

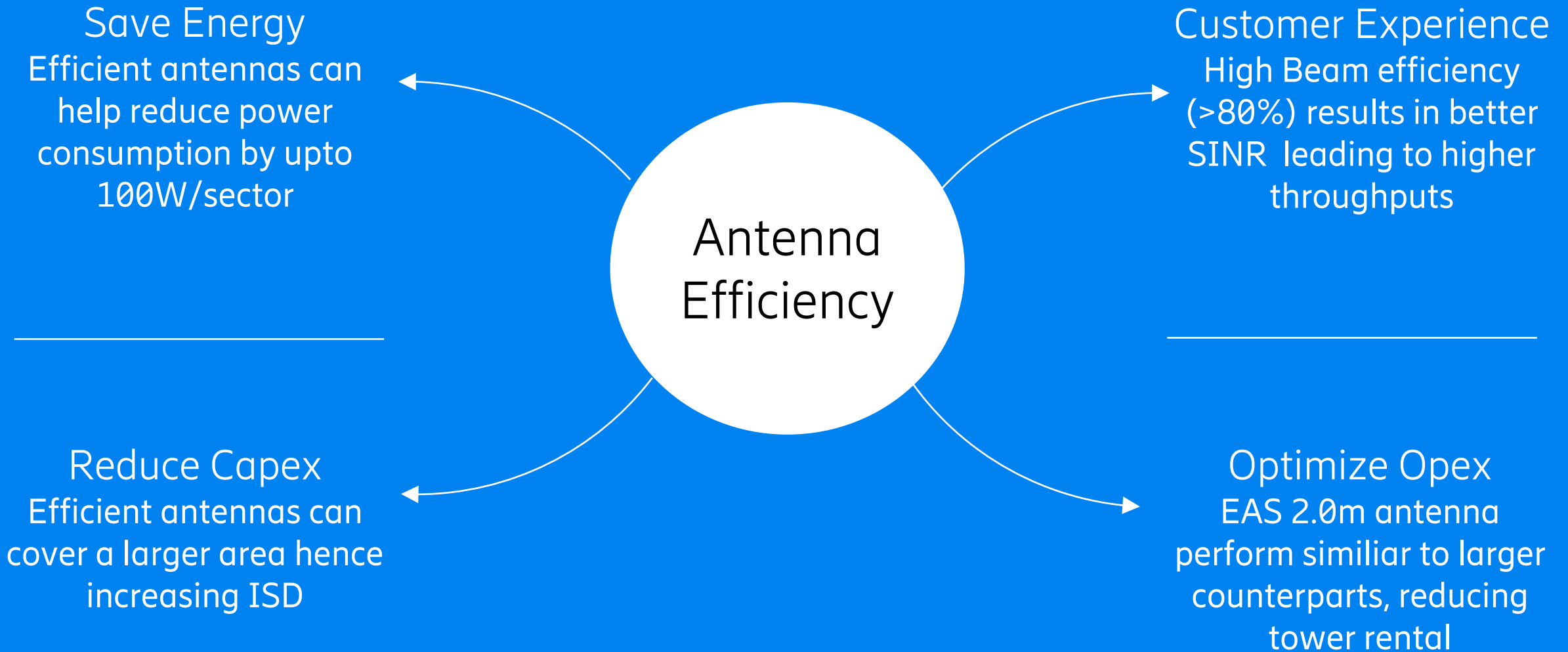
# Ericsson Antenna System



Pursuing Relentless  
Efficiency



# Advantages of efficient Antenna Systems



# Ericsson's approach to antenna efficiency



## Current architecture focus (since 2019)

Low loss cables (UT250) & phase shifters

Higher integration

Reduction of solder joints and PCB parts for all bands

Single fed radiators

Optimized RF pattern design through more flexible radiator positioning

Reduced weight & improved component space

Reduced PIM risk

High tilt performance

83%

low band efficiency

78%

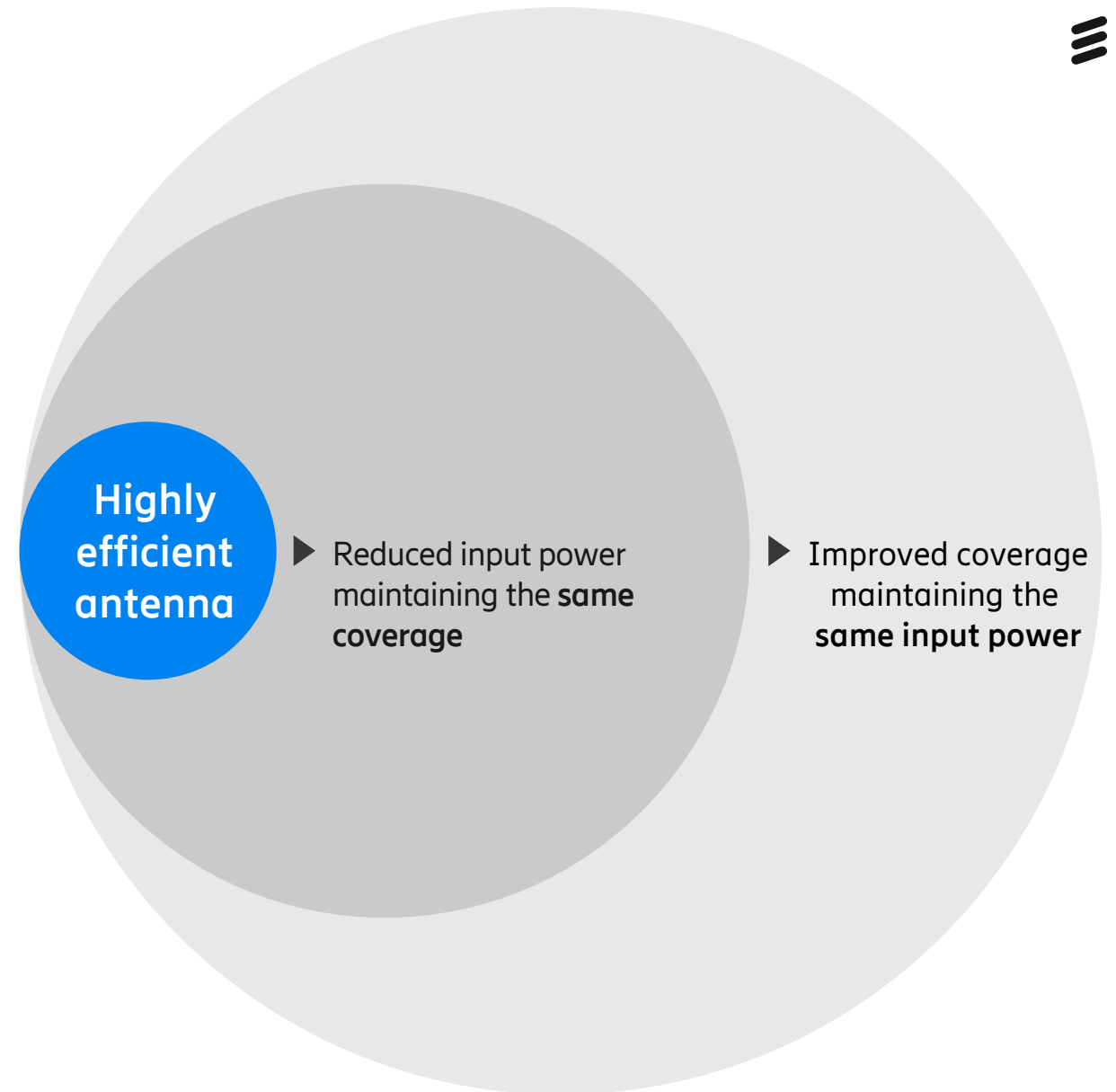
mid band efficiency

Ant. 800482002 –representing typical values for NPA2

# Antenna efficiency



A highly efficient antenna not only proves a better network performance, but also increases TCO savings.



# Breaking the Energy Curve

## Antenna efficiency reduces carbon emissions



The highly efficient Ericsson multiband antenna can save 100W per sector on radio power consumption

4480 B8B28    4415 B7    4480 B1 B3



Radios at ETSI average traffic load



2L4M Ericsson antenna

### Benefits achieved

10-15%  
Higher efficiency

Reduced  
power consumption

Saving  
CO2 emission<sup>1</sup>

Effortless  
TCO savings<sup>2</sup>

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Radios at ETSI average traffic load



2L4M Ericsson antenna

### Benefits achieved

300W

Per site

2628kWh

Per year per site

1314 kgCO<sub>2</sub>

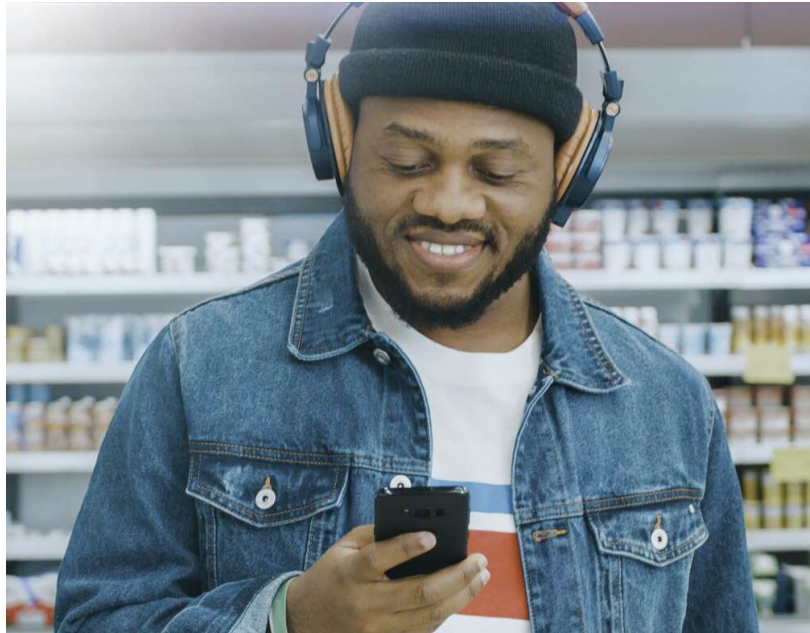
Per year per site<sup>1</sup>

32.855 tCO<sub>2</sub>

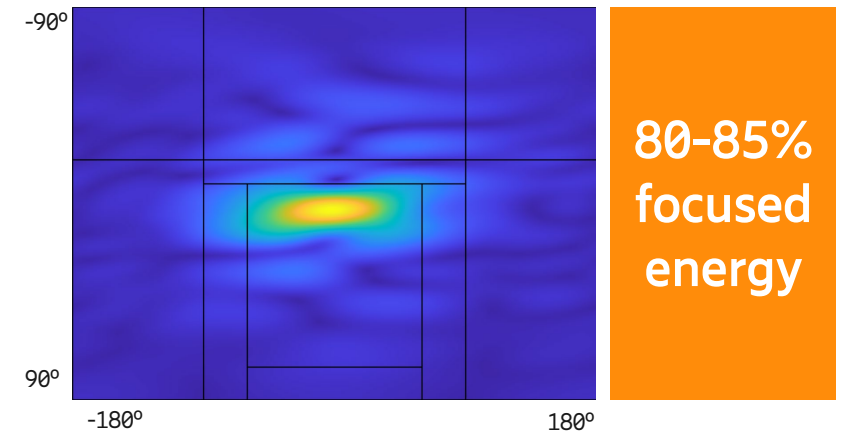
13,4 Million EUR

TCO savings<sup>2</sup>

# Beam efficiency improves user experience



- Beam efficiency can be described as the ratio of the **power radiated in the main beam** of the antenna to the total radiated power
- Not only antenna gain is important, but also vertical and horizontal beamwidths and low side lobe levels to ensure that **most of the energy focuses on the main area to be covered**



Ericsson antennas have high beam efficiency and great side lobe suppression improving network SINR and allowing users to experience higher throughputs.



<https://www.ericsson.com/en/antenna-system/efficiency/>