

AMPLEON



Ampleon: Mobile Evolution from 1G to 5G

Nick Pulsford
Ampleon CTO



BC Semi 10 Years

26 April 2018

Ampleon Company at a Glance



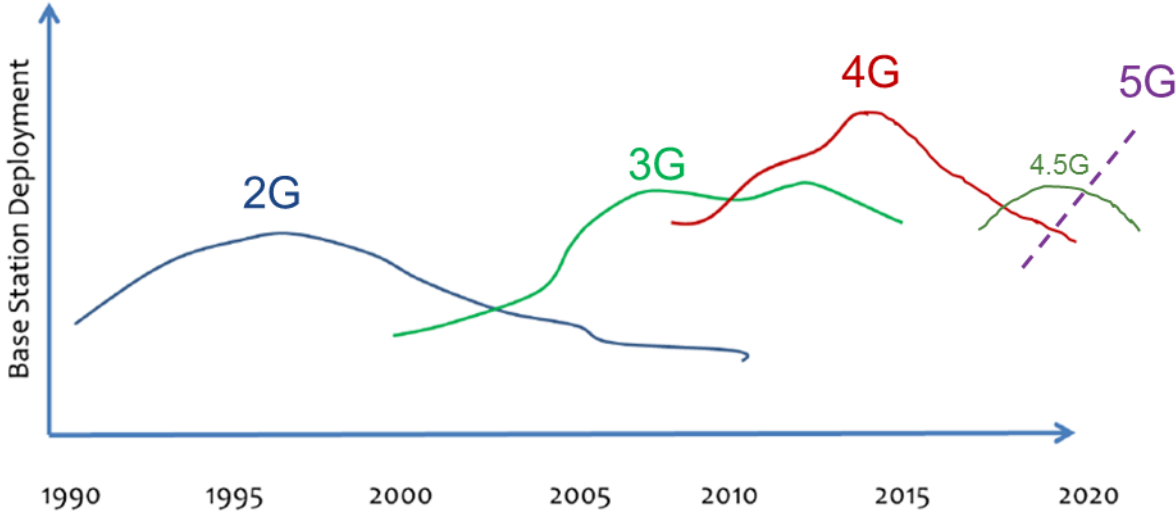
Our Company

- European Company / Headquarters in Nijmegen/Netherlands, founded in 2015
- 1,350 employees globally in 16 sites
- Worldwide Sales, Application and R&D
- Broad LDMOS and GaN portfolio of Power Amplifiers
- Package & Assembly manufacturing facility in the Philippines
- Partner with leading external manufacturers (LDMOS and GaN)

Our Business

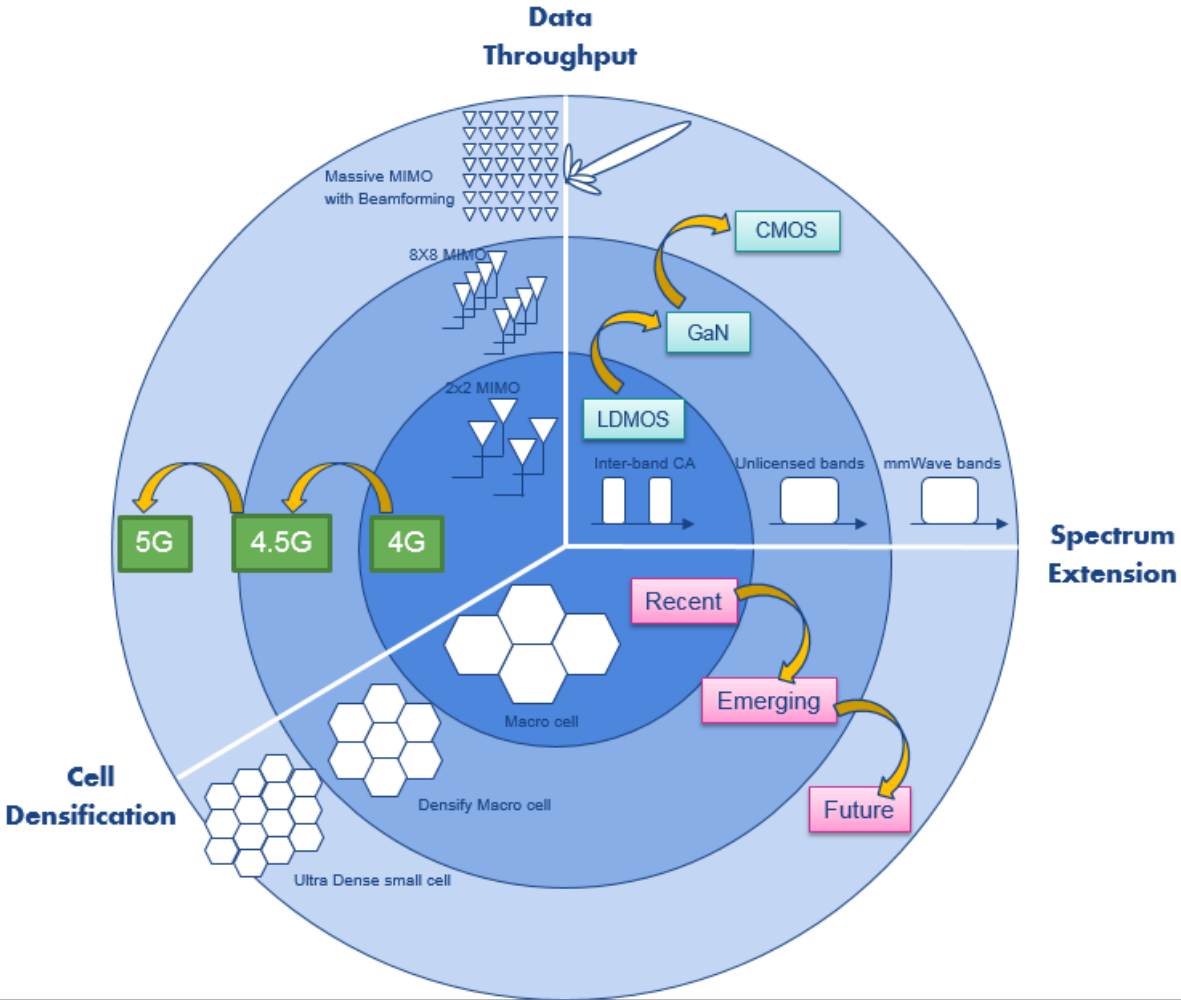
- Building transistors and other RF Power products for over 50 years, with strong heritage from Philips and NXP
- Industry Leader for 35 years, addressing
 - Mobile Broadband
 - Broadcast
 - Industrial, Medical, Scientific
 - Aerospace & Defense
 - RF Energy

The Mobile “Device” Evolution: from 1G to 5G



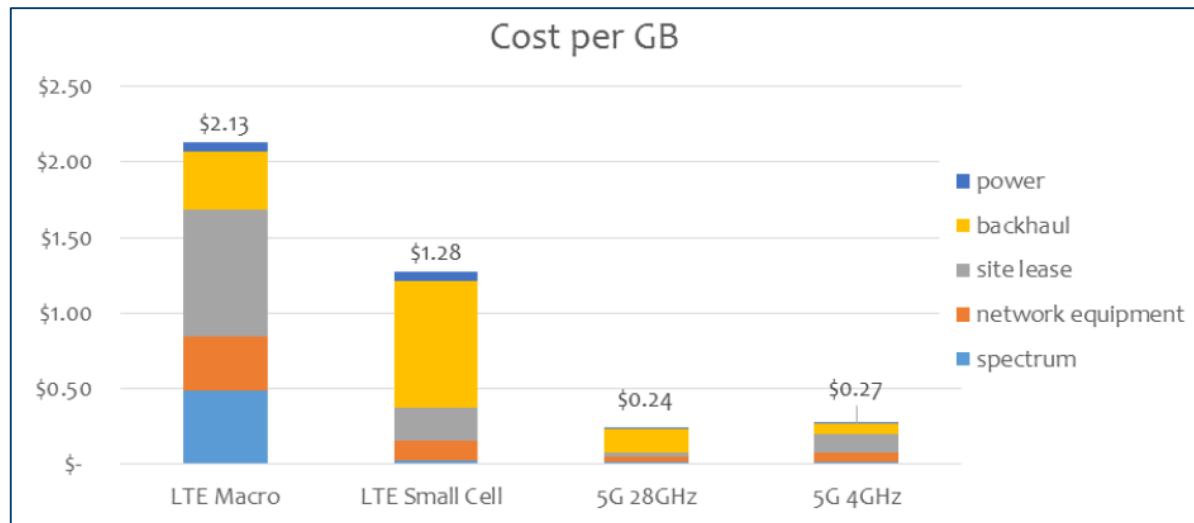
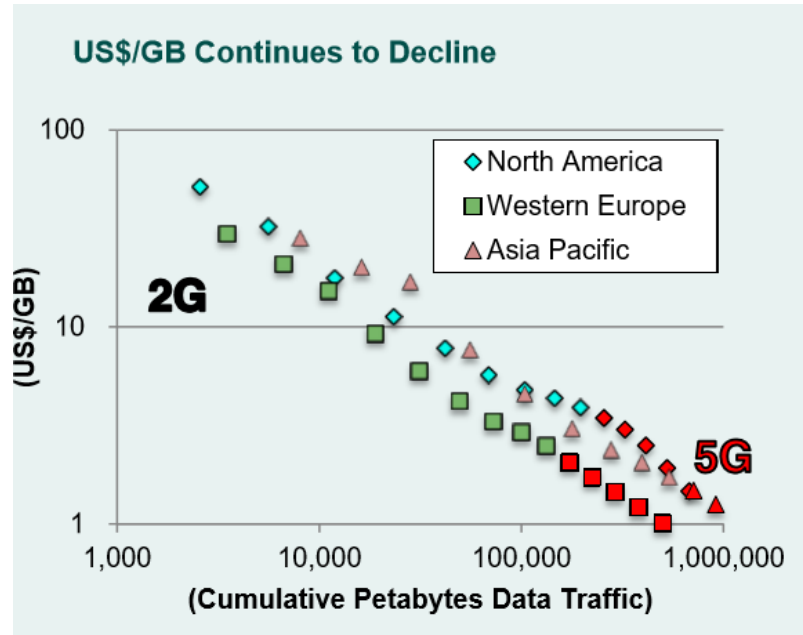
Source: Mobile Experts

3 Key Drivers for the Network: Data Throughput, Cell Densification and Spectrum Extension

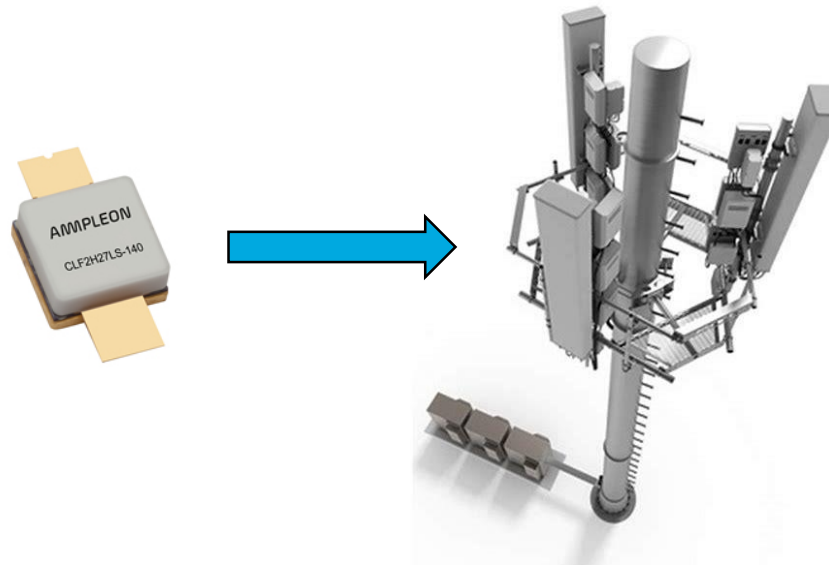


Continuous improvement in system efficiency for energy usage

Meeting the \$/GB Cost is a Major Challenge



How does Ampleon cover Network Evolution?



5G System Trends

- QAM modulation >>
- Carrier aggregation >>
- Higher frequencies >>
- m-MIMO systems >>

5G PA Trends

- improved linearity
- higher bandwidth
- higher fT transistor
- low power integration

5G Innovation



Generation by generation improvements in amplifier efficiency !

AMPLEON

The Leading Global Partner in RF Power