What's hot in IT in 2019 An Indian Perspective

Major developments of the year

- ►ISRO with its 99% success of Chandrayaan II
- >The launch of Samsung Fold phones in the year (many others following in 2020)
- >BSE going from 36,000 to 42,000 in the year
- >TCS creating history
- >Hostile take-over of Mindtree by L&T InfoTech
- >Launch of Reliance Jio Fiber
- >Nobel Prize winner Abhijit Banerjee with India connection
- **≻Prime Minister Modi** in his historic US visit "**Howdy Modi**" and his address in UN Assembly & US Congress
- >Several **Supreme Court rulings** including **AADHAAR** related issues, **Ayodhya** case finally getting solved >Supreme Court ruling in **Vodafone** case, telecom companies in dire financial circumstances, banks not lending enough, **ILFS** crisis, dramatic economic **slow-down**
- >BJP winning an absolute majority and returning to power in May, yet having a series of debacles in Rajasthan, Madhya Pradesh, Karnataka, Maharashtra and Jharkhand; CAA, NRC, NPR confusion all of December!
- The tragic death of Café Coffee Day founder VG Siddhartha
- >Three senior BJP leaders Manohar **Parikkar** (Goa CM), Sushma **Swaraj** (External Affairs Minister) and Arun **Jaitley** (Finance Minister) within months
- >Apple & Goldman Sachs launching a virtual card (in the crowded credit / debit card space)
- >Aramco IPO
- >US China friction in trade; Huawei winning 5G orders yet not getting the sales thru due to trade war between US &China
- >Social media related human misery fake news & loss of privacy
- >President Trump getting formally impeached
- **▶Brexit** going thru its up & downs with UK PM Theresa May stepping down, Boris Johnson winning but deciding to go for another election and winning back all in a year

Markets

>On the IPO scene

>Indian Railways PSU IRCTC IPO on October 14, 2019 got oversubscribed 110 times! Stock price gained 29% on Day 1

>Globally.

Saudi Oil major **Aramco** created history with its **IPO** becoming the largest ever IPO on **December 4, 2019**; on Day 2 of its listing, its market value touched \$ 2 **Trillion** surpassing the market value of **Apple**, **Microsoft** and **Google**.

>Uber IPO is finally through in May 6, 2019; priced at \$ 45 Uber raises \$ 8.1 Billion, but loses value on the very first day of trading! In fact, it created history by way of losing the maximum on Day 1 among all IPO's post 1975!

>On the acquisition front,

>L & T Infotech hostile take-over of Mindtree got a lot of attention; it finally concluded in October 2019

>Globally,

- >In semi-conductor industry, **Infineon** buys **Cypress Semiconductors** for a whopping \$ 10 Billion on June 5, 2019, one of the largest acquisitions; **NVIDIA** acquires chip maker **Mellanox** for \$ 4.9 Billion on March 8, 2019
- >HPE acquires Cray (the only company focused exclusively on super computers, founded by super computer pioneer Seymour Cray) on May 18, 2019
- >Google acquires the wearables company FitBit for \$ 2.1 Billion on November 1, 2019 and the analytics start-up Looker for \$ 2.6 Billion on June 6, 2019
- >Salesforce acquires the analytics biggie Tableau for \$ 15.3 Billion on June 10, 2019
- **Dassault Systems** buys **Medidata** for \$ 5.7 Billion on June 12, 2019 → Dassault Systems
- >United Technologies and Raytheon merge on June 10, 2019 to create a huge \$ 120 Billion defence contractor
- >Amazon India and Flipkart Big Billion Days Shopping Festival in September & October 2019 saw big increase in sales in an otherwise damp market condition
- >BSE Index **Sensex** had moved from 36,000 to 42,000 over the year; it jumped 1,800 point increase on September 20, 2019, following Finance Minister's announcement of corporate tax reduction (the highest single-day gain in a decade); and went past 40,000 on NDA victory on May 23, 2019; had a huge fall in September and recovered in December
- ▶ Wall Street had a remarkable year with Dow Jones Index crossing 28,000 for the first time in December 2019

MNC IT Companies in India

- **≻Samsung India** is a \$ 10 Billion company on **December 1, 2019**
- >With 9,100 patents in 2018 (with more than 4,000 patents in AI), IBM continues its record of holding the No 1 position for 26 years; interestingly, 800 of them were from IBM India, the largest for IBM outside USA
- >Google announces the starting of Google AI Research Lab in India; Google Pay expands to 200,000 merchants in India in March 2019, thanks to PineLabs and Innoviti
- \gt Several global majors increased their operations in India in the year 2019. This include
 - ➤ Google signs up for 450,000 square feet office space with Simpli Work in Gurgaon on December 12, 2019
 - ➤ Goldman Sachs starts a new delivery center in Bangalore with 1.25 Million square feet space to host 7,300 people at a cost of \$ 250 Million on May 30, 2019 (it will be the third center globally for GS)
 - >Amazon leases 1.3 Million square feet office space in Bangalore in June 2019
 - **≻Samsung** R & D Institute signing up for another 4,00,000 sq. ft. space in Bangalore on **February 16, 2019**
 - French major **Thales** launches its R & D Center in Bangalore in February 2019,
- **≻"Make in India"** seems to be taking off
 - >Apple started selling iPhone XR units made in India and even exports to other countries from Chennai plant owned by its supplier Foxconn
 - >Xiaomi supplier Holitech invests \$ 200 Million in NOIDA plant in UP in North India; production expected to start as early as Q3 of this year
 - >Siemens Healthineers starts a medical device manufacturing facility in Electronics City in Bangalore on September 19, 2019

Indian IT companies

>TCS creates history

>On June 9, 2019, with 417,929 employees (as per Wikipedia), TCS market capitalization (\$ 120.5 Billion) is higher than that of legendary IT leader IBM (\$ 119.6 Billion). Interestingly, TCS had a turnover of \$ 21 Billion for FY 19 and \$ 4.5 Billion profit, while IBM with 3,50,600 employees (as per Wikipedia) had a much larger \$ 79.6 Billion turnover and \$ 8.7 Billion profit and for the same period; its brand value takes it to global No 3 (next only to Accenture & IBM) as per Brand Finance Report of January 23, 2019; TCS bags \$ 2 Billion order from Europe's largest pension funds consolidator Phoenix group on November

>Mindtree joins the "billion dollar club" on April 17, 2019; however, as an independent company, it becomes history after L&T acquisition in July >L& T InfoTech makes news! Mindtree saga is over! L&T is officially the promoter of Mindtree effective July 3, 2019 as its holdings cross 60% on that day.

>With 2018-19 turnover of \$ 8.6 Billion HCL is No. 3 Indian IT Services company (next to TCS and Infosys) bypassing Wipro with 2018-19 turnover of \$ 8.1 Billion; HCL signs contract worth \$ 1.3 Billion with Xerox on March 1, 2019

► Bajaj re-launches an Electric version of its

historic "Chetak" scooter in October 2019
>Cognizant decides to lay off 350 Senior Management
personnel to cut costs on December 23, 2019



Tech
Mahindra
Mindtree

Products

➤The one product that was truly revolutionary in the year 2019 was Samsung Galaxy Fold launched on February 20, 2019 at Bill Graham Civic Auditorium in San Francisco, the place where Steve Jobs launched Apple II way back in 1977; after initial glitch, Samsung Galaxy Fold had a spectacular launch in September 2019; 1,600 Samsung Fold Phones were sold in 3 minutes in India!

➤There were interesting Smart TV launches in India in the year 2019;

they include Nokia TV launched with FlipKart (Wal-Mart owned) on December 12, 2019 (55" TV at Rs 41,999)! Amazon Fire TV, in partnership with ONIDA in Proceeding 2010

in partnership with ONIDA in December 2019 and OnePlus TV in September 2019



>HMD Global (NOKIA brand owner) launched a number of products in India in the year 2019; they include Nokia 2.3 on December 15, 2019; Nokia 6.2 and Nokia 7.2 in October 2019 and Nokia 4.2 on May 10, 2019

- ➤ Google launches Pixel 4 phone on October 18, 2019 (not to be sold in India); Google Nest Mini on November 25, 2019; Google Music App in India on March 12, 2019; Google Bolo App in India on March 6, 2019, targeting rural children
- >Xiaomi launches Note 8 and Note 8 Pro in India on October 2019
- >Android 10 was out in September 2019
- ▶ Reliance Jio Fiber was launched on August 18, 2019

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People

- >After 53 years of outstanding service, Wipro Chairman **Azim Premji** hands over charge on **July 31**, **2019** to his son **Rishad Premji Premji's** personal **philanthropy** touches Rs 100,000 Crores in March 2019
- >CTS CEO Francisco D'Souza steps down after 12 years (CTS revenue saw top-line growing from \$ 1.42 Billion in 2006 to \$ 16.1 Billion in 2018)
- >Keshav Murugesh and Praveen Rao are Chair and Vice Chair of NASSCOM for FY 2019-20 (starting April 1, 2019)
- Narendra Modi takes oath as India's Prime Minister for a second time on May 30, 2019
- Sharad Arvind Bobde takes over as 47th Chief Justice of India on November 18, 2019
- >Om Birla was unanimously elected as the *Lok Sabha* (Lower House of the Indian Parliament) Speaker on June 17, 2019
- > Japanese new Emperor Naruhito is sworn in on May 1, 2019 (Emperor Akihito abdicated his power on April 30, 2019)
- >Greta Thunberg is Time Magazine's Person of the Year 2019
- The year 2019 saw several India-born and educated individuals make it big globally; this include
 - >Dr Sethuraman Panchanathan (an IISc & IITM Alum) appointed as the Chief of NSF (National Science Foundation), USA on December 20, 2019
 - >Monisha Ghosh (IIT-KGP Alum) appointed as CTO of the powerful FCC (Federal Communications Commission) of US in December 2019
 - >Microsoft CEO Satya Nadella in the list of 20 Business Persons of the year 2019
 >Google CEO Sundar Pichai becoming the CEO of its parent company Alphabet on
 - December 2, 2019
 >BITS-Pilani alumnus Ms **Revathi Advaiti** named Flex (earlier Flextronics) **CEO** on **February 11, 2019**
 - >Anshula Kant of State Bank of India appointed as CFO of World Bank on July 12, 2019
 >Prashanth Chandrasekar (Bangalore born) is the new CEO of Stack Overflow (the first port of call for 50 million developers, globally)!
- ➤ Several high-profile visitors to India in the year 2019 include
 - >Chinese Premier and the historic summit with Modi at Mamallapuram (October 12-13, 2019)
 - >German Chancellor Angela Meckel (November 1-3, 2019)
 - **▶Bangladesh Prime Minister (October 3-5, 2019)**
 - >WhatsApp global head Will Cathcart (July 25-26, 2019)
 - >Wal-Mart International CEO Judith McKenna (May 2-3, 2019)
- >Sri Lanka elects a new President on November 16, 2019; the new President Gotabaya Rajapaksa nominates his brother Mahinda Rajapaksa as Prime Minister on November 21, 2019
- >Former President **Pranab Mukherjee** gets **Bharat Ratna** the highest civilian award on August 8, 2019
- **≻Cisco** Chairman **John Chambers** and **Adobe** CEO **Santanu Narain** are part of **Padma** awards 2019
- >Unfortunately India lost several distinguished citizens in the year 2019; this include
 - Former Finance Minister Arun Jaitley (August 24, 2019)
 - Foreign Minister Sushma Swaraj (August 6, 2019)
 - Café Coffee Day founder and the iconic entrepreneur from Bangalore VG Siddhartha (July 29, 2019)
 - ➤ Goa Chief Minister Manohar Parrikar (an IITB Alum) (March 17, 2019)
- >Jonathan Ive, the legendary design Guru of Apple announces his decision to leave Apple on June 27, 2019; Apple loses \$ 9 Billion of mar-cap in a day!



Universities & Higher Education

- National Education Policy was out in 2019; extensive consultations are on; likely to start getting implemented in early 2020
- ▶Ranking becomes a major issue among Institutes of Higher Learning
 - >NIRF 2019 rankings out on April 8, 2019; IITM and IISc top the list; IITM, IITD, IITB, IITKGP & IITK are the Top 5 Engineering Institutes; IISc, JNU, BHU, UoH and Calcutta University are Top 5 Universities; IITM, IISc, IITD, IITB & IITKGP are the overall Top 5
 - >QS World rankings of Indian Universities is out on June 18, 2019; IITKGP moves up by 28 ranks! QS Asia 2019 Ranking was out on July 22, 2019; with IIT-Bombay (33), IIT-Delhi (40), IIT-Madras (48), IISc (50), IIT-KGP (53), IIT-K (61), Delhi University (68) and IIT-Roorkee (85), India has 8 entries on the Top 100
 - >Times Higher Education ranking of September 14, 2019 leads to lots of confusion; 56 Indian Institutes in the Top 500 but none in Top 300 (for the first time after 2012); **IISc** that had been in the Top 300 for many years talks of "data error"; **other IIT's** join to take up "data errors" with the Agency; interestingly, **IIT-Ropar** and **IIT-Indore** lake it to the Top 400!
- >IoE (institutes of Eminence) list of September 5, 2019 gets five new additions IIT-Kharagpur, IIT-Madras, BHU, Delhi University and Central University of Hyderabad on September 5, 2019 (Teachers Day)
- > JEE Mains 2019 held in January 2019 by National Testing Agency in online mode spread over January 9, 10, 11 & 12; nearly 10 Lakhs took the exam; results declared on January 19, 2019 (10 days ahead of time)
- > JEE (Advanced) results were out on June 14, 2019, for admissions to IIT's; 38,705 qualify; girls constitute just 5,356! Karthikey Gupta among the boys (Rank 1) and Shabnam Sahay among the girls (Rank 10) are the Top 10 rank holders; of the first 100 ranks the number of students opting for IITB is 64! It is 33 for IITD, 2 for IITK and 1 for IITM; of the first 500 ranks, the number of students opting for IITB is 147! It is 142 for IITD, 53 for IITM, 52 for IITK, 47 for IITKGP, 35 for IITR, 17 for IITG and 7 for IITH!
- >NEET (Admission Test for Undergraduate courses in Medical and Dental colleges) results were out on June 5, 2019; staggering 14,10,755 students took the exam on 11 languages in 2.546 Centers spread across 154 Cities involving 128,000 invigilators and 64,000 rooms! 7,97,042 students qualify for counselling; Rajasthan boy Khandelwal tops the exam while Delhi's Bhavik and Kaushik from UP secure the second and third rank >IIT's to add 4,320 seats in 2020-21; IIIT's to add 556 seats in the same period
- >IIT-Delhi announces 500 PhD Fellowships for International students from the academic year 2019-20, a game changer initiative of the Indian higher education system
- >Sponsored **Research grants** scale new heights in IIT's; **IIT-Madras** earns more than Rs 500 Crores in 2018-19; **IIT-Delhi** and **IIT-Bombay** are not far behind; **IIT-Delhi** starts a **Billion Dollar fund raising** campaign, the first such large-scale fund collection drive; FlipKart founders **Bansals** kick off the drive with **Rs 125 Crores** donation
- >Engineering college seats approved by **AICTE drop** from 28.71 Lakhs in 2017-18 to 27.12 Lakhs in 2018-19; for 2019-20 it will drop further to 24.92 Lakhs! **AICTE** cuts 40,000 engineering seats and decides not to give permission for new engineering colleges for 2 years, on **January 31, 2019**

Interesting Application

- ➤ Payment space has huge traction in India in the year 2019
 - >FASTag (RFID reader-based toll collection) becomes mandatory on all toll booths of NHAI (National Highway Authority of India) effective December 15, 2019, hopefully avoiding wasteful delays
 - >Mobile payment platform **UPI** volume exceeds debit card volume on **October 1**, **2019**; touches 1 Billion mark on
 - October 25, 2019
 >UPI-based mobile payment App
 BHIM goes global with its
 Singapore launch on November
- >Amazon's AI-based voice assistant device Alexa starts to speak and understand Hindi in September 2019
- >RBI (Reserve Bank of India) waives charges on RTGS & NEFT transactions on June 6, 2019 incentivizing the country's move towards digital money transactions; ATM charges too are to get rationalized
- > ModiCare (Aayushman Bharat) treats 6,85,000 patients free of cost in the first 100 days

Policy

- **≻RBI** to **transfer Rs 1.76 Crores** to Government of India in the year **2019-20**; unusually high in India
- ▶Public sector Bank mergers finally happened in 2019
 - Dena Bank and Vijaya Bank merge with Bank of Baroda (BoB) on April 1, 2019
 - >Announced on August 23, 2019, twelve more banks get consolidated
 - ❖Punjab National Bank with OBC and United Bank
 - Canara Bank and Syndicate Bank
 - ❖Union Bank with Andhra Bank and Corporation Bank
 - ❖Indian Bank with Allahabad Bank
- Finance Minister Nirmala Sitharaman announces a slew of measures to boost the economy and improve investor / market sentiment; Public Sector Banks consolidation (Aug 23), "faceless" Income Tax administration (Oct 7), real estate sector fund (Sep 14), corporate tax reduction (Sep 20); this follows the earlier consolidation exercise State Banks' consolidation and Dena Bank and Vijaya Bank merger with Bank of Baroda. Markets react to the first announcement with Sensex gaining 839 points on August 26, 2019; the second announcement too is expected to be well-received by the markets on Sep 3, 2019
- > Reserve Bank of India lowers Repo rate by 35 basis points (a new record) on August 7, 2019
- >Modi government passes the historic **Jammu & Kashmir** re-organization legislation on **August 5-6, 2019** in both the Houses of the Parliament
- > Department of Telecom orders payment of Rs 93,000 Crores on November 14, 2019, as per Supreme Court ruling adding further blow to the ailing telecom companies; Government provides partial relief by way of 2-year moratorium on November 21, 2019
- >Finance Minister announces Rs 25,000 Crores fund to help the real estate sector on November 7, 2019
- >India decides to opt out of RCEP (Regional Comprehensive Economic Partnership) on November 5, 2019, though it was very close to signing the agreement; steps towards bi-lateral agreement with USA are on
- >TRAI norms for broadcast TV channel pricing comes into effect from February 1, 2019; expected to save money for hundreds of millions of TV consumers
- Drone Policy 2.0 enters Draft stage and ready for comments on January 15, 2019

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Science & Technology

- ▶ISRO gained lots of attention from the global the scientific community, thanks to its Moon Mission Chandrayaan II
 - ➤ Announced in June 2019
 - >Took off on July 22, 2019 at 2:43 PM ((the takeoff had to be re-scheduled due to technical slag identified 54 minutes before the originally planned 2:51 AM takeoff on July 15, 2019)
 - >Third of the four earth-bound maneuvers successfully deployed by ISRO on July 29, 2019; successfully completed all earth-bound maneuvers of reached Moon Orbit on August 20, 2019; all set for Rover landing on September 7, 2019
 - >Rover **Vikram** managed to reach all but 2.1 KM of the 4,00,000+ KM journey to the Moon on 6th **September 2019** night, but "crash lands"; luckily, the **Orbiter** successfully keeps sending Lunar images and said to be in good health with nearly one full year of life.
- ► ISRO (Indian Space Research Organization) launches CARTOSAT-3 and 13 micro-satellites on November 27, 2019
- >ISRO gets approval from the global standard body 3GPP for its home-grown GPS "NavIC" on September 24, 2019
- >IISc researchers claim super-conductivity at room temperature on May 27, 2019
- >MIT visualization scientist could share the first-ever picture of a black hole on April 10, 2019
- Google claims quantum computing breakthrough on October 27, 2019 with its quantum computers beating the reported fastest computer
- >Korea becomes the first country to start offering 5G services commercially on three networks in Korea starting April 2019; Samsung S10 5G is the first device to offer the service
- >History was made with the first electric-powered commercial flight taking off safely from Vancouver, Canada on December 11, 2019; Australian firm Magnix designed and retro-fitted an old Beaver Aircraft; Greg McDougall founder and Chief Executive of Harbour Air flew the aircraft; the flight landed only 15 minutes. While the current Lithium battery will have a range of just 160 KM, in the years to come, electric powered planes with less environmental pollution is likely to a be reality
- >SpaceX launched its first set of 60 satellites (of the 12,000 planned over 6 years) on May 23, 2019 to provide Internet connectivity
- >After its first successful test flight on May 4, 2019 in Munich, Lilium starts 5-seater Air taxi with 300 KM range electric plane on May 16, 2019, a revolution in passenger flight
- >Infosys Science Prizes for 2019 were announced on November 7, 2019; Professor Sunita Sarawagi of IIT Bombay is the winner for Engineering & Computer Science
- >Nobel Prizes for 2019 announced in October
 - >Announced on October 14, 2019 Nobel Prize in Economics 2019 went to Abhijit Banerjee (India-born) & Esther Duflo of MIT USA and Michael Kramer of Harvard. USA
 - Announced on October 9, 2019, Nobel Prize in Chemistry 2019 went to John Goodenough of UT Austin, USA, Stanlet Whittingham of Binghamton, USA and Akira Yoshimo of Meijo, Nagoya, Japan for their work on "Lithium-ion batteries"
- >Bhatnagar Prizes were announced on September 26, 2019, Dr Manik Varma of Microsoft India Research gets the Award for Engineering Science
 >Professor Gagandeep Kang of Translational Health Science & Technology Institute, Faridabad, Delhi is the first Indian woman to become a Fellow of the Royal Society on April 20, 2019
- >AI pioneers Yoshua Benigo (Univ. of Montreal), Geoffrey Hinton (Univ. of Toronto) and Yann LeCun (New York Univ.) win Turing Award (the Nobel Prize in Computing) on March 28, 2019
- >Abel Prize 2019 goes to Norwegian woman (the first time ever for a woman) Prof. Karen Uhlenbeck of UT Austin

Startup Scene

- Indian Start-ups are doing the country proud globally
 - Ritesh Agarwal founded **Oyo** is the world's third largest hotel as of July 2019! (8,50,000 rooms with 23,000 hotels in 800 cities)
- Indian start-ups are doing trail-blazing work
 - Bangalore-based **Skylark** and **Throttle Aerospace** are the very first Drone companies to get DGCA Certification on **June 21**, **2019** (The new **Drone Policy** of the Government of India is at work!)
- Start-ups in **Tier II towns** are making news
 - HCL Technologies acquires Hubli-based semiconductor startup Sankalp Semiconductor for Rs 180 Cr on September 10, 2019
- More unicorns are born in the year 2019
 - Mirace of South Korea invests \$ 150 Million in BigBasket; with their valuation BigBasket turns Unicorn
 - Pune-based data back-up and analytics firm **Druva** offering SaaS-based solutions gets \$ 130 Million funding and becomes an Unicorn on June 21, 2019
- Unicorns are getting bigger
 - Fresh capital infusion of \$ 150 Million into FreshWorks (Chennai-based customer engagement company) on November 13, 2019 takes its market cap to \$ 3.5 Billion (2018 Unicorn) PayTM raised \$ 1 Billion in end November 2019 taking its valuation to \$ 16 Billion (2017 Unicorn)

 With \$ 250 Million funding from Softbank on July 2, 2010
 - With \$ 250 Million funding from **Softbank** on **July 2, 2019**, Bangalore-based Taxi aggregator **Ola** has a value of \$ 6 Billion (2015 Unicorn)

Special events

- >In December 2019, Company Law Tribunal decides the termination of Cyrus Mistry as Chairman of Tata Sons (the 100+ Billion Dollar enterprise that is much respected in India for more than one century) illegal, after three years, leading to much confusion
- > Jammu & Kashmir and Ladakh form new Union Territories on November 1, 2019
- ➤ Prime Minister Modi and President Trump share the stage in a historic "Howdy Modi" event on September 22, 2019 in Houston, Texas; Modi addresses UN General Assembly on September 29, 2019; Prime Minister Modi hosts Chinese Prime Minister Xi Jinping at Mamallapuram in Tamil Nadu for a Summit during October 11-12, 2019
- ➤ Brexit causes much turbulence in UK in the year 2019; Prime Minister Theresa May steps down and Boris Johnson gets elected on July 24, 2019; had to resign and seek re-election in November and finally Parliament approving the decision Brexit will be a reality (hopefully) by January 31, 2020
- >US President imposes \$ 200 Billion duty on Chinese imports on May 9, 2019; China retaliates and hikes duty on most US goods from June 1, 2019; technology war hots up on May 20, 2019 with Google restricting Android access to Huawei; Intel, QUALCOMM getting forced to restrict supply / sourcing of components to / from China

Interesting numbers

➤India's **IP Index rank** moved from 44 to 36 in the **year 2018**, as per US Department of Commerce Report; the largest jump in the year across all countries

>Of the total 1.1 Million foreign students in USA, Indian students' population crosses 200,000 in 2019 (Open Doors Report dated November 19, 2019)

>China with 21%, India with 18% and USA with 8% are the Top 3 Internet User countries as per Mary Meeker Report of June 12, 2019

➤India's Foreign Exchange reserves at record \$ 454 Billion in December 27, 2019
➤Kumbh Mela in Prayagraj (erstwhile Allahabad) starts at 4 AM on January 15, 2019; 150

million visitors over 2 months (Jan 15 (Sankranti) to March 6 (Mahashivratri);

800 special trains, 50,000-strong security force, 220 KM of road, thousands of doctors, hundreds of tents, 4000 Wi-Fi hotspots and 1.20.000 toilets Kumbh Mela 2019 is spectacular in every respect

Telecom

- **China** launches **5G services** on **November 1, 2019** (second country after South Korea); India yet to announce the auction dates!
- >Supreme Court ruling in Vodafone case, telecom companies in dire financial circumstances
- >The woes of telecom sector continues; **Vodafone Idea Chairman** KM Birla even talks of "hanging up", if there are no bailouts, on December 6, 2019
- Telecom companies increase tariff by up to 40% on December 1, 2019

Milestones

- >Accenture creates history in December 2019; its headcount crosses 500,000 (with 150,000 in India)
- > Alibaba creates history with \$ 38.4 Billion sales on a single day on November 11, 2019
- >FlipKart and Amazon clock Rs 31,000 Crores sales during the Indian festival season in November 2019
- ➤ Google turns 21 on September 27, 2019
- >AI program solves Rubik Cube in less than a second, setting a new record on July 20, 2019
- The world celebrated the 50th year of "Man on the Moon" (Apollo 11 Mission) on July 21, 2019
- ➤ Gmail turned 15 on April 1, 2019
- >WWW turns 30 in March 2019
- >Wikipedia turns 18 on March 12, 2019
- >Tata brand reaches the global Top 100 (the only entry from India) in January 2019
- ➤ IndiGo operates 1,500 flights a day by December 2019; it crossed 1,000 flights a day in December 2017
- Maruti Suzuki crosses 20 Million sales mark on December 4, 2019
- ▶ Rajya Sabha had its 250th Session on November 18, 2019
- >Prime Minister **Modi** has 30 Million followers on **Instagram** the highest for any leader on **October 14, 2019**
- >Akshaya Patra mid-day meal program among School students in India (run by ISKCON) touches 3 Billion mark on February 11, 2019; starting with 1,500 children in 2000, it crossed the 1 Billion milestone in 2012 and the 2 Billion milestone on 2016
- > Jet Airways goes for Bankruptcy on June 16, 2019; stopped flying from April 17,

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