Industries – Survival → Recovery → Reinvent



Industries that are globalized and digitally enabled for remote workforce operations are best positioned to combat the effects of COVID-19

IMPACT Low High	<div> <div></div> <div></div> <div></div> <div></div> </div>					
	Consumer Spending Sentiment Impact	Public Health Impact	Industry Fiscal Health Impact	Digital Adoption	Supply Chain Impact	Zinnov COVID-19 Overall Impact
Aerospace						
Automotive						
BFSI						
Chemicals & Materials						
Comp. peripherals & Storage						
Consumer Electronics						
Consumer Software						
Energy & Utilities						
Enterprise Software						
FMCG						
Healthcare payers & providers						
Industrial						
Medical Devices						
Media & Tech						
Mining & Metals						
Pharmaceuticals						
Retail						
Semiconductor						
Telecommunication						
Transportation, CHM						
Travel & hospitality						

Source: Zinnov

Growth Opportunities in the ICT Industry

Footfalls → Eyeballs ; Digitally enabled Sales



DIGITAL ENTERPRISE & DIGITAL MEDIA



- ▲ Big Data analytics use cases proliferate, validating the value proposition across verticals.
- ▲ eLearning will be a much bigger market as many institutions and students are forced to adopt distance learning.
- ▲ eSports will see a wider audience and revenue growth as it draws eyeballs during the pandemic.

IoT



- ▲ Current market conditions highlight the need for secure, artificial intelligence (AI)-driven wireless connected applications.
- ▲ The need for data provenance and security will accelerate the demand for blockchain.

CLOUD & BUSINESS NETWORKS



- ▲ Businesses will replace legacy premises-based business applications with cloud-based SaaS.
- ▲ Data protection and disaster recovery will be key areas of growth as business evaluate their business continuity capabilities.

CYBERSECURITY



- ▲ Remote collaboration necessitates an increased focus on cloud security.
- ▲ Demand for enhanced security rises as mobile banking and digital payments increase.

CUSTOMER EXPERIENCE



- ▲ AI, robotic process automation, and virtual agents are now a must-have.
- ▲ New, longer-term opportunities emerge in business process automation and intelligent self-service initiatives.

MOBILE & WIRELESS



- ▲ The pandemic highlights the urgent need for upgrading digital infrastructure and deploying 5G.
- ▲ Mobile banking and cashless payments rise, catalyzing fintech innovation.

Closing thoughts on changes after COVID-19

❑ WFH

- ✓ new workplace paradigm – impact on real estate with micro offices emerging

❑ Manufacturing to shift closer home

- ✓ Global supply chains will become less efficient, but more resilient with rising industrial nationalism

❑ Ecommerce to rise fast including B2B

- ✓ The route to market will increasingly become digital

❑ Accelerating DIGITAL

- ✓ Companies become *more* digital *far* sooner

❑ Manufacturers preferring new biz model akin to services firms

- ✓ Safer payment and bigger margins in selling the utility not the product

❑ Faster adoption of Super Cloud everywhere

- ✓ Digital connectivity becoming far more important than physical connectivity

❑ START-UP funding to be severely impacted

- ✓ VCs have less appetite to make new investments as they try to salvage current investments