

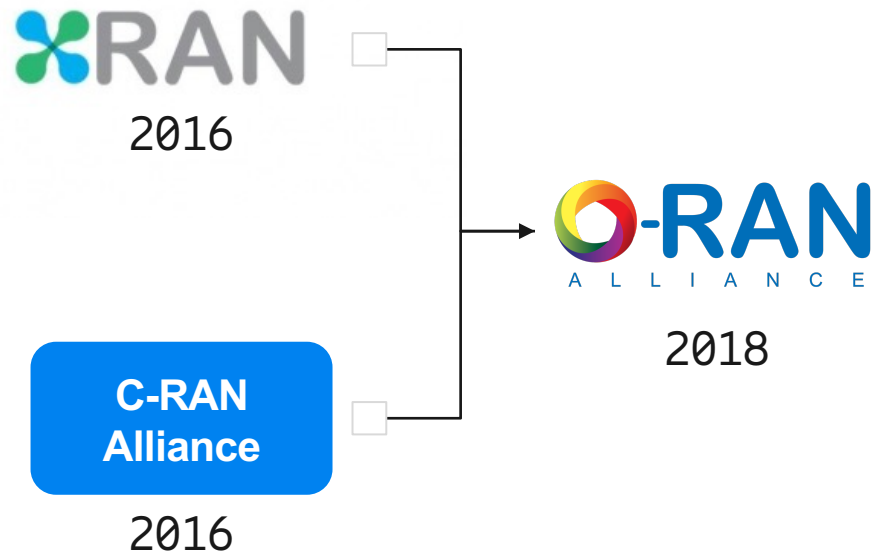


# O-RAN Update

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November 15<sup>th</sup>, 2021

# Origination of Open RAN Standardization

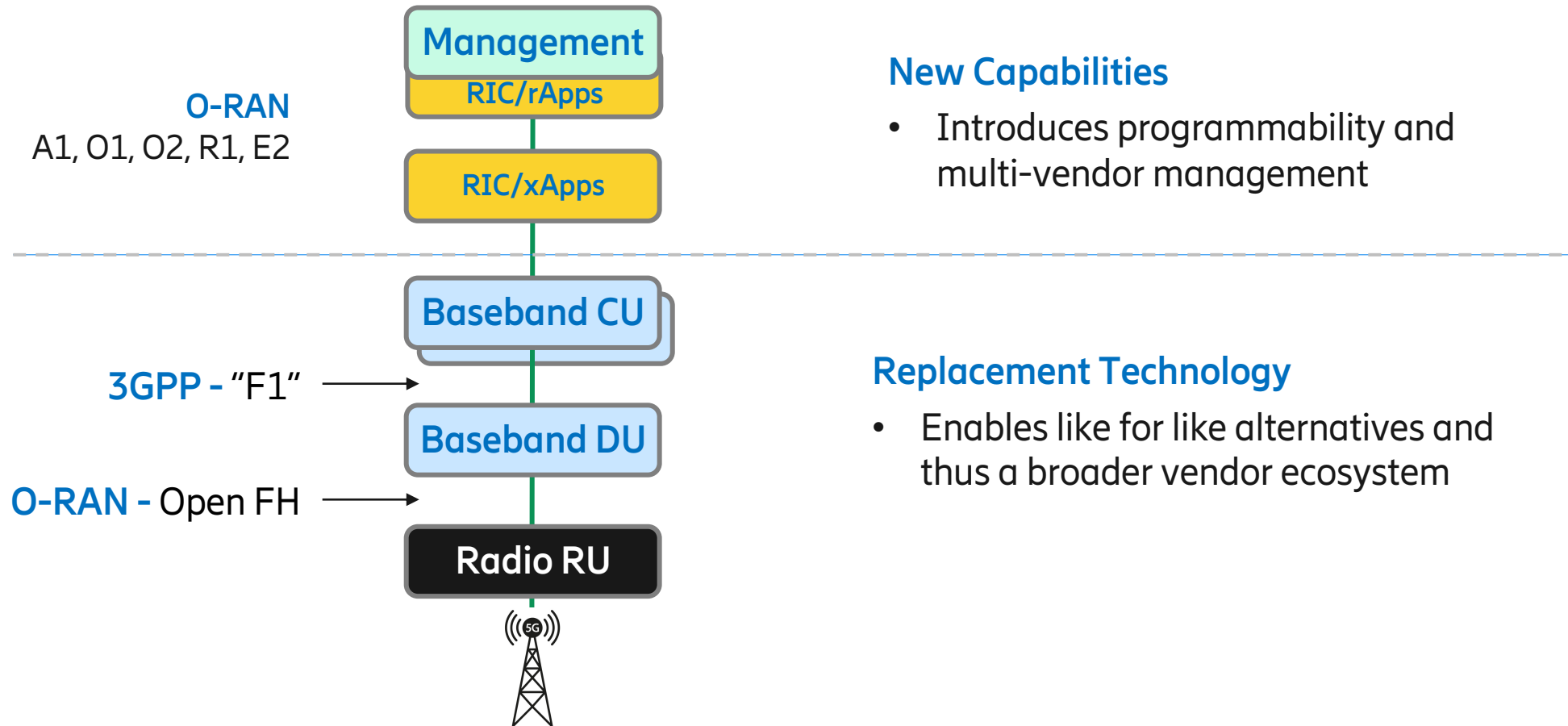


## Governance

- 5 founding members
- 10 working groups
- 4 focus groups
  
- 2 operator co-chairs / group
- 2 vendor co-chairs / group

**Scope : 4G & 5G (not 2G, 3G)**

# O-RAN Alliance Architecture



# Specification Status



Interface	WG	Version
A1	WG2	3.01
O1	WG10	4.0
R1	WG2	
FH - CUS/M	WG4	7.0/6.0
O2	WG6	1.0
AAL API	WG6	1.0
E2	WG3	1.01
Security	SFG	2.0
Test & Integration	TIFG	2.0
<i>E1, F1, W1, X2, Xn</i>	<i>WG5</i>	<i>5.0/4.0</i>

*\* Origin 3GPP*

**Standards progressing well, but incomplete.**

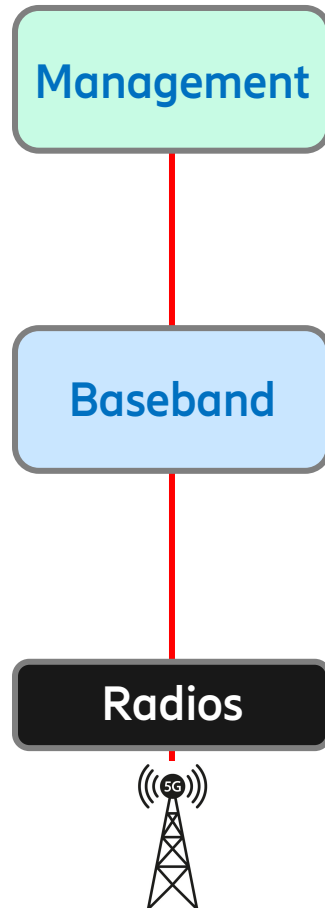
Implementations today are possible, but require pairwise vendor agreements where specification gaps exist.

**Ericsson is a major contributor to specifications. (#1 in 2020).**

# Comparison of Today's RAN & Open RAN

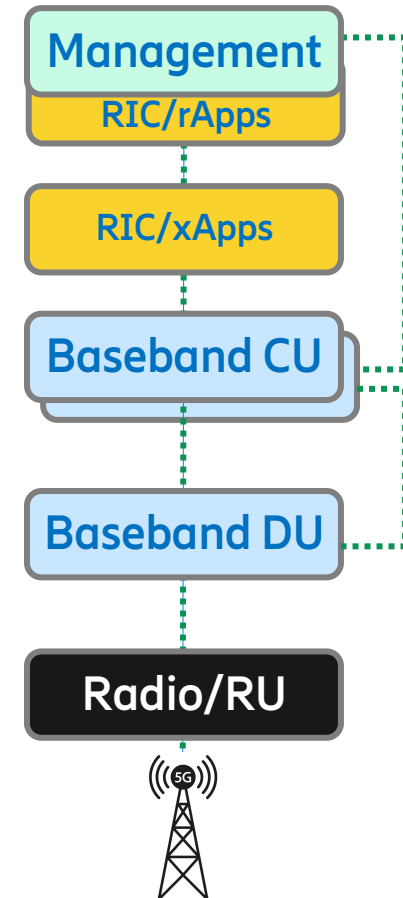


## Today's RAN



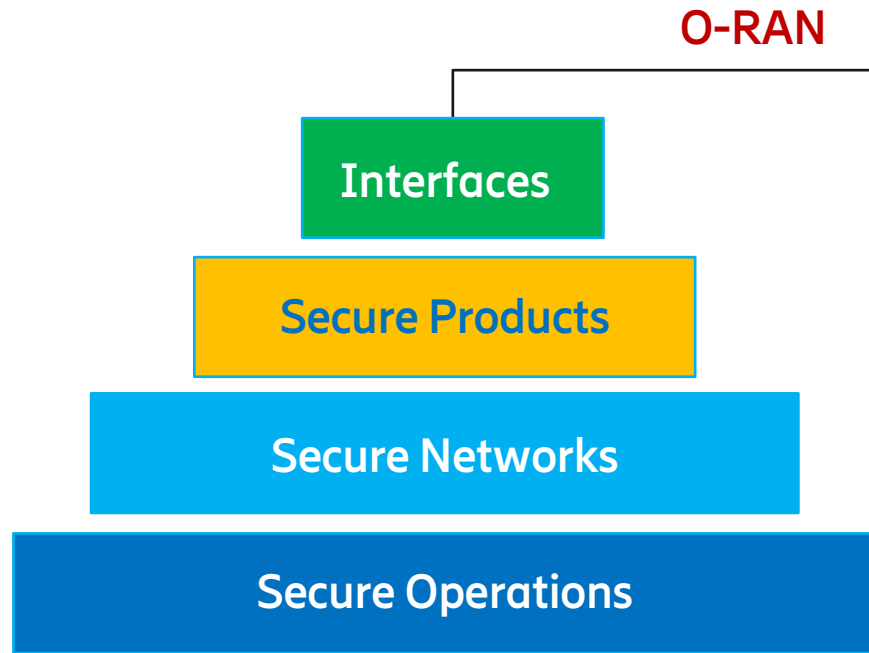
- Single vendor integration
- Purpose-built silicon BBU & RU

## Open RAN



- Multi-vendor integration
- IT Silicon (BBU)
- Varying Silicon (RU)

# Security



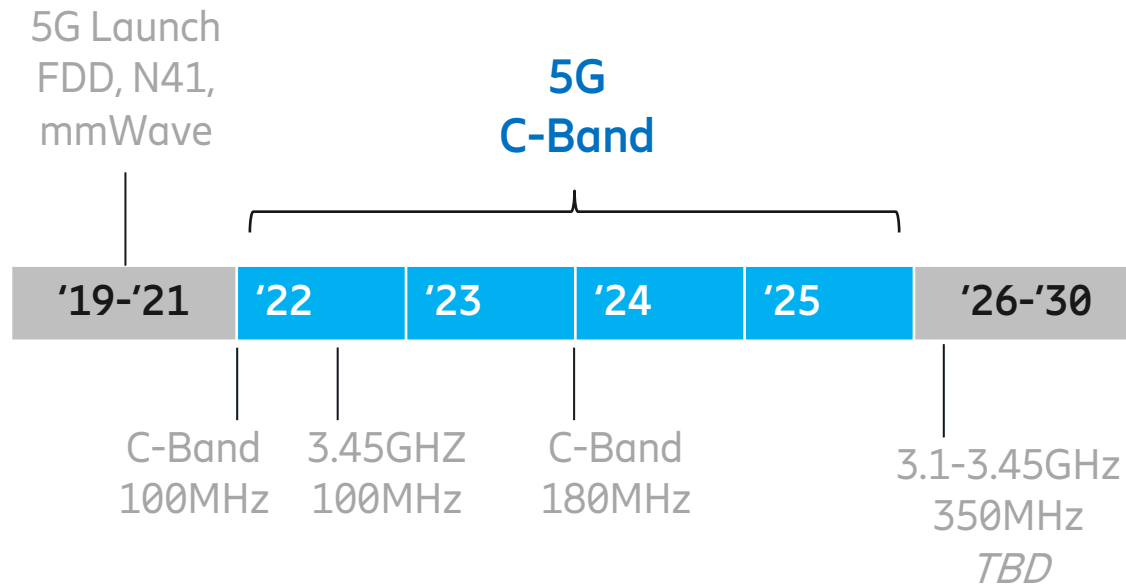
**12 newly opened interfaces require specifications:**  
*A1, O1, R1, C, U, S, M, O2, AAL API, E2, xApps, rApps*

- 3<sup>rd</sup> party applications introduced
- Security Focus Group created October, 2020
- One requirements specification at V2.0

**Potential for stronger security once completed.**

*\*Interfaces are a small part of secure system*

# USA Outlook



## USA situation:

- Late in broad mid-Band availability

## Expected progression:

- Rapid mid-band deployments
- Growth in mmWave
- Vertical industry adoption

**Main 5G objectives...develop economy,  
establish global leadership in 5G & 6G**

