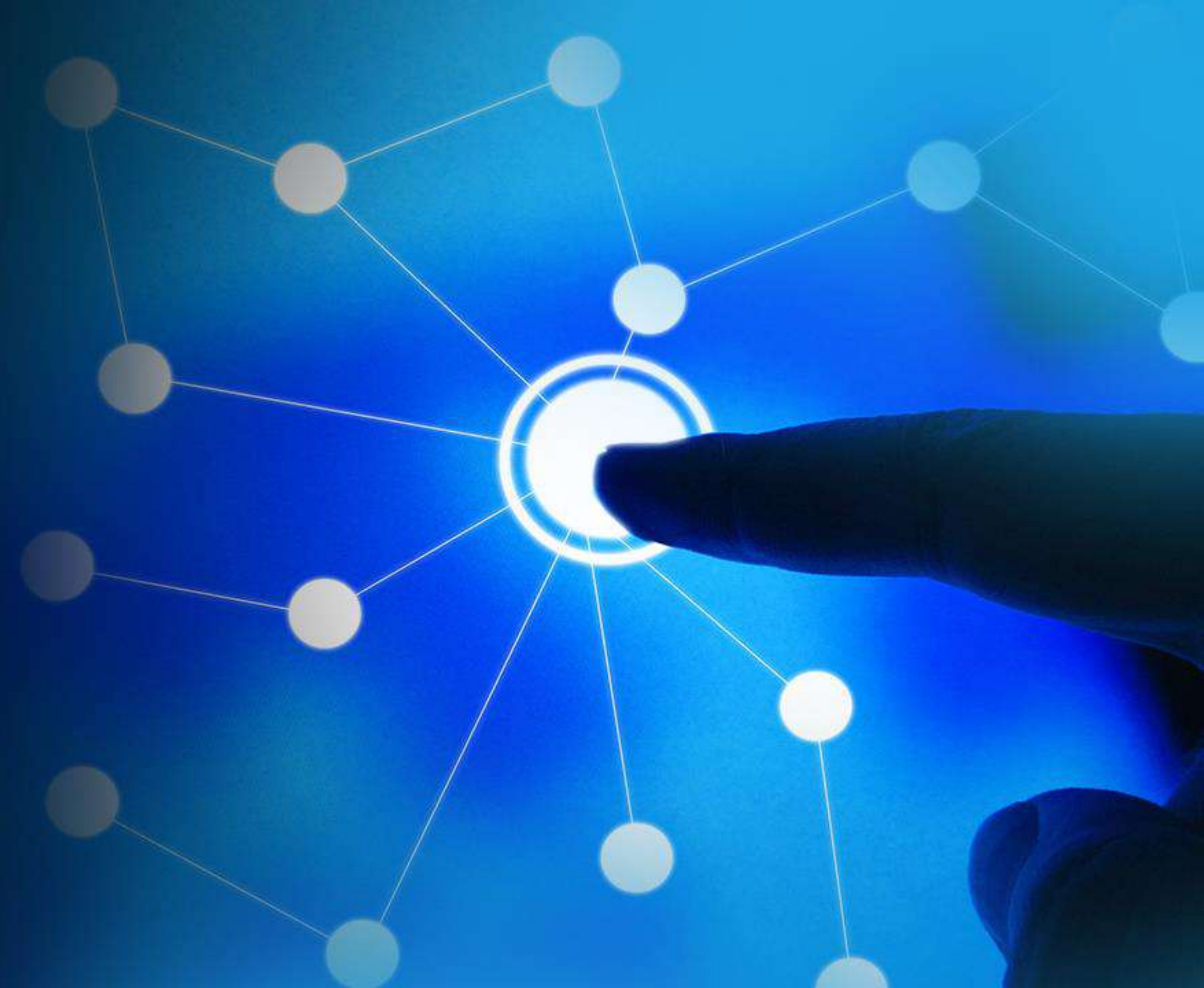
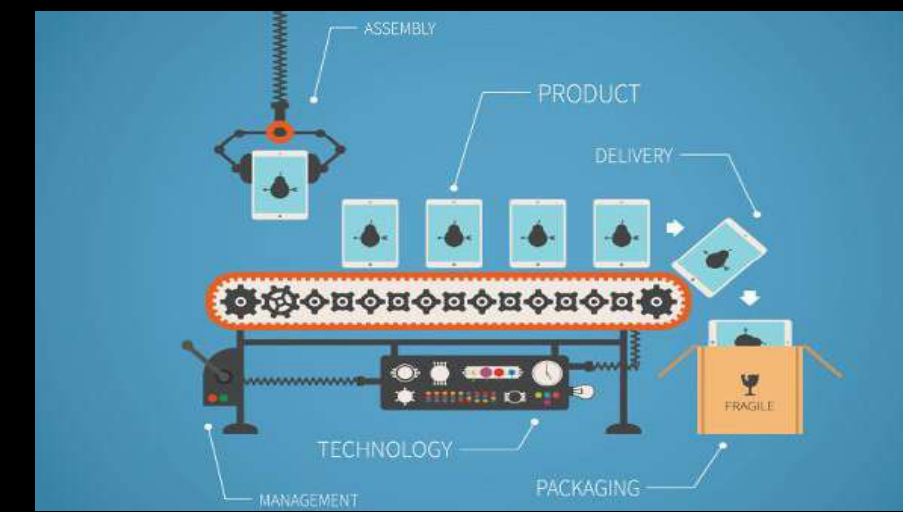


# Catalyzing 5G launch in India





2018

1.2 Bn  
Connections

2.4 Bn GB  
data usage

200 Mn Connected  
devices

1 Bn  
transactions

2023

1.5 Bn  
Connections

20 Bn GB  
data usage

2 Bn  
Connected devices

1 Tn  
transactions

This exponential demand can only be met through 5G

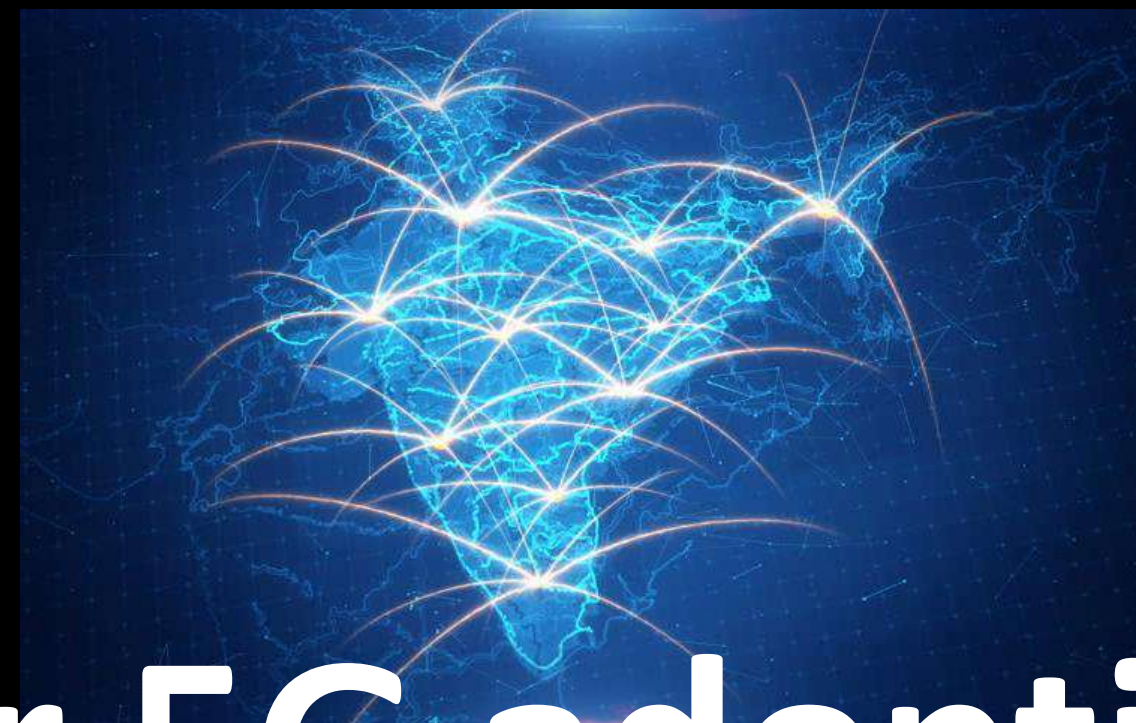




Network



Device



Digital India



Ecosystem

# Key enablers for 5G adoption





Broadband highways

e-governance

E-delivery of  
services

Public internet –  
information access to  
everyone

Digital manufacturing

# Digital India

- Extreme capacity - Tbps / cluster
- Ultra speeds - 100Mbps+ user experience
- Ultra density - millions of connection
- Deep coverage
- Ultra low latency - 1 to 2msec





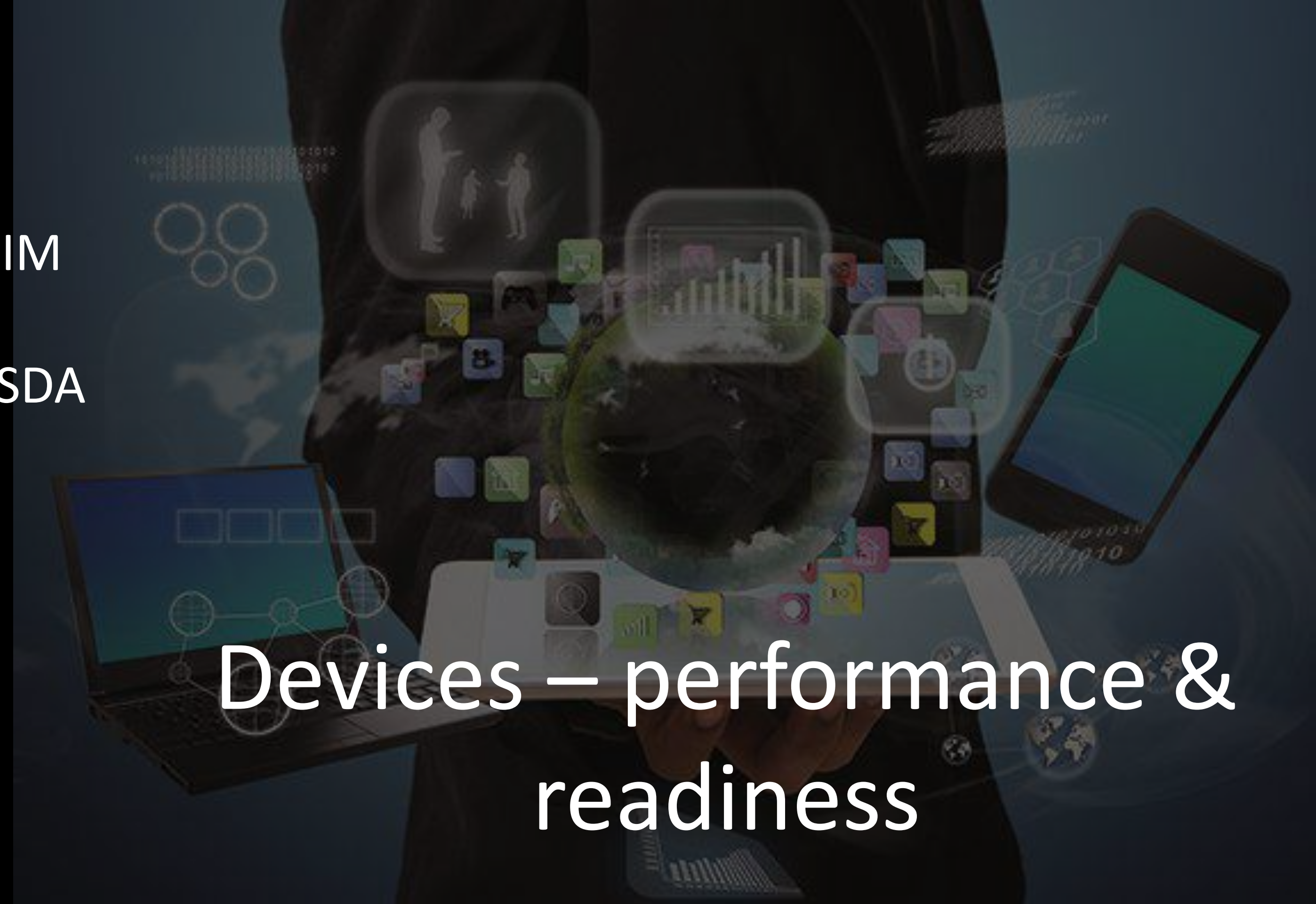
# Network – Maximum Reuse of legacy Assets

- Band-40 for 5G-NR
- 5G Compatibility of BBU, radios
- vRAN with non-ideal fronthaul
- Relay solution – integrated access & backhaul
- NSA (Option-3x) for reuse of EPC

VoNR as native service with single profile across devices & operators



- HPUE for Band-40
- Dual Sim – 95% of smartphones in India are Dual SIM
  - standards for all three modes – DSDS, DSDV,DSDA
- USIM for 5G authentication
- UE capability QoE reporting



Devices – performance & readiness



Smart healthcare



Smart cities



Smart energy



Smart services



Smart manufacturing

5G

# ECOSYSTEM – Integration with Industry verticals

Definition & standardization



Interworking



Economies of scale

NB-IOT to be forward compatible with 5G, No changes in NR based solution



**Our Journey to 5G has started**

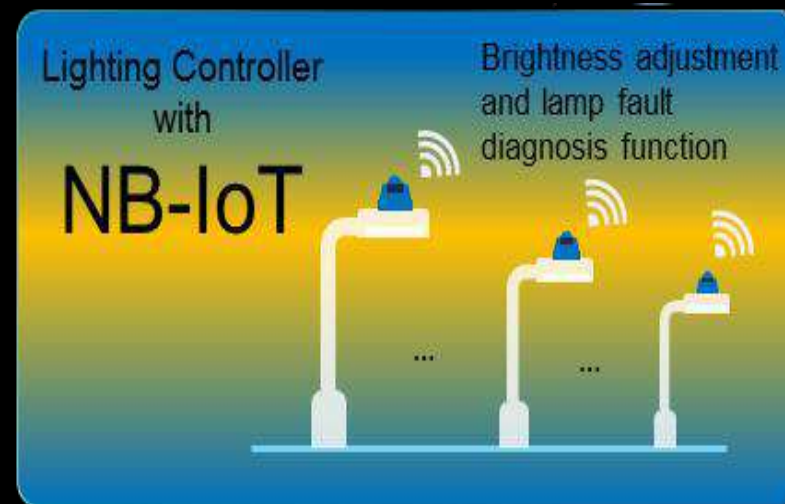




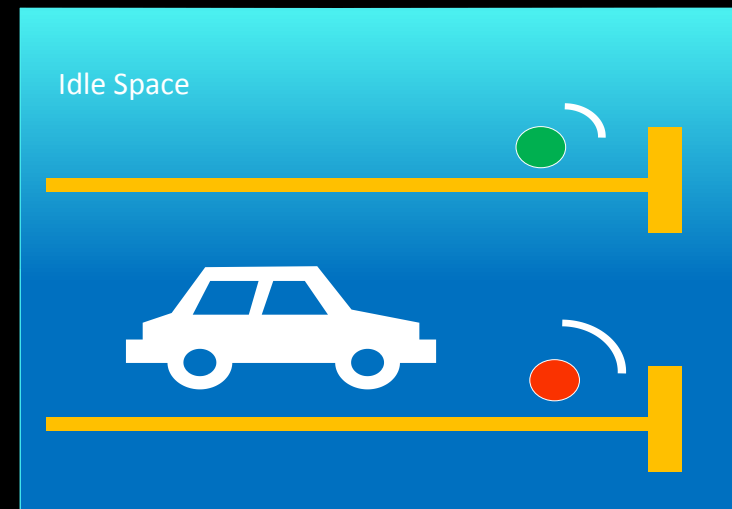
Smart water  
meter



Smart street-  
light



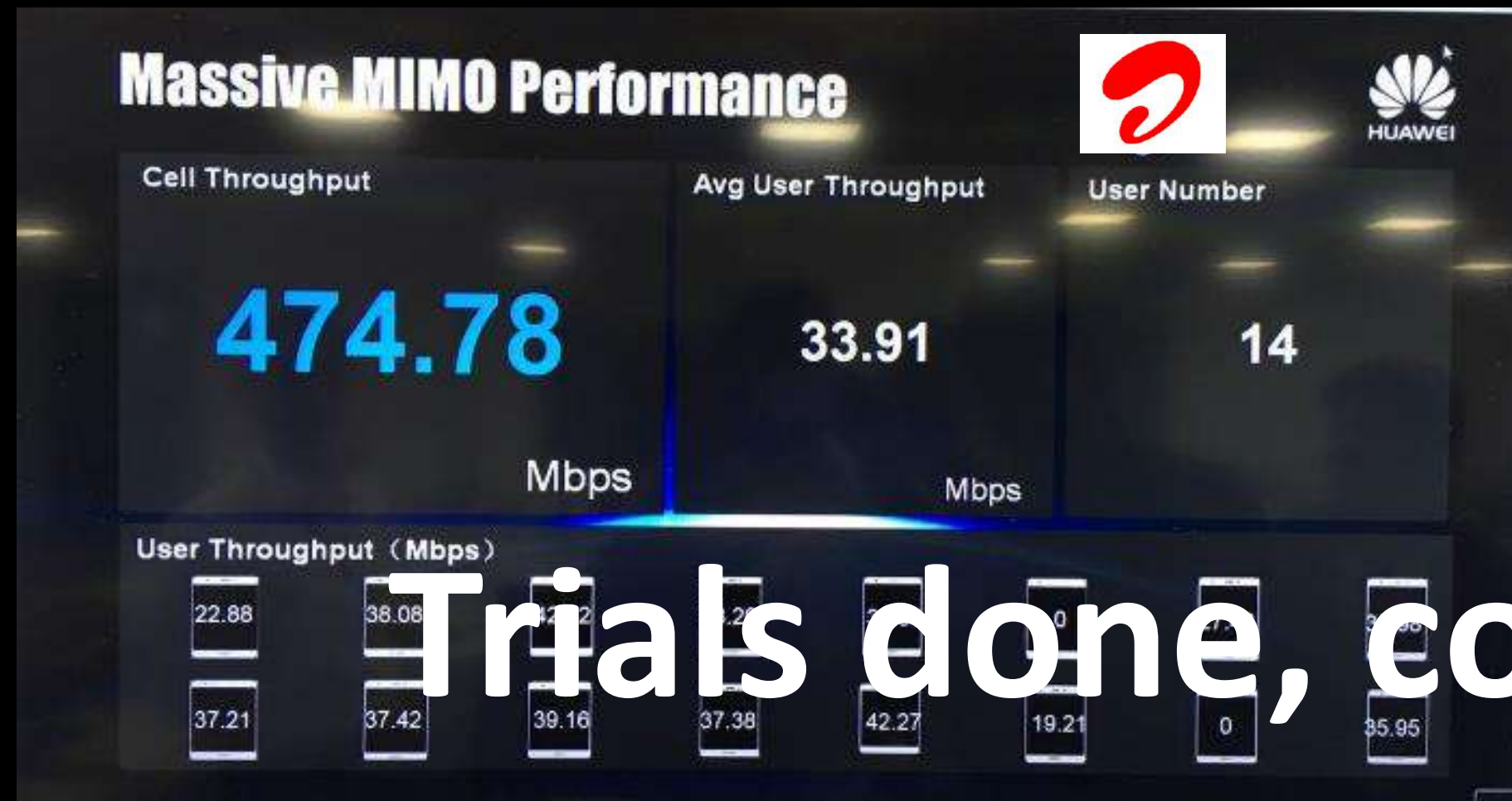
Smart  
parking



# THE INTERNET OF THINGS

IOT Use cases  
Implemented





**Trial done, commercial deployment started**

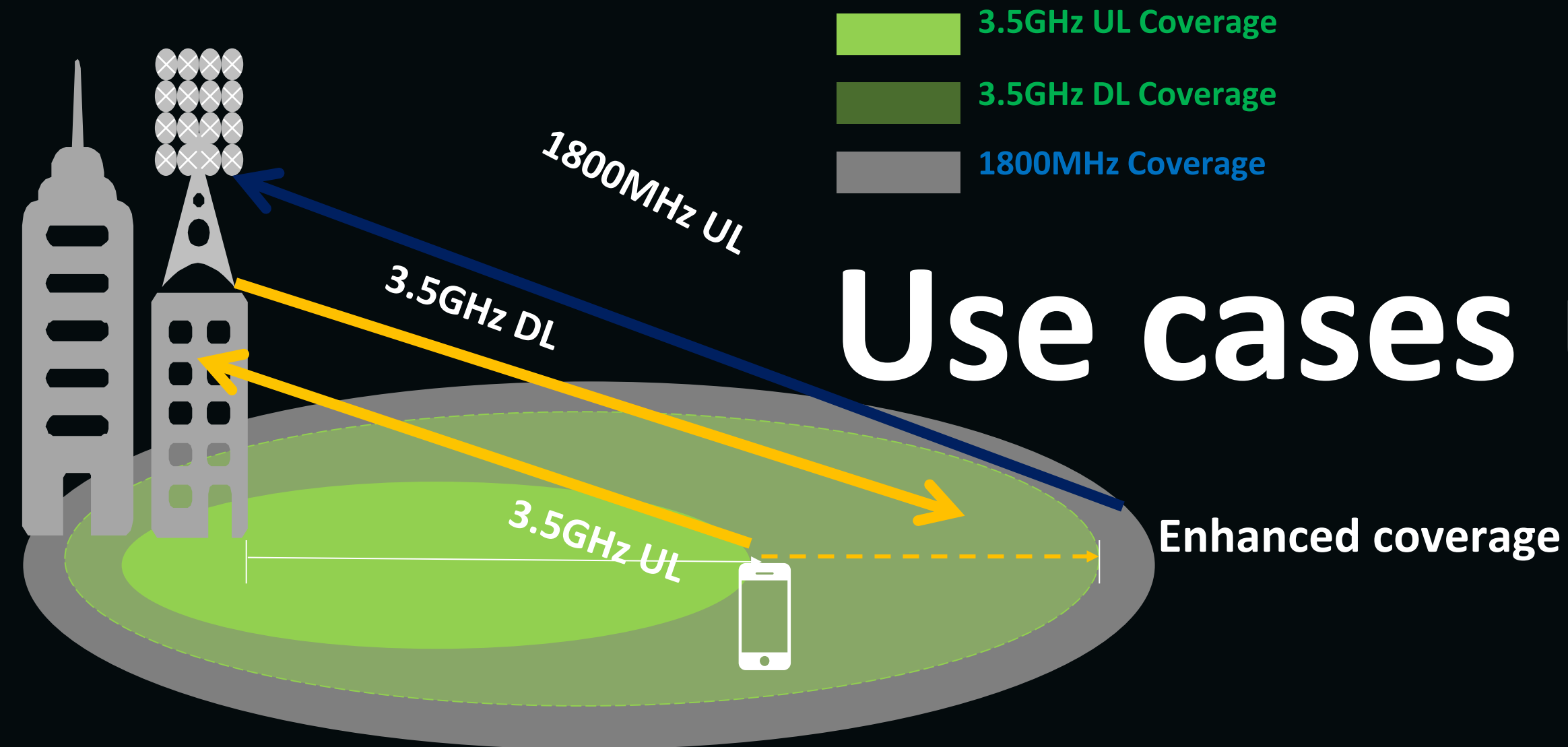
India's first Massive MIMO in live network..

India's first 5G Trials

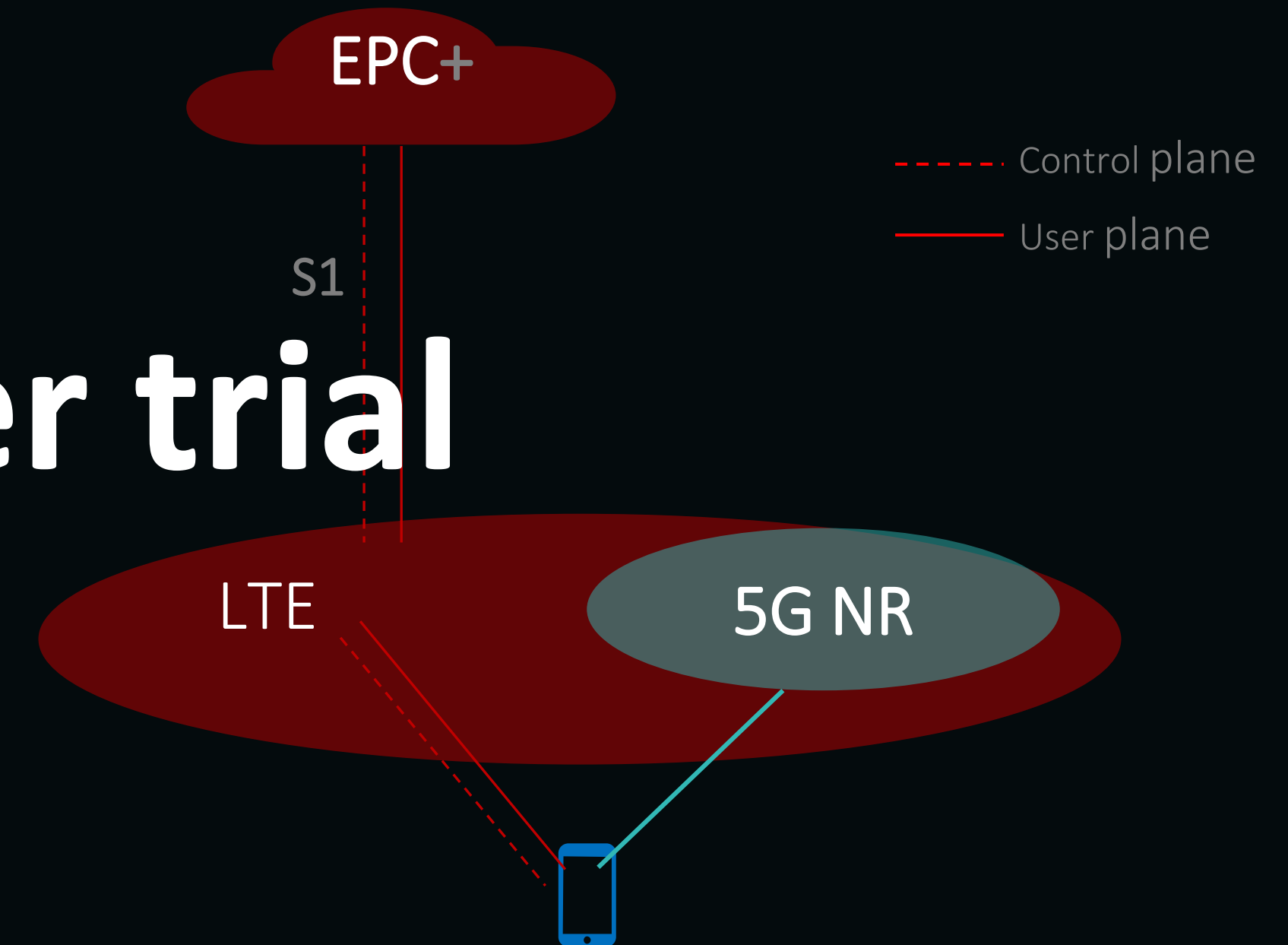


Dual connectivity - DL@3.5GHz + UL@1800MHz

Non-Standalone (NSA) – Option 3x



Use cases under trial





Thanks