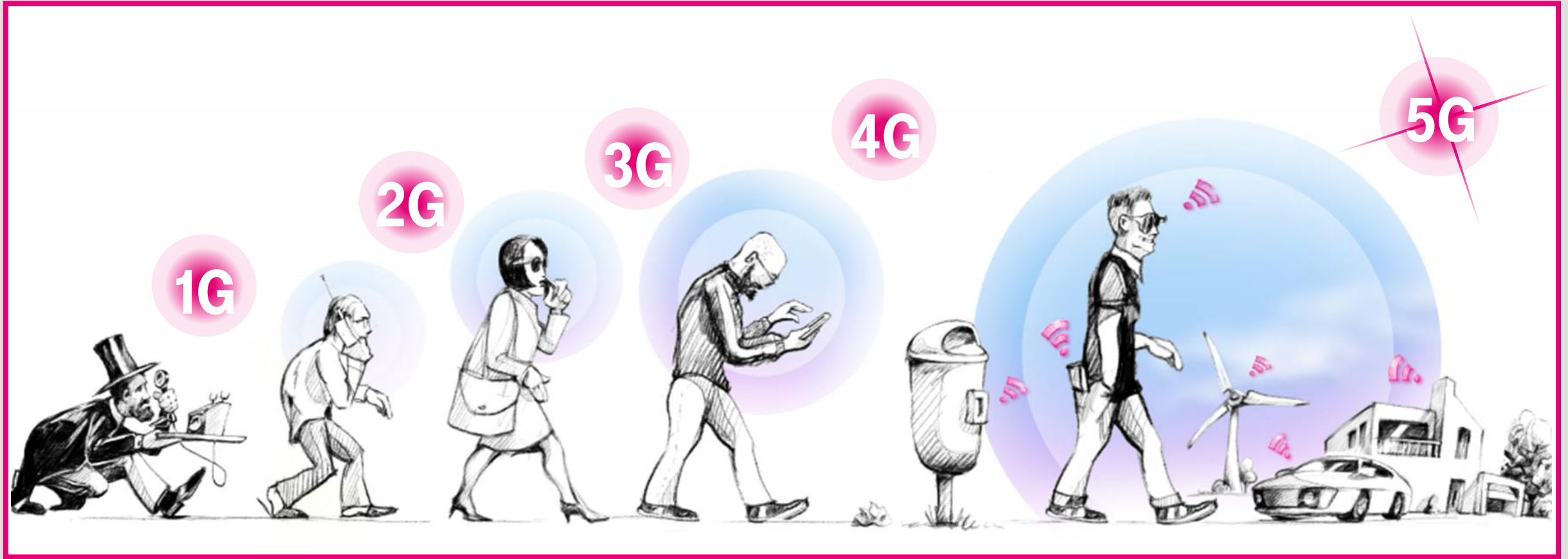


5G+ Next Gen Network

April 20th, 2023

THE EVOLUTION OF COMMUNICATIONS

WITH 5G, EVERYTHING TO BE CONNECTED!



FROM PHONES TO SMARTPHONES TO SMART-THINGS



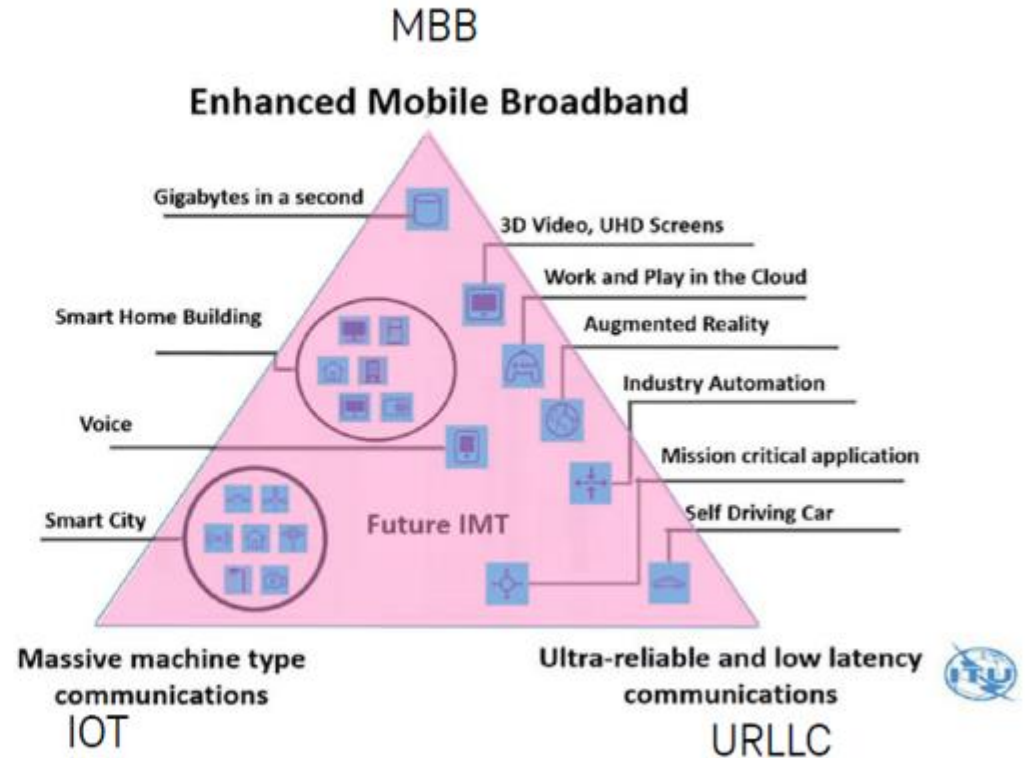
5G REQUIREMENTS / USE CASES

5G with new technical capabilities

- **Reduced latency** incl. EDGE computing
- **Slicing support**
 - use-case / customer specific optimization of the network
 - More flexible QoS definition
- **Mandatory Cloud native** deployments
- **Higher efficiency,**
 - especially for high band radio deployments



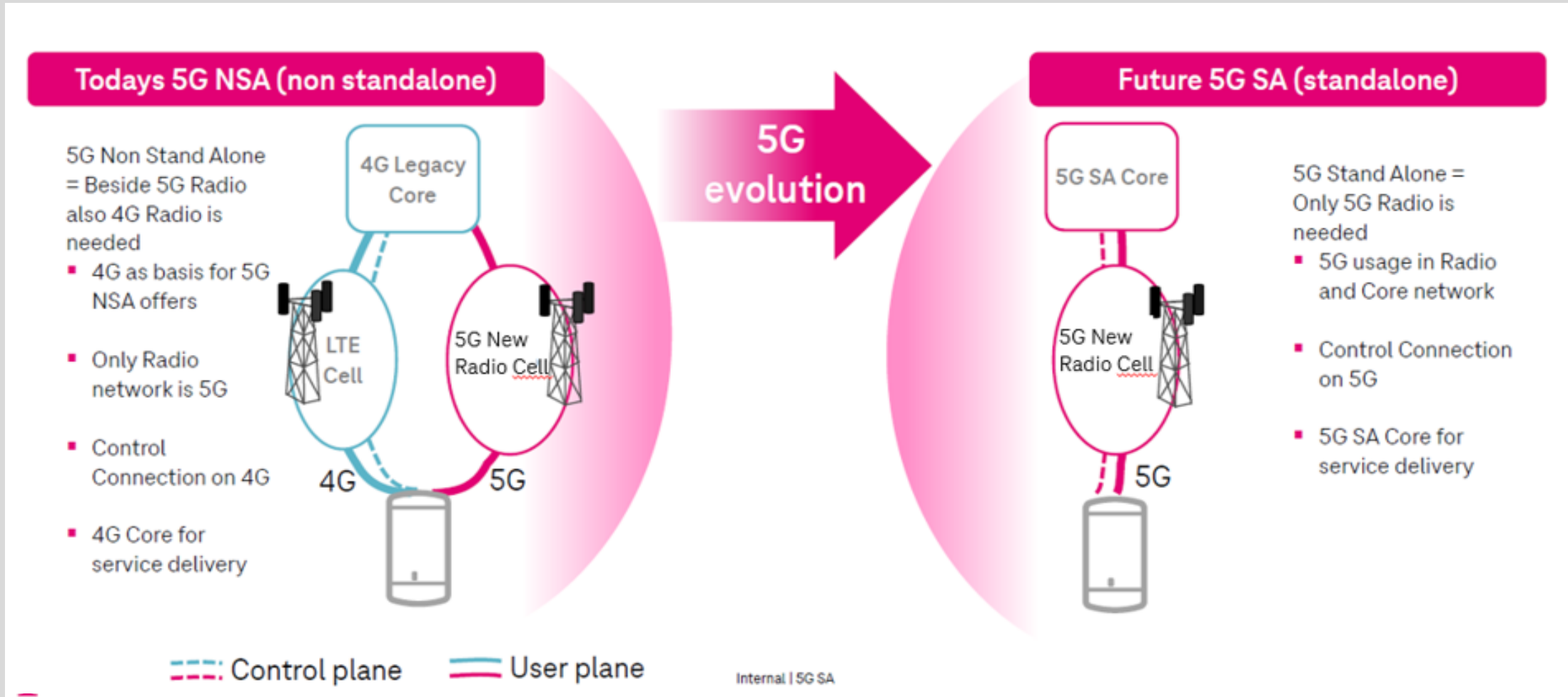
5G use-cases



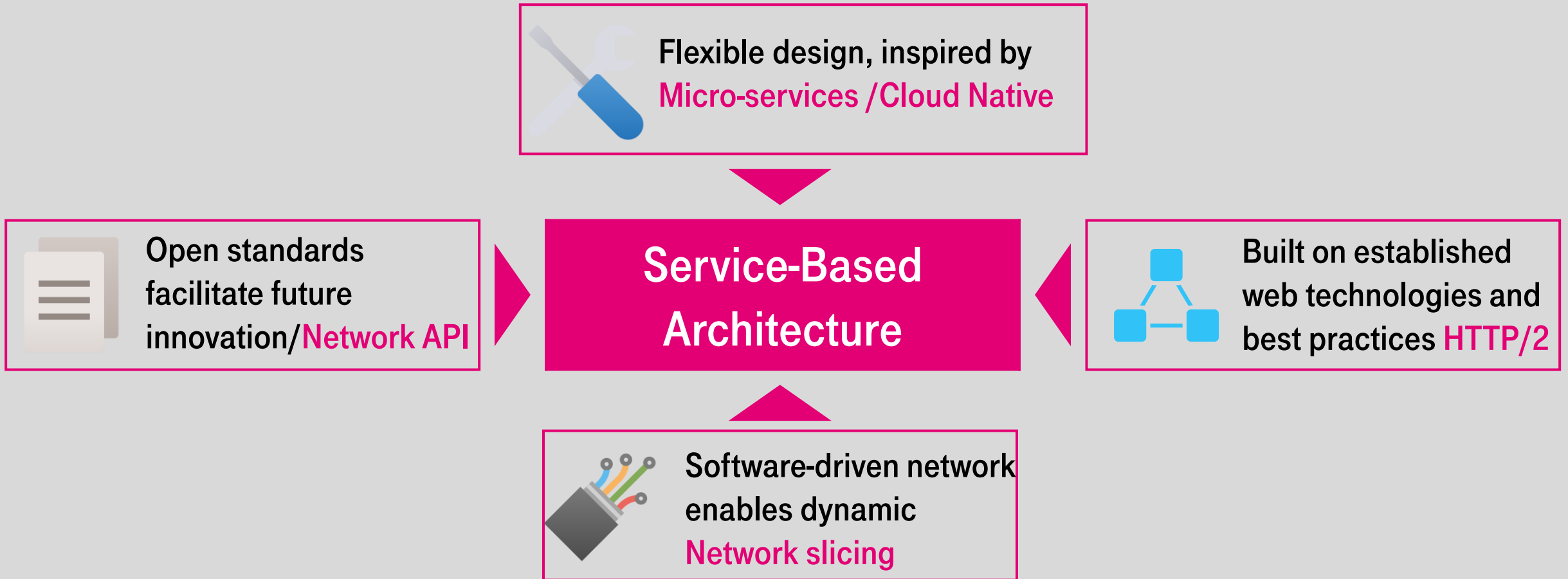
Source: ITU IMT-2020

5G EVOLUTION

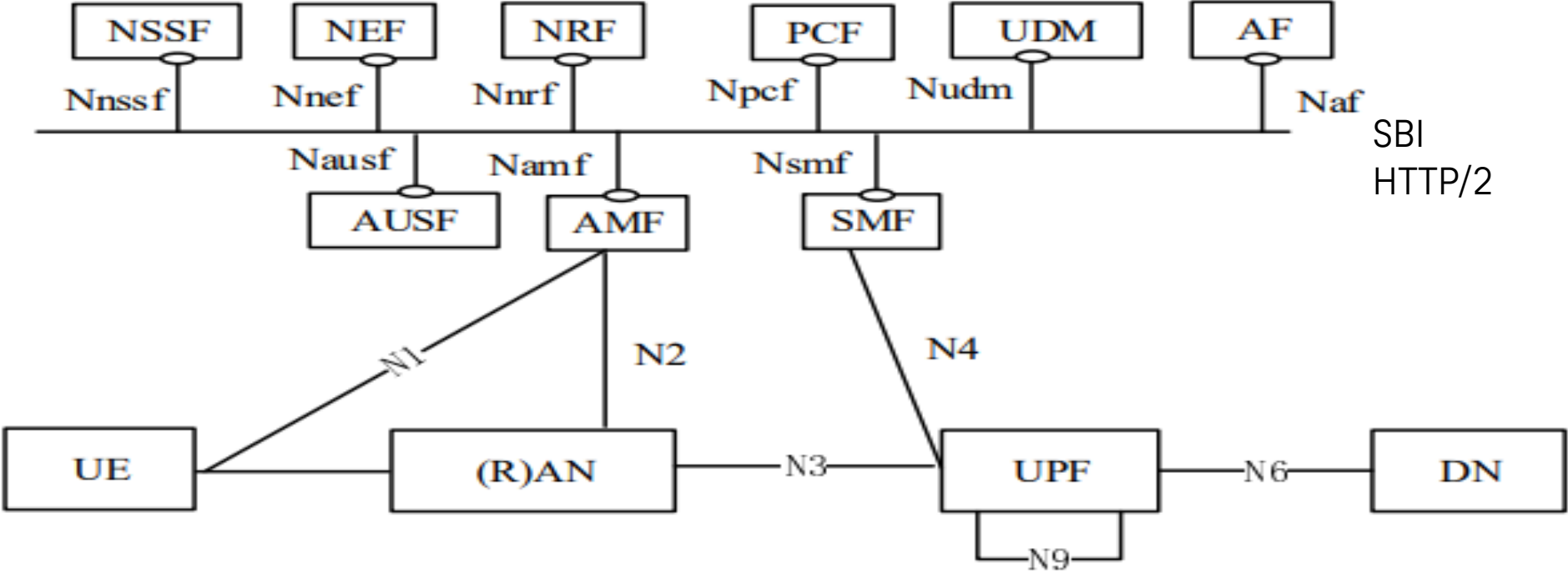
Non Stand Alone to Stand Alone Architecture



5G STAND ALONE ARCHITECTURE PRINCIPLES



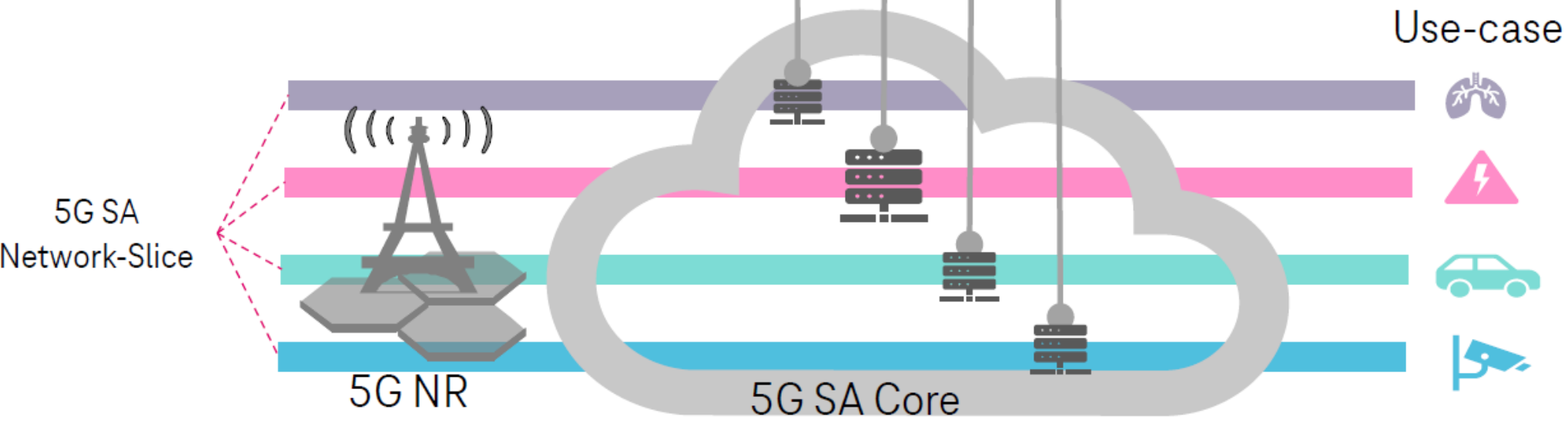
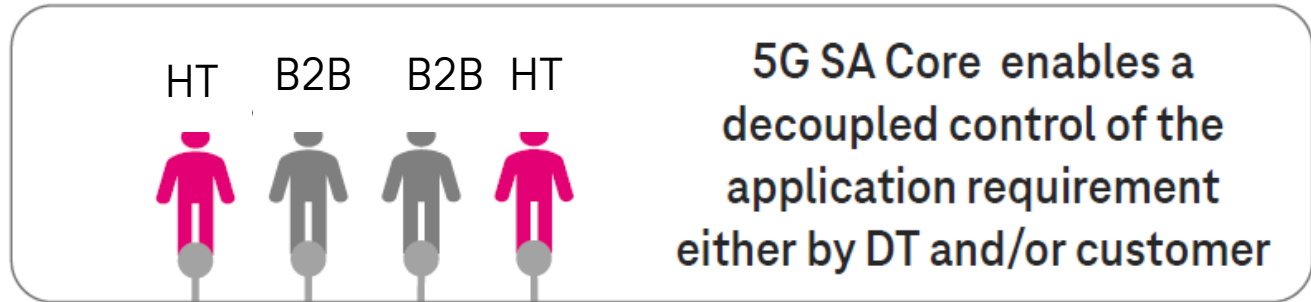
5G SERVICE BASED ARCHITECTURE



3GPP 23.501



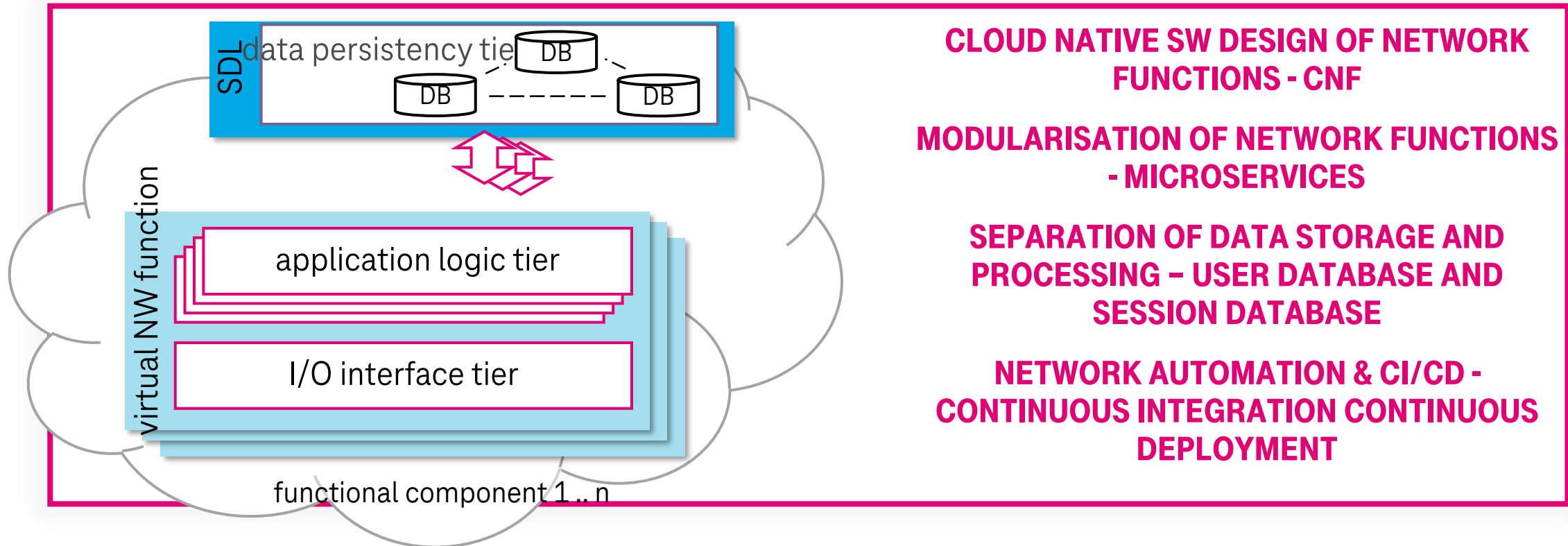
5G NETWORK SLICING



Network Slice is an E2E virtual network resource, including radio, transport and Core, with defined properties (e.g. low latency)



ONE CLOUD INFRASTRUCTURE WITH NETWORK AUTOMATION



CLOUD NATIVE SW DESIGN OF NETWORK FUNCTIONS - CNF

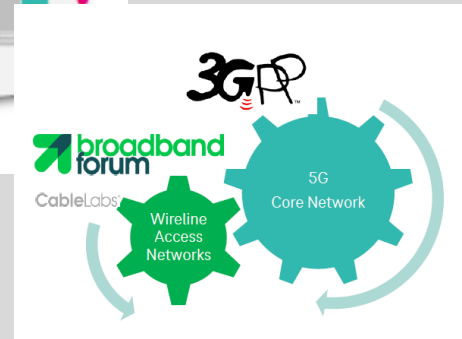
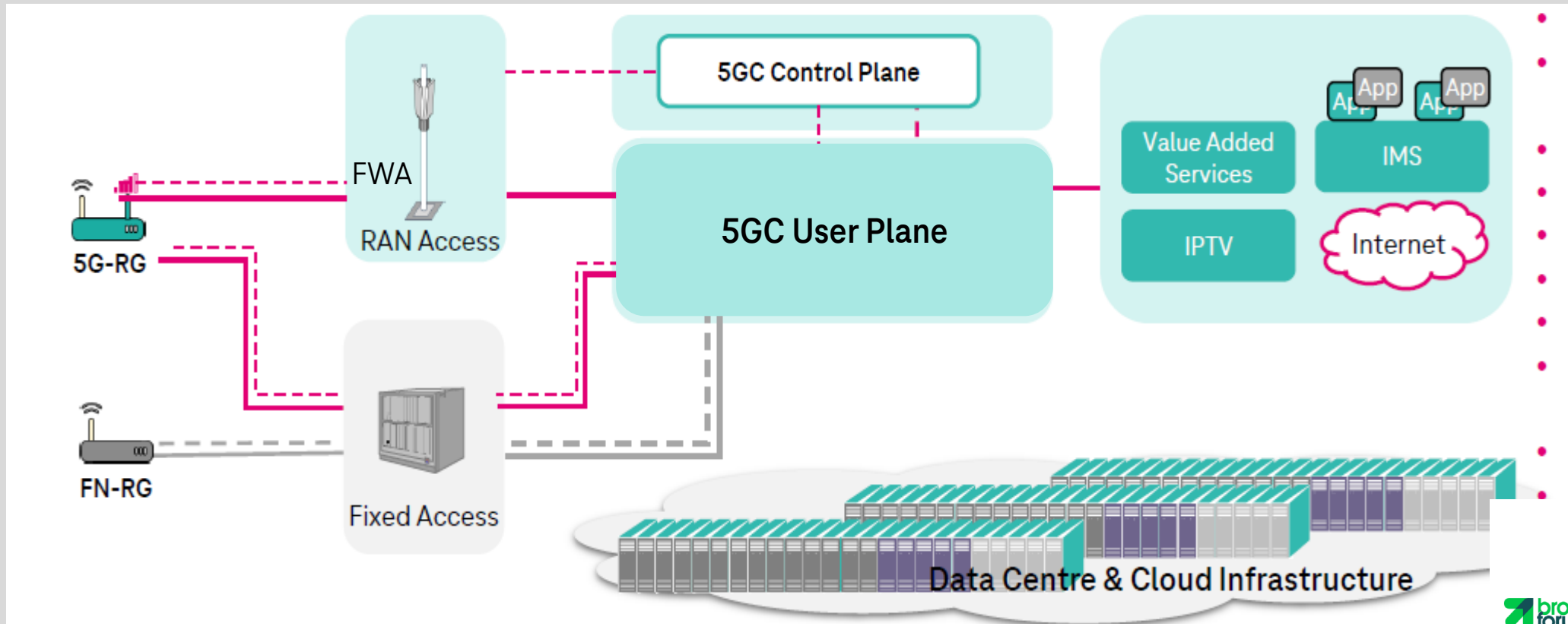
MODULARISATION OF NETWORK FUNCTIONS - MICROSERVICES

SEPARATION OF DATA STORAGE AND PROCESSING - USER DATABASE AND SESSION DATABASE

NETWORK AUTOMATION & CI/CD - CONTINUOUS INTEGRATION CONTINUOUS DEPLOYMENT

5G FMC TARGET ARCHITECTURE

Wireless Wireline Convergence



5G CAMPUS NETWORK / INDUSTRIAL 5G WITH A PUBLIC AND A PRIVATE NETWORK



RESERVED RESOURCES/ PRIVATE



LOCALLY ENHANCED/ PUBLIC



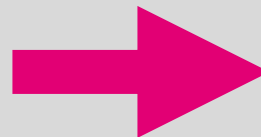
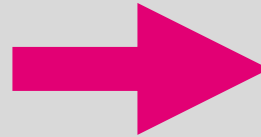
5G+ Next Gen Network

CONVERGENT ACCESS AGNOSTIC CORE

- WiFi / Fiber/ LTE / 5G NR access
- 5G Core / SBA architecture
- Network Slicing
- Network API
- Advanced QoS

CLOUD NATIVE AND AUTOMATION

- CNF SW design
- Microservices
- Container based
- CI/CD
- Predictive maintenance/ ML OPS



EVERYTHING CONNECTED

- Enhanced Mobile Broad Band - eMBB
- Voice over NR - VoNR
- Massive IoT
- Campus network/Industrial IoT
- Public Safety Communication
- Autonomus Driving
- Augmented Reality
- Smart City
- ...