

# The panacea hybrid solution but not for site installation

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1

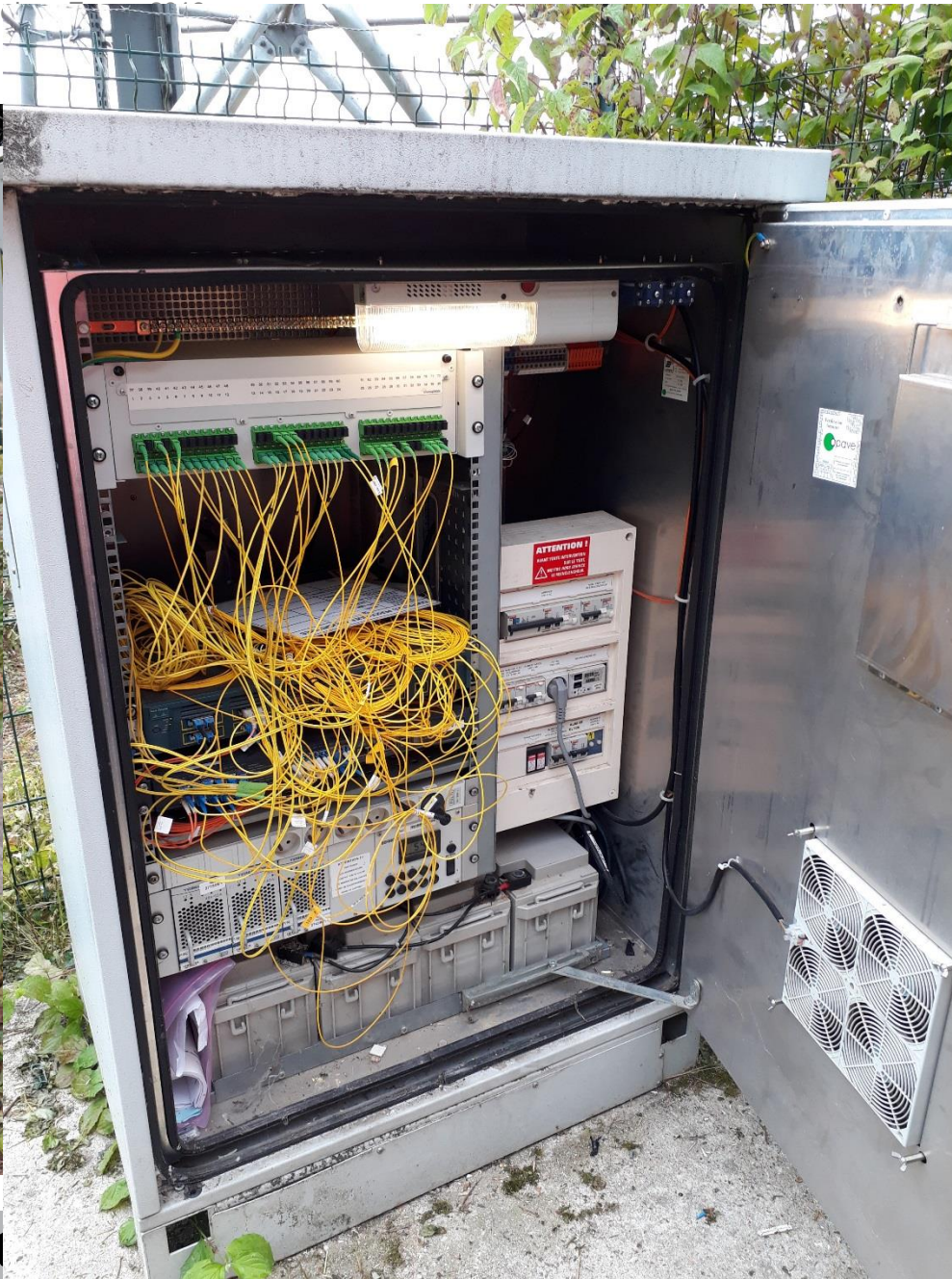
Typical fronthaul architecture

2

Macro vs Small cell

3

Where hybrid infrastructure makes sense



Boîtier PTTA



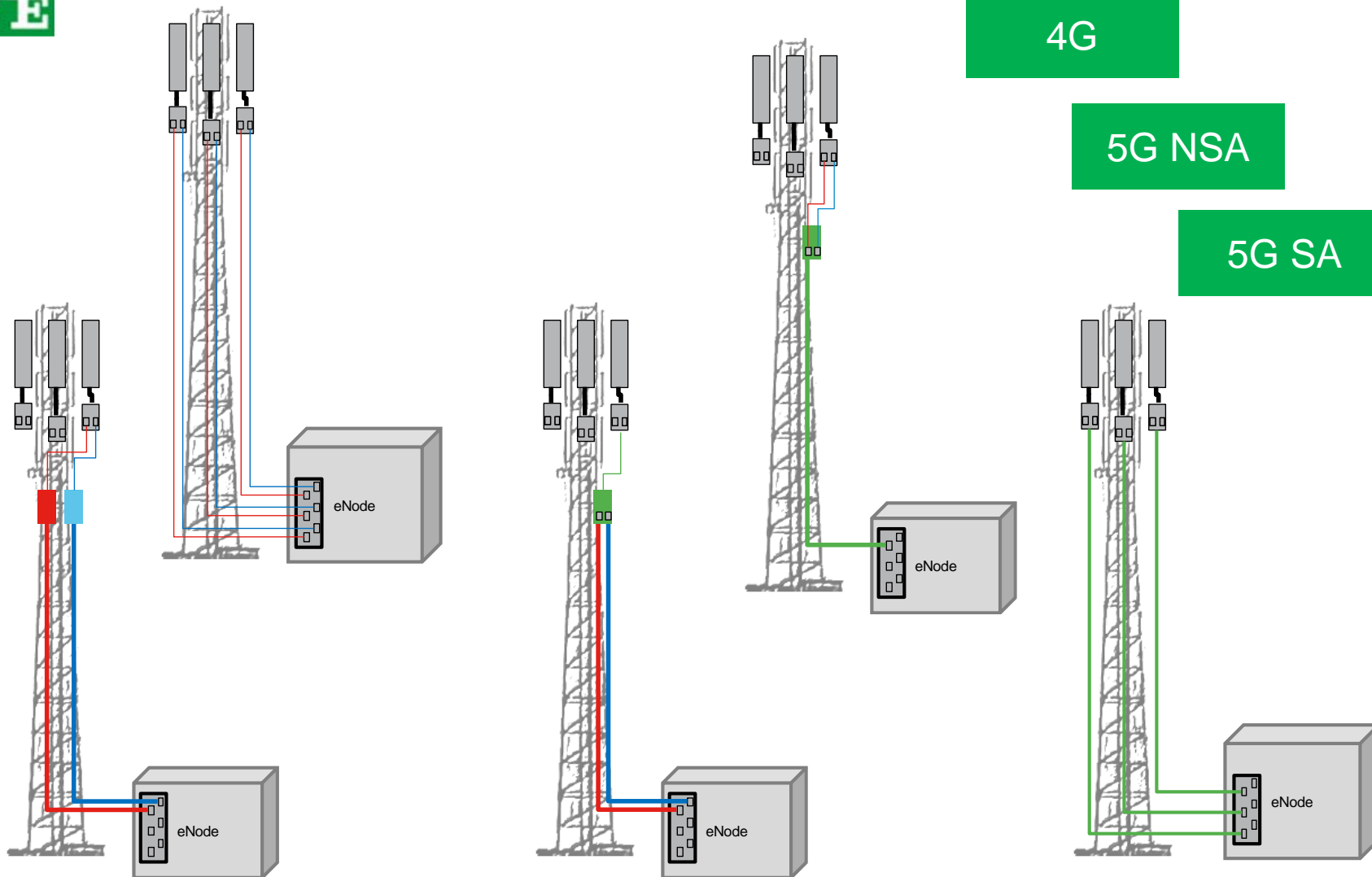
DCDU  
BBU  
4890

# Type of site engineering

4G

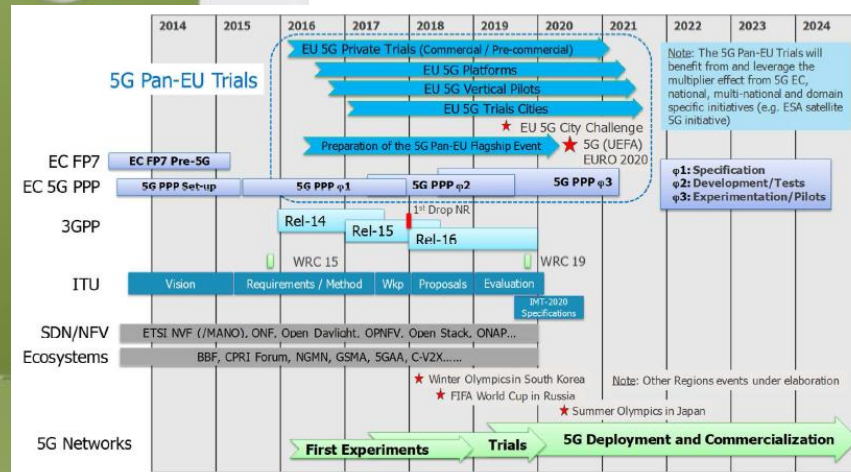
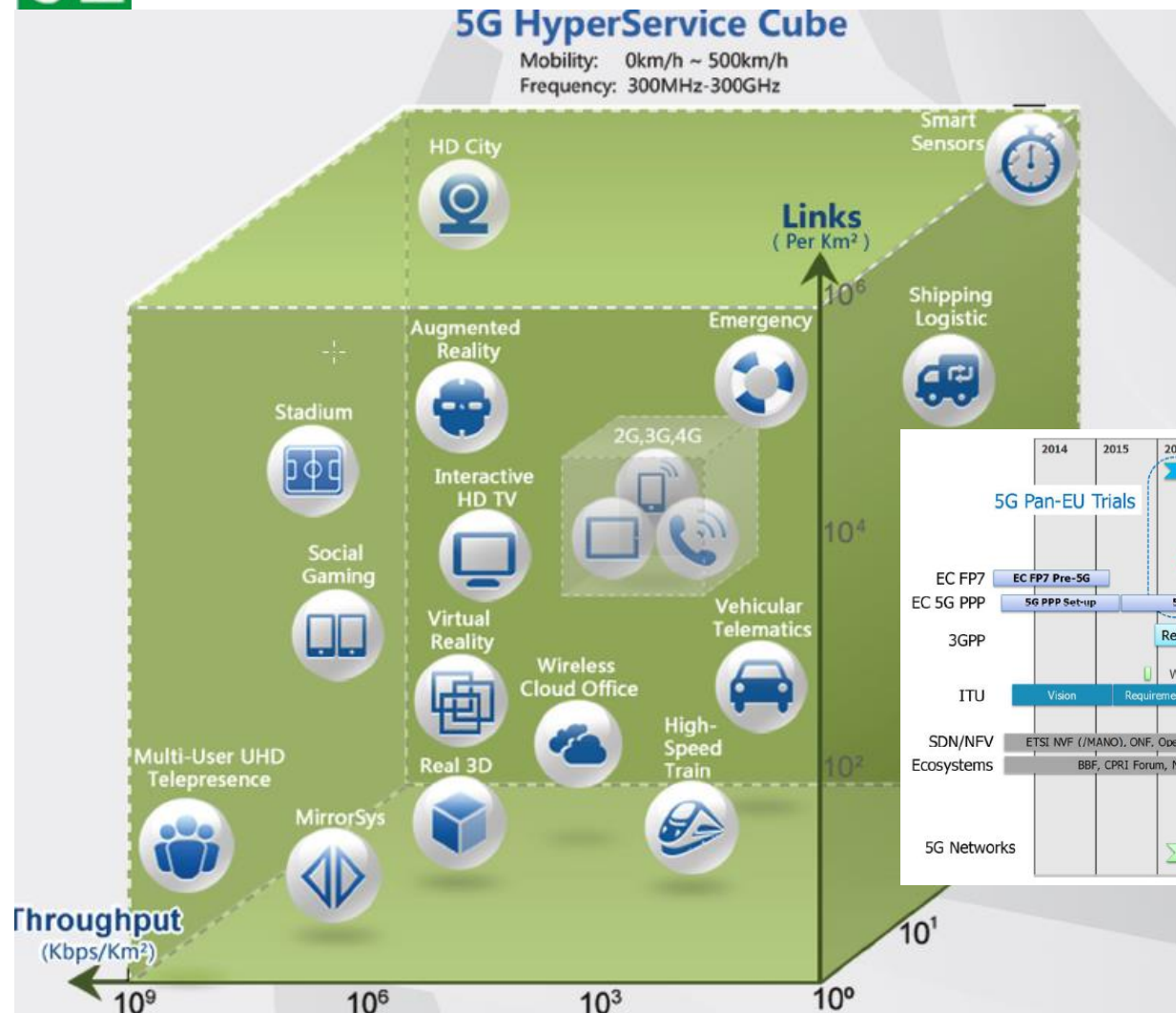
5G NSA

5G SA

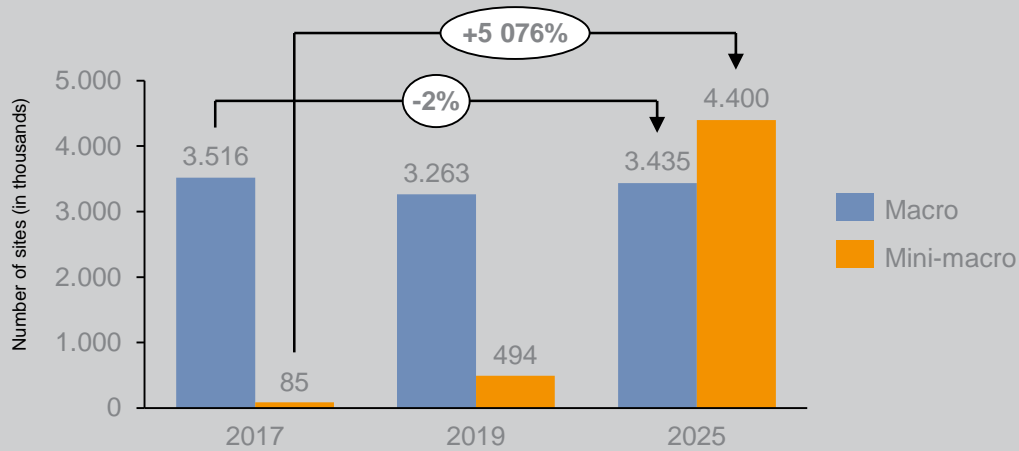




# The 5G promise

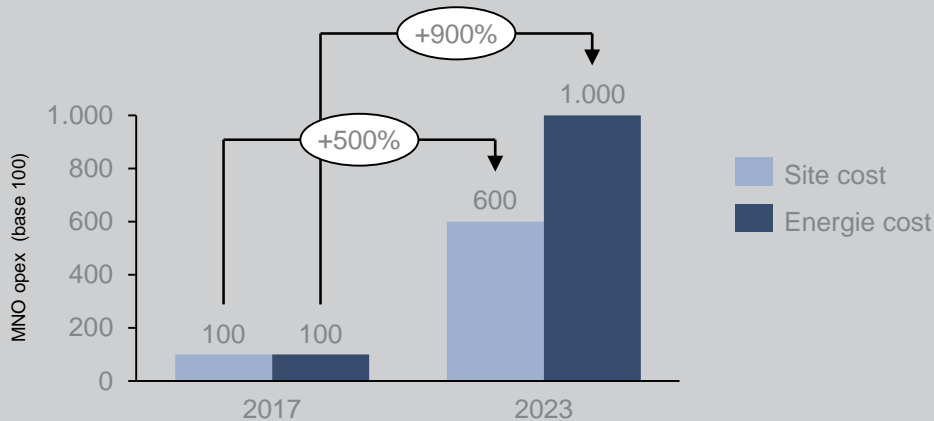


# Type of site



Source Analysis Mason, 2019

MIX site evolution with 2 phases:  
 . Before 2020  
 . After 2020



Source Analysis Mason, 2019

If 5G site planning, deployment and management are administered the same as 4G

Operating costs for MNOs account for approx. 70% of TCO

# Using hybrid makes life easy?

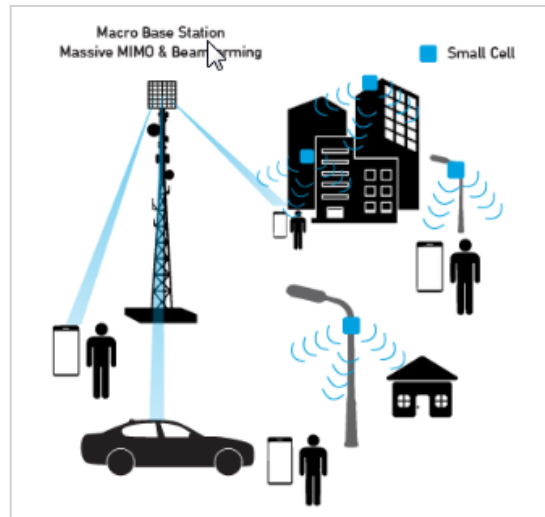
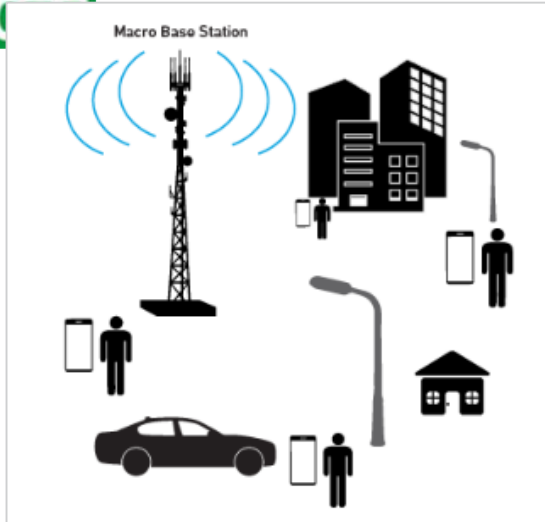


NO

For macro sites

- Tower and rooftop are existing sites
- Limited number of new sites
- Shared site with 2G, 3G, 4G, 5G...
- Site survey?
- Position of Data/DC plant equipment?
- Extra length?

# Macro vs small cell



## Macro

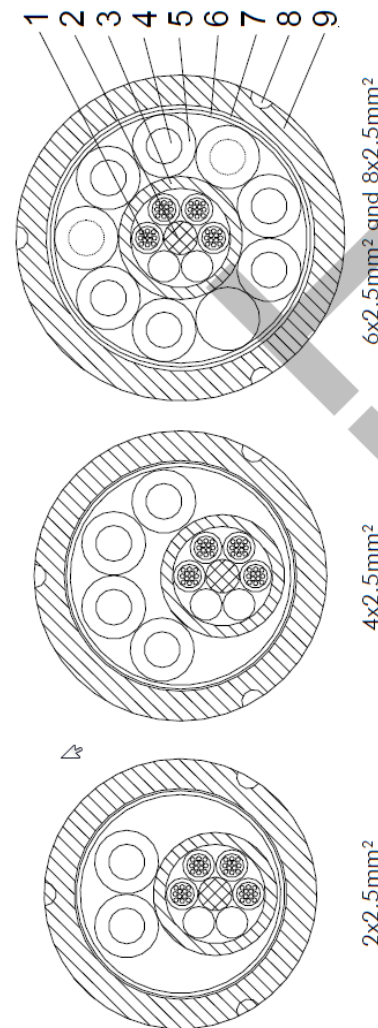
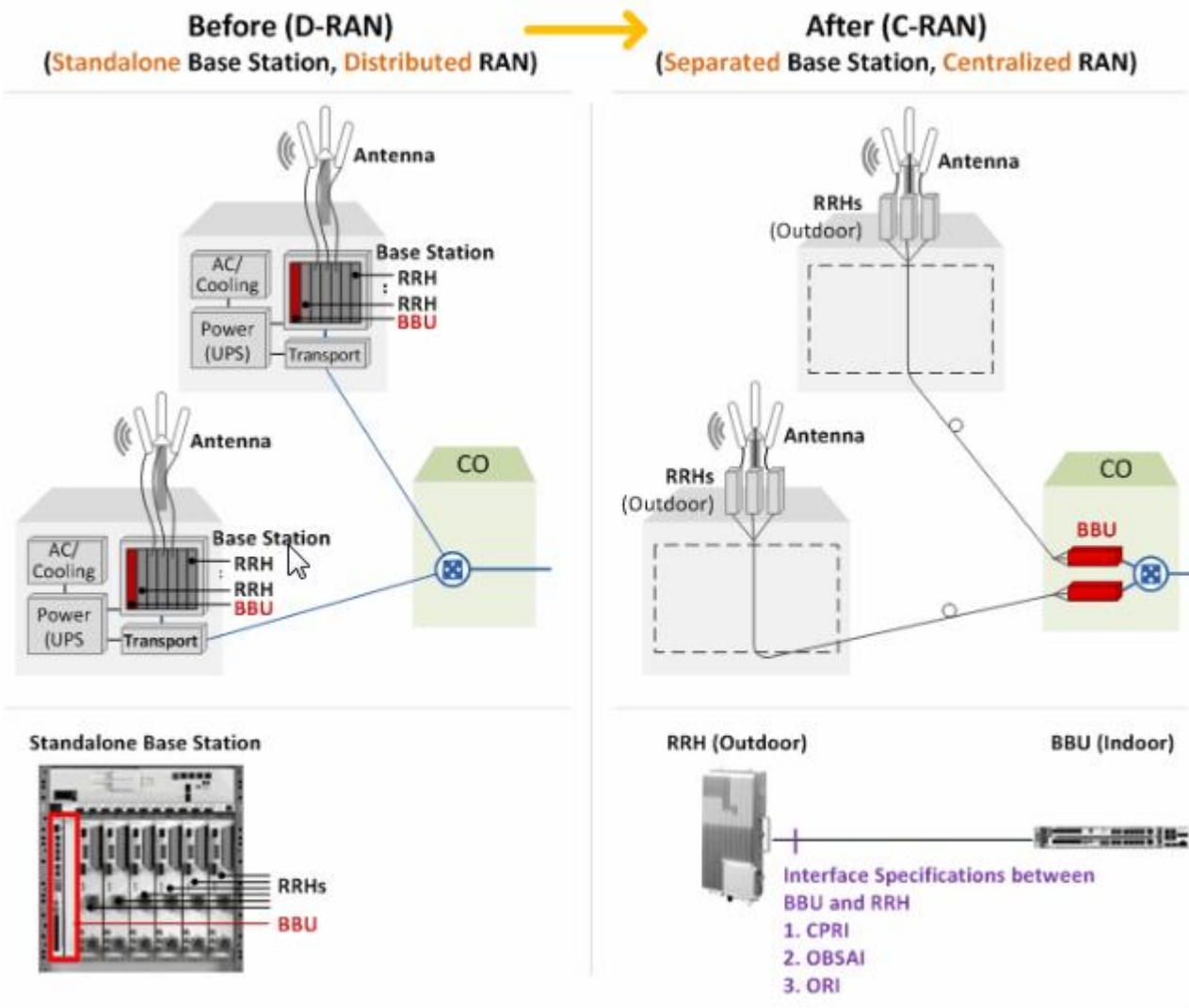
- Limited number of new sites
- Upgrade of existing sites
- Require multiple configurations
- High flexibility in number & performance
- Multiplication of equipment
- Site sharing
- Skilled workforce

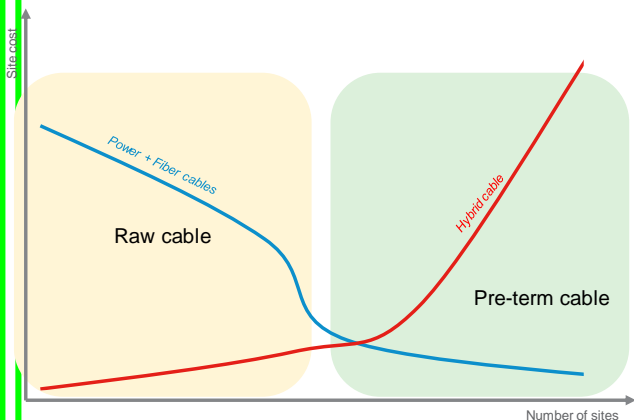
## Small

- Numerous new sites
- Speed of deployment
- Limited number of equipment
- Unskilled workforce



# Remote powering w/ C-RAN





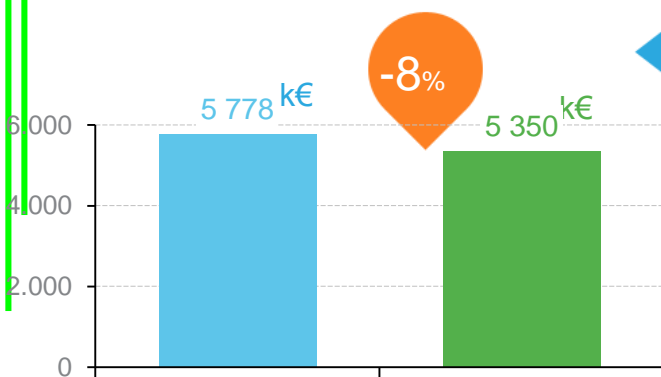
### Today

FTTA: 100% pre-term  
PTTA: 10% pre-term  
HTTA: 3% pre-term

### Impact

Site availability  
Reduced risk of accident  
Reduced churn

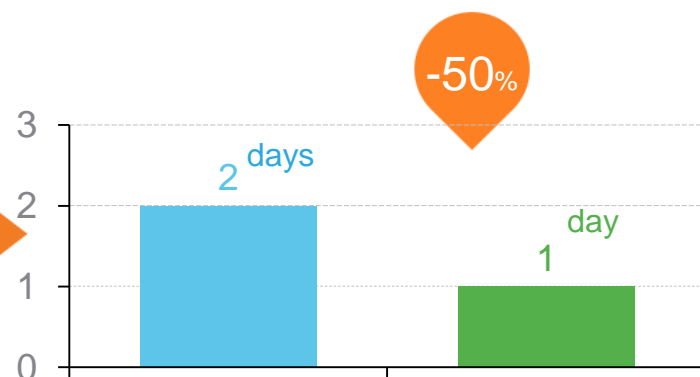
### EXPERIENCE RESULTS on PREFABRICATED (outdoor active cabinet)








Based on 1000 outdoor active cabinets

Capex

Installation  
time on site



# Conclusion

- ✓ 5G network will be made of successive deployment waves 
- ✓ Wave 1 is 4G like, with focus on macro sites 
- ✓ Hybrid is the solution where site evolution is low 
- ✓ Hybrid will be mandatory tomorrow for small cell 
- ✓ The challenge of hybrid is on the power 

**Thank you!**



**Nexans**