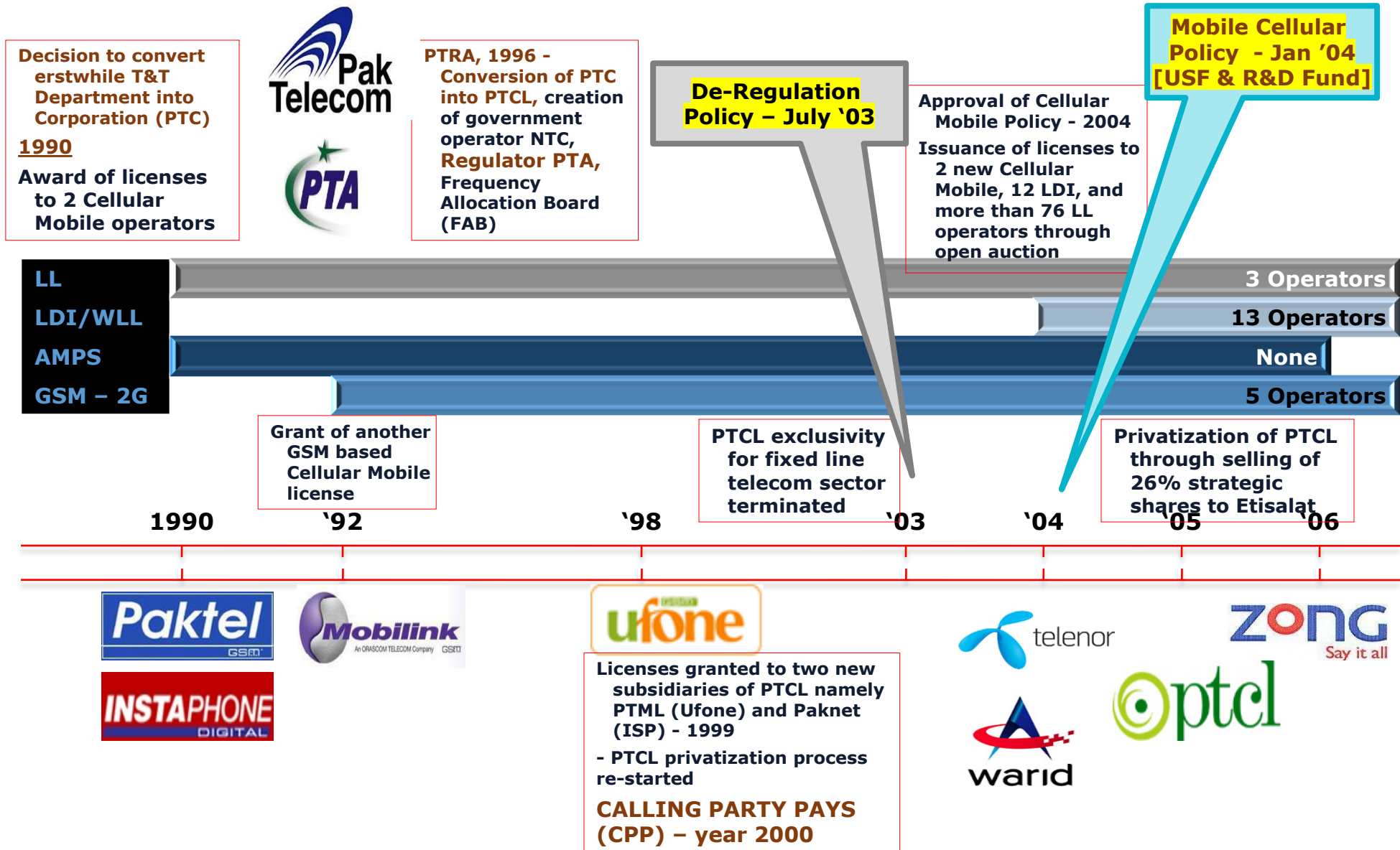# Future of Telecom Industry amid COVID-19
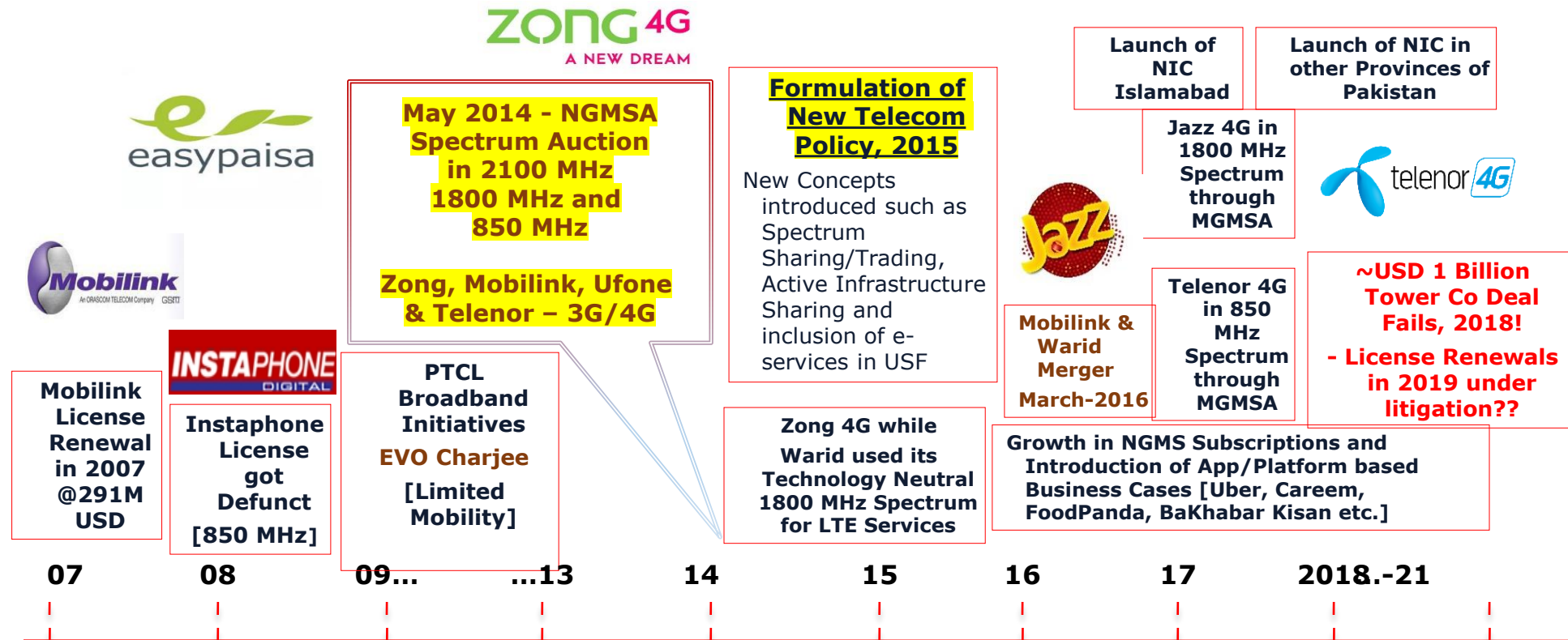
From waves to the new normal, recovery, adaptation and resilience in Pakistan

Pakistan Telecom Industry – History (Policy Interventions)

Decision to convert erstwhile T&T Department into Corporation (PTC)

1990

Award of licenses to 2 Cellular Mobile operators

Pak Telecom

PTA

PTRA, 1996 - Conversion of PTC into PTCL, creation of government operator NTC, Regulator PTA, Frequency Allocation Board (FAB)

De-Regulation Policy – July '03

Approval of Cellular Mobile Policy - 2004
Issuance of licenses to 2 new Cellular Mobile, 12 LDI, and more than 76 LL operators through open auction

Mobile Cellular Policy - Jan '04 [USF & R&D Fund]

LL	3 Operators
LDI/WLL	13 Operators
AMPS	None
GSM – 2G	5 Operators

Grant of another GSM based Cellular Mobile license

PTCL exclusivity for fixed line telecom sector terminated

Privatization of PTCL through selling of 26% strategic shares to Etisalat

1990   '92   '98   '03   '04   05   06

Paktel

Mobilink

ufone

INSTAPHONE DIGITAL

telenor

warid

ZONG Say it all

ptcl

Licenses granted to two new subsidiaries of PTCL namely PTML (Ufone) and Paknet (ISP) - 1999
- PTCL privatization process re-started
CALLING PARTY PAYS (CPP) – year 2000

Pakistan Telecom Industry – Journey to New Generation Technologies

ZONG 4G
A NEW DREAM

easypaisa

Mobilink
An ORASCOM TELECOM Company | GSM

INSTAPHONE DIGITAL

Launch of NIC Islamabad

Launch of NIC in other Provinces of Pakistan

Jazz 4G in 1800 MHz Spectrum through MGMSA

telenor 4G

jazz

May 2014 - NGMSA Spectrum Auction in 2100 MHz 1800 MHz and 850 MHz

Zong, Mobilink, Ufone & Telenor – 3G/4G

Formulation of New Telecom Policy, 2015

New Concepts introduced such as Spectrum Sharing/Trading, Active Infrastructure Sharing and inclusion of e-services in USF

Mobilink & Warid Merger March-2016

Telenor 4G in 850 MHz Spectrum through MGMSA

~USD 1 Billion Tower Co Deal Fails, 2018!
- License Renewals in 2019 under litigation??

Mobilink License Renewal in 2007 @291M USD

Instaphone License got Defunct [850 MHz]

PTCL Broadband Initiatives
EVO Charjee [Limited Mobility]

Zong 4G while Warid used its Technology Neutral 1800 MHz Spectrum for LTE Services

Growth in NGMS Subscriptions and Introduction of App/Platform based Business Cases [Uber, Careem, FoodPanda, BaKhabar Kisan etc.]

| 07 | 08 | 09... | ...13 | 14 | 15 | 16 | 17 | 2018.-21 |

Establishment of USF Co and R&D Fund Co [Ignite]

Ufone License Renewal Process – 8th April, 2014

Focus on Data - Policy Directive on Introduction of NGMS in Pakistan
Introduction of 3G (256 Kbps) and advance services in unserved areas through USFCo

Focus on Voice - Unserved Areas through USFCo Projects

UNIVERSAL SERVICE FUND EMPOWERING COMMUNITIES

ufone

The five fully featured National Incubation Centers (NIC) established across the country, has so far raised an investment of Rs2.84 billion and created more than 890 jobs.

Contribution of ICT/Telecommunication through **Digital Inclusion** in an economy

Growth:

- **1% growth in mobile penetration** *can boost GDP growth by* **0.28%**
- **1% growth in internet penetration** *can boost GDP growth by* **0.077%**
- **10% increase in broadband penetration** *accelerates GDP growth by* **1.38%**

(Source: GSMA study on Pakistan)

Productivity:

- Better information flows reduce transaction costs from travelling long distances
- 10% increase in mobile penetration boosts Total Factor Productivity by 4.2% in long run

GoP Vision & Direction

Digital Pakistan
Initiative – Digital Services/e-Services (education, health, commerce etc.)

- User Facilitation – CMOs and Landline operators' initiatives

- Industry Facilitation – Deliberations on Telecom industry issues (*Taxation, ROW, Industry status etc.*)

- 1800 & 2100 MHz Spectrum – NGMSA 2021 Auction & Rationalization

International Best Practices in COVID-19

- Accelerating the licensing of all available IMT spectrum & Allowing more flexible IMT spectrum use

- Reduced license fees including fees for spectrum license

- Facilitating the use of new FWA networks

- Government subsidy to operators for broadband services specially fiberizing the urban & rural hubs

Future Outlook of Telecom Sector in Pakistan

Industry players will learn during the journey from waves to new normal, recovery, adaptation and resilience in Pakistan

INTERNET will be the basic need – Increase in Data Pipes/Capacity/Connectivity

Convergence of services - New service delivery modes and innovative monetization strategies to meet continued user expectations

Hyper Competition among the CMOs as well as the industry players

Market Consolidation & Resource Sharing (Infrastructure and Spectrum) catalyzed by High CAPEX/OPEX requirements and Low ARPUs in Pakistan

Regulatory modernization – Cross sector Legislation (Data Protection and Information Security) in addition to sector specific **National Broadband Policy & Frameworks**

There is potential to be leading market in the region with the underlying assumption that Regulator(s) will play its role in ensuring level playing field and ease of doing business – *example being affordable ROW provisioning for extensive rollout of FTTH*

ITU Report 2021–*Pandemic in the Internet Age / Four Key Themes*

Four main themes are recommended to be addressed globally by regional and national governments supported by national regulatory authorities and industry stakeholders:

1. **addressing the digital divide**: The huge shift to online activity means that social groups without affordable connectivity are now more disadvantaged than before the pandemic

2. **driving digital deepening**: In contrast to addressing the digital divide, digital deepening is primarily driven by economic objectives of increased efficiency, productivity, competitiveness and growth. It is not limited to access networks; backhaul, cloud infrastructure and international submarine/satellite capacity must also be properly dimensioned for the additional load and more.

3. **effecting digital transformation**: The shift to digital processes requires a broad digital transformation in institutions and in business and government processes, including access to health care, financial services and government services. A critical component of this shift is to improve the digital literacy of less capable groups so that they are comfortable accessing services online. More difficult, but just as important, is cultural change in societies, government and companies.

4. **building digital resilience**: The rapid increase in demand for services experienced at the onset of the COVID-19 pandemic means that additional capacity and resilience have to be built into telecommunication infrastructure systems and services. In a period of uncertainty, the returns for building additional "headroom" are increased. Again, building digital resilience it not limited to access networks; backhaul, cloud infrastructure, international submarine/satellite capacity and ICT systems must be properly dimensioned for present and future crises and disasters.

Digital responses to COVID-19

OBJECTIVES	ACTIONS/POLICIES
ADDRESSING THE DIGITAL DIVIDE	• Improving coverage – lower band spectrum (e.g. 700 MHz), transitioning from 2G/3G to 4G/5G sooner, rural backhaul, rural and remote broadband satellite services • Affordability –use of universal service funds for access and affordability efforts, municipal networks, Wi-Fi, devices • Digital skilling – government education programmes, language challenges, minorities, older persons and persons with disabilities
DRIVING DIGITAL DEEPENING	• High-speed/capacity broadband, increased IMT spectrum and fiberized backhaul, fixed wireless access (5G at mid- and high-band spectrum) • Urban/suburban deployments to support: working from home, home education, teleworking, video services • Online government services and communications (help desk, health information, hotlines, etc.)
EFFECTING DIGITAL TRANSFORMATION	• Legislative and regulatory change to support digital business processes and services • Reimagining legacy processes and approaches with an emphasis on the cloud • Accelerate transition to e-money, online banking, identification and payment services • Supporting societal and cultural change to effect digital transformation
BUILDING DIGITAL RESILIENCE	• Build capacity and system headroom, while improving speed and capacity • Develop system redundancy and resilience, including submarine cable capacity • Strengthen cybersecurity and strategic network assets • Strengthen personal data protections to encourage online participation

REVISE AND IMPLEMENT NATIONAL DIGITAL/BROADBAND PLANS TO ACCELERATE COVID RECOVERY