



# QKDN use cases of KT

2021. 05. 26 | Hans (Hyugnsso) KIM

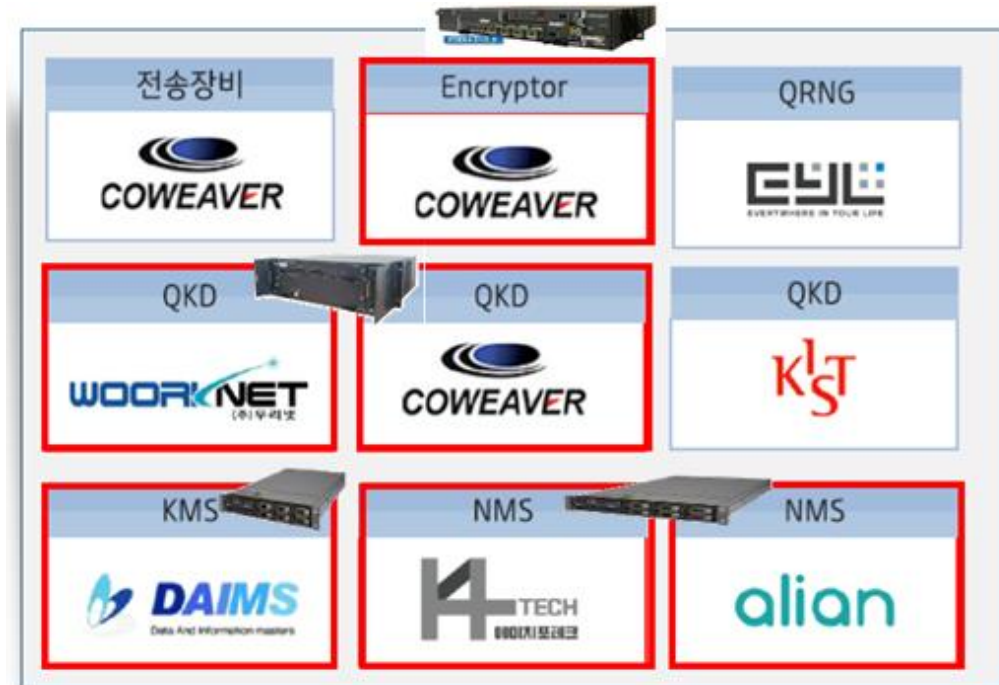
# 01 QKDN-related systems of KT corp.

Developed 'prototype QKD systems' by KT; QKD module, Encryptor, Key Management System, QKD NMS (Manager), etc.



<KT prototype>

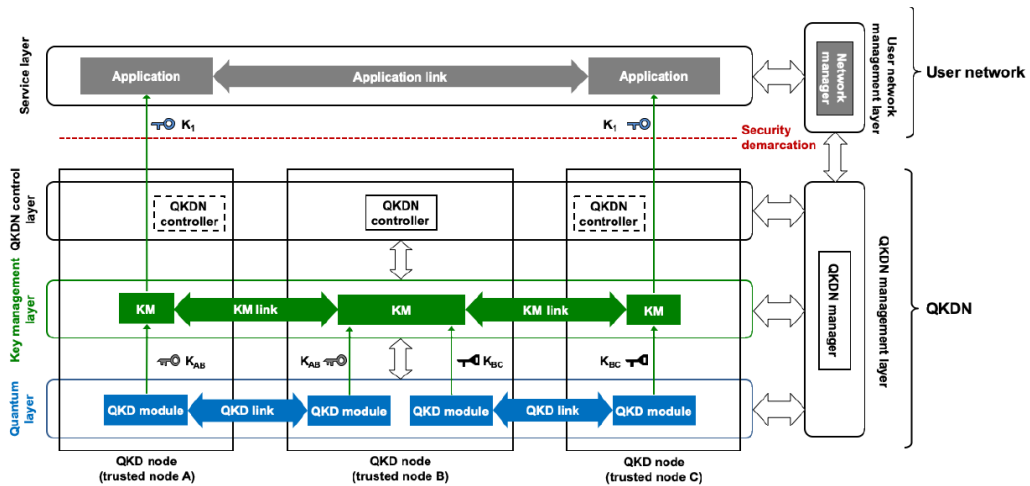
Technology Transfer



<Products of Korean Vendors>

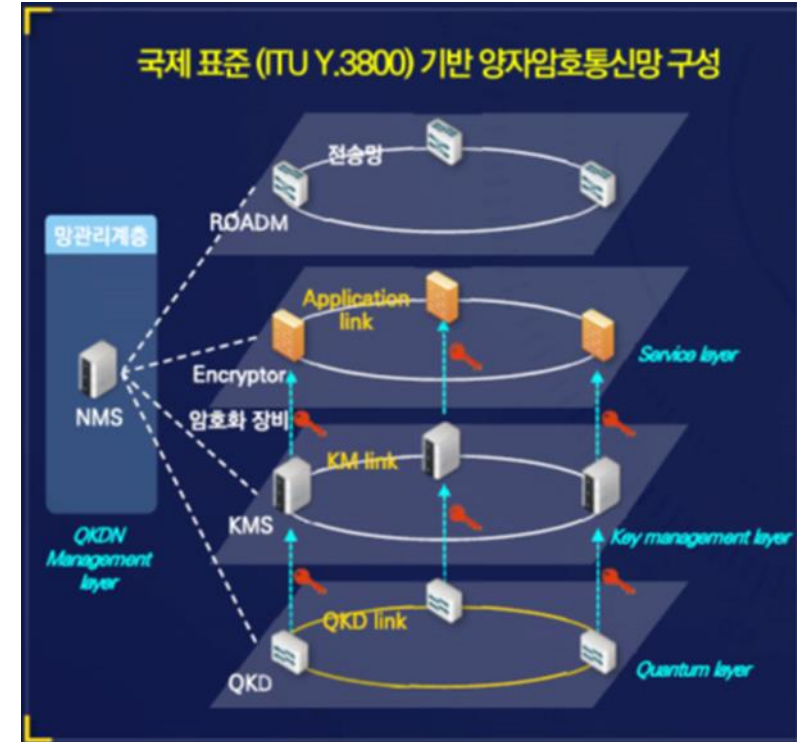
## 02 QKD network structure of KT corp.

Based on ITU-T Recommendation Y.3800; layered model - Quantum, KM, Service and Network Management layers



<Conceptual structure of QKDN in Rec. Y.3800>

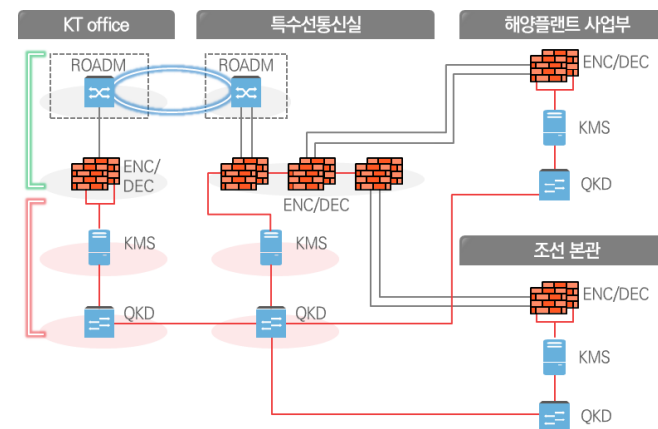
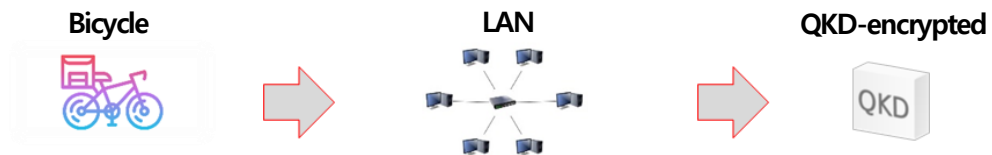
Realization



<Conceptual structure of KT QKDN>

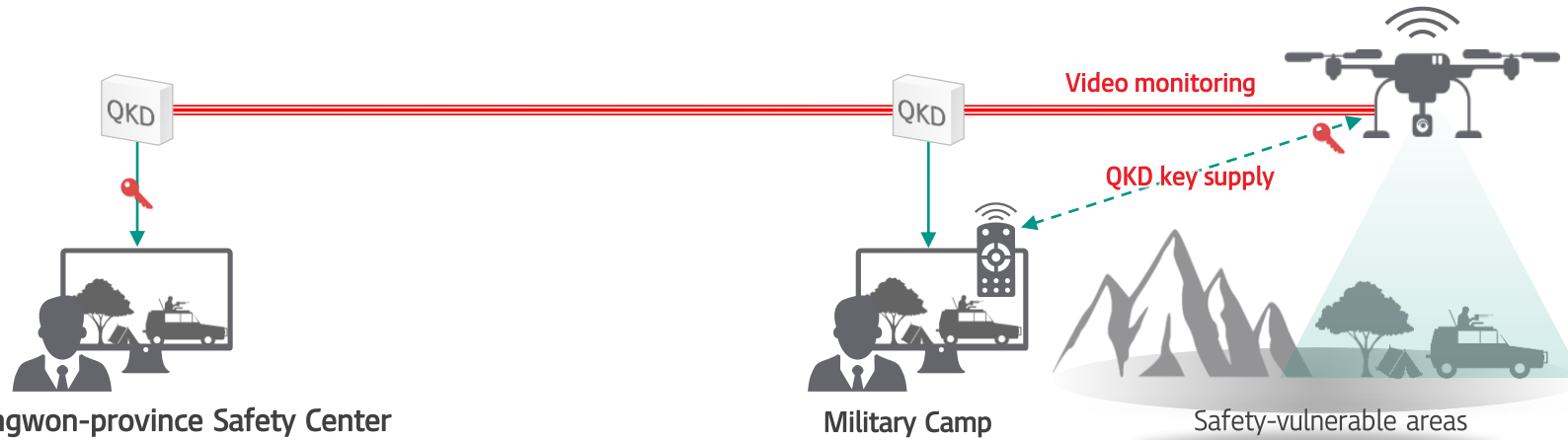
# 03 Industrial Plant - Local Area Network

Hyundai Heavy Industry; Global no.1 shipbuilding plant



# 04 Local society - Drone-based safety system

Gangwon-province; adjacent to DMZ (De-Militarized Zone)

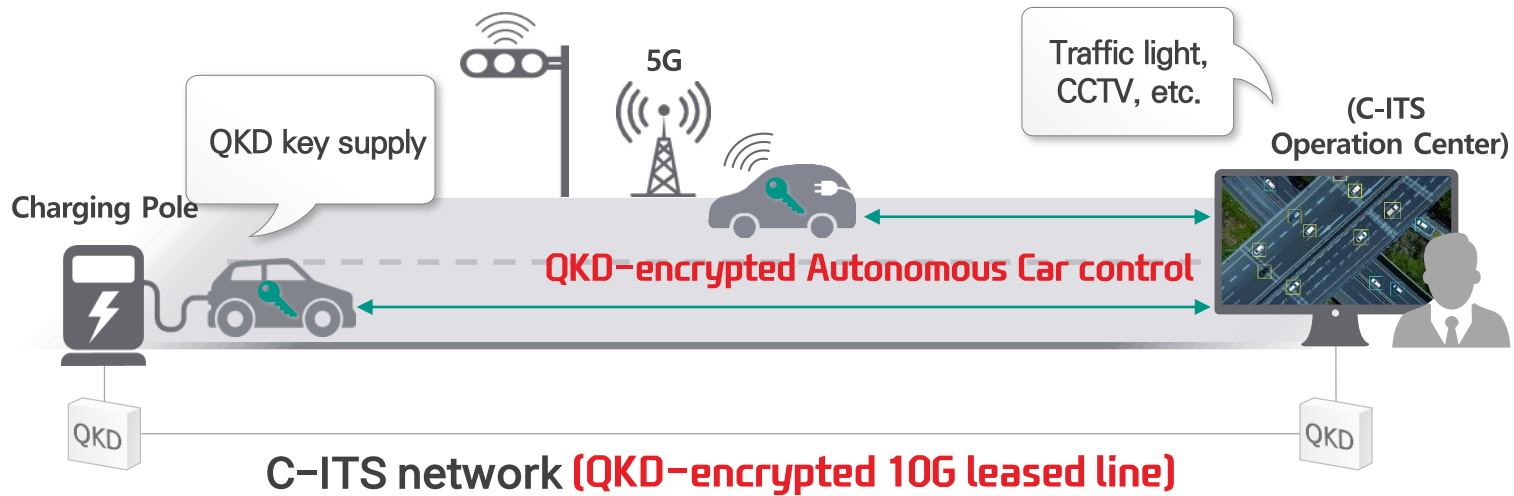


# 05 C-ITS - Quantum-safe Autonomous Car

Jeju; C-ITS implemented romantic island

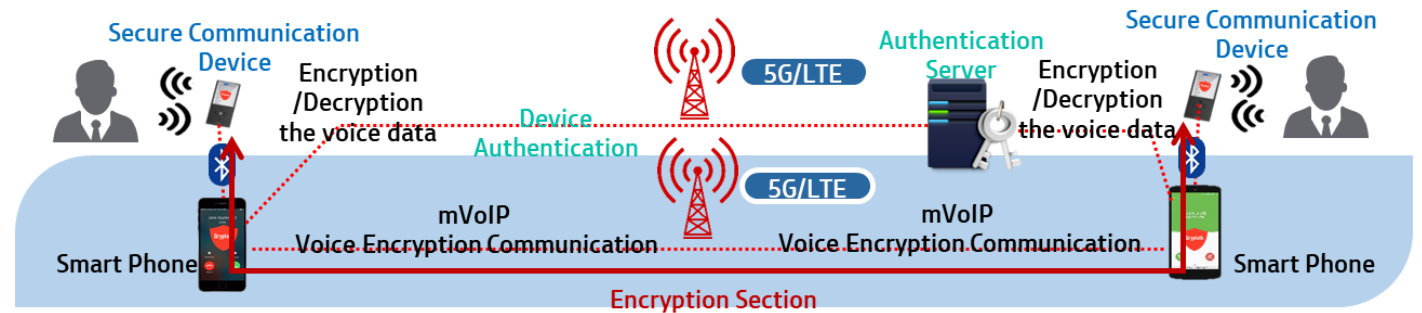
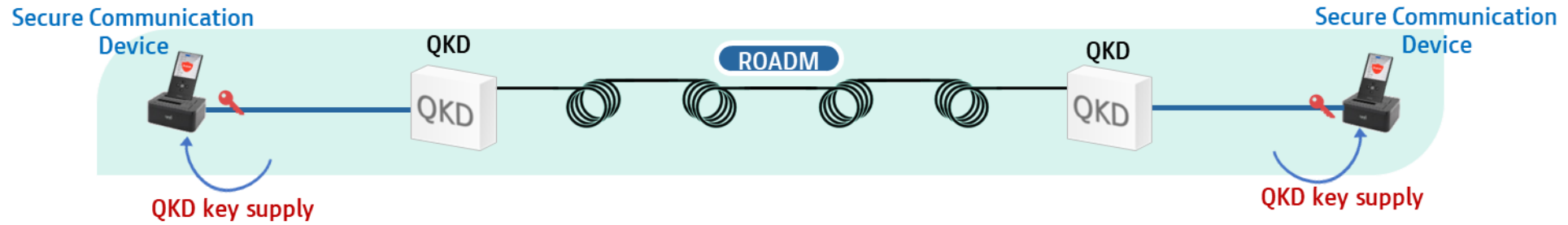


<world's busiest airline route – Bloomberg>



# 06 QKD application; Quantum-safe Mobile Communication

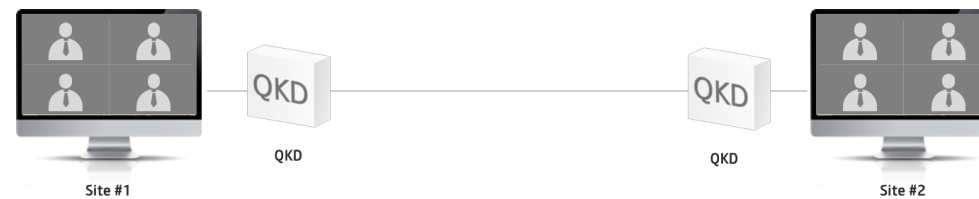
Secure Communication Device; charging cradle-based QKD key supply



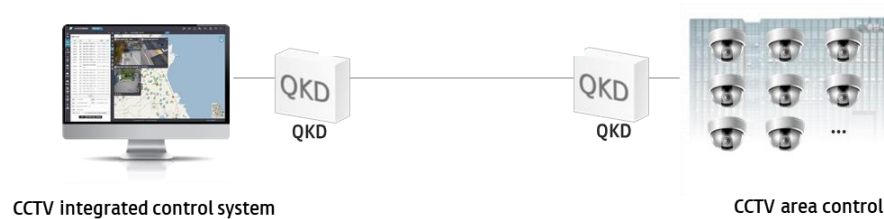
## 07 Others



<Medical Centers and Data Center>



<Video Conference>



<CCTVs operation center>



PEOPLE. TECHNOLOGY. 

