

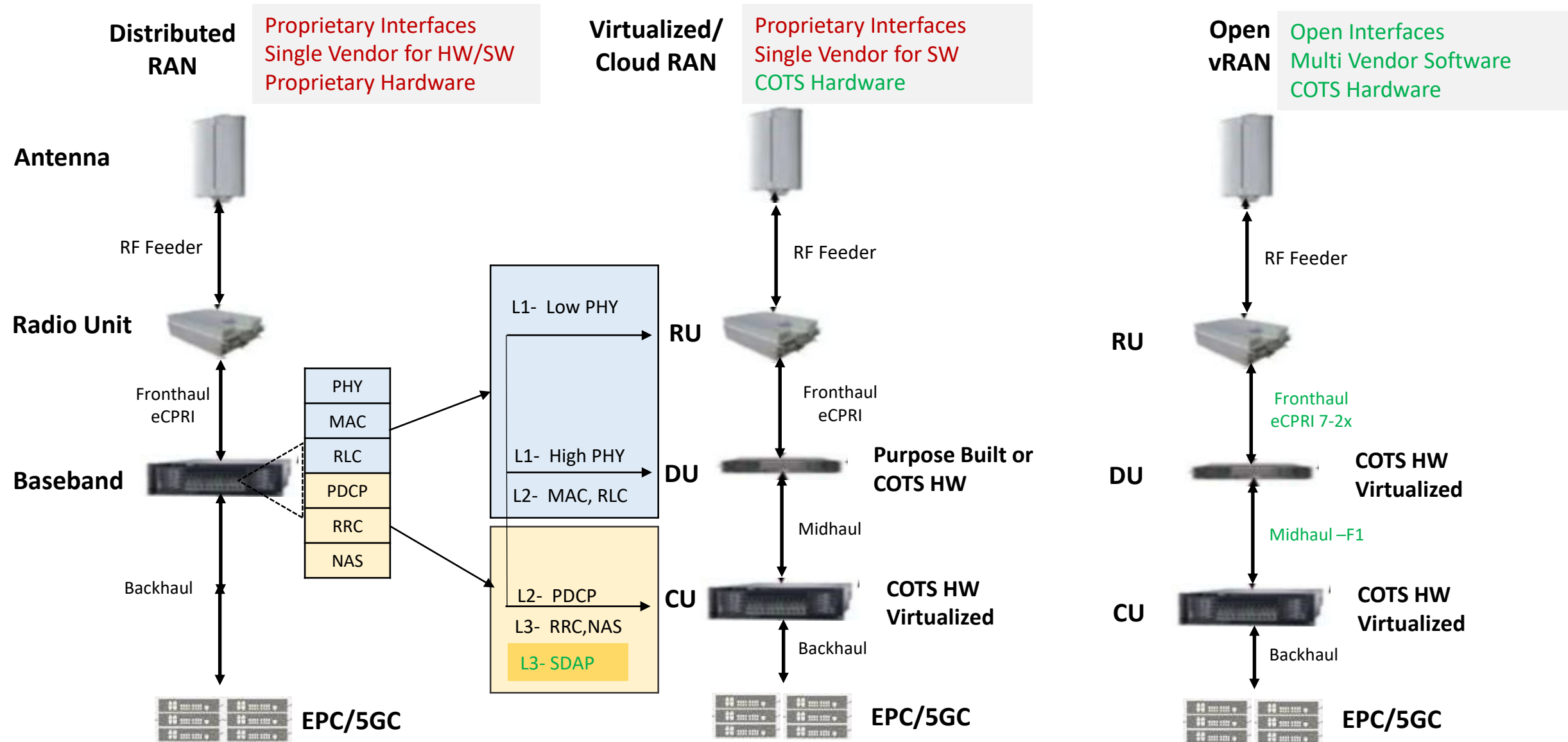


**OUR**  
**TIME IS**  
**NOW**

***Open RAN Impact on Telecom Ecosystem***

**June 17<sup>th</sup>, 2021**

# Open RAN | dRAN vs cRAN vs Open RAN



# Open RAN | Closed and Open supply chains

## FUTURE TELECOMS NETWORK REQUIREMENTS CAN BE BETTER MET WITH AN OPEN AND DISAGGREGATED SUPPLY-CHAIN ECOSYSTEM

### Priorities driving future telecoms network development



Introducing advanced technologies and new use cases for individuals and enterprises





Improving connectivity in rural areas where people lack access and affordability



Ensuring that networks can cope with demand due to unexpected events such as Covid-19

### Differences between closed and open supply chains

	<b>Closed Environment</b> 	<b>Open, disaggregated</b> 
<b>Vendors</b>	Few	Many
<b>Interfaces</b>	Proprietary	Open
<b>Roadmap</b>	Vendor led	Operator led
<b>Resilience</b>	Vendor-dependent due to lock-in	Improved from greater choice
<b>Innovation</b>	Business as usual	Faster, more diverse

# Open RAN | Open Source and Open Standards

## Open Standard

RAN components including RIC



RAN component



TELECOM INFRA PROJECT

Indian Standards



## Open HW

Open HW for Macro



Open HW for Small cells



## Open SW

RAN software



Cloud Infra



# Open RAN | Expected Advantages

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- Enables vendor unlocking and hence independent innovation
- Solution customization
  - Multiple deployment options
  - Multiple Use-cases/Configurations
  - Lesser cost for innovation and customization
- Enables entry for smaller players with specific focus
  - Easy on boarding of open APIs based network optimization apps
  - Continuously evolving/improving network
- Supply chain diversity
  - Competitive costs from wider choices
  - COTS hardware, volume aggregation-->Cost reduction
- Integration of operators specific innovations/Features

# Open RAN | Short-term Challenges

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- Challenges in quicker integration and faster deployment
  - Ecosystem not yet matured for plug and play integration
  - Longer deployment cycle, negatively impacts the network planning
- New ways of working
  - Ramp up/skilling up of operations/Deployment teams
  - Investment into Lab infrastructure and tools
  - Project management is challenging, considering multiple partners
- Maturity of open ecosystem
  - To get converge all the partners in a project to single Roadmap
  - Over all ecosystem maturity is not homogeneous for different deployment scenarios
  - Cell site DU, NSA deployments are comparatively less matured
- Lack of cross layer optimizations/innovations

# Open RAN | Long term Impact on Ecosystem

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- Co-existence of dRAN and Open RAN primarily based on
  - Ease of Deployment/Operations
  - Customization and innovations, no same size fit for all
  - Cost of the solution
- Increased adoption of local/country specific use cases/services/policies
- Agile NW, bigger role for AI/ML driven adaptive NW solutions
  - NW to adapt as 5G discovers more use cases
- More players in the ecosystem, interoperability to be the key
- Boost to 'Make in India' and 'Startup India'

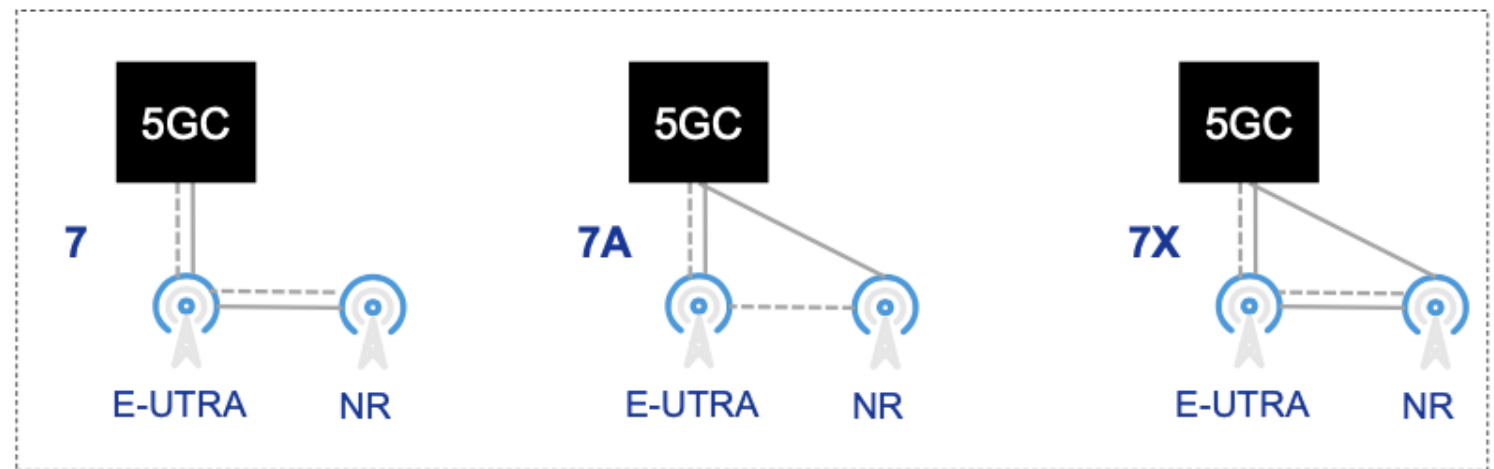
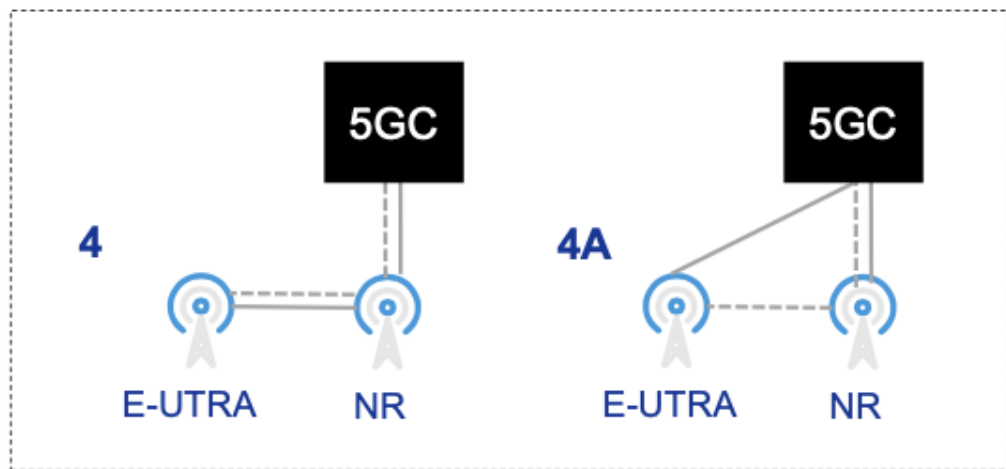
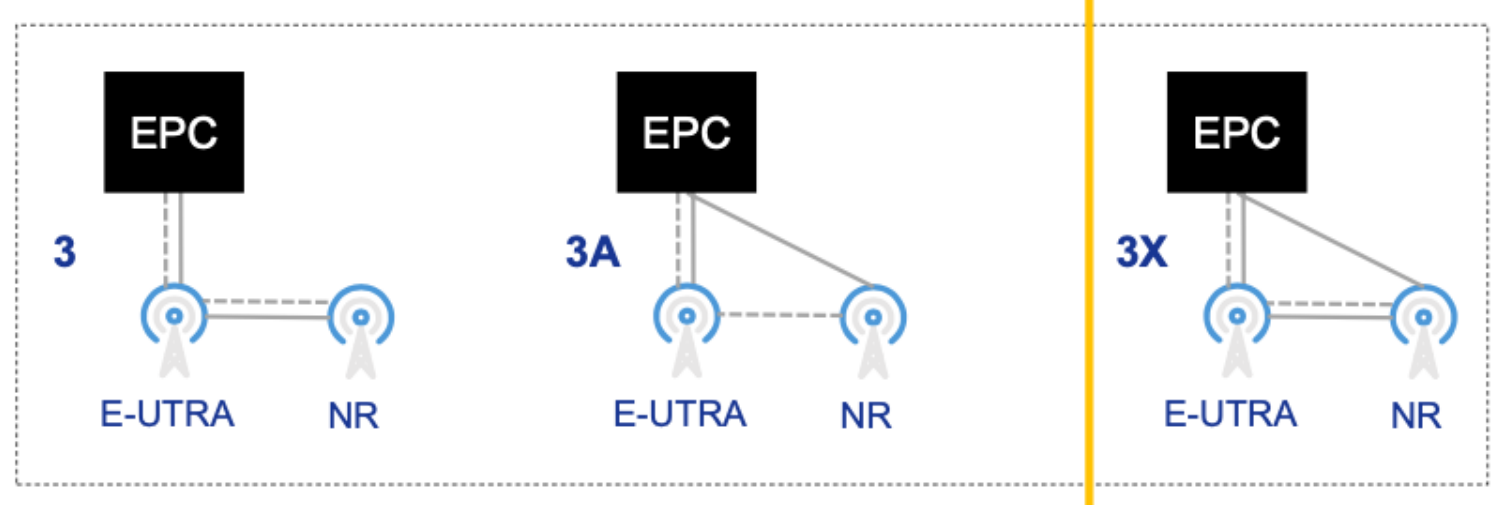
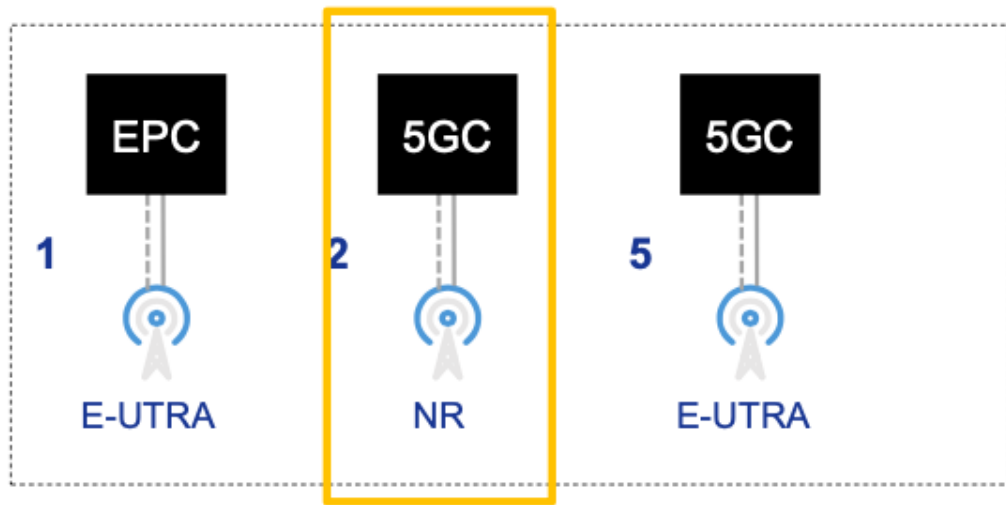
THANK YOU



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Back UP

# O-RAN | Deployment Options



# O-RAN | NextGen Use-Cases

